

Decentralised Energy Governance in the Global South: The Case of Kenya since the Implementation of Devolution

Richard Sieff

Loughborough University



**A thesis submitted in June 2019 in partial fulfilment of the requirements for
the award of Doctor of Philosophy**

Photo: Image of a grid powered national government street light (left) adjacent to a solar powered county government street light in Lodwar, Turkana county (12/05/2017). The two placed so close to one another indicative of certain coordination issues which have impeded aspects of decentralised energy governance. Source: author's own photograph.

Abstract

Drawing on nine months' field research in Kenya and using a predominantly qualitative methodology, this thesis investigates the role of decentralised governance in addressing Global South energy access issues. The study explores the concepts of decentralisation, governance, and energy access, engaging with overlooked debates concerning how these concepts interrelate and under what circumstances decentralised energy governance might help address Global South energy access issues. Concepts of scale and power are also explored, enabling new insights into the understudied area of how cross-scalar power relations play out in decentralised energy governance, while extending debates over whether the state should be viewed relationally. Critically, a spatial lens is applied to the aforementioned concepts and debates, developing new knowledge on how and the extent to which decentralised energy governance is spatially contingent.

Framed within debates on multilevel governance, the thesis shows cross-scalar power imbalances have led to a more hierarchical form of energy governance emerging in Kenya relative to that intended by legislation – this has led to excessive emphasis on grid electricity which has been detrimental to addressing energy access inequities. The emergent decentralised energy governance is also found to have marked geographical variations, underpinned by a range of spatially contingent historical, socio-economic, and political factors. The overarching conclusion is that Kenyan decentralised energy governance needs to develop robust networks of local actors to provide effective checks and balances to 'top-down' governance: without which, energy access inequities are likely to persist.

These findings have broader conceptual and theoretical implications for decentralised energy governance in the Global South. Decentralisation is shown to have distinct relevance to energy as grid electricity remains one of the few remaining de facto state monopolies in the Global South: the implication being central governments will see this control as too lucrative and politically important to cede to decentralisation reforms. The findings also highlight marked geographical variations, revealing that decentralised energy governance needs to be understood not only relationally, as typically seen in political economy analyses, but also spatially. This understanding has important methodological implications as it signals that geographical empirical approaches are required if on the ground practices of decentralised energy governance are to be better understood and more effectively developed.

Acknowledgements

Overseas research projects are reliant on cross-country partnerships and I am highly indebted to the support and assistance I have received from a large number of people in the UK and Kenya.

I feel very fortunate to have been supervised by Prof. Ed Brown and Dr. John Harrison. Both were incredibly supportive and always approachable and giving of their time. Their different strengths and academic areas of expertise complimented each other and were of enormous benefit to the development of the PhD and my research skills and helped make the four years working on this project an enjoyable and rewarding experience.

I am also thankful for the contributions of other members of staff within the Geography Department at Loughborough. Prof. Kate Gough, my internal upgrade supervisor, was very supportive and provided me with useful alternative perspectives. Dr. Jon Cloke's expertise and insights into the energy sector and working in Kenya greatly assisted fieldwork while Dr. James Esson's advice on the PhD process and postgraduate teaching was highly valuable. I am also grateful to the administrative team for the work they do which enables research projects to take place and many thanks to the Geography postgrads for making the department a fun place to work - Andreas Culora probably suffered more than most having to sit next to me for two years.

As stressed at the start, this PhD is the result of a cross-country partnership and I am particularly grateful to everyone at Strathmore University Energy Research Centre (SERC) in Nairobi where I was based during fieldwork. I can't thank everyone there enough for the advice, support, contacts, time and perspectives offered which proved incredibly valuable for the research, and also for making me feel incredibly welcome and part of the group. Thank you also to Fred Ajwang and Declan Murray for easing me into life in Nairobi and the process of conducting research there.

In Kenya, the efforts and support of certain individuals allowed the research to achieve much greater depth than would otherwise have been possible – for which I am very grateful. Tameezan wa Gathui's advice before, during and after fieldwork helped shape the study to local realities. Anne Nyambane provided valuable sector insights and knowledge of local stakeholders, enabling the fieldwork in Trans Nzoia and Usain Gishu to take place. Ewa Sawe was instrumental in supporting the county questionnaire, circulating it among all 47 counties and providing a platform for me to present directly to county energy officers. I am also very grateful to Faith Odongo for backing the research and providing official support from the Ministry of Energy.

Similarly, the visits to Nakuru, Migori and Turkana would not have achieved what they did without the input, advice and suggestions of the research assistants I worked with: Evan Kimani, Michael Ongei and Jackson Angiror. Thank you for your company and insights during these visits. Thanks also to Aran Eales and the team at the University of Strathclyde for integrating me into the Community Energy Malawi project. I am also hugely thankful to all those who gave up their time to take part in the study but are not listed for reasons of participant confidentiality.

Lastly, but very much not least, I am incredibly grateful for all the support my parents have provided me throughout my life, always being there for me, and giving me the opportunities to enable me to choose the paths I've wanted to take.

Contents

Abstract.....	ii
Acknowledgements.....	iii
Contents.....	iv
List of Tables.....	viii
List of Figures.....	ix
List of Abbreviations	x
Chapter 1 - Energy governance in the Global South: a critical research agenda	1
1.1 The urgent need to address energy access issues	2
1.2 Decentralised energy governance as a response.....	3
1.3 Sub-Saharan Africa and Kenya as a case study region and country	6
1.4 Research aim and questions	8
1.5 Thesis structure.....	10
Chapter 2 - Understanding Energy Access in an Era of Decentralisation	12
2.1 Paradigm shifts and energy governance.....	12
2.1.1 From paradigm to policy: international interventions and their impact on energy governance.....	17
2.2 Energy Studies: limitations impede the development of decentralised energy governance.....	21
2.2.1 Concepts of energy access: flawed rationales, flawed governance	21
2.2.2 Imbalances in the energy studies literature and their implications for energy governance	23
2.3 Decentralisation: a key research agenda for energy governance	25
2.3.1 Concepts of decentralisation and their implications for governance.....	26
2.3.2 The rise of decentralisation and its impact on governance.....	28
2.3.3 Potential impacts of decentralisation for energy governance	29
2.3.4 Lack of engagement between the decentralisation and energy literatures.....	31
2.4 Concepts of governance in the era of decentralisation.....	33
2.5 Conclusion.....	38
Chapter 3 - Global Goals, sub-Saharan African Realities: The Energy Governance Challenge in Kenya	39
3.1 Sub-Saharan Africa: the energy access front line	39
3.1.1 Decentralisation in sub-Saharan Africa.....	41
3.1.2 Energy policy and governance in sub-Saharan Africa	44
3.2 Exploring Kenya's extensive decentralisation process	47
3.2.1 Decentralisation in Kenya 1963-2010: a conflicting legacy	48
3.2.2 Energy policy and governance 1963-2010: centralisation and inequality in Kenya	50
3.3 The 2010 constitution: a new system of governance?	55

3.3.1 Interpreting devolved energy in the Constitution of Kenya	57
3.3.2 Devolved energy: interpreting the broader legislative framework	60
3.4 Conclusion	63
Chapter 4 - Methodology	65
4.1 Research Approach	65
4.2 Data Collection and Methods	67
4.2.1 Semi-structured interviews	72
4.2.2 Focus group discussions	77
4.2.3 Questionnaires	80
4.2.4 Conferences and workshop attendance	83
4.2.5 Use of secondary sources	85
4.2.6 Fieldwork notes	86
4.3 Data analysis	87
4.4 Positionality and ethics	89
4.5 Conclusion	92
Chapter 5 – Developments in Kenyan Decentralised Energy Governance: The Reticence of National Government to Devolve	94
5.1 The impact of post-2013 energy legislation on decentralised energy governance	94
5.1.1 Energy Bill 2015 & 2017	95
5.1.2 Clean cooking in post-2013 legislation	99
5.1.3 The Climate Change Act 2016	100
5.1.4 Promulgation issues with energy legislation	100
5.2 Institutional developments since 2013	102
5.3 Developments in grid electricity since 2013	105
5.4 Developments in off-grid electricity since 2013	107
5.5 Developments in clean-cooking since 2013	110
5.6 The development of county governments since 2013	112
5.6.1 Developments in county institution building	113
5.6.2 Developments in county capacity building	115
5.6.3 Developments in county energy initiatives	117
5.7 Conclusion	120
Chapter 6 - Power Relations between Key Stakeholders in Decentralised Energy Governance: The Difference between Rhetoric and Reality	124
6.1 Transnational actor interactions with decentralised energy governance	124
6.2 National government interactions with decentralised energy governance	128
6.2.1 Interactions over grid electricity	129
6.2.2 Interactions over off-grid electricity	135
6.2.3 Small scale off-grid electricity and clean cooking	136
6.3 Community level interactions with decentralised energy governance	138
6.3.1 Community expectations of devolution	138
6.3.2 The extent and nature of community interactions with other key energy stakeholders ..	142

6.3.3 Community level interactions with decentralised energy governance over land rights ...	147
6.4 Conclusion.....	150
Chapter 7 - Decentralised Energy Governance and its Impact on the Local Level: Spatial Variations of Four County Case Studies	153
7.1 Migori.....	153
7.1.1 Developments in decentralised energy governance	154
7.1.2 Transnational actor interactions with decentralised energy governance	155
7.1.3 National government interactions with decentralised energy governance	156
7.1.4 Key county issue: uncoordinated power structures and their impact on the community level.....	160
7.1.5 Migori conclusion.....	161
7.2 Nakuru.....	161
7.2.1 Developments in decentralised energy governance	162
7.2.2 Transnational actor interactions with decentralised energy governance	162
7.2.3 National government interactions with decentralised energy governance	164
7.2.4 Key county issue: geothermal energy and its impact on the community level.....	167
7.2.5 Nakuru conclusion	168
7.3 Turkana	168
7.3.1 Developments in decentralised energy governance	169
7.3.2 Transnational actor interactions with decentralised energy governance	170
7.3.3 National government interactions with decentralised energy governance in Turkana	171
7.3.4 Key county issue: oil and its impact on the community level.....	174
7.3.5 Turkana conclusion	177
7.4 Nairobi.....	177
7.4.1 Developments in decentralised energy governance	178
7.4.2 Transnational actor interactions with decentralised energy governance	179
7.4.3 National government interactions with decentralised energy governance	180
7.4.4 Key county issue: grid electricity cost and reliability and its impact on the community level	183
7.4.5 Nairobi conclusion	184
7.5 Conclusion.....	185
Chapter 8 - Conclusion: the role of decentralised energy governance	188
8.1 Empirical contributions	188
8.2 Methodological contributions	193
8.3 Conceptual and theoretical contributions	194
8.4 Wider applicability of research: implications for policy and practice.....	198
8.5 Future research: where do we go from here?.....	200
8.5.1 Additional case studies	200
8.5.2 Interrogating recent developments.....	201
8.5.3 Nexus approaches	202
References.....	203

Appendix	230
1. Table of key stakeholder interviews	230
2. Semi-structured interview guide	233
3. Questionnaire	235

List of Tables

Table 1.1 Dimensions of the term ‘energy access’	3
Table 1.2 Governance links to missing research themes in current UK energy research	4
Table 1.3 Types of Multilevel governance	6
Table 1.4 Electricity access in the Global South by region.....	7
Table 1.5 Clean cooking access in the Global South by region	7
Table 2.1 Summary of Goldthau’s energy paradigms and corresponding governance patterns.	13
Table 2.2 Key international policies interventions impacting energy and their implications for governance.....	19
Table 2.3 Definitions of decentralisation forms	26
Table 2.4 Multilevel Governance Type 1	35
Table 2.5 Multilevel Governance Type 2	36
Table 3.1 Predicted population without access to modern energy services	40
Table 3.2 2017 Energy access in Africa by region.	40
Table 3.3 Historical context of Kenyan decentralisation: timeline of key events.....	49
Table 3.4 Key Kenyan agencies established after 1995 neoliberal reforms	53
Table 3.5 Key Kenyan energy policies launched before the Constitution	54
Table 3.6 Key articles governing concurrent functions in the <i>Constitution of Kenya</i>	57
Table 3.7 Objects of devolved government in the <i>Constitution of Kenya, Article 174</i>	58
Table 3.8 Allocation of energy functions in the <i>Constitution of Kenya</i>	59
Table 3.9 Allocation of agriculture and health functions in the <i>Constitution of Kenya</i>	59
Table 3.10 Kangu’s Interpretation of concurrent energy functions	60
Table 3.11 Deduced county energy roles from legislation enacted before the Kenyan constitution..	61
Table 3.12 Effect of <i>Energy Act 2006</i> amendments on devolved roles in Kenya	61
Table 3.13 2010 - 2013 post-Constitution legislation and its effect on devolved energy roles in Kenya	63
Table 4.1 Varying disciplines of leading academics in decentralisation and energy governance	67
Table 4.2 Site visits to Kenya.....	67
Table 4.3 Six key stakeholder groups engaged in decentralised energy governance	69
Table 4.4 Transnational actor categories 1-3 (TAC1-3)	71
Table 4.5 County administrations engaged during fieldwork.....	72
Table 4.6 Number and location of semi-structured interviews with each stakeholder group.....	73
Table 4.7 Interview guide topic areas and the research questions they primarily address	75
Table 4.8 Community focus group locations and attendees	78
Table 4.9 Questionnaire responses	83
Table 4.10 Key events attended during fieldwork.....	84
Table 5.1 Post 2013 election legislation affecting devolved energy roles.....	95
Table 5.2 Planning functions in the <i>Energy Bill 2015</i>	96
Table 5.3 Regulation functions in the <i>Energy Bill 2015</i>	97
Table 5.4 Operations and development functions in the <i>Energy Bill 2015</i>	98
Table 5.5 Concurrent or overlapping operations & development functions in the <i>Energy Bill 2015</i> ..	99
Table 5.6 Largest national government led initiatives in each energy sub-sector by US\$ of investment	106

Table 5.7 Perceived level of inter-departmental coordination in county ministry containing energy	115
Table 5.8: Potential factors contributing to county energy plan completion	118
Table 6.1 Stakeholder discussions with communities on energy issues.....	143
Table 7.1 Presidential and governor election results for Migori county in 2013 and 2017.	154
Table 7.2 Migori energy related polices developed since 2013	154
Table 7.3 Energy access in Migori in 2013 (% of households)	155
Table 7.4 Presidential and governor election results for Nakuru county in 2013 and 2017.	162
Table 7.5 Nakuru energy related polices developed since devolution.....	162
Table 7.6 Energy access in Nakuru (Nakuru County, 2016)	162
Table 7.7 Presidential and governor election results for Turkana county in 2013 and 2017	169
Table 7.8 Turkana energy related polices developed since devolution	169
Table 7.9 Energy access in Turkana	170
Table 7.10 Presidential and governor election results for Nairobi county in 2013 and 2017	178
Table 7.11 Nairobi county energy polices developed since 2013.....	178
Table 7.12 Energy access in Nairobi.....	179
Table 7.13 Cooking fuel costs	182
Table 7.14 Factors increasing the chance of a move to MLG2 and their discernibility in case study counties.....	186
Table 8.1 Reasons why sectors conventionally perceived as natural monopolies are not in Kenya..	195
Table 8.2 Model predicting the likelihood of a movement towards MLG2-esque decentralised energy governance in a sub-national territory.....	197

List of Figures

Figure 3.1 Map of sub-Saharan Africa.....	41
Figure 3.2 Model of sub-Saharan African decentralisation	43
Figure 3.3 Chinese-added generation capacity mix in sub-Saharan Africa, 2010-20	45
Figure 3.4 Access to clean cooking and electricity in Kenya.....	48
Figure 3.5 Lack of grid electricity coverage in ASAL areas of Kenya in 2013	51
Figure 3.6 Institutional structure of grid electricity in Kenya in 2017	53
Figure 3.7 Political map of Kenya pre- and post-implementation of the 2010 Constitution	55
Figure 3.8 Structure of governance under the new Kenyan Constitution	56
Figure 5.1 Departments found in county ministries containing energy	114
Figure 5.2 Example county government structure	114
Figure 6.1 Quantity of discussions with each stakeholder group by community.....	143

List of Abbreviations

ACTS	African Centre for Technology Studies
AfDB	African Development Bank
ASALs	Arid and Semi-arid Lands
AU	African Union
CAFOD	Catholic Agency for Overseas Development
CAPEX	Capital expenditure
CAQDAS	Computer Assisted Qualitative Data Analysis Software
CBO	Community Based Organisation
CCAK	Clean Cooking Association of Kenya
CEC	County Executive Committee member
CEO	Chief Executive Officer
CF	County Function
CIDP	County Integrated Development Plan
CO	Chief Officer
CoG	Council of Governors
COP	Conference of the Parties
Cordaid	Catholic Organisation for Relief and Development Aid
CSO	Civil Society Organisation
DECC	Department for Energy and Climate Change
DfID	Department for International Development
DLP	Digital Literacy Programme
E4D	Energy for Development
EC	European Community
EDM	Energy Delivery Model
EnDev	Energising Development project
EOPS	Early Oil Pilot Scheme
ERC	Energy Regulatory Commission
ESMAP	Energy Sector Management Assistance Program
ESPRC	Engineering and Physical Sciences Research Council
ETI	Extractive Industry Transparency Initiative
EU	European Union
FGD	Focus Group Discussion
FPIC	Free, Prior and Informed Consent
GACC	Global Alliance for Clean Cook Stoves
GCF	Green Climate Fund
GDC	Geothermal Development Company
GDP	Gross Domestic Product
GE	Green Economy
GIZ	Deutsche Gesellschaft für Internationale (German Corporation for International Cooperation)
GMG	The Green Mini Grid Facility Kenya
GPOBA	World Bank Global Partnership on Output-Based Aid
GTF	Global Taskforce of Local and Regional Governments
Hivos	The Humanist Institute for Cooperation with Developing Countries
ICLEI	Local Governments for Sustainability
ICT	Information and Communications Technology
IEA	International Energy Agency
IFC	International Finance Corporation

IIED	International Institute for Environment and Development
IMF	International Monetary Fund
IPP	Independent Power Producer
KADU	Kenyan African Democratic Union
KAM	Kenyan Association of Manufacturers
KANU	Kenyan African National Union
KenGen	Kenyan Electricity Generation Company
KETRACO	Kenya Electricity Transmission Company
KNEB	Kenya Nuclear Energy Board
KOSAP	Kenya Off-Grid Solar Access Project
KPC	Kenya Pipeline Company
KPLC	Kenya Power and Lighting Company
KPRL	Kenya Petroleum Refineries Limited
Ksh	Kenyan Shilling
kW	Kilowatt
LA21	Local Agenda 21
LAPSSSET	Lamu Port and Lamu South Sudan Ethiopia Transport Corridor
LCEDN	Low Carbon Energy Development Network
LCPDP	Least Cost Power Development Plan
LMCP	Last Mile Connectivity Project
LPG	Liquid Petroleum Gas
MCA	Member of County Assembly
MDGs	Millennium Development Goals
MECS	Modern Energy Cooking Services
MLG	Multilevel governance
MoE	Ministry of Energy
MoEP	Ministry of Energy and Petroleum
MOU	Memorandum of Understanding
MoWEFNR	(Nairobi county) Ministry of Water, Energy, Environment, Forestry & Natural Resources
MP	Member of Parliament (Kenya)
MW	Megawatt
NCCAP	National Climate Change Action Plan
NDCs	Nationally determined contributions
NETFund	National Environment Trust Fund
NF	National Function
NGO	Non-governmental organisation
NOCK	National Oil Corporation of Kenya
NTA	National Transition Authority
NUA	New Urban Agenda
ODM	Orange Democratic Movement
PSC	Production Sharing Contract
PPA	Power Purchase Agreement
PPP	Public Private Partnership
PS	Principal Secretary
PV	Photovoltaic
PWC	Post Washington Consensus
RA	Research Assistant
REA	Rural Electrification Authority
READ	Renewable Energy and Decentralisation project

REEPASA	Renewable and Efficient Energy for Poverty Alleviation in Southern Africa
RQ	Research question
SACCO	Savings and Credit Cooperative Organisation
SCODE	Sustainable Community Development Services
SDGs	Sustainable Development Goals
SE4All	Sustainable Energy for All
SEI	Stockholm Environment Institute
SERC	Strathmore University Energy Research Centre
SHS	Solar Home System
SONG	Solar Nano Grid project
TAC	Transnational Actor Category
TEA	Transforming Energy Access
UCLG	United Cities and Local Governments
UK	United Kingdom
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Commission on Sustainable Development
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organisation
UNSD	United Nations Statistics Division
US	United States (of America)
USAID	United States Agency for International Development
USD	United States Dollars
USES	Understanding Sustainable Energy Solutions programme
VAT	Value Added Tax
WSSD	World Summit on Sustainable Development
WW2	World War Two
WWF	World Wide Fund for Nature

Chapter 1 - Energy governance in the Global South: a critical research agenda

“Underpowered, inefficient and unequal”, Kofi Annan’s damning verdict of Africa’s highly centralised energy systems, based on an assessment that such systems “benefit the rich and bypass the poor ... undermining sustainable growth, jobs and investment ... [and] reinforce poverty, especially for women and people in rural areas” (Africa Progress Panel, 2015, p.8). A major factor underlying the former United Nations (UN) Secretary-General’s criticism is governance, particularly the failings of central governments. In Annan’s words:

Governance of power utilities is at the heart of Africa’s energy crisis. Governments often view utilities primarily as sites of political patronage and vehicles for corruption, providing affordable energy can be a distant secondary concern (Africa Progress Panel, 2015, p.23).

Annan’s critique stresses the acute need to address the challenges centralised governance and centralised energy systems pose for greater and more equitable energy access, issues disproportionately affecting countries of the Global South. These challenges are particularly pressing as they have the potential to undermine ongoing, high-profile international efforts to address energy access issues, most notably the call of the UN ‘Sustainable Energy for All’ (SE4All) and ‘Sustainable Development Goals’ (SDGs) initiatives “for universal access to modern energy services” by 2030 (SE4All, 2015, p.1).

This PhD directly engages with these concerns by investigating the role of decentralised governance in addressing energy access issues in the Global South. Using Kenya as a case study, the research centres on the interactions and power dynamics between key stakeholders operating in and through decentralised energy governance and explores how these exchanges have shaped the quality of governance emerging. Stakeholders clearly operate at multiple scales. Accordingly, the thesis draws on key human geography perspectives of scalar governance involving multiple stakeholders (e.g. Bulkeley, 2005; Brown et al., 2015; Ockwell & Byrne, 2017) and contested theories of multilevel governance (e.g. Hooghe & Marks, 2003; Jessop, 2016) to better understand the assumed spatial variations in decentralised energy governance.

This introductory chapter first highlights the urgent need for research in this area in section 1.1, emphasising how energy access and governance issues have disproportionately affected the Global South (and in particular sub-Saharan Africa). Section 1.2 then explores the rationale for decentralised energy governance as a response to energy access and governance issues, noting the lack of coverage in the wider literature which has predominantly treated the energy and decentralisation discourses as separate entities. The reasons why sub-Saharan Africa and Kenya were selected as the focal points for the study are then discussed in section 1.3. Lastly, the overall aim and research questions are provided in section 1.4, followed by an outline of the thesis structure in section 1.5.

Global South and Global North: definitions and debates over usage

Used throughout this PhD, the terms ‘Global South’ and ‘Global North’ have become prominent within academia to describe the economic inequalities between the poorer ‘South’ and richer ‘North’, largely because they are considered less hierarchical than their predecessors: the ‘First and Third World’ and ‘Developed and Developing countries’ (Hollington et al., 2015). Yet, these terms are contested and

have been critiqued, notably in the development studies and development geographies discourses, for reflecting a Global North blanket term imaginary which fails to capture the considerable diversity between localities in the South or acknowledge that many contemporary challenges of development are common to both South and North (Maxwell, 1998; McFarlane, 2006; Pieterse, 2001). Despite these criticisms, this study sees value in arguments which understand the term Global South as a political statement for highlighting a part of the world “systematically subordinated both intellectually and in practical terms” (Allen et al., 2014). In addition, this study concurs with Arabindoo (cited in Allen et al., 2014) who finds ‘Global South’ a useful designation for framing research localities without a superlative lens; the geographer also posing the question, “what are the alternatives otherwise?”.

This question and the surrounding debate are clearly not settled and whilst this PhD uses and finds value in the terms Global South and North, I recognise the need for continual engagement with debates concerning this terminology in subsequent research. In line with contemporary revisions of Brandt’s (1980) original demarcation, the Global South is understood in this thesis to encompass Africa, Latin America, Asia (except Japan, Russian Asia, Singapore, Hong Kong, South Korea and Taiwan), and Oceania (except Australia and New Zealand). However, there is recognition that as the term is largely geopolitical, the geography of the two terms is contested and thus subject to change.

1.1 The urgent need to address energy access issues

The need to address barriers to energy access is clear and pressing. Globally, 992 million people lack access to electricity (International Energy Agency (IEA), 2018b), while more urgently, the cooking needs of 2.7 billion are met by the traditional use of solid biomass or coal (IEA, 2018a). The latter is significant because of the severe detrimental environmental and health impacts: the resultant air pollution attributable to 4 million premature deaths annually (World Health Organisation, 2018).

Energy access is geographically uneven with data from the IEA (2018) showing how countries of the Global South are faring worst, particularly those in sub-Saharan Africa. Only 54% of the population of the Global South have access to clean cooking facilities; the remainder are reliant on the traditional use of biomass (IEA, 2018a). Electricity access rates fare better, with 83% of the Global population having access although this drops to 73% in rural locations (IEA, 2018b). This falls dramatically in sub-Saharan Africa where access to clean cooking facilities and electricity stands at 16% and 43% respectively (ibid). Further discrepancies are shown between different socio-economic groups within the Global South’s urban context, with the urban poor more likely to be disadvantaged by low-quality, unreliable electricity services and by having to use and pay more for polluting cooking fuels (UNDP, 2016).

Recognition of the urgency of addressing energy access has also been spurred by a growing acknowledgement of the key enabling role energy plays in a range of transformational benefits critical to human well-being. The globally agreed water, sanitation, education, health and poverty targets of the Millennium Development Goals (MDGs) were deemed unachievable by the IEA (2010) without energy provision. Similarly, the UN Development Programme (UNDP, 2016) stressed direct linkages between SDG7, ‘modern energy for all’, and all of the other 16 SDGs. The internationally renowned energy for development specialist, Subhes Bhattacharyya (2012, p.261), concluded that “consensus seems to exist that without affordable, reliable and clean energy services to the population,

sustainable development cannot be achieved”. Scientific consensus on the anthropogenic causes of climate change has also contributed significantly to the prioritisation of the pursuit of sustainable energy on international development agendas (IPCC, 2014).

Definition of energy access

The term ‘energy access’ is multidimensional (Table 1.1) and no universally agreed definition exists (Bhattacharyya, 2012). For this study, energy access will be defined as that which enables the provision of services to address broader developmental objectives such as those shown in Table 1.1. This definition incorporates the minimum basic needs of lighting, heating, cooking, cooling, communications and earning a living prescribed by Practical Action (2010) and agrees with Bhattacharyya (2012) that clean cooking is a higher priority than electrification due to the severe health impacts of solid fuels and because cooking forms the vast majority of energy demand in the Global South. Viewing energy in terms of services also reflects increasing consensus within the energy studies literature that energy is a means to an end rather than an end in itself and that the development it entails and the accompanying living standards benefits are the real markers of progress (Pachauri, 2011).

Table 1.1 Dimensions of the term ‘energy access’ (Bhatia & Angelou, 2015)

Dimensions	Examples
Scales	Households, community institutions, industry
Services (household)	Cooking, lighting, heating, cooling communication, income generation, refrigeration, entertainment, commercial/industrial, transport
Services (shared)	Street lighting, water pumping, health facilities, education facilities, government offices
Carriers	Electricity (grid and off-grid), renewable energy sources, solid fuels (e.g. biomass, coal), liquid fuels (e.g. petroleum, Liquid petroleum gas (LPG), kerosene, biogas), gaseous fuels (e.g. natural gas)
Quantity and quality	Connectivity, availability, quantity, convenience, safety and standards, health impact, reliability, affordability, environmental impact, legality
Developmental objectives	Gender equality, education, health, food security, rural development, poverty reduction, sustainable development

1.2 Decentralised energy governance as a response

Research addressing the pressing energy access issues facing the Global South has tended to be technocentric and econocentric, resulting in social science approaches and the critical human aspects of energy being overlooked (Watson et al., 2012; Sovacool, 2014). Ockwell & Byrne (2017, p.5) concur with this interpretation, citing the lack of socio-cultural and political approaches as a “scholarly deficit”. A recent review of ongoing UK energy research noted a predominant engineering focus on developing new technologies along with delivery models designed to scale these technological developments, the authors arguing “what has largely been missing in this effort has been an adequate appreciation of the broader social context of these interventions” (Bagley et al., 2018, p.32). Nine key themes were identified by Bagley et al. (2018, p.46) as lacking from the current energy studies literature; among which, governance, and in particular “how energy interventions are governed at a variety of different scales”, were emphasised as

absolutely crucial to grasping how new forms of energy access will affect the lives of the poor across the Global South ... [and] when considering the kinds of skills and capacities that need to be developed if the current wave of energy sector interventions are to bring sustainable and equitable benefits.

The quote reinforces the importance of the scalar approach to decentralised energy governance adopted by this PhD whilst also emphasising how governance is a major underlying factor to effective energy access interventions; a view signalled by other leading energy scholars: Ockwell & Byrne (2017, p.205) stressing that “By far the most critical issue that remains to be addressed relates to the governance of socio-technical innovation system building. Table 1.2 further reinforces these arguments, underlining how governance is a significant factor in the other eight missing themes cited as missing by Bagley et al. (2018, p.46).

Table 1.2 Governance links to missing research themes in current UK energy research (Bagley et al., 2018)

Missing themes	Links to governance
Research & innovation	Call for research into the different forms of support needed to facilitate the “huge” potential for innovation to challenge incumbent technologies in Africa. This implies the governance conditions required to facilitate these different forms of support for innovation and how these conditions link to theoretical understandings of innovation (e.g. ‘disruptive innovation theory’ and ‘theory of social change’).
Longitudinal studies & differential impact	Call for research on the medium to longer-term assessment of the wider impacts of energy access interventions, their unintended consequences, and differentiated impacts (e.g. gender, age, class, ethnicity). This will require “engagement with the complex political economy of energy issues at multiple scales of analysis”.
User demand	The political context (and by implication the governance context) is seen as an underlying factor in the call for “sociology-based research on the nature of social practices of women and men in consuming and paying for energy”.
Energy planning and governance	Call for more research on how governance affects “social and economic relationships that make changes to livelihoods and living standards possible”. Governance factors seen as “absolutely crucial” to understanding how new forms of energy access will affect the Global South poor. Understanding how energy interventions are governed at different scales also deemed absolutely crucial, particularly in terms of the capacities needed to be developed in light of current new energy sector interventions.
Reaching the poorest	Need for research into the governance conditions which can help “[ensure] adequate support for enterprises and practitioners seeking to reach the ‘last mile’”.
Energy for productive uses	Call for wider barriers to productive use uptake to be explored, which includes key aspects underlain by governance such as local/national policies, corruption and an enabling institutional environment.
Scaling up of mini and micro-grids	Call for “sustained work on the forms of governance through which mini-grids are developed and managed and also how they intersect with household levels systems and with the extending national grid” (community involvement particularly stressed).
Transforming clean cooking	Call for “more holistic thinking about the clean cooking challenge” This necessitates incorporating governance into the understudied areas of distributing and marketing cleaner fuels and enabling more sustainable forms of biomass production.
Energy access in urban areas	Call for “further expansion on research into sustainable urban governance” to “identify the specific needs of the urban poor, and to integrate them into energy and urban planning processes”.

The term ‘governance’ has also assumed added importance in the light of increasing decentralisation, a process commonly understood as the transfer of authority from central to lower-level actors

(Wunsch, 2014), which Berkes (2010, p.491) sees as “a kind of governance reform, a mechanism to bring citizens, local groups and organizations into the policy and decision-making process”. Proponents of decentralisation also argue the process facilitates more informed, responsive, and accountable governance, enabling more effective delivery of services (Bennett, 1990; Donahue, 1997).

Governance derived from decentralisation has also been viewed favourably in the context of energy by leading social science contributions to energy studies. Brown et al. (2015, p.9) emphasise governance in the context of decentralisation has particular relevance to energy due to “the challenges that the highly complex nature of energy infrastructures pose for effective governance”. This complexity is elaborated upon by Goldthau (2014, p.134), who stresses the particular challenges of infrastructure solutions spanning multiple scales, problems concerning common pool resources, and the interactions between the existing dominant “socioeconomic institutions, regulatory agencies, incumbent market actors and social norms”. Sovacool (2011, p.3832) notes that such polycentric governance approaches – i.e. which mix scales, mechanisms, and actors – “can foster equity, inclusivity, information, accountability, organizational multiplicity, and adaptability that result in the resolution of climate and energy related problems”. Goldthau (2014, p.134) is similarly supportive, arguing:

the governance of energy infrastructure needs to be polycentric. This allows for contextualization, experimentation and innovation, which can lead to sustainable infrastructure solutions and learning across scales.

Yet, within these espoused polycentric approaches, a critical research gap remains concerning the role of decentralised energy governance in Global South contexts and under what circumstances multi-scale governance arrangements work. Whilst attention has been paid to the impact of decentralisation on the governance of other sectors in the Global South (e.g. water) and on energy in the Global North, it has been critically overlooked in the context of energy governance in the Global South (Brown et al., 2015). Thus, given the increasing trend of decentralisation in the Global South, along with the prioritisation of energy access on international development agendas, the focus of this thesis on appraising the role of decentralised energy governance is both timely and urgently needed.

Multilevel governance: concept and analytical framework

Integral to this study’s main focus of enquiry are the concepts of ‘governance’ and ‘multilevel governance’. Widely used, the former generally describes the interactions between a broad range of actors (public and private sector, government and non-government) involved in the governing process (Kooiman & Bavinck, 2005; Bache & Flinders, 2004). Governance is thus distinct from ‘government’ as it is not simply the latter exercising its authority, but instead depicts a shared responsibility. In doing so, it incorporates the ideals of greater stakeholder collaboration, citizen participation, and community empowerment that the process of decentralisation is assumed to engender.

‘Multilevel governance’ builds on the notion of governance by asserting that the interactions between actors operate on multiple scales. For over two decades multilevel governance (MLG) has provided an important analytical framework to understand the forms of governance stemming from decentralisation and has been applied to a wide range of sectors but as far as the author is aware never to decentralised energy governance. It is the contention of this study that multilevel governance

also provides a framework to develop new knowledge and understanding of the understudied forms of decentralised energy governance emerging from the Global South, and in doing so facilitate normative judgements as to their appropriateness for particular localities. To this end, this research uses Hooghe and Mark’s (2003) seminal intervention differentiating between ‘Multilevel Governance Types I and II’ (MLG1 & MLG2¹) (outlined in Table 1.3) as the primary theoretical tool within the study’s conceptual framework². A fuller discussion of the different concepts of MLG is provided in Chapter 2.

Table 1.3 Types of Multilevel governance (Hooghe & Marks, 2003)

	Multilevel Governance Type 1 (MLG1)	Multilevel Governance Type 2 (MLG2)
Structure	Hierarchical structure	Multiple, often overlapping, structures
Characteristics	<ul style="list-style-type: none"> ▪ General-purpose jurisdictions ▪ Nonintersecting memberships ▪ Jurisdictions at a limited number of levels ▪ Systemwide architecture 	<ul style="list-style-type: none"> ▪ Task-specific jurisdictions ▪ Intersecting memberships ▪ No limit to the number of jurisdictional levels ▪ Flexible design

1.3 Sub-Saharan Africa and Kenya as a case study region and country

The particular urgency of addressing energy access issues in sub-Saharan Africa is clear as the region has fared significantly worse compared to other parts of the Global South, particularly in comparison to Developing Asia, which has the second worst energy access rates (%) after sub-Saharan Africa. Table 1.4 shows the proportion of the population with electricity access in ‘Developing Asia’ rose from 79% in 2010 to 91% in 2017, resulting in a 277 million fall in the number of people without electricity (IEA, 2018b). In contrast, although electricity access in sub-Saharan Africa increased from 32% to 43% between 2010 and 2017, the number of people without electricity grew by 14 million due to a significantly higher population growth rate. In 2010, sub-Saharan Africa held approximately 47% of the world’s population without electricity. By 2017 this had increased to 61%. Further regional discrepancies are evident in the disparity between rural and urban locations: a gap far wider in sub-Saharan Africa than the rest of the Global South.

¹ Marks and Hooghe term the concepts using Roman numerals (i.e. Type I and Type II). For ease of reading, this study prefers Arabic numbers.

² The thesis uses Imenda’s (2014, pp.189-193) definition of conceptual framework as “[a synthesis of] a number of concepts, research findings and theoretical perspectives ... to explain or predict a given event, or give a broader understanding of the phenomenon of interest – or simply, of a research problem” which the author notes as differing from a theoretical framework which is “the application of a theory, or a set of concepts drawn from one and the same theory, to offer an explanation of an event”. This study concurs with Imenda (2014, p.193) that despite the terms conceptual and theoretical framework often being used interchangeably within academia, the two are not synonyms and that conceptual frameworks are usually more appropriate for social sciences where “research problems cannot ordinarily be explained by one theoretical perspective”.

Table 1.4 Electricity access in the Global South by region (IEA, 2012; IEA, 2018b)

Region*	Population with access (%)				Population without access (million)	
	Total		Urban	Rural	2010	2017
	2010	2017	2017	2017		
Developing countries	74%	83%	93%	73%	1265	992
Sub-Saharan Africa	32%	43%	67%	28%	589	603
Developing Asia	79%	91%	98%	85%	628	351
Central & South America	94%	96%	98%	86%	29	20
Middle East	91%	92%	98%	78%	18	18

*The naming of regions follows IEA conventions. The term 'Developing countries' is broadly equivalent to the Global South, while 'Developing Asia' constitutes all of Asia except Central Asia and the Middle East.

Access to clean cooking facilities highlights a far starker contrast between the progress made in sub-Saharan Africa and the rest of the Global South. Table 1.5 shows access rates are far higher in the other Global South regions, with considerable progress made in Developing Asia (IEA, 2018a). In Developing Asia, clean cooking access increased from 42% to 56% of the population between 2010 and 2017, resulting in the total number of people without clean cooking facilities falling by 495 million. This contrasts markedly with sub-Saharan Africa, with the IEA (2018a, p.1) stressing that “The challenge in sub-Saharan Africa remains acute, with a deteriorating picture”. Only 16% of the population had access to clean cooking in 2017 (from 13% in 2010) while the high population growth means 193 million more people now lack access to clean cooking compared with 2010.

Table 1.5 Clean cooking access in the Global South by region (IEA, 2012; IEA, 2018a)

Region	Population with access (%)				Population without access (million)	
	Total		Urban	Rural	2010*	2017
	2010	2017	2017	2017		
Developing countries	45%	54%	%	%	2588 (+ 400) = 2988	2677
Sub-Saharan Africa	13%	16%	%	%	696 (+ 4) = 700	893
Developing Asia	42%	56%	%	%	1814 (+ 396) = 2210	1715
Central & South America	86%	89%	%	%	65	56
Middle East	95%	95%	%	%	10	11

*For population without access in 2010, IEA (2012, p532) only gives data for the traditional use of biomass but estimates a further 400m coal users “mainly in China but [with] significant numbers in South Africa and India”. Exact numbers of coal users per region are not given for 2010, so estimates extrapolated from 2015 IEA data are provided in brackets.

Kenya as a case study

Within this regional context, Kenya is a particularly relevant case study as the political and energy context suggests the country is well placed to establish effective decentralised energy governance. Kenyan decentralisation has been particularly extensive (Cheeseman et al., 2016), described by the World Bank (2015, p.1) as “among the most rapid and ambitious devolution processes in the world”. Key energy powers have been devolved, such as county energy planning, suggesting a more significant role for decentralised energy governance than other nations engaged in a devolution process. The country’s infrastructure also seems facilitatory: Kenya has the world’s largest per capita photovoltaic solar market, aided by the ubiquity of mobile money (e.g. M-PESA³) which mitigates the issue of upfront equipment costs by facilitating payment on a ‘pay as you go’ basis (Ondraczek, 2013).

³ M-Pesa is a mobile phone-based service for transferring money transfer and microfinancing.

Despite this seemingly conducive context for decentralised energy governance, at the inception of this study Kenya paradoxically had energy access rates below average for sub-Saharan Africa. 80% of the population relied on solid biomass for cooking, while 32% had access to electricity, dropping to 19% in rural areas (Sustainable Energy for All, 2016; African Development Bank Group, 2014). This paradox initially present in Kenya questioned the validity of the assumption that decentralisation improves service delivery, and thus indicated an ideal testing ground for investigating the circumstances in which decentralised energy governance arrangements work most effectively.

Over the course of the study, significant investment in electricity (predominantly grid electricity initiatives) saw access increase to 73% of all households by April 2018 according to national government figures (KPLC, 2018), although the validity of the stated increase, and the quality and affordability⁴ of the electricity provided has been questioned by several sources (Lee et al., 2016). Although these criticisms are valid, electricity access has nevertheless improved by a fairly considerable margin. This adds further weight to the choice of Kenya as a case study as it prompts the question to what extent the increase can be attributed to effective decentralised energy governance, particularly as this period of increasing electricity access coincides with the era since the first county governments were installed in 2013.

Kenya was also selected as the Geography Department at Loughborough University have established connections with a range of Kenyan energy stakeholders, including national and local government officials, NGOs, universities, research groups and private sector actors. Many of these contacts are a result of the earlier Renewable Energy and Decentralisation (READ⁵) and Solar Nano Grid (SONG⁶) projects, which were partly sited in Kenya and led by my supervisor, Professor Ed Brown. Both projects are concerned with the themes of decentralised energy governance and provided an invaluable entry point from which to ground this thesis and an opportunity to build on leading research in the field. The experience the department has of working in the Kenyan context and its extensive contacts was also anticipated to help avoid extractive research and foster collaborations with local stakeholders, aiding the development of Global South/Global North partnerships and diminishing the scope for the study to exacerbate existing geographical inequalities in the knowledge economy.

1.4 Research aim and questions

The aim and research questions were informed by findings in the wider literature, specifically the critical lack of attention paid to decentralised governance in addressing energy access issues in the Global South (Brown et al., 2015). This is of particular surprise given the Global South is the site of increasing and, in many cases, extensive decentralisation, a process implying changing national-local political relationships and a more prominent role for decentralised governance.

⁴ Affordability has been particularly controversial of late as electricity prices were kept artificially low in the run up to the 2017 election to favour the incumbent coalition, only to be significantly increased post-election (Wafula & Achuka, 2018).

⁵ Funded by the UK Engineering and Physical Sciences Research Council (EPSRC) and the UK Government Department for International Development (DFID), the READ project (2013-15) scoped the implications of decentralisation for energy governance, including an exploration of energy literacy capacity amongst local authorities in Kenya and Rwanda.

⁶ The EPSRC, DfID, and UK Department for Energy and Climate Change (DECC) funded SONG project (2014-18) investigated the viability of 'nano-grid systems' (1-5kW) for small off-grid communities in Kenya and Bangladesh.

This study seeks to bridge the gap between the discourses on decentralisation and energy access, which have hitherto largely been discussed as separate entities. Through empirical research and critical engagement with the theoretical and conceptual debates of the aforementioned two literatures, the principal aim is **to investigate the role of decentralised governance in addressing energy access issues since the devolution process was instituted in Kenya in 2013**. Developed from this aim are three research questions which centre on the experiences, interactions, and agendas of the wide range of stakeholders operating at multiple scales in and through decentralised energy governance. The specific research questions (RQs) are:

RQ1: How has the process of decentralisation and decentralised energy governance unfolded in Kenya?

RQ2: How have the interactions and agendas of various energy stakeholders shaped the decentralised energy governance which has emerged in Kenya?

RQ3: How has the process of decentralisation and the interactions and agendas of various energy stakeholders shaped the development of decentralised energy governance at the local level in Kenya?

These research questions respond to specific gaps identified in the literature. RQ1 addresses the lack of research concerning local level energy governance in the context of decentralisation, building on the more macro regional scale analysis offered by the few existing studies (e.g. Havet et al. (2009); Brown et al. (2015)) by providing a specific in-depth country analysis of Kenya. RQ2 focuses on the interactions and power dynamics between key energy stakeholders to better understand how they have helped shape developments in Kenyan energy governance, responding to Goldthau's (2014, p.139) call for research which investigates "when multi-scale governance arrangements work, and under what circumstances they deliver – or not". In contrast to the broader state level analysis of power relations in RQ1-2, RQ3 provides a county level response to Goldthau's call which is deemed critical if the likely geographical disparities in local energy governance are to be better understood.

Together, these research questions address the issue of whether the intended devolution process and its envisioned implications for decentralised energy governance (and consequently energy access) match the realities experienced by stakeholders operating on the ground. This issue is of importance as a disconnect between intended policy and reality has a number of significant implications. It could indicate decentralised energy governance has not been prioritised, that top-down centralised decision-making and energy systems still predominate, redolent of a more hierarchical MLG1 system of governance. Alternatively, it may suggest particular challenges, such as capacity issues, facing the newly installed county administrations, which may hinder the implementation of a more representative MLG2 form of governance.

Overall, it is envisioned that the findings from the study will contribute to key conceptual and theoretical debates concerning the changing spatial and scalar realities of power implied by decentralisation and their consequences for the role of the state and energy governance. In addition, the thesis's novel application of MLG to energy governance is expected to develop new knowledge concerning the effectiveness of MLG as a means to better understand decentralised energy governance in the Global South. Ultimately, it is intended that the findings from the PhD will inform

policy making which enhances decentralised energy governance and energy access more broadly across a range of sub-Saharan Africa and Global South contexts, acknowledging, as Sovacool (2014, p.17) does, that such approaches “do not come without risks” and there is a need to better understand “how ... the advantages of decentralization [can] be synergized with those of centralization”. Thus, it is hoped the learnings from the Kenyan experience will contribute to an enhanced understanding of how decentralised energy governance might most effectively be applied across the Global South.

1.5 Thesis structure

The thesis is composed of seven further chapters, structured as follows:

Chapter 2 reviews the decentralisation and energy studies literatures, and explores the contested debates concerning the central themes of the PhD: energy access, decentralisation, and governance. The chapter contends there has been a critical lack of engagement between the decentralisation and energy literatures in a global South context, undermining decentralised governance as a potential means to address energy access issues, whilst also justifying the focus of this study. The use of multilevel governance as the analytical framework of the study is then introduced and the reasons behind its appropriateness explored.

Chapter 3 builds on the previous chapter, focussing the global debates on decentralisation and decentralised energy governance within the realities of the regional context of sub-Saharan Africa, and more specifically, Kenya, the site of the empirical research of this thesis. The region is seen to be significantly underrepresented in the literature despite being the most deprived in terms of energy access. An overview of the main drivers behind Kenyan devolution is then presented, with the post 2007 election violence seen as the main spur. The chapter argues the resulting haste to implement the devolution process led to ambiguous legislation which undermined the decentralisation of sectors such as energy which previously had little to no local level representation.

Chapter 4 critically appraises the methodology of the thesis and explores the debates surrounding the use of predominantly qualitative approaches in studies investigating energy governance in the Global South. It is argued that a predominantly qualitative approach is required to measure the overlooked human dimensions present within the energy sector and the quality of governance they shape. Quantitative methods are deemed useful in a supportive role to help determine the representativeness and scalability of qualitative findings. Positionality issues are also emphasised, notably the impact of Global North researchers on existing geographical inequalities in the knowledge economy. Findings drawn from the chapter are intended to be practical, with the hope that lessons learned from the research process will be of use to other researchers working in the Global South.

The first of three empirical chapters, **Chapter 5** addresses RQ1 by exploring the developments in Kenyan decentralised energy governance since the implementation of the county governments in 2013. It provides an analysis of how legislative developments in this period (or lack thereof) have shaped the energy governance which has evolved and assesses the impact of county governments on decentralised energy governance during their first term. It is argued that the inability or unwillingness of national government to cede effective power to devolved units has so far presented the most significant barrier to decentralised energy governance playing an effective role in delivering more locally appropriate energy services.

Chapter 6 focuses on RQ2 and adopts a scalar approach, exploring the interactions of stakeholders operating at transnational, national and community scales with decentralised energy governance. These power relations are argued to have resulted in decentralised energy governance bearing more of the hallmarks of MLG1; a significant departure from the rhetoric of Kenyan devolution which appears to embody much of MLG2. The chapter concludes by proposing that governance arrangements have worked most effectively when one key stakeholder group is not operating at an overwhelming position of strength compared to the other(s). Such imbalances in power dynamics are not readily identified by MLG, raising questions over the validity of using Hooghe and Mark's framework to understand the changing realities of power and governance emerging from a decentralisation process.

Building on the findings of the previous chapter, **Chapter 7** addresses RQ3 by examining how the inequities in power relations found at the broader state level are being experienced in the energy governance present in four individual counties: Migori, Nakuru, Turkana, and Nairobi. Replicating the approach in Chapter 6, stakeholder interactions with decentralised energy governance at transnational, national, and local scales are explored in each county. The chapter finds many of the inequities in inter-scalar power relations seen at state level are also present in the four counties, but argues important spatial variations exist; a more representative MLG2-esque system of governance emerging in counties which have prioritised the energy sector and where non-governmental stakeholders are actively involved.

Chapter 8 draws together the main empirical, methodological, conceptual and theoretical contributions of the thesis. Addressing the overall aim and research questions, the thesis contends that the Kenyan experience of decentralised energy governance has been spatially uneven, influenced primarily by inequities in inter-scalar relations which owe more to MLG1 forms of governance than the more MLG2 system devolution proports to attain. Within this milieu, it is argued that facilitating MLG2-esque networks of local actors to provides checks and balances to top-down governance is the key role of decentralised energy governance. The wider conceptual and theoretical of the research are then highlighted, with the Kenyan experience argued to have significant applicability for broader debates concerning the role of the state and the concept of decentralised energy governance in the Global South. Possible directions for future research are also examined. The thesis suggests that additional case-study analyses and nexus-based approaches are required to enhance the understanding and implementation of decentralised energy governance in the Global South.

Overall, this thesis offers a better understanding of the role of decentralised energy governance in addressing energy access issues in the Global South and Kenya. It delineates in what circumstances decentralised multilevel governance arrangements function most effectively and carves a distinct facilitator role for local government that has applicability not only in Kenya, but broadly across the Global South. In doing so, the thesis questions the validity of Hooghe & Marks' MLG framework to fully account for the effectiveness of multilevel decentralised energy governance as the twin concepts of MLG1 and MLG2 do not identify critical power differentials. As these power imbalances vary according to spatially contingent factors, it therefore follows that further geographical based empirical research is required to build on this study's findings and develop deeper understandings of how the two forms interrelate in various Global South energy contexts.

Chapter 2 - Understanding Energy Access in an Era of Decentralisation

There is an urgent need to address the ways in which energy access issues are being framed in the Global South, and in particular the overlooked but potentially crucial role of decentralised energy governance. The aim of this chapter is to unpack these thematic priorities by providing a critical analysis of the two key areas of literature most relevant to this study: energy studies and decentralisation. Exploring the intersection of these two literatures is considered critical as they have largely been discussed as separate entities in a Global South context (Brown et al., 2015). This scholarly deficit undermines the potential for decentralised governance to address energy access issues and reinforces the need for this study.

To achieve this aim, the chapter begins by examining the discursive framing of the energy studies and decentralisation literatures. It does this by assessing the influence of prevailing economic paradigms on the energy sector and its governance. Section 2.2 then turns to the energy studies literature, highlighting how limited understandings of energy access and a lack of social science-based approaches have impeded the development of an evidence base to better inform energy policy on effective energy governance. Turning to the decentralisation literature, section 2.3 argues the issues found within the energy studies discourse have been compounded by a lack of attention paid to energy and its governance within the context of decentralisation in the Global South. Representations of governance are then critically examined in section 2.4, providing explanation for the use of Hooghe and Mark's seminal 'Multilevel Governance Types I and II' as the analytical framework for this study. Lastly, section 2.5 concludes by summarising the key knowledge gaps this study seeks to address.

2.1 Paradigm shifts and energy governance

Energy, like almost no other sector, reflects changing economic paradigms on a global scale.

This is the assessment of Andreas Goldthau (2012, p.200) on the impact of paradigmatic shifts on energy policy and governance⁷, the leading international relations and energy governance scholar explaining how:

paradigms are lenses on reality and hence determine policy agendas. As a result, ... they are also the basis of energy governance arrangements set in place to deliver on these agendas (Goldthau, 2012, p.206).

Given their impact on governance, paradigm shifts are therefore highly relevant to the multilevel governance focus of this thesis (on multilevel governance), particularly as the various shifts have largely concerned changing attitudes towards the role of the state. Goldthau (2012) delineates a series of 'energy paradigms' emerging in response to their economic counterparts, which provides a useful means to explore the impacts that shifts in paradigm have had on energy policy and governance in the Global South. While other authors have also explored energy paradigms, notably to discuss shifts in national and geopolitical energy policy objectives (e.g. Flavin & Dunn, 1999; Helm, 2007), the use of Goldthau's paradigmatic framework in this study is justified as its explicit focus on governance

⁷ In line with conventional academic thinking, this thesis takes 'paradigm' to mean "an accepted model or pattern" (Kuhn, 1962, p. 23)

patterns and the influence of the Global South provides a more convincing and apt framing for research on decentralised energy governance in sub-Saharan Africa.

Goldthau’s identified paradigms are presented according to chronological era of prominence (Table 2.1), yet it is important to recognise processes of change are often “messier and less linear” than this suggests (Kern et al., 2014, p.516) such that multiple energy paradigms can, and often do, coexist concurrently (Sovacool, 2008).

Table 2.1 Summary of Goldthau’s (2012) energy paradigms and corresponding governance patterns.

Energy paradigm & era of prominence	Shaped by	Policy challenge	Policy agenda	Governance patterns
Statism (Post WW2 to 1970s)	Global North	Energy security	Public provision	<ul style="list-style-type: none"> ▪ Vertical integration of energy value chain ▪ State-run monopoly ▪ State as owner
Liberalism (1980s & 1990s)	Global North	Energy security	Private provision	<ul style="list-style-type: none"> ▪ De-integration of energy value chain ▪ Free market exchange ▪ State as rule setter & regulator
Interventionism (2000+)	Partly Global South	Energy security Climate change Energy poverty	Private with some public provision	<ul style="list-style-type: none"> ▪ Backward integration into upstream ▪ Energy mercantilism re externalities ▪ State as stakeholder of ‘public interest’
Fragmentation (currently emerging)	Entirely Global South	Energy security Climate change Energy poverty	Mixed public/private provision	<ul style="list-style-type: none"> ▪ State-market hybrids ▪ Energy governance à la carte (incorporating various state roles)

Statism

The first of Goldthau’s energy paradigms, *statism*, has its roots in post-Second World War reconstruction and was predominant until the 1970s. Reflecting notions of the state and economic development found within the ‘realism’ tradition of international relations (Snyder, 2004) and the main development theories of the 1960’s and 1970’s (i.e. Modernisation, Structuralism and Dependency theory), the statist paradigm sees the state as the key actor in the provision of public goods and services, Goldthau (2012) noting this was particularly the case for sectors reliant on infrastructure networks and thus considered natural monopolies such as telecommunications, railways, water, district gas heating as well as grid electricity.

Energy, particularly centralised large hydro, was situated prominently within these development debates, advocated by development agencies as a key feature of technology driven industrialisation and economic progress (Van Der Straeten, 2011; Iwayemi, 1998)⁸. Electricity was often prioritised over other development goals (e.g. irrigation) as its particular characteristics lent themselves to the objective of measurable development – critical to the form of development envisaged by Modernisation theory, which was supported by both international donors and, initially, by new nation states (Van Der Straeten, 2011).

To accommodate these ideological underpinnings, governance models veered towards state-run monopolies incorporating full control of the energy value chain (Goldthau, 2012). In addition, the

⁸ This advocacy was not only found in the Global North. Showers (2011, p.200) adds that leaders of newly independent African states “were enthusiastic” about hydroelectricity’s potential to aid industrial development.

paradigm's establishment in the Global North provided the region 'rule-setting'⁹ power over global energy agendas, resulting in a tendency for the 'rule-taking' Global South to follow Global North energy pathways and adopt highly centralised energy systems which were often ill suited to the socio-political contexts found within the Global South.

*Liberalism*¹⁰

An abrupt shift in economic paradigm emerged as neoliberalism took hold in the early 1980s, sparked by the economic crises of 1973-74 and spurred by the elections of conservative politicians Margaret Thatcher in the UK (1979) and Ronald Reagan in the US (1981). Later codified in the 'Washington Consensus' – the key Global North development framework of the 1990s (Williamson, 1990¹¹) – neoliberalism contrasted with *statism* in seeing the state as the problem rather than the solution; the state's lack of profit motive rendering it less efficient than private companies (Stigler, 1971). Neoliberalism thus called for the market to determine costs and the privatisation of state-run companies.

Goldthau's (2012) *liberalism* paradigm sees energy governance responding to neoliberalism via the increased privatisation and de-integration of state-run energy monopolies as energy became progressively regarded as a private good. Correspondingly, the role of the state was increasingly "limited to the role of a rule setter and enforcer, not owner. Its main task ... to provide for a level playing field for competition and to enforce legal frameworks" (Goldthau, 2012, p.202).

Interventionism

However, disquiet over market based approaches grew in the late 1990s following recognition from "proponents and critics alike" that the neoliberal economic paradigm had largely failed to deliver (Rodrik, 2006, p.973). Most nations of the Global South stagnated economically (Easterly, 2001)¹² while crises befell a number of states following neoliberal doctrines, countering the core ideological notion that market reforms would stimulate growth (World Bank, 2005)¹³. Contrastingly, the success stories of the era were "unexpected" from a neoliberal perspective as Rodrik (2006, p.975) explains:

China and India increased their reliance on market forces, of course, but their policies remained highly unconventional. With high levels of trade protection, lack of privatization, extensive industrial policies, and lax fiscal and financial policies through the 1990s, these two economies hardly looked like exemplars of the Washington Consensus. Indeed, had they been dismal failures instead of the successes they turned out to be, they would have arguably presented stronger evidence in support of Washington Consensus policies.

⁹ Goldthau (2012, p. 205) defines rule setting power as "the ability to create the institutions that are suitable and able to deliver on related policy agendas" which itself "is determined by the impact domestic decisions have on third actors, countries or systems".

¹⁰ Goldthau names his paradigm: 'Liberalism', although it seems it could quite conceivably have been called 'Neoliberalism' as it essentially captures the same underlying economic arguments found within the latter, more commonly used term.

¹¹ Williamson disputes the accuracy of what was done in the name of the Washington Consensus, stating it was applied far more "mechanistically" than intended (World Bank, 2005, p. xi).

¹² Global South median per capita income growth was 0.0 percent in 1980-98 but 2.5 percent in 1960-79 (Easterly, 2001).

¹³ Examples include Mexico (1994), East Asia (1997), Brazil (1998), the Russian Federation (1998), Turkey (2000), and Argentina (2002) (World Bank, 2005a).

Recognition of the failings of neoliberal development ideals prompted Global North institutions to develop a 'Post Washington Consensus' (PWC) to remedy the shortcomings of its predecessor. The PWC which emerged added social and regulatory reforms, with a notable emphasis on inclusive growth, poverty reduction, and 'good governance' (Kaufmann et al., 1999, p.1). However, it remained firmly market orientated, representing as Güven (2018, p.392) notes "a turn-of-the-century upgrade of orthodox neoliberalism" rather than a genuine alternative.

However, the influence of the PWC on energy seems more profound than in other sectors; its social regulatory reforms appear to have been increasingly mirrored by global energy agreements, with the landmark World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 incorporating social and human development dimensions into international energy policy discussions (Najam & Cleveland, 2004). The increasingly social nature of international energy agendas was further pushed by the emerging UN concept of the Green Economy (GE), which, although adhering to or, in some cases, intensifying neoliberal practices, also clearly helped drive sustainability ideals to the fore, as later captured by the 2011 Sustainable Energy for All (SE4All) agenda. Thus, whilst economically, concepts such as the PWC and GE seem merely extensions of the neoliberal model, their influence vis-à-vis energy seems sufficient to justify Goldthau's proclamation of a new energy paradigm: *interventionism*.

For Goldthau (2012), interventionism emerges as the prevailing energy paradigm in the early millennium once climate change and energy poverty joined energy security as the principal concerns of global energy agendas: a triumvirate of issues, commonly conceptualised as the 'energy trilemma' (ODI, 2012). Manging this trilemma became widely seen as the "central challenge" for energy governance (Gunningham, 2013, p.184); a priority reinforced by an "increasing unease" over the capability of the market to deal with the greater complexity of this new energy agenda, particularly the pricing of environmental externalities and provision of affordable modern energy services (Goldthau, 2012, p.202)¹⁴.

The governance response to interventionism saw energy continue to be primarily provided by the private sector, but become both complimented and contested by re-emerging forms of state intervention (Goldthau, 2012), while Herington et al.'s, (2017) similar *sustainable development* energy paradigm also notes increasing collaboration with community led agencies. This polycentric system saw the perceived role for the state shifted to that of "a stakeholder of public interest", mandated to adopt a more mercantilist approach to protect key strategic assets and address the externalities of the energy trilemma (Goldthau, 2012, p.207). Interventionism also saw a shift in rule setting power; viewed by Goldthau as inextricably linked to changing shifts in paradigm. Whereas the previous statism and liberalism paradigms were shaped by the economic hegemony of the Global North, the emergence of China and the focus on energy poverty resulted in interventionism being partly shaped by the Global South.

Fragmentation

Writing in 2012, Goldthau viewed a new energy paradigm of *fragmentation* emerging: one which advocated a less dogmatic, state-private hybrid approach to energy governance. The initial roots of

¹⁴ Externalities most notably include greenhouse gas (GHG) emissions

this shift can be seen in conclusions drawn from the failings of the neoliberalism economic model, the former vice president of the world bank, Gobind Nakani (World Bank, 2005, p.xiii) acknowledging:

The central message ... is that there is no unique universal set of rules ... [W]e need to get away from formulae and the search for elusive 'best practices'

For Rodrik (2006, p.986), Nakani's assessment represents "a mea culpa as well as a way forward"; the economist agreeing with the World Bank's (2005a, p.xii) turn towards "country-specific and institution-sensitive" economic policies. This call for more flexible, context specific approaches were buoyed by the mixed state/market economies of developing Asia (especially China and India) emerging largely unscathed from the 2008 financial crisis, boosting their role model status at the expense of Global North doctrines.

This growing Global South influence is reflected in Goldthau's (2012) fragmentation energy paradigm which he sees as "entirely driven" by the vast increases in the region's energy consumption¹⁵, contrasting markedly with the predicted falls in the Global North. Goldthau (2012) argues this increased energy demand affords the Global South power and leverage as international responses to the energy trilemma (particularly climate change) would amount to little without Global South participation. Signs of this agenda setting power were perhaps evident at the Rio+20 conference (2012) where the market-based 'Green Economy' was reconfigured to address Global South concerns, specifically the Global North was to provide funding for implementing the GE. In addition, there was mutual recognition that states "needed to be able to define [the GE] to fit their own specific circumstances" (TWN, 2012, p.1).

Similarly, the governance response to fragmentation does not prescribe a state or market-based approach but advocates cherry picking from both according to the specific energy requirements of a given locality; the assumption being that governance models "are no longer universally applicable, and policy prescriptions need to adapt to country or even local contexts" (Goldthau, 2012, p.207). This more flexible paradigm, shaped by Global South realities, appears to present an opportunity for alternatives to the energy governance norms of the Global North which imply centralised carbon-intensive energy systems, often ill-suited to meeting the climate change and energy poverty challenges of the Global South. In the words of Goldthau (2012, p.206):

Finding an alternative pathway, possibly leapfrogging the western experience and fostering a decentralised system instead, might enable the new decision makers in Beijing and Delhi to avoid and circumvent some of the mistakes that have been made in earlier industrialisation processes.

The quotation highlights the need for research which investigates how policy and governance might facilitate effective 'alternative pathways' and 'decentralised systems', ostensibly more viable in the emerging fragmentation paradigm devoid of overriding prescriptiveness.

Yet, more recent treatments suggest evidence of a shift towards fragmentation is mixed. Kern et al. (2014, p.523) found signs in the UK, noting a shift in policy paradigm to one which has "'picked and mixed' between perspectives on energy and how energy should be governed". However, they add

¹⁵ Predicted to account for all new growth in energy demand from 2020 (Goldthau, 2012)

that while the policy changes amount to a policy paradigm shift, little has altered in terms of the on the ground characteristics of the energy system, with the principal actors still the big six private energy companies whose behaviour and influence is little changed. Likewise, Herington et al. (2017, p.1412) noted in a rural development context, energy planning had hardly changed over the past 35 years (up to 2016) and was largely “out of step with contemporary paradigms of energy access and development”, remaining largely techno-economic focussed and consequently shorn of meaningful local stakeholder engagement. These contrasts between paradigm and on the ground practices of energy governance highlight how key to the development of less centralised alternative pathways under fragmentation will be conceptualisations of how the state operates on different scales and the need to understand how spatially contingent power relations and interests running in and through the state and energy sector are operationalised on different scales. These dynamics also support human geography arguments concerning the need to view the state and energy sector in relational terms (Angel, 2017; Van Veelen, 2018) and emphasise the importance of this study’s focus on cross-scalar stakeholder interactions.

The fragmentation paradigm’s advocacy of decentralised systems also raises questions concerning the future of the grid. Corneli & Kihm (2016) suggest a regulatory paradigm shift is likely needed, with state funding used to support the social benefits of grid connectivity as increasingly competitive off-grid technologies reduce the profitability of former centralised grid monopolies. The authors note this shift requires acceptance of “the grid as basic ‘public good’ infrastructure much as roads and airports are treated today”, with the grid potentially evolving to become a platform for various off-grid energy systems – a blending of centralised and decentralised approaches seemingly indicative of the polycentric governance within fragmentation. However, evidence from both Global North (Stein, 2019) and South (Hankins, 2019; Newell & Phillips, 2016) suggests that irrespective of wider societal benefits, this evolution of the grid is likely to be keenly resisted by powerful interests vested in the continuation of the centralised grid electricity regime.

Overall, it appears there is still a struggle for control over the direction of thinking concerning energy, which in turn has implications for policy, governance and the role of the state. It seems clear that the prominence of the energy trilemma and the growing rule setting power of the Global South means the Global North and neoliberal market-based approaches have less dominance than before. More flexible, less dogmatic interventionism and fragmentation energy paradigms have emerged, ostensibly giving Global South nations more scope to tailor policy and governance options to their specific contexts, suggesting a policy environment more amenable to alternative pathways incorporating decentralised governance. Yet, the increased rule setting power afforded the Global South is not held equally among its constituent nations, and thus it seems the extent to which states can operationalise independently fragmentation’s ‘energy governance à la carte’ will vary significantly.

2.1.1 From paradigm to policy: international interventions and their impact on energy governance

Echoing Goldthau’s (2012, p.200) assertion that “policy agendas mirror paradigms, and vice versa”, this sub-section explores how the emerging interventionism and fragmentation paradigms have been reflected in conceptualisations of energy governance in key international policy interventions.

Energy's return to prominence¹⁶ on global policy agendas can be traced to the sustainable development agenda initiated by the 1987 *Brundtland Report* and the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro. The latter formalised a series of agreements, including the UN Framework Convention on Climate Change (UNFCCC) establishing non-binding GHG limits and a framework for future interventions (e.g. the 1997 Kyoto Protocol, 2015 Paris Agreement), and 'Agenda 21': a non-binding action plan for sustainable development. In terms of governance implications, the UNCED was largely seen as "an exercise in the rhetoric of national governments" (Voisey et al., 1996, p.34), although Local Agenda 21 (LA21) (a sub-section of Agenda 21) emphasised the local level as the best starting point for the achievement of sustainable development and called for local authorities in each country to have established by 1996 an LA21 through consultations with their communities (UN, 1992). However, the focus of these sustainable development objectives was more broadly on the environment, with the energy sector underprioritised by global development agencies. This trait persisted over the next decade; most clearly seen by the lack of explicit reference to energy in the 2000 Millennium Development Goals (MDGs), later termed the 'missing MDG' (Modi, 2004, p.6).

However, the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg marked a turning point as energy emerged in this and subsequent policies (Table 2.2) as a central issue in its own right rather than merely a subsidiary of the environment (Clancy et al., 2007). Seemingly reflecting the greater social emphasis in the PWC and Goldthau's (2012) interventionism paradigm, the WSSD recognised energy as critical for fulfilling basic human needs, with energy poverty seen as "a key constraint to economic development and to the eradication of poverty in developing countries" (Piebalgs, 2012, p.78). Unlike the earlier UNFCCC Kyoto Protocol (UN, 1998), there was also a clear stress on "good governance", including the "full and effective participation of developing countries in global decision-making" (UN, 2002, p.9) .

Elements of Goldthau's fragmentation paradigm can also be seen in the WSSD (UN, 2002, p.100) call for policy which enables countries to "take their own decisions on energy use and policies" including a balance between "centralised ... conventional energy", redolent of Global North pathways, and "more decentralized, small-scale technologies for the rural poor" as urgently required in the Global South. Yet, multilevel governance (MLG) approaches were only acknowledged in the context of water, where it was argued:

Better institutional Frameworks are needed for governance, decentralization and multi-stakeholder arrangements — an overarching framework that helps to link national, regional and local levels (linking strategies and policies with actions at the local level) (UN, 2002, p.99).

The lack of reference to MLG in the context of energy seems indicative of a broader trait in the literature where MLG approaches are far less common in energy than other key sectors, such as water (Moss & Newig, 2010), agriculture (Cash et al., 2006), and climate change (Amundsen et al., 2010).

¹⁶ i.e. after its initial prominence in the era of Goldthau's statism paradigm.

Table 2.2 Key international policies interventions impacting energy and their implications for governance

Policy intervention	Year	Overview & outcomes	Governance implications
WSSD Johannesburg	2002	Energy recognised as a central issue in its own right and critical for fulfilling basic human needs.	Global South participation in 'good' global governance
Conference of the Parties (COP) 16: Cancun	2010	Green Climate Fund (GCF) established	Multi-stakeholder and multilevel
Sustainable Energy for All (SE4All)	2011	Set three 2030 targets: 1) universal energy access; 2) double global rate of improvement in energy efficiency; 3) double the share of renewable energy in the global energy mix	Multi-stakeholder and multilevel
UN Commission on Sustainable Development (Rio+20)	2012	Global North proposal, 'the Green Economy' reconfigured to meet Global South demands.	Multi-stakeholder and multilevel
Sustainable Development Goals (SDGs)	2015	17 SDGs (or '2030 Agenda') replace the eight MDGs, with a specific energy goal (SDG7), incorporating SE4All targets.	Multi-stakeholder and multilevel
COP 21: 'Paris Agreement'	2015	All nations agree to aim to keep global temperatures "well below" 2.0C (3.6F) above pre-industrial times. But only elements of COP21 legally binding. US later announce intention to withdraw in 2017.	Multi-stakeholder and multilevel with capacity building considerations
Roadmap for localising the SDGs	2016	Global Taskforce of Local and Regional Governments (GTF) document advocates decentralisation but lacks specific energy focus	Multi-stakeholder and multilevel. Decentralised
New Urban Agenda	2016	Stronger city governance (i.e. decentralised) seen as key to sustainable urbanisation agenda. Specific decentralised energy governance roles incorporated.	Multi-stakeholder and multilevel. Decentralised

MLG approaches in energy and an increased Global South presence were more apparent in interventions following Johannesburg. Established at the 2010 UN Climate Change Conference, the Green Climate Fund (GCF) mandated Global North nations to provide funding for climate change adaptation and mitigation initiatives in the Global South. There was also recognition of the need for governance approaches involving multiple stakeholders operating on multiple scales to address "all aspects of climate change", thus incorporating, if not specifically mentioning, energy (UN, 2011, p.3).

MLG approaches were explicitly mainstreamed into energy in 2011 following the launch of the UN's "ambitious" (ISO, n.d.) Sustainable Energy for All (SE4ALL) initiative. Calling for universal access to modern energy services and a 100% increase in global rates of energy efficiency and renewable energy by 2030 (Ki-moon, 2011), the SE4All (2012) 'Framework for Action' envisaged coordinated multi-stakeholder approaches operating at various scales. Included was a detailed breakdown of potential roles for stakeholders in the public sector (host and donor governments, public institutions, multilaterals), private sector (businesses, banks, investors), and civil society (NGOs, academia). However, an analysis of possible roles for the sub-national level was lacking, with decentralisation not mentioned anywhere in the framework (SE4All, 2012).

The energy targets of SE4All were also incorporated into the 2015 Sustainable Development Goals (SDGs), which unlike their predecessor, the MDGs, had a specific energy goal (SDG7). The governance implications of the SDGs were captured in the overarching SDG17 ('Partnerships for the goals'), whose focus on "partnerships between governments, the private sector and civil society ... at the global, regional, national and local level" essentially replicated the MLG vision of SE4All (UN, n.d.). Similar multi-stakeholder and multilevel governance prescriptions were evident at the "landmark" 2015 Paris Agreement, where all nations agreed to "aim" to keep "a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels" and "pursue efforts" to limit the increase to 1.5C (UNCC, 2019, p.1). Although country specific policies were emphasised in the form of legally binding 'Nationally Determined Contributions (NDCs) to reduce GHGs, there was little focus on the role of local governance or decentralisation aside from recognition that capacity building was required at all governance levels.

However, running parallel to the SDGs and Paris, the role of local government and decentralisation was championed by the United Cities and Local Governments (UCLG) facilitated Global Taskforce of Local and Regional Governments (GTF) set up in 2013 to coordinate major international networks of local governments in driving international policy processes. The 2016 GTF roadmap viewed the SDGs as "a fresh opportunity to strengthen the decentralization agenda and promote new forms of cooperative governance (multilevel and multi-stakeholder)", advocating local and regional governments to call on their central governments to implement the decentralisation agenda embodied within the 2009 UN Habitat document '*International guidelines on decentralization and access to basic services for all*' (GTD, 2016, p.18). The guidelines provide extensive coverage of the roles subnational structures should adopt under decentralisation but are orientated towards the UN Habitat agenda on SDG11, 'sustainable cities and communities', which acknowledges energy but lacks an explicit focus on decentralised energy governance roles. This was partially amended by the later 2016 UN Habitat agreement, the New Urban Agenda. Although not predominantly energy focussed, specific decentralised energy governance roles were outlined (UN Habitat, 2017, p.30):

to promote sustainable energy initiatives to achieve universal energy access, and take direct control, where applicable, ... of local infrastructure and codes, to foster uptake in end-use sectors such as residential, commercial and industrial buildings, industry, transport, waste and sanitation.

This brief outline appears a welcome and long overdue step towards more explicit and comprehensive advocacy of decentralised energy governance within international policy interventions.

Yet, energy governance models embracing multiple stakeholders and levels without specifically addressing the implications of decentralisation continue to be the norm of international policy interventions, although the increasing pessimism over meeting the Paris Agreement appears to have strengthened calls for decentralised governance approaches. Writing in *Nature*, Victor et al. (2017, pp.25-26) argue "No major advanced industrialized country is on track to meet its pledges to control the greenhouse-gas emissions that cause climate change", stressing the "logic" of countries setting their own NDCs "threatens to unravel because national governments are making promises that they are unable to honour". Optimism over Paris was also reduced by the United States (US) decision to withdraw in 2017; President Trump arguing the agreement "would undermine our [the US] economy"

(The White House, 2017, p.1). However, in response, several prominent US networks of subnational stakeholders, including states, cities, businesses, higher learning institutions, faith groups, and cultural institutions, have formed to drive policies to meet the Paris Agreement (potentially accounting for 40% of US emissions). This reinforces the potential of the sub-national level noted in the broader environmental governance literature (Bulkeley & Betsill, 2003), and highlights the need for similar decentralised governance research specifically focussing on energy.

Overall, the evolution of international policy has seen energy become increasingly prominent but these interventions appear to only partly reflect contemporary energy paradigms. Governance involving multiple stakeholders operating on multiple levels has increasingly become the norm of global policy prescriptions concerning energy reflecting the more polycentric nature of interventionism and fragmentism. However, despite this apparent embrace of the local, the specific energy roles for local level governance within such MLG arrangements remain opaque while the implications of decentralisation for energy governance remain largely untouched by international policy agendas. This oversight is significant and a likely explanatory factor behind assertions in the literature stating that shifts in energy paradigm have resulted in little meaningful improvement to local energy governance on the ground, particularly in terms of power dynamics vis-à-vis the state and powerful private sector institutions (cf. Kern et al., 2014; Herington et al., 2017; Farrell, 2019). This only partial realisation in international policy interventions of the energy governance conceptualised in fragmentation seems likely to undermine efforts to implement decentralised energy governance initiatives.

2.2 Energy Studies: limitations impede the development of decentralised energy governance

The previous section highlighted the lack of a specific focus on decentralised energy governance within the international energy policy arena. This section explores how this policy deficiency is partly explained and compounded by a similar lack of focus on decentralised governance within the energy studies discourse. The underlying factors behind this deficiency are assessed, exploring first the impact of flawed conceptualisations of energy access and subsequently the lack of social science-based approaches.

2.2.1 Concepts of energy access: flawed rationales, flawed governance

Conceptualisations of 'energy access' are highly influential on energy policy and governance for as Pachauri notes, "The way ... [energy] access is defined will have a direct impact on the design and implementation of specific energy development initiatives". This issue is particularly critical as the lack of a universally accepted definition of 'energy access' (see Chapter 1) offers more scope for various understandings to emerge catering for specific agendas. This section appraises these different conceptualisations, exploring how and why they have been mobilised by various stakeholders and their subsequent impact on governance.

As indicated in Chapter 1, the futility of a single parameter approach is clear given energy access incorporates a multitude of dimensions, including scale, services, quality, and most importantly broader development objectives (Bhatia & Angelou, 2015). Affordability is one of the most commonly overlooked dimensions (Practical Action, 2010); critical given the poorest households spend a far greater proportion of their income on energy (often due to using the most inefficient fuels and

devices) (Foster et al., 2000). This policy oversight may stem partly from the challenge of assessing affordability as biomass (the most common fuel source in a rural development context) is typically not bought, while the opportunity cost of time spent collecting biomass and the health and welfare impacts of biomass collection (e.g. the danger of assault) also need to be factored in (Mirza & Szirmai, 2010). The cost of energy devices is also often overlooked; Reddy (2003) noting the prices of liquid petroleum gas (LPG) stoves results in cooking with LPG being more expensive than biomass despite its greater efficiency. A holistic governance approach to affordability is thus required which encompasses both fuel and equipment costs along with the typically non-monetised opportunity and welfare costs.

Another critical but common misconception in definitions of energy access are those which concentrate just on electricity. Bhattacharya (2012, p.260) notes a “disproportionate emphasis on electrification” in energy access programmes which is “neither sustainable nor adequately contributing to development” as cooking and heating is the “greatest challenge” due to it comprising ≈90% of poor people’s energy demand in the Global South. Bhattacharya’s stance is supported by Birol (2014), who argues the majority of the predicted 4 million premature deaths attributed to indoor air pollution from cooking (see Chapter 1) would be avoided if the uptake of clean cooking facilities was pursued more urgently. A team of pre-eminent economists led by Nobel laureate, Prof. Finn Kydland cite economic reasons for prioritising clean cooking. They identified cutting indoor air pollution by providing clean cookstoves as one of the 19 SDG targets (out of a total 169) that “represent the best value-for-money in development over the period 2016 to 2030, offering more than \$15 back on every dollar invested”: thrice the benefit assigned to the universal provision of electricity (Kydland et al., 2015, p.1). Thus, governance approaches which belie the general trend and prioritise cooking over electricity seem prudent given the severity of the health impacts and the favourable economic indications suggested above – although recent research suggests the two should not necessarily be seen as mutually exclusive given the growth of electric cooking as a concept (Batchelor et al., 2018a).

A further issue concerns whether conceptualisations of energy access refer to centralised energy systems or those with varying degrees of decentralisation in their management, production and distribution. The former typically refers to electricity generated in large power stations and then transmitted and distributed via a national (and sometimes trans-national) grid network but can also refer to the provision of gas and petroleum where similarly centralised distribution networks exist. A centralised energy system also indicates its constituent parts (e.g. resource extraction, production and distribution) are centrally managed, typically by the state in a Global South context (Goldthau, 2012). Centralised energy (particularly electricity) systems have tended to be over emphasised in energy access conceptualisations; a significant flaw as they are often not feasible in a Global South rural development context due to the cost and impracticality of extending the grid to sparsely populated and geographically isolated areas. In such localities, ‘decentralised energy’ has become increasingly important (Sen & Bhattacharyya, 2014). These systems typically refer to electricity generated from small scale facilities situated at or near the point of use which do not utilise the grid network (i.e. are ‘off-grid’). However, they can also refer to more localised provision of cooking and heating facilities, and, in a political context, the transfer of energy governing powers from a higher to lower level authority. Given the potential significance of decentralised energy systems, it is thus vital they are incorporated into conceptualisations of energy access informing policy and governance.

The analysis above suggests that policy and governance derived from single dimension understandings of energy access are likely to fall short in meeting the needs of citizens as they are highly unlikely to cater for the various socio-political and cultural facets of energy access. Yet, it appears that these are precisely the type of definition most commonly mobilised by key energy stakeholders as noted by (Bhatia & Angelou, 2015, p.22):

In the absence of a comprehensive and widely accepted approach to defining and measuring the different facets of energy access, most projects and programs treat energy access as a unidimensional and binary parameter that simply entails having or not having energy access

Pachauri (2011) concurs that the physical availability of energy carriers is internationally the most common understanding definition of energy access, arguing the appeal of this understanding lies in the convenience of its simple metric nature to policymakers. This is evident in approaches adopted by leading multinational agencies who commonly use a range of physical access indicators that are compromised by their entirely binary nature, which fails to account for the quality of energy accessed and the way it is utilised (Bhatia & Angelou, 2015). Unidimensional conceptualisations centred on physical access are also politically convenient as they enable improvements in energy access to be claimed regardless of whether the physical availability of energy has been translated into the more complex and harder to achieve goal of actual usage (Lee et al., 2016). Understandings of this nature seem to particularly cater for centralised governance approaches which often seek to retain control of the energy sector through promotion of one-size-fits-all grid electricity-based initiatives. Pachauri (2011) warns against such approaches, stressing energy access is inherently geographical and will vary by location according to a range of factors including climate, culture, demographics, type of locally available energy sources, and the efficiencies of end-use devices typically used in the locality.

Overall, it seems shortcomings in energy access conceptualisations have negatively impacted on energy policy and governance. Stakeholder conceptualisations have tended to be insufficiently holistic, leading to policy and governance which largely fails to accommodate the multidimensionality of energy access. Limited, unidimensional understandings have also been mobilised to justify one-size-fits-all energy policy approaches, particularly centralised grid electricity-based interventions which tend to align with the interests of national governments in the Global South. These approaches are often at the expense of the rural poor who are more likely to benefit from more multidimensional interpretations that better cater for critical spatial differences. This, in turn, would likely result in the advocacy of a range of policy interventions, particularly decentralised approaches (both in terms of the energy system and its governance) which can be more readily tailored to specific localities.

2.2.2 Imbalances in the energy studies literature and their implications for energy governance

The previous section highlighted how different, and often deficient, understandings of energy have impacted on policy, contributing to the lack of emphasis on decentralised energy governance arrangements. This section explores how this shortcoming has been compounded by imbalances in the energy studies literature which have focussed primarily on technology and economy-based approaches and overlooked the social sciences. This has resulted in a limited academic evidence base for informing policy on the potential of decentralised energy governance.

This propensity for econocentric and technocentric approaches can be traced to the neoliberal turn in the 1980s (see section 2.1), which Stern (1986) and Lutzenhiser (1992) see reflected in a movement towards efficiency and enhancing models of energy conversion and use, and away from the 1970's focus on conservation. Lutzenhiser (1992, p.58) posited that a movement to a more humanistic approach on end-users was needed, vividly highlighting the limitations of the focus on efficiency:

The engineers and natural scientists in the energy community may only be required to ask 'How can we be more efficient?' Social scientists are also bound to ask 'Why are we not more energy-efficient, when clearly that has been possible?'

Lutzenhiser rightly saw the focus on efficiency as turning attention away from the issue of equity (i.e. the technological and energetic life conditions of the poor) and the influences of corporations and governments upon public and private sector consumption and conservation. He later suggested with Shove (1999, p.225) that there was a neoliberal underpinning behind this shift, highlighting how concerns over budgets and providing value for money led to Global North research agendas becoming less flexible, preferring more streamlined technical or market-based research to the broader and less clearly demarcated social sciences.

This imbalance within the energy studies literature has been the subject of criticism from various social science disciplines. The psychologist Paul Stern (1986) noted promising policy options were being disregarded due to an over reliance on economic theory at the expense of non-economic behavioural sciences. The sociologists Lutzenhiser & Shove (1999, p.217) concurred, arguing this focus largely ignores the notion of "human choice as critical and controlling in energy use and technology choice". This notion of choice was seen by the political scientist, Lynton Caldwell (1976, p.32) to have ethical and political considerations not captured by the prevailing technocentric approach:

If there is a comprehensive energy problem, it is a problem of choice and value in a world of finite capabilities. It is therefore also a moral and political problem, and for this reason will not yield to a purely technical solution.

Discussing the broader context of global warming, the environmental sociologist, Thomas Heberlein (2012, p.3) saw the avoidance of such ethical behavioural issues in preference to technological fixes as a result of the latter being more convenient: "they bypass human behaviour. They require that people do basically nothing. We simply change the environment and go on living much as we have in the past. Problem solved". This paradigm of narrow technical and economic focus in energy is seen as disadvantaging social science-based research in the field, thus limiting its scope to address current energy issues.

The deficit of social science approaches also contributes to the inadequate capture of gender-based issues by the energy studies literature. Although the "strikingly gendered" (Sovacool, 2014, p.14) nature of energy use (particularly in the Global South) has become increasingly prominent in access debates¹⁷, notable gaps exist concerning gendered impacts on energy governance. Pachauri & Rao (2013, p.205) highlight that "Existing power relations and institutions today discriminate against women in many developing countries", critiquing the existing literature for a lack of "Compelling

¹⁷ Partly through international programs such as ENERGIA (Cecelski, 2000).

empirical evidence on the gender differentiated impacts and determinants of energy transitions”, which “undermine the potential for transforming women's status and well-being”. The authors argue research needs to understand the factors affecting women’s agency vis-a-vis the adoption of modern energy services, including the policies and research intended to address these gendered issues. (Sovacool, 2014, p.15) concurs, urging academia to explore “the gendered aspects of energy production and use, and what constitutes ‘gender-aware’ energy planning”.

More broadly, there is a clear need for greater interdisciplinary energy research reflecting broader humanistic goals. D’Agostino et al. (2011, p.519) stressed that “the development agenda should drive the energy agenda, not vice versa” as there is a need to “cover issues not easily confined to technology and science (such as energy demand, human behavior, and mundane technologies such as cook stoves and light bulbs)”. More recently, Bagley et al. (2018, p.7), remarked “The gaps/weaknesses in the [UK energy] research portfolio are reflected as much in the lack of collaborative initiatives as in the absence of actual research/funding”, highlighting how a lack of interdisciplinary research remains an ongoing concern. As the authors note, governance research is particularly “crucial” in addressing this issue, given it intersects and underlies many of the other aspects missing in the current energy studies literature (Bagley et al., 2018, p.46).

More recent systematic literature reviews support the assertion of continuing imbalances within the energy studies literature, particularly the clear emphasis on engineering and economy-based approaches to the detriment of the social sciences. The scale of the issue was outlined by Sovacool (2014) in a content analysis of 4444 articles from three leading energy journals over 15 years, only 19.6% of the articles were grounded in social sciences with just 3.3% concerned with governance. Brown et al. (2015) concur, noting a particular lack of attention paid to the role of local governance in facilitating energy access. As seen in Chapter 1, the recent review of the UK energy studies literature by Bagley et al. (2018, p.46) arrived at much the same conclusions, suggesting calls for a broadening of energy research have gone largely unheeded.

Overall, despite the increased prominence of energy on global development agendas and the availability of significant finance for energy-based research, an uneven portfolio has emerged from the energy studies literature, predominantly centred on technocentric and econocentric approaches at the expense of the social sciences. This epistemological issue critically undermines the ability of the energy studies discourse to incorporate the multiple socio-political dimensions of energy, including a notable lack of studies on governance. This deficit of governance-based research is unsurprisingly reflected by an even greater paucity of studies looking at the more nuanced multilevel forms of energy governance emerging from decentralisation; a deficiency impeding the development of an evidence base to better inform policy on the potential of decentralised forms of energy governance.

2.3 Decentralisation: a key research agenda for energy governance

In the last twenty years decentralisation has established itself as a political and institutional phenomenon in most countries around the world (UCLG, 2007, p.18)

This statement highlights the global prominence of decentralisation, a process which has direct implications for governance roles and structures and is thus highly relevant to this study’s MLG approach. Advocacy of decentralisation generally stems from the view that the process results in more

informed, responsive, and accountable governance, and consequently more effective delivery of services (Bennett, 1990; Donahue, 1997). Yet, analysis has been critically lacking concerning the impact of decentralisation on the delivery of urgently needed energy services in the Global South (Brown et al., 2015). This deficit of the decentralisation discourse replicates and compounds the failures of the energy studies literature to engage with decentralisation (see section 2.2). Responding directly to this deficiency, this section draws together the two discourses in order to better understand the potentially crucial implications decentralisation could have for energy governance in the Global South.

2.3.1 Concepts of decentralisation and their implications for governance

Various definitions of decentralisation exist, which need to be examined as they are crucial to understanding how the concept might be mobilised by different stakeholders and applied to energy policy and energy governance. The term ‘decentralisation’ has been utilised loosely in a range of policy contexts and research literatures and is broadly understood as “the reorganisation of a single concentrated unit (e.g. a government, an industry) into smaller more autonomous units” (Brown et al., 2015, p.6). However, decentralisation has long been understood to incorporate three forms depending on the extent to which powers are distributed and the nature of accountability (Rondinelli et al., 1983) (Table 2.3).

Table 2.3 Definitions of decentralisation forms (adapted from Gregersen et al. 2004; Cabral, 2011)

Term	Type of reorganisation	Where decision making lies
Deconcentration	Involves the transfer of administrative responsibilities/functions to subordinate units of government, often on a geographical basis.	Decision-making power remains at the centre.
Delegation	Consists of the transfer of responsibilities for public functions/services to parastatal or semi-autonomous public entities.	Decision-making power remains mostly at the centre, with the semi-autonomous entities implementing programmes for and accountable to central government but not wholly controlled by it.
Devolution	Entails the transfer of governance powers and responsibilities to sub-national levels, often via an electoral process which leaves sub-national authorities directly accountable to local people.	Decision-making power is transferred to the sub-national level and largely outside the direct control of the central government.

There are key differences between the three forms in Table 2.3¹⁸. Deconcentration, or administrative decentralisation, is generally seen as the weakest form of decentralisation and involves the transfer of administrative responsibilities but not decision-making power from the centre to one or more lower level authorities, generally on some spatial basis. Delegation involves the transfer of responsibility for a public function or delivery of a service (which can be on a local or national level basis) to semi-autonomous public bodies who are accountable to the centre but not wholly controlled by it.

¹⁸ ‘Privatisation’ (or deregulation), where public functions are transferred to the private sector has also been considered a form of decentralisation. This study will adopt the position of Steiner (2005) and not consider it so as in most cases power is completely removed from government structures.

Compared with delegation and deconcentration, 'devolution' involves a far greater transfer of power from the centre including decision making powers which are largely outside the direct control of the central government. Power is transferred to sub-national entities who are often elected and thus directly accountable to local people.

Overlapping these three forms, are the dimensions of administrative, fiscal and political decentralisation. As noted above, administrative decentralisation is linked with the weaker deconcentration and delegation forms and concerns "the mere relocation of execution to the local level with decision-making power remaining at the centre" (Cabral, 2011b, p.2). Fiscal decentralisation concerns the authority to spend financial resources and, in some cases, raise taxes to meet assigned responsibilities. It can be found to varying extents in all three forms. Political decentralisation is mostly associated with devolution as it concerns the transfer of decision-making powers and involves a degree of accountability to local people, often through an electoral process (Gregersen et al., 2004).

The three dimensions are closely linked and somewhat dependent on one another for each to take effect (Cabral, 2011). Falleti's (2005) sequential theory has proved highly influential in understanding their interrelatedness, stating that greater autonomy accumulates in decentralisation processes where political decentralisation occurs before administrative and fiscal decentralisation, whereas in cases where the reverse is true, authority remains centralised. In the former sequence, subnational actors are able to ensure their autonomy before accruing responsibilities which strengthens their negotiating position with central government. However, the latter sequence sees the centre assume initial control over decentralisation, enabling responsibilities to be divested to the subnational level before autonomy is conferred – providing the central government continued leverage throughout the decentralisation process. Leading decentralisation scholar, Dickovick (2014, p.3) praises Falleti for providing "real leverage in understanding decentralization's causes" but stresses that as the theory was developed using Latin America as the empirical referent, revisions are required to account for the significant historical and institutional differences in the sub-Saharan African context (see Chapter 3).

For the purposes of this PhD, all three forms are considered important for better understanding the nature of decentralised energy governance, particularly as the actual extent of power, autonomy and accountability transferred via each of the three forms will vary from case to case. This study thus agrees with the analysis of Wunsch (2014, p.3) that limiting the discussion to only devolution, as many studies have, is an error as all three forms "fit the standard definition of decentralization, which involves the transfer of authority, powers, resources, and responsibilities from central to lower-level actors". In addition, Wunsch (2014, p.3) seems prudent in asserting that theoretically "it is possible for delegation and deconcentration to provide many of the beneficial outcomes that devolution is intended to provide" and that empirically, the three forms often do not reflect the on the ground nuances of a decentralisation process; a point reinforced by Erk (2014, p.539) who noted that in both the Global North and South "factors exogenous to institutional design often influence and determine the workings of federalism and decentralization". For instance, the three forms run the risk of being conflated (unintentionally or otherwise) and erroneously mobilised by stakeholders to retain or assume powers outside the stated legislative provisions (Rodríguez-Pose & Gill, 2003).

The broader decentralisation is thus the lens through which the analysis of this PhD is conducted and is understood using Wunsch's aforementioned 'standard definition'. It is also seen as an umbrella term

for deconcentration, delegation and devolution, which are defined as shown in Table 2.3. The varied ways decentralisation can be conceptualised also reinforce the benefits of this study's MLG approach, which simplifies the inherent complexity of decentralisation and the ensuing multi-scalar and multi-stakeholder governance, facilitating analysis over whether realities match intended outcomes.

2.3.2 The rise of decentralisation and its impact on governance

The rise of decentralisation over the last two decades appears largely a response to broader economic paradigm shifts in a manner redolent of the reflective nature of energy paradigms (see section 2.1). As noted previously, these economic paradigm shifts largely concern changing views towards the role of the state, which in turn have direct implications for perceptions of decentralisation and are thus highly relevant to the MLG approach of this thesis.

The intersection of decentralisation with perceptions of the state is evident in the origins of its current prominence, which is usually traced to disillusionment with centralised governments in the 1980s following the economic crises of 1973-74, subsequent fiscal crises of the 1980s, and the post 1989 collapse of the socialist economic sphere (Berkes, 2010). Having previously been widely seen as the best means to achieve development in the 1950s and 1960s (Manor, 1999; Béné & Neiland, 2004), this erosion of faith in centralised governments to effect development led most African, Asian and Latin American countries to implement decentralisation reforms under the auspices of international agencies such as the World Bank (Manor, 1999; Berkes, 2010).

Rodríguez-Pose & Gill (2003, p.3) suggest the onset of 'contemporary globalisation' (itself largely a product of liberal economic policies and increasing world trade following the 1973-74 economic crises) has also contributed to the rise of decentralisation. They note globalisation has coincided with "a greater relevance of place, space, and regions", which Keating (1998) supports by highlighting the more prominent role of local government in this period. Rodríguez-Pose & Gill (2003) also note the era is marked by political unrest emanating from and contributing to the disillusionment with the centre, particularly at the subnational level. This has led in extreme cases to the emergence of new states, both peacefully (e.g. The Czech Republic and Slovakia) and via conflict (e.g. Eritrea, East Timor and the states of the former Yugoslavia).

Despite apparent neoliberal underpinnings, the rise of decentralisation seems likely to appeal to a broad political spectrum: neoliberal interests piqued by the assumed efficiency gains of the process while advocacy from the democratic left stems from the process offering a means to promote greater participation and democratisation of the political process (Slater, 1989). This broad acceptability helps explain the current popularity of decentralisation, particularly as its flexibility ostensibly facilitates policy-based evidence making tailored to specific localities; a facet likely facilitated by the current PWC era, in which policy and governance is less dominated by the Global North and a single form of economic doctrine. Critically, this scope for spatially contingent applications of decentralisation aligns with the human geography and MLG approach of this thesis, which seeks to better understand the localised complexity of emergent forms of decentralised governance.

2.3.3 Potential impacts of decentralisation for energy governance

The need to study the implications of decentralisation for energy is clear given the well-documented and significant benefits and pitfalls of decentralisation in other sectors. The vast literature on decentralisation essentially occupies itself with the question of whether the process is beneficial, with answers dependent on a wide range of socio-political, economic and geographical factors. Proponents of the process claim local governance is better placed to deal with socio-economic challenges owing to assumed advantages over central authorities such as greater access to local information which enables greater responsiveness to local needs and improved accountability (Bennett, 1990; Donahue, 1997). Yet questions remain concerning quality as decentralisation has tended not to lead to “significant decentralisation of authority, budgets and strategic roles in many parts of the world” (Vincent & Wa Gathui, 2014, pp.11–12). This section thus explores these issues by assessing three widely held assumptions about the impacts of decentralisation, namely: enhanced localised decision making and information access; increased resource availability; and improved administrative performance.

Assumption 1: enhanced localised decision making and information access

Based on the economic argument of ‘allocative efficiency’ of resource use, decentralised local governance structures are often viewed as better placed to align public goods to local preferences due to possessing superior knowledge of these local preferences, and thus deemed more probable to respond to local demands (Azfar et al., 1999). Enhanced powers for local authorities are also assumed to improve efficiency of local planning and increase the likelihood of local people playing a more active role (Vincent & Wa Gathui, 2014).

However, the quality of locally sourced information is dependent on both the source and its interpretation by institutions in receipt of decentralised power, with the representativeness and responsiveness of such institutions to local needs dependent on: the type, structure and composition of the institution; the capacity and motivation of the individuals concerned; local and national power structures and the type of decentralisation (e.g. deconcentration or devolution). Conyers (2007) deems the latter issue critical, arguing the benefits of devolution over decentralisation are not always clear given the former has suffered from patronage-based politics. She argues this clientelism has resulted in little difference in terms of representativeness between local and central government, with the latter continuing its hold over local development control. Perhaps most critically, Ribot (2002) warns that minimum standards stipulating where national and sub-national roles begin and end are required in decentralisation reforms to avoid the common occurrence of excessive central government oversight.

Assumption 2: increased resource availability

Decentralisation is assumed to increase resource availability for decentralised governance as it enables new sources of tax revenue not open to central government, improves existing tax collection, assists the collection of service user fees and voluntary public contributions (e.g. of money, materials, labour), and lowers the cost of service provision thereby creating surplus funds to be used elsewhere (Conyers, 2007). However, this notion is disputed by Cabral (2011) who notes taxes tend to be difficult to collect (particularly in rural areas), while central administrations often seek to retain control on the management and allocation of tax revenues by limiting scope for locally raised taxes.

Yet, decentralisation reforms have tended to be characterised by central governments bestowing insufficient resources to match decentralised responsibilities (Conyers, 2007). Cabral concurs, adding that central government often have pre-ordained funds for specific projects, altering the role of local authorities in Batchelor et al. (2014) words to “deconcentrated agents of central government rather than autonomous bodies”. Local authorities are also often unconsciously complicit in reducing their revenues due to adopting a zero-sum game approach in a bid to outcompete other local authorities for perceived limited resources (Olowu, 2001). Diprose & Ukiwo (2008) partially counter this argument, noting decentralisation has been found to both exacerbate and alleviate internal conflict, either intensifying religious and ethnic tensions over resources or easing conflict through the provision of a framework to resolve disputes.

Assumption 3: improved administrative performance

Decentralisation is said to benefit administrative performance by reducing the administrative distance between politicians and their electorate and by using local politicians with specialist localised knowledge and capacity to implement locally attune policy innovations (Bennett, 1990; Donahue, 1997). For instance, Conyers (2007) notes decentralised powers could be used to support donor-backed programmes, which she argues have had short term success in areas such as capacity building, improved planning, coordination and project implementation. Local authorities could also use decentralised powers to enhance coordination between various local governance structures in order to exploit synergies, such as the so called “triple win” nexus of energy, agriculture and the combatting of poverty and climate change (Africa Progress Panel, 2015).

Yet, several of these assumed benefits to administrative performance appear to have been relatively short lived. Conyers (2007) notes difficulties have arisen in long term local level administrative performance, particularly in terms of scaling up projects to national level, replacing short term donor funds, and maintaining performance once donor capacity building programmes have ceased. Arguably the most significant impediment to improved administrative performance is local authority capacity, consistently cited as a critical barrier impeding the potential positive impact of decentralisation. Particular capacity shortcomings include: poor quality planning, budgeting, implementing and monitoring (Cabral, 2011b); issues concerning compliance, responsiveness to public needs and documentation preparation (Dickovick & Riedl, 2010); along with difficulties understanding stakeholders and responding flexibly to rapidly changing circumstances (Brockhaus et al., 2012). Despite these numerous concerns, it appears that administrative performance has generally not deteriorated under decentralisation with local capacity generally seen as reflective of capabilities at national level (Dickovick & Riedl, 2010; Conyers, 2007).

Overall, there is growing consensus within the literature that traditionally held assumptions on decentralisation’s benefits for service delivery may lack veracity. Conyers (2007, p.18) rebukes the wider literature, stating “there is very little evidence” to ascertain whether service provision is improved by decentralisation, arguing that it impacts on four intermediary processes instead (access to local information, localising decision-making power, resource availability and administrative performance). She adds that assessing these intermediate processes is complicated by its effects not being solely dependent on decentralisation but also several key factors, such as the type of decentralisation and its implementation, the type of service indirectly impacted on, stakeholder

capacity and, in particular, the broader economic and socio-political environment. Ludeki (2004, p.10) concurs, adding that development could worsen under decentralisation or occur regardless of decentralisation, highlighting that:

a country can adopt decentralised ... structures but fail to realise development. Conversely, a country can achieve breakthroughs in development at the local level under highly centralised, even authoritarian, administrative structures.

Thus, it seems clear that the assumed benefits of decentralisation on governance are highly dependent on a range of spatially contingent factors, including most prominently: local authority capacity and inter-scalar power dynamics. These issues reinforce the critical need for geographical approaches to assess these spatial variations in order to better understand the circumstances in which decentralisation might benefit energy governance most effectively.

2.3.4 Lack of engagement between the decentralisation and energy literatures

Despite the potential significant impacts of decentralisation to governance and service delivery noted in the previous section, the decentralisation literature has inadequately engaged the energy sector. Vincent & Gathui (2014, pp.11–12) stress the extent of this issue, highlighting “a general lack of attention ... to local governance in most international approaches towards addressing sustainable energy access”. This has led to “frustration” on the part of Brown et al. (2015, p.4) who note the extensive literatures on decentralisation and energy as separate entities, but a lack of research analysing the two together. They along with the UNDP (2009) suggest this deficiency may be hindering significant opportunities to exploit synergies between decentralisation policies and energy initiatives.

The little research which does exist on decentralisation and energy in unison predominantly focuses on the Global North, where disparities in legal responsibilities, budgets, resources, capacities relative to the Global South often impede parallels being drawn from the one context and applied to the other¹⁹ (Brown et al., 2015). The dearth of Global South data is stressed by the report by the United Nations Development Programme (UNDP) (2009), ‘Energy in National Decentralization Policies - A Review on the Least Developed Countries and sub-Saharan Africa’, one of the few to focus on energy in the context of decentralisation in the Global South. Assessing the decentralisation policies of 64 nations, the UNDP found only four (Madagascar, South Africa, Nepal and Sudan) with specific decentralisation legislation affecting energy, and another two (Bangladesh, Mali and in some instances Nepal) where energy governance had become more decentralised but without a connection to a decentralisation process. As the UNDP report is almost ten years old, the need for further studies addressing the deficit of research on energy and decentralisation in the Global South are critical in order to capture the region’s rapidly changing political and energy landscapes.

The lack of research engaging both the decentralisation and energy studies literatures is partly explained by the difficulties inherent in such analysis. The UNDP report implies challenges may arise due to difficulties in distinguishing whether an enhanced local authority energy governance role is a result of decentralisation or simply due to that authority being given a different role (i.e. irrespective

¹⁹ However, the UK seems to provide a warning to heed concerning both convoluted legislation which fails to encourage local authorities to prioritise climate change measures and instances of local governments being handed more responsibility without the power (i.e. the budget) to effect change.

of decentralisation). A further potential difficulty concerns distinguishing between decentralisation legislation affecting energy generation, and that relating to energy distribution (see South Africa and India) or the allocation of responsibility to existing infrastructure (see Mozambique, Burkina Faso, Ghana, Sudan and Madagascar) (UNDP, 2009). Whilst examples of the former are scarce in the literature, the latter two are more prevalent and may provide insights into the implications of giving local authorities similar controls over energy generation.

Likewise, it may be possible to draw learnings from instances where other state services affecting energy have been decentralised. The UNDP (2009, p.7) argue decentralisation legislation is more likely to discuss energy via such indirect contexts, which include forestry (e.g. Guinea), transport (e.g. Kenya, South Africa), and motorised agriculture equipment (e.g. Mali). However, heating and cooking remain notable gaps in this aspect of the UNDP coverage (Brown et al., 2015). Further insights might be feasible from instances where individual local authorities have carried out energy related initiatives but not as part of a broader decentralisation process (UNDP, 2009). Examples include waste-to-energy initiatives in Malaysia and Indonesia, although whether such projects are facilitated by decentralisation remains unclear.

The lack of research combining both discourses is particularly concerning given Brown et al. (2015, pp.4-16) emphasise “a special relevance” between decentralisation and off-grid energy as “both are concerned fundamentally with the changing relationships between different scales of activity and both revolve around enhancing the importance of smaller scale levels of activity over larger”. The authors argue the two need to be considered together if opportunities for off-grid energy are to be maximised but warn of significant political economy barriers given the “continued dominance of the entrenched centralised energy paradigm” whereby:

Rather than ceding power in and through processes of decentralisation, power companies, governments and other key actors have remained active progenitors in shaping the form that decentralised energy systems take. Naturally they have sought (and will continue to seek) to exert their influence over such changes in order that, if there is to be a transition towards more decentralised energy systems, they are decentralised energy systems which enable them to maintain control over managing and regulating the energy sector (Brown et al., 2015, p.23).

Examples of such centralised resistance and political economy barriers to off-grid energy are becoming increasingly common. In Spain, a tax on electricity generated from household solar PV (even if for self-consumption) was introduced (2015-2018) following lobbying by grid electricity utilities. The tax sought to protect utility profits by disincentivising off-grid systems and was seen as illustrative of the political power of energy utilities and their close ties with government which have been viewed as a “revolving door with former ministers taking up senior posts in the sector and vice versa” (Burgen, 2018, p.1). Similarly, US state-level grid electricity utilities have developed considerable political power from their sector monopolies, which they have used to oppose off-grid energy initiatives that threaten the predominance of their centralised grid utility business model (Farrell, 2019; Stein, 2019).

These cases suggest that previous understandings of grid utilities as natural monopolies²⁰ are increasingly outdated as consumers were deprived of competitive off-grid alternatives. Countering this monopolistic control may lie with decentralisation and decentralised governance: community governance advocates Pomerantz & Farrell (2019) calling for the public to influence energy regulation policy by applying pressure to sub-national authorities, who are more likely to be responsive to a potential local election issue than national government stakeholders.

Overall, there has been a clear lack of engagement between the decentralisation and energy literatures in a global South context, which appears likely to undermine the development of effective decentralised energy governance. This is critical as the theorised impacts of decentralisation to governance and service delivery (seen empirically in other sectors) indicate decentralised energy governance has considerable potential to address energy access issues in the Global South, while findings in the energy studies literature suggest decentralisation may have special relevance to energy as a potential check to the predominance of centralised grid-centric monopolies.

2.4 Concepts of governance in the era of decentralisation

The previous section highlighted how understandings of decentralised energy governance in the Global South have been undermined by the lack of engagement between the discourses on decentralisation and energy studies. This section responds to this deficiency by exploring how governance has been conceptualised under decentralisation; critical if the forms of decentralised energy governance emerging from the Global South and the circumstances in which they work effectively are to be understood. Particular attention is paid to 'Multilevel governance', the most prominent of the various conceptualisations and the analytical framework for this thesis.

Conceptualisations of 'governance' have taken on added significance in the current era of increasing decentralisation as the two concepts directly interact. The applied ecologist, Berkes (2010) sees devolution as a process to reform governance and incorporate local stakeholders into policy and decision-making process. This sharing of the governing role among various actors raises issues of democratic accountability and implies a possible decline in the power of central government (Peters & Pierre, 2004), with Bache & Flinders (2004) suggesting the role of the state may often be reduced from directing to coordinating policy.

This emphasis on the changing scalar and spatial realities of power implied by decentralisation has led to a reappraisal of the role of the state by human geographers. Notions of the state as static, bounded, vertical, simple hierarchies have been critiqued by human geographers, who instead have viewed the state relationally, arguing that state institutions are composed of complex and contradictory socio-ecological processes which they in turn help to reproduce (Jessop, 1990). Brown & Purcell (2005, pp.614–620) agree, arguing that:

²⁰ Economists define a natural monopoly as where a single company could provide a service or good more efficiently than multiple competing firms (Stein, 2019). A legal monopoly refers to a company operating as a monopoly under a government mandate; the legal monopoly providing a specific good or service at a regulated price (Kenton, 2019).

scales and scalar relationships are the object and outcome of political struggle [and] ... scales and scalar relationships become fixed, un-fixed, and re-fixed as a result of that struggle.

These sentiments have led a number of leading scholars (Smith, 1995; Leitner, 1997; Brenner, 1997) to suggest the existence of an extensive restructuring of the state “as its powers are relocated upwards to supra-regional or international bodies, downwards to regional or local states, or outwards to ... cross-national alliances” in what has been termed a ‘hollowing out’ of the nation-state (Jessop, 1999, p.354). However, crucially, as Goodwin et al. (2005, p.424) point out Jessop’s ‘hollowing out’:

makes no explicit claims about the organizational or institutional forms that may result ... and one needs other conceptual devices to help in the understanding about how and why that process subsequently unfolds.

It is thus to an analysis of the most prominent of these “conceptual devices”, ‘Multilevel governance (MLG)’, that the thesis now turns.

Multilevel governance (MLG)

Widely viewed as the key response to conceptualising the governance emerging from the restructuring of the state, MLG was seen by Behnke et al. (2019, pp.v-2) to have gained “immense popularity over the past 20 years” as “it captures several fundamental insights about the institutional structures and policy-making processes of modern democratic states”. Stephenson (2013, p.818) concurs, noting as its chief virtue the ability “to overcome complexity and ambiguity in international policy-making”.

MLG was first introduced by the political scientist, Gary Marks (1993, p.402) to describe the greater prominence of the subnational and supranational levels following structural changes²¹ to the then European Community (EC), but was then further developed by Marks alongside fellow political scientist, Lisebeth Hooghe to analyse the policy making of the EC’s successor, the European Union (EU). Together, they (1997) initially conceptualised MLG as the reduced role of the nation state within the EU, whose requirement for collective decision-making afforded stakeholder networks influence over the previously monopolistic control of national governments over policy making. They felt this did not necessarily mean the state was not important or the most important actor, but instead emphasised it was ‘one among a variety of actors contesting decisions that are made at a variety of levels’ (Hooghe & Marks, 1997, p.23). Within their framework, ‘multilevel’ referred to the vertical hierarchal relationship between national and sub-national, while ‘governance’ referred to the growing horizontal interdependence between governments and non-government actors (Hooghe & Marks, 1997).

²¹ Conzelmann (2008) notes the main changes as the opening of subnational ‘embassies’ in Brussels, the creation of the Committee of the Regions, the 1988 reform of structural funds, and increasing direct contact between the subnational level and the EC.

MLG1 and MLG2: the continued development of the MLG concept

However, the term MLG has since been developed by Hooghe and Marks from its original incarnation to incorporate a broader range of governance arrangements, which respond to the emergence of less hierarchical, more polycentric forms of governance involving various public and private actors, operating within and beyond the borders of the traditional state (Conzelmann, 2009; Peters & Pierre, 2001). Aiming in particular “to broaden understanding of different levels of public policy making and the role of the state” (Mortal et al., 2018, p.68), Hooghe and Marks demarcated two, not necessarily exclusive, ‘types’ of multilevel governance.

The first, MLG1 (Table 2.4), is based on federalism and essentially replicates Mark’s 1993 framework. Authority is seen as dispersed to a limited number of general-purpose jurisdictions at a limited number of levels. Commonly analogised as a ‘Russian doll set’, MLG1 is conceived of as a hierarchical structure, where the smaller (usually territorial based) jurisdictions do not overlap their larger counterparts. As Conzelmann (2009, p.2) notes, the focus is on “the interaction between these levels and the sharing of competences between them ... [and] thus is attached to a state-centric concept of politics”. Mortal et al. (2018, p.68) agree, noting Type 1 “shows clear vertical linkages between the different governance levels with a central role for the state”.

Table 2.4 Multilevel Governance Type 1 (Hooghe & Marks, 2003)

	Characteristics	
Variation in individual jurisdictions	General-purpose jurisdictions	Functions are bundled Jurisdictions bundle together multiple functions, including a range of policy responsibilities
	Nonintersecting memberships	Hierarchical structure with static, usually territorial membership (as in national states, regional, and local governments). Smaller jurisdictions are neatly contained within the borders of the larger ones and do not overlap.
Systemic properties	Jurisdictions at a limited number of levels	levels of government are multiple but limited in number (e.g. international, national, regional, meso, local). only one relevant jurisdiction at each level
	Systemwide Architecture	Territorial jurisdictions are intended to be stable for periods of several decades or more with institutions fairly rigid, though the allocation of policy competencies across jurisdictional levels is flexible

In contrast to the first form, MLG2 (Table 2.5) centres on flexible task specific jurisdictions (such as providing services or solving problems) which “operate at numerous territorial scales” and “tailor membership, rules of operation, and functions to a particular policy problem” (Hooghe & Marks, 2004, pp.12–29). Governance is seen as non-hierarchical with overlapping jurisdictions, focussed on complex patterns of interactions and power relations between myriad state and non-state actors as Bulkeley & Betsill (2003, p.28) illustrate:

In this picture, the ‘neat scales, or levels, or tiers, disappear – they meld into one another. There is no up or under, no lower or higher, no dominant class of actor; rather, a wide range of public and private actors compete or collaborate in shifting coalitions.

Thus, MLG2 largely ignores traditional notions of territorial spaces and levels of government and instead sets no limit to the number of levels jurisdictions may operate in (Hooghe & Marks, 2003).

Rosenau (1997) agrees with Hooghe & Marks (2001) in seeing MLG2 forms emerging at the boundaries of formal politics, characterised by the engagement between formal and informal “spheres of authority” in both territorial and non-territorial networks.

Table 2.5 Multilevel Governance Type 2 (Hooghe & Marks, 2003)

	Characteristics	
Variation in individual jurisdictions	Task-specific jurisdictions	Jurisdictions are designed around fulfilling distinct functions, each providing services (e.g. water, energy, transport) or solving problems (adjudicating international trade disputes, monitoring water quality)
	Intersecting memberships	Non-hierarchical structure, with many overlapping, often competing and formally independent centres of decision-making
Systemic properties	No limit to the number of jurisdictional levels	Jurisdictions may operate at numerous territorial (or otherwise defined) scales
	Flexible design	Jurisdictions are responsive to temporary need and may discontinue when no longer required. The mode of decision making, adjudication, and implementation can be adapted to particular policy problems

Applications of MLG

The term, MLG, has since moved beyond its original EU incarnation and been “developed and extended to other political arenas” (Bulkeley & Betsill, 2003, p.27). Kersbergen & Waarden (2004) note the spread of MLG configurations in numerous national, subnational, transnational and international contexts. Behnke et al. (2019, p.3) concur, arguing the prevalence of MLG configurations in various world regions renders limiting MLG analysis to the EU as “outdated”. In a 2016 publication, Hooghe and Marks (2016) themselves assessed multilevel configurations in 81 countries²², providing further acknowledgement of the global spread of MLG²³.

However, MLG “has not been interpreted and applied in the same way by all scholars” as Stephenson (2013, p.817) highlights in an analytical review of the various scholarly applications of MLG. Behnke et al. (2019, pp.v-2) agree, noting the concept has been embraced by a wide range of scholars and extended to incorporate a diverse range of research themes including federalism, regionalism, and, critically for this study, decentralisation. The authors propose that the term Multilevel governance (MLG) has come to be seen as an umbrella term encompassing a wide range of “research perspectives on governing and governance in multilevel systems” (Behnke et al., 2019, pp.v-2).

MLG has also been applied to a wide range of sectors including water, agriculture, biodiversity, pollution, health, education, and business (Cash et al., 2006), although rarely to energy where there are only isolated examples of its use (e.g. Li & Yi, 2014) and, as far as the author is aware, never as a lens on decentralised energy governance. Moss & Newig (2010, p.1) note the particular relevance of MLG to aspects of environmental management, such as water, air pollution and biodiversity, as “Levels of government and administration typically do not fit the environmentally relevant scales, resulting in

²² The study contains countries from every continent bar Africa despite the existence of many African decentralisation initiatives. This appears to again highlight the general disservice towards the continent from academia (REF).

²³ The authors referring to these arrangements as “regional’ rather than ‘MLG’, but they still clearly consist of multilevel configurations and are thus perceived as MLG; aligning with thinking from Behnke et al. (2019).

inefficiencies, spatial externalities, and spillovers”²⁴. These applications are both conceptual and practical, Lockwood et al. (2010), for example, have developed a suite of governing principles for multilevel governance of natural resource management to be used in establishing effective and equitable governance institutions and for developing governance monitoring and evaluation instruments.

These applications suggest MLG could be successfully applied to energy, a sector where benefits and costs clearly overlap jurisdictions, and in which there is an urgent need to establish and develop effective decentralised energy governance institutions (see Chapter 1). Doing so seems particularly pressing in the context of increasingly prominent nexus debates²⁵, which have centred on the potential synergies and trade-offs energy has with water and agriculture (Stevens & Gallagher, 2015). As the latter two sectors are already well-documented within the MLG literature, applying MLG to energy remains the missing link to enhancing understanding of the circumstances in which multilevel arrangements work effectively in nexus approaches.

Criticisms of MLG as a framework

MLG has been subject to various criticisms during the course of its proliferation, potentially questioning its use as the analytical framework of this study. Arguably, the most prominent have been critiques decrying MLG as merely descriptive and lacking predictive powers to explain causality and the evolution of governance systems (Jordan, 2001). Stephenson (2013, p.818) suggests this criticism may be unfair given other well-known frameworks and theories lack a predictive scope (e.g. policy networks, grand theory), arguing MLG should instead be lauded for its ability to “overcome complexity” and inform “how governance is arranged today in a way that is easy to grasp”. Whilst Stephenson’s analysis seems prudent, it does seem to confirm Kohler-Koch & Eising’s (1999) assertion that MLG should be seen as a concept rather than a theory with predicative and explanatory scope.

Other concerns have centred around the perceived inability of MLG to interpret the influence of actors within governance, Bache (2008), for example, argues that MLG offered little insight into the links and power relations between actors. Both he and Warleigh-Lack (2008) suggest combining policy network approaches with MLG to account for these varying power differentials between actors. Similarly, the political scientist, Blom-hansen (2005, p.644) felt MLG “fails to specify which actors, at which levels, will be causally important”, suggesting the use of principal agent theory to address this shortcoming. However, the political scientist acknowledged the concept provides “a descriptively accurate picture” of the complexity present in contemporary governance structures.

The renowned geographer, Jessop (2006, p.151) argues the concept of MLG could be “misleading”, primarily because it “neglects problems of meta-governance” (i.e. “the governance of governance” (Jessop, 2010, p.106)) which might typically include efforts to improve aspects of governance and avoid the increasingly recognised concept of ‘governance failure’. For Jessop, this involves actors engaging in reflexive, self-balancing processes to create checks and balances within governance in

²⁴ Examples of spillovers include: ‘pollution spillovers’ (the movement of pollutants across jurisdiction boundaries); ‘preservation spillovers (resource use by citizens from other jurisdictions); and ‘competitive spillovers’ (states competing on environmental matters) (Moss & Newig, 2010).

²⁵ For instance, the 2016 annual conference at the Royal Geographical Society with Institute of British Geographers was dedicated to the theme of nexus thinking.

order to achieve policy aims; a commonplace praxis coined 'collibration' by Dunsire (1996). The intrinsic presence of collibration leads Jessop to argue that MLG would be more accurately termed 'multi-scalar meta-governance', although he acknowledges these issues have been circumvented in many studies by the use of additional theoretical and empirical analyses alongside MLG.

Rationale for applying an MLG framework to decentralised energy governance

Despite the aforementioned criticisms, MLG remains a particularly suitable framework for understanding energy governance in post devolution Kenya. Taken as a concept rather than a theory, Hooghe and Mark's various contributions to MLG have stood the test of time over twenty years, not only as a seminal foundational piece of the literature, but also critically as a tried and tested means of overcoming the complexity inherent in governance comprised of networks featuring a wide array of actors operating on multiple socially constructed scales. As such, its simplifying, descriptive nature provides a platform for understanding governance, facilitating the empirical analyses of this study to address the limitations of MLG in terms of identifying power differentials, incorporating meta-governance, and identifying which actor(s) will be causally important. It is thus anticipated that this thesis's application of MLG to energy (itself an emergent model of enquiry) can replicate the successes found with its more established usage in other sectors, and in doing so facilitate better understanding of the circumstances in which decentralised energy governance arrangements might work most effectively in the Global South.

2.5 Conclusion

Overall, the critical analysis of the energy studies and decentralisation literature in this chapter has clearly illustrated that insufficient attention has been paid to the impact of decentralisation on energy governance in the Global South, with key knowledge gaps revealed. The energy studies literature was found to have neglected the study of governance (and more broadly the application of social science-based approaches) undermining in the process more holistic governance approaches incorporating the multiple socio-political dimensions of energy and limiting the evidence base for policy exploring the potential of decentralised energy governance forms to address Global South energy access issues.

This scholarly deficit has been compounded by the failure of the decentralisation literature to address the theme of energy in the Global South. This clear lack of engagement between the decentralisation and energy studies discourses appears highly likely to have undermined the development of effective decentralised energy governance which it can be argued shows considerable potential given the success of such initiatives in other sectors. In addition, the few texts which do engage with both discourses suggest decentralisation may have particular relevance to energy in terms of facilitating off-grid initiatives and as a check to centralised energy governance monopolies.

Thus, given the increasing trend of decentralisation in the Global South, along with the prioritisation of energy access on international development agendas, the focus of this thesis on appraising the role of decentralised energy governance – within the more broadly recognised need for polycentric energy governance approaches – is both timely and urgently needed. Due to their expediency in better understanding the complexity of such forms of governance, the thesis employs Hooghe and Mark's (2003) twin concepts of MLG1 and MLG2 as the main analytical framework to help situate and interpret the empirical findings of the study.

Chapter 3 - Global Goals, sub-Saharan African Realities: The Energy Governance Challenge in Kenya

This chapter justifies Kenya (and more broadly sub-Saharan Africa) as the site of the empirical research of this thesis and provides a critical discussion of how the conceptual and theoretical debates discussed in Chapter 2 have unfolded in the country and wider region. In doing so it begins to uncover significant contradictions between the rhetoric of decentralisation and the realities on the ground; a recurring theme in Kenya as the later empirical chapters reveal. As with the previous chapter, the energy studies and decentralisation literatures are drawn together, facilitating a novel approach whereby developments in Kenyan energy governance are explored through the lens of decentralisation. Adopting this approach enables a fuller understanding of how the spatially contingent dynamics of decentralisation might affect the potential of decentralised energy governance to address energy access issues in Kenya.

To achieve this Section 3.1 first highlights the relevance of the broader sub-Saharan Africa region to this research which is argued to be on the front line of energy access and governance debates. These regional influences are critical to understanding the Kenyan context and why the country emerges as a particularly pertinent case study to ground the thesis empirically. Section 3.2 then explores the historical developments in Kenyan decentralisation and energy policy, revealing their significant influence on the current stakeholder interactions shaping decentralised energy governance. The implications of the current political framework for decentralised energy governance are then interrogated in section 3.3, unearthing critical issues concerning the legislative provisions for devolved energy likely to undermine decentralised governance. Lastly, section 3.4 concludes by establishing the chapter's main findings, particularly how the emergent contradictions between concept and reality might be better understood through this study's MLG approach.

3.1 Sub-Saharan Africa: the energy access front line

Although decentralised energy governance is highly relevant to much of the Global South, the greater urgency of energy access issues in sub-Saharan Africa is the principal reason it was selected as this PhD's region of study. As Chapter 1 stressed, sub-Saharan Africa has fared worse than other Global South regions in addressing energy access issues (IEA, 2018b; IEA, 2018a), a problem compounded by predictions indicating electricity and in particular clean cooking access rates will not keep pace with the projected population growth (Table 3.1). Unlike other Global South regions, this is expected to lead to the number of people without electricity and clean cooking access continuing to increase until 2030 before signs of a decline emerge towards 2040. The relevance of sub-Saharan Africa to this research is also demonstrated by the clear ongoing trend towards decentralisation in the region (Mohmand & Loureiro, 2017), as seen by the African Union adoption of an African Charter on values and principles of decentralisation in 2014 (UN Habitat, 2015). In addition, there has been an ongoing regional commitment to the ideals of the New Urban Agenda (NUA) which has decentralisation at its core (Bwire, 2019).

Table 3.1 Predicted population without access to modern energy services (IEA, 2016; IEA, 2018a/b)

Region	Without access to electricity			Without access to clean cooking facilities		
	2017	2030	2040	2017	2030	2040
Sub-Saharan Africa	603	619	489	893	823	708
Developing Asia	351	166	47	1715	1458	1081
Latin America	20	0	0	56	56	52
Middle East	18	0	0	11	8	7
World/Global South		784	536		2345	1849

Sub-Saharan Africa is defined using what the UN Statistics Division (UNSD) (2003) term “the most common” definition: namely all of Africa except the five North African countries of Morocco (including the disputed Western Sahara territory), Algeria, Tunisia, Libya, and Egypt (Figure 3.1). However, the notion of ‘sub-Saharan Africa’ has been criticised for being a euphemism for negative ‘black Africa’ news stories (Udeze, 2009). This is supported by the term’s clear geographical inaccuracy as predominantly ‘black African’ countries such as Mali, Mauritania, Chad, Sudan and Niger lie mostly within, rather than below the Sahara, while it has been alleged that South Africa was not considered part of sub-Saharan Africa until after apartheid and the implementation of a majority black government (Ekwe-Ekwe, 2012).

Despite these criticisms, the notion of sub-Saharan Africa is a useful designation for energy access studies in Africa due to the sharp contrast between the near universal energy access found in North Africa and the much lower levels in the continent’s other regions (Table 3.2). The access levels in North Africa clearly indicate the region is not a priority for this PhD, and thus, a naming convention is required to distinguish between Africa and the focus of this study. As potential substitutes to sub-Saharan Africa may also derive similar negative connotations, the term will be used in keeping with its usage by most major multilateral and regional organisations (e.g. UN, African Development Bank (AfDB)).

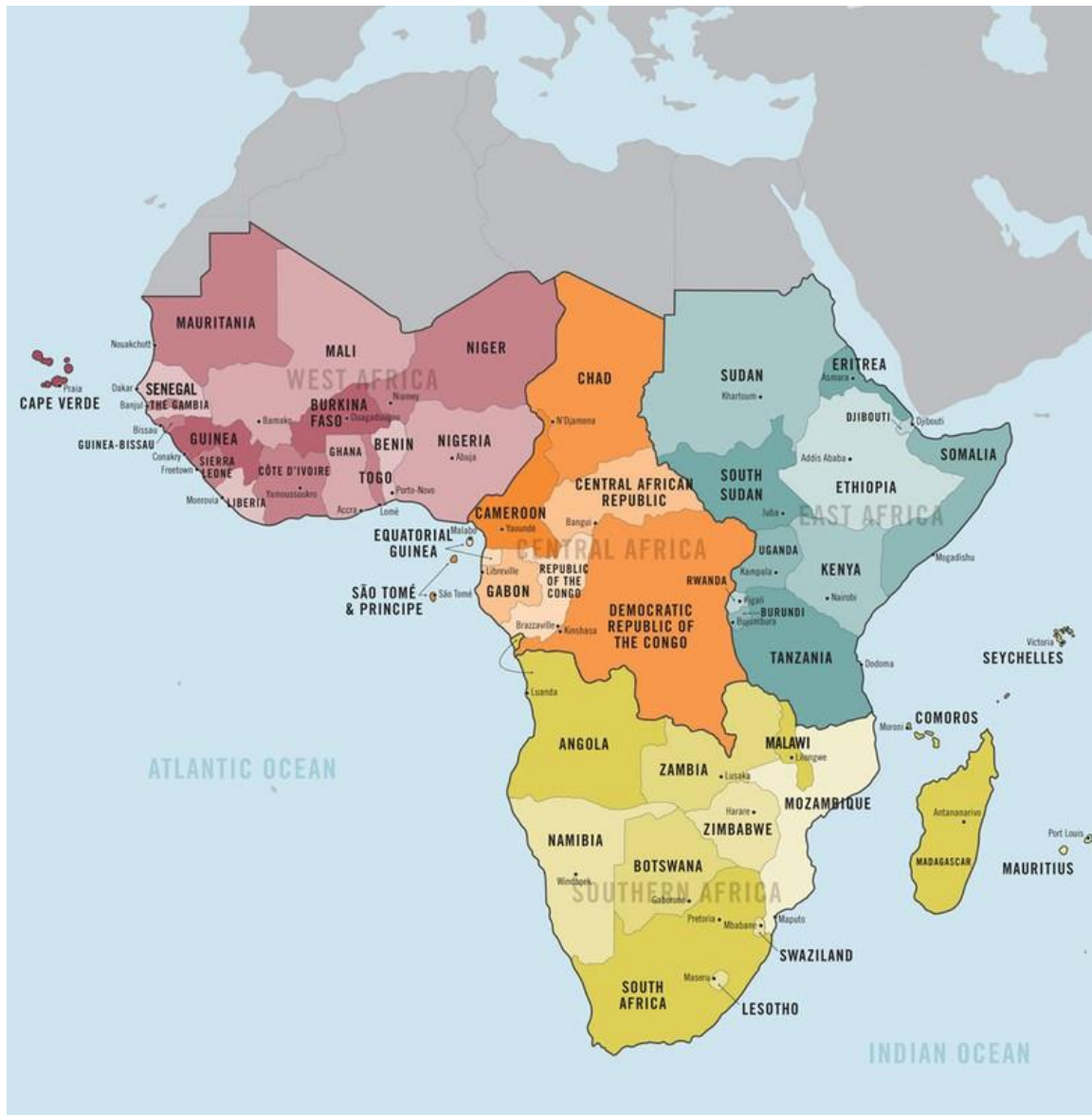
Table 3.2 2017 Energy access in Africa by region (adapted from IEA, 2018a/b).

Region		Electricity access	Clean cooking access	Countries with access rates equal or above South Africa
North Africa		100%	> 99%	
Sub-Saharan Africa	Central Africa	26%	10%	Gabon (e & c), Equatorial Guinea (e)
	East Africa	41%	11%	
	West Africa	51%	11%	Cape Verde (e & c), Ghana (e)
	Southern Africa*	32%	17%	Mauritius (e & c), Seychelles (e & c)
	South Africa	84%	85%	
	Sub-Saharan Africa	43%	16%	

* Excludes South Africa²⁶. e = electricity, c = clean cooking

²⁶ The IEA’s separation of South Africa from its region Southern Africa may be read as further evidence of sub-Saharan Africa being a pejorative term as Gabon, Mauritius, Seychelles and Cape Verde have better access rates than South Africa but are not separated from their regions. However, the four countries have small populations and thus it seems are not separated as they do not skew the regional data to the same extent as South Africa (the most populous country in Southern Africa).

Figure 3.1 Map of sub-Saharan Africa (Source: Khandke, 2016)



3.1.1 Decentralisation in sub-Saharan Africa

The ongoing movement towards decentralisation in sub-Saharan Africa has been shaped by varied historical agenda which are important to explore if the underlying influences shaping current decentralised energy governance initiatives are to be better understood. First emerging in the 1980s, the decentralisation agenda was initially advocated by Global North development agencies (often as part of structural adjustment programmes) as a way to improve governance and service delivery by circumnavigating the perceived corruption, rent seeking and ethnic patronage of the centralised state (Cheeseman et al., 2016). By the 2000s, such reforms had become a “cure-all prescription” (Cheeseman et al., 2016, p.3); a means to variously “protect minorities, diffuse conflict, boost local development, and bring politics ‘within the people’s reach’” (D’Arcy & Cornell, 2016, p.246).

Decentralisation in sub-Saharan Africa has been well documented as “widespread but not deep” (Cabral, 2011, p.2). Ndegwa's (2002, p.22) well-known analysis of 30 countries in the region found all

contained sub-national governance structures but central government retained its “continued dominance”. Similarly, the United Cities and Local Governments (UCLG), in what Batchelor et al. (2014, p.10) consider the “most comprehensive review of decentralisation worldwide” found decentralisation policies in “practically all stable countries” in sub-Saharan Africa but noted most were “limited” in extent (UCLG, 2007, p.21-24). D’Arcy & Cornell, (2016, p.253) argue “there are few real success stories”, noting general agreement within the decentralisation literature that meaningful reform has not been implemented by most central governments “because it threatens their hold on power and means of rule”. More recent treatments suggest these traits of ongoing but not extensive decentralisation policies continue to persist: (Mohmand & Loureiro, 2017), with notable discrepancies emerging between decentralisation legislation and realities shaped by what Erk (2014, p.536) terms “long-term structural uncodified factors”; the decentralisation scholar emphasising that:

it seems everywhere to the south of the Sahara there is a gap between the institutional/constitutional blueprints introducing the reforms and the facts on the ground (Erk, 2014, p.535)

As such, sub-Saharan decentralisation has “consisted mostly of deconcentration of administrative functions, rather than true devolution of powers” (Cabral, 2011b, p.2), characterised by insufficient power and resources to match responsibilities (Conyers, 2007) and at times efforts by central government to ‘recentralise’ due to changing priorities (Rondinelli et al., 1989). These weak forms of decentralisation have often been used by elites to consolidate central power by creating positions which either divide opposition power bases or are filled by officers loyal to central government (Crook, 2003). However, these limited deconcentration realities are not confined to sub-Saharan African but are a global occurrence (Rodríguez-Pose & Gill, 2003); the devolution of power to ‘city regions’ in the UK serving as a Global North exemplar. This policy resulted in the multiplication of overlapping sub-national scales of governance, weakening the newly formed city regions and highlighting “how the state shapes policies in ways that protect its legitimacy for maintaining regulatory control and managing the economy” (Harrison, 2012, p.1255).

Factors at the sub-national scale have also hindered the impacts of governance reform in sub-Saharan Africa, such as underpaid staff lacking motivation and capacity, lack of clarity over systems and procedures, interference from other political scales, lack of accountability, and corruption (Ribot, 2002). In addition, the prevalence of political patronage at both national and sub-national levels has undermined decentralisation efforts in the region, “exacerbated by lack of pressure from civil society organisations, which are often weak and part of the same political patronage system” (Conyers, 2007, p.23). The presence of clientelism further emphasises the critical impact of stakeholder agendas and interactions, resonating with Faguet's (2014, p.10) assertion that decentralisation “is not exogenous to the issue of who has the power and what they want”.

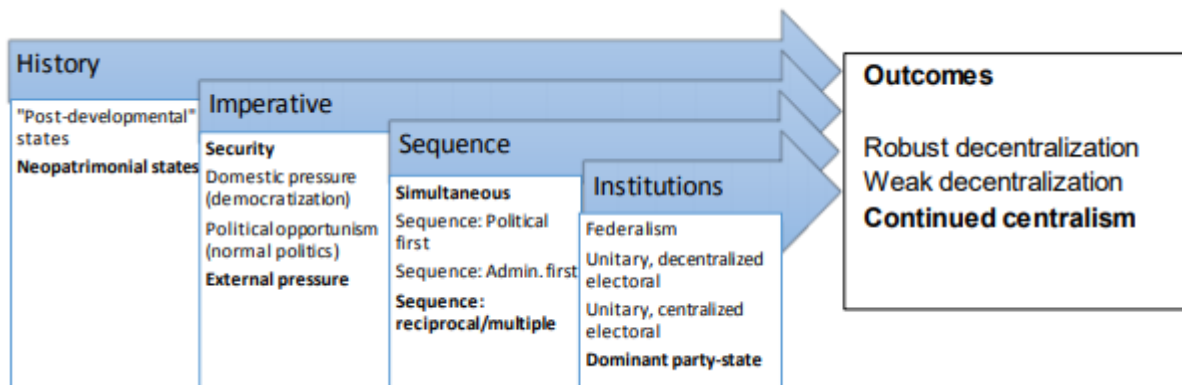
Despite the general lack of genuine reform in sub-Saharan Africa, significant regional variations can be observed. Ndegwa's (2002, p.22) noted a marked tendency for francophone and lusophone countries to have lower levels of decentralisation, due to their roman law tradition which emphasises greater state centralisation. Revising Falleti's (2005) sequential theory (see Chapter 2), Dickovick (2014) argued sub-Saharan Africa's historical and institutional context (which differed significantly from Latin America, the empirical basis of Falleti's work) was key to explaining the varying depths of

decentralisation within the region. Whereas decentralisation emerged in Latin America in a context of ‘post-developmentalism’ in the 1980s, sub-Saharan Africa prior to decentralisation “was neopatrimonial and personalistic”, Dickovick emphasising that:

In particular, Africa has a much less robust history [than Latin America] of local governance and countervailing local elites that can meaningfully oppose central rule. That is, the history of governance is more centralized.

Dickovick therefore proposes revising sequential theory, adding variations (in bold in Figure 3.2) to account for sub-Saharan African outcomes. Those factors placed higher in the four variables of history, imperative, sequence and institutions presumed to lead to more robust decentralisation.

Figure 3.2 Model of sub-Saharan African decentralisation (Source: Dickovick, 2014)



In a later compendium assessing decentralisation outcomes of ten sub-Saharan African states, edited by Dickovick & Riedl (2014), several of the model’s features were apparent. Ethiopia, Nigeria, and South Africa were seen as most decentralised²⁷, being federal states with the highest proportion of government spending at the subnational level and whose decentralisation initiatives had largely arisen from security concerns over ethnopolitical divisions. In contrast, Botswana, Burkina Faso, Mali, and Mozambique were regarded the most centralised: the subnational level receiving a very small share of total government expenditure, with elected officers in the francophone and lusophone countries overseen by central government institutions. Dickovick’s revision of sequential theory appears to support the use of Kenya as the case study for this PhD as the country exhibits several of the factors expected of robust decentralisation²⁸. Despite its neopatrimonial past, Kenyan devolution emerged from security concerns after the post-2007 election violence, with a near simultaneous implementation of political, administrative and fiscal decentralisation, while the institutions that condition decentralisation have been described as “quasi-federal” (Kangu, 2015).

Decentralisation has also varied significantly by sector in sub-Saharan Africa. Energy has rarely been incorporated into decentralisation reforms (see following sub-section) while other sectors, such as health, water and agriculture have a more established tradition. Mehrotra's (2006) analysis of the 1987 Bamako initiative to decentralise decision-making for public health services found mixed results but noted “very successful” reforms in Benin, Guinea and Mali, incorporating components of “deep

²⁷ The three countries along with Comoros are the only federal states in sub-Saharan Africa.

²⁸ Kenya was not one of the countries analysed in the compendium edited by Dickovick & Riedl (2014).

democratic decentralisation". The ideals of urbanisation have also been a driving force, with for instance a number of African cities adopting decentralisation policies and strategies for solid waste collection and disposal (UN-Habitat 2010a; Bwire, 2019).

Overall, it seems clear that decentralisation in sub-Saharan Africa has lacked depth, with the success of reforms highly dependent on spatially contingent factors, particularly policy agendas and the power relations between central elites and actors at the sub-national level (Cabral, 2011b): facets which reinforces the relevance of the geographical approach adopted by this study. Sub-Saharan African decentralisation has, paradoxically, often consolidated central authority (Fessha & Kirkby, 2008), hindering research in the area by limiting the number of cases where genuine reform has occurred. This concern contributed to Kenya's selection as the case study for this PhD, for as Cheeseman et al. (2016, p.3) note: "there has been genuine reform: decentralisation was neither killed at birth ... nor was it limited to a set of superficial measures with little significance".

3.1.2 Energy policy and governance in sub-Saharan Africa

Historical context

The tendency for sub-Saharan African decentralisation to consolidate central authority has had clear implications for energy policy and governance, with few countries implementing policies that integrate energy into decentralisation processes (Brown et al., 2015). This is partly attributable to the general reluctance of central governments to decentralise noted in the previous section, yet sector specific factors are also pertinent, particularly the influence of prevailing energy paradigms.

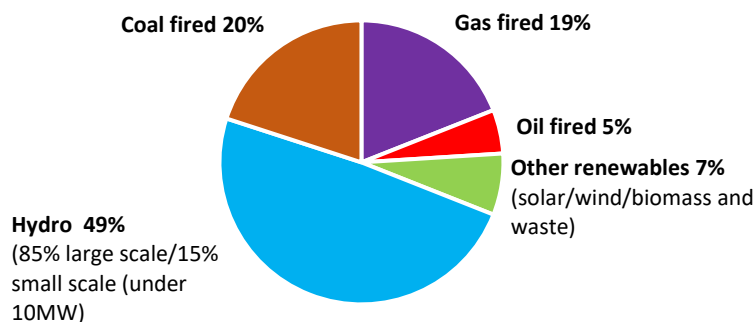
Discussed in Chapter 2, Goldthau's (2012) assertion that energy paradigms mirror economic paradigms is largely backed up by the evidence from sub-Saharan Africa. Following independence, most countries formed energy systems with highly centralised management dominated by large-hydro powered grid electricity systems, aligning with the prevailing *statism* and modernisation development models (Showers, 2011). Neoliberal reforms to the region's energy sector, which came to prominence in the 1990s as part of conditions attached to development loans, advocated greater commercialisation of the energy sector (Wamukonya, 2003). Yet, while these policies offered greater access to private investors, they did not significantly diminish central government control vis-à-vis the sub-national level (Brown et al., 2015).

The increased geopolitical influence of the Global South and growing concerns over climate change triggered the emergence of the interventionism and fragmentation paradigms, whose more flexible governance patterns ostensibly suggested greater scope for decentralised energy governance in sub-Saharan Africa. This potential was also indicated by cost reductions in off-grid technologies which suggested the economics driving the traditional (and often monopolistic) centralised approach might no longer apply, thus enabling greater use of distributed energy, whose more localised level of operations appears to align with the remit of decentralised governance (Levin & Thomas, 2016). This is of particular relevance to sub-Saharan Africa where low population densities indicate off-grid provision is key to addressing energy access issues (Pachauri et al., 2012).

Despite this context, the key international policy interventions driving the low carbon energy agenda contained very little in provision for decentralised energy governance (see Table 2.2) while investment

from Global North financial institutions in off-grid energy and clean cooking has trailed significantly behind that for grid-based initiatives (Bhattacharyya, 2013). Decentralised technology initiatives have remained largely the domain of bilateral donor programmes: notably the solar and clean cooking programme of the German development agency, GIZ²⁹ (GIZ, 2018; 2019). Having risen to become sub-Saharan Africa’s largest energy development partner (Gualberti, 2014), China has also shown an investment preference for large scale generation, transmission and distribution infrastructure for grid electricity (Figure 3.3).

Figure 3.3 Chinese-added generation capacity mix in sub-Saharan Africa, 2010-20 (source IEA, 2016)



Domestically, sparsely populated areas which might benefit from off-grid solutions have not been prioritised by central governments due to “fewer perceived political ‘returns’” (Scott & Seth, 2013, p.7), a feature Kofi Annan (2015, p.18) emphasised, noting political patronage and corruption have meant “For too long, Africa’s leaders have been content to oversee highly centralized energy systems”. The content noted by Annan resonates with thinking in the political science discourse, which emphasises the high stakes associated with loss of centralised control in sub-Saharan Africa, Cheeseman (2015, p.10) highlighting:

Where the government enjoys a monopoly over resources and jobs (such that opportunities for those outside of the regime are few and far between), as in many African countries, political control means economic control. Under these circumstances, loss of office implies a loss of financial opportunities not just for the leader, but also for their allies, family, and supporters

Given the current monopolistic control of many sub-Saharan African governments over energy and the sector’s lucrativeness, the quote suggests that central governments are likely to particularly keenly resist decentralisation reforms to the energy sector which might threaten their dominion.

Overall, it seems the reluctance of domestic governments to decentralise along with international investor priorities and prevailing energy paradigms have been the main causes behind the prevalence of highly centralised energy governance and energy access inequities in sub-Saharan Africa. However, there are currently a limited number of more decentralised governance systems in the region to which this thesis now turns.

²⁹ GIZ is an acronym for the Deutsche Gesellschaft für Internationale (German Corporation for International Cooperation)

Decentralised energy governance in sub-Saharan Africa

The two most prominent studies on energy in the context of decentralisation in the Global South: UNDP (2009) and Brown et al. (2015) (see Chapter 2) highlight several sub-Saharan African cases, providing insight into the spatially contingent factors affecting decentralised energy governance in the region. The two studies find six countries (Madagascar, Sudan, South Sudan, South Africa, Rwanda and Kenya) have legislation integrating energy into an overall decentralisation policy while a seventh, Malawi, is in the process of implementing such reforms (Buckland et al., 2017).

The reforms in the former three nations appear less extensive: sub-national government ownership and operation of distribution systems and power plants has been enabled but has mainly resulted in local governments struggling to maintain former centrally controlled infrastructure rather than actively adopt new energy roles and responsibilities³⁰ (Brown et al., 2015). In contrast, the approaches of the latter three nations have been far more extensive. In Rwanda, significant energy roles have been transferred to the district level including integrating energy into annual plans, approving local energy initiatives by non-government actors, and awareness raising initiatives; although budgetary and human resource constraints have proved challenging (Vincent & Wa Gathui, 2014). The roles emanating from Kenya's part-devolution of energy are arguably further reaching, particularly the mandate for county energy planning (explored more fully in Sections 3.8-3.9). South Africa's constitution provides more extensive powers still, devolving "executive authority and rights to 'administer' electricity" (UNDP, 2009, p.9). This has led to the sub-national level playing key roles in electrification (particularly distribution) and energy efficiency initiatives (Brown et al., 2015).

Despite the provision for local authority energy roles, initiatives have often been hindered by sub-national level capacity issues, particularly a lack of sectoral knowledge and "inclination to devote time and resources to addressing energy issues" (Brown et al., 2015, p.42). These challenges have largely gone unaddressed, with only a few capacity building schemes specifically targeting issues concerning decentralised governance, such as the 2008 'Renewable and Efficient Energy for Poverty Alleviation in Southern Africa' (REEPASA) project in Southern Africa (Brown et al., 2015), and more recently the 2015-19 'Community Energy Malawi' initiative. Unlike other decentralised energy governance initiatives (e.g. Kenya), Community Energy Malawi took the uncommon but prudent step of engaging with a wide range of stakeholder to define the decentralised energy role prior to the devolved position being implemented (Buckland et al., 2017).

In addition, the aforementioned legislative roles almost all relate to electrification and there are few cases of significant sub-national authority involvement in other aspects of energy (UNDP, 2009). Isolated examples include Rwanda, where local authorities were prominent in the national biogas programme (Tumwebaze, 2014), and the Central African Republic, which saw local authorities conduct needs analyses of community energy needs that subsequently helped shape national policy (UNDP, 2009). The UNDP found no decentralised legislation governing the region's most pressing energy access issues, domestic cooking, although Brown et al. (2015) note developments since the UNDP

³⁰ Burkina Faso, Ghana, and Mozambique also feature legislation with these provisions to the sub-national level although not as part of an overall policy of integrating energy into decentralisation processes.

study, highlighting examples from Kenya and Rwanda where local authorities have undertaken key roles in promoting clean cookstoves.

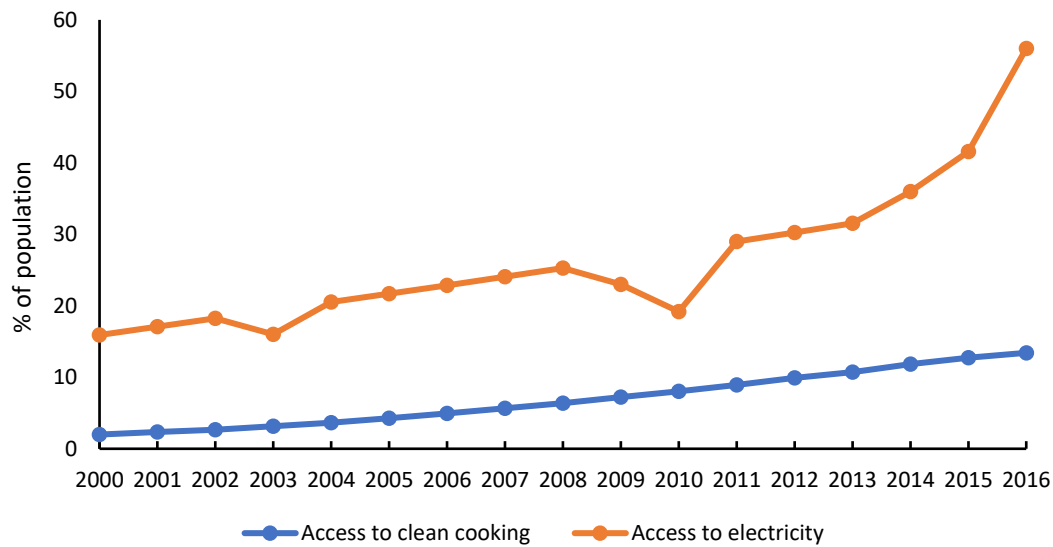
Overall, the few decentralised energy governance initiatives which exist in the region indicate local authorities could potentially play a wide range of roles in the energy sector, incorporating most critically clean cooking and not confined to electrification as has mainly been the case thus far. The case studies illustrated suggest decentralised energy governance initiatives in sub-Saharan Africa are more effective when sufficient budgetary control is transferred, sub-national level capacity building has been implemented, and where devolved roles have been clearly demarcated as part of a multi-stakeholder collaborative process. These factors provide key insights into issues likely to impact the Kenyan decentralised energy governance experience which this study explores.

The themes discussed in this section also help explain why Kenya emerged as an ideal case study for this research. A key difficulty cited by both the UNDP (2009) and Brown et al. (2015) concerns whether a sub-national energy governance role is a result of decentralisation or simply due to being allocated a new role regardless of decentralisation. For the purposes of this study, it was thus prudent to choose a case study country, such as Kenya, with explicit devolved energy reforms so that the implications of decentralisation might be more easily determined. Although regionally, South Africa appears to offer the most significant devolved energy provisions, Kenya was selected as it has more pressing energy issues, a more recent devolution process, and was deemed more representative of the Global South than South Africa which despite its striking inequalities is classed as an upper-middle-income economy (World Bank, 2019b).

3.2 Exploring Kenya's extensive decentralisation process

Kenya provides a particularly relevant context in sub-Saharan Africa for this study since it has undergone a far more extensive decentralisation process than most countries in the region (D'Arcy & Cornell, 2016), including, distinctively, the devolution of key energy powers. This suggests a more significant role for decentralised energy governance than other nations engaged in decentralisation processes. Kenya's relevance to this research is reinforced by the country's shifting energy access picture since the devolution process was implemented in 2013, with significant increases in electricity access (although not clean cooking access) inviting the question to what extent these trends can be attributed to decentralised energy governance (Figure 3.4).

Figure 3.4 Access to clean cooking and electricity in Kenya (adapted from (World Bank, 2018a/2018b))



3.2.1 Decentralisation in Kenya 1963-2010: a conflicting legacy

Understandings of decentralised energy governance, which consequently affect how the term is mobilised by stakeholders and ultimately its effectiveness, are highly influenced by historical conceptualisations of decentralisation. It therefore follows that the pre-devolution context is critical to explore. In this sense, Kenya between independence in 1963 and the new constitution’s promulgation in 2010 presented a paradox: a highly centralised MLG1-esque political system prevailed (Kangu, 2015), yet debates concerning decentralisation retained an “enduring place in Kenya’s politics” (Anderson, 2005, p.564).

Decentralisation was the dividing issue in the run-up to independence between the two main parties: the Kenyan African Democratic Union (KADU) and the Kenyan African National Union (KANU). KADU, mainly representing the smaller rural-based ethnic communities, advocated *majimboism* (regional autonomy) due to fear of political and economic dominance by the larger, better educated Kikuyu and Luo ethnic groups who supported the nationalist, unitary state ideology of KANU (Anderson, 2005). Supported by self-interested colonial policies which sought to cultivate local politics and undermine notions of national unity, KADU’s vision prevailed and Kenya became independent under a semi-federal *majimbo* constitution³¹. However, this was quickly undone after KANU won the inaugural election; their initial agreement to *majimboism* merely a ploy to accelerate independence (Cheeseman et al., 2016). The election dispute had detrimental implications for the development of decentralisation as “the rhetoric of KANU turned the federalist goal of *majimboism* into a slur: *majimboists* were derided as tribalists who opposed the broader goals of nationalism” (Anderson, 2005, p.447).

³¹ The 1963 independence constitution created eight regions with “considerable powers” (Chitere et al., 2006, p.12). Each had a legislative assembly, president, executive, and a police force in a more extensive form of decentralisation than the present system. Although *majimbo* literally translates as ‘regions’, a (highly politicised) debate exists over whether what was achieved by the 1963 constitution was federalism (which KADU sought). However, most align with Maxon’s (2011) interpretation that the independence constitution “was regional in character but fell short of a federal system”.

Following the defeat of majimboism, Kenya became increasingly centralised; a one-party state emerging under KANU's, and the country's, first two presidents: Jomo Kenyatta³² (1964-1978) and Daniel Arop Moi (1978-2002) (Table 3.3). Although weak forms of decentralisation were introduced during Moi's presidency, these were self-serving policies to consolidate central control. In the 1980s, Moi allocated power to district administrators, yet these policies amounted to deconcentration: an expansion of field offices filled by personnel centrally and ethnically aligned to Moi which consolidated his control over rural development (Barkan & Chege, 1989). Similarly, in the 1990s, Moi invoked majimboism as a means to divide the opposition, mobilising ethnic sentiment over contested land rights in the Rift Valley and the Coast which sparked election violence in 1992 and 1997. This mobilisation of majimboism involved no actual transfer of power but "showed how devolution could be used to reinforce rather than counter ethnic politics" (Cornell & D'Arcy, 2014, p.14).

Table 3.3 Historical context of Kenyan decentralisation: timeline of key events

Year	Event
1963	Kenya gains independence with a semi-federal constitution
1964	Amendment abolishes parliamentary system making Kenya a republic and highly centralised
1965	Amendment abolishes majimboism (Regionalism) abolished
1969	Kenya becomes de facto one party state
1982	Kenya becomes de jure one party state
1983	Moi introduces weak deconcentration reforms to consolidate central power
1991	Moi mobilises majimboism as a divide and rule measure, exacerbating ethnic tension
2005	Proposed new constitution is defeated in a referendum. Opposition centred around Kibaki's weakening of the devolution and parliamentary system provisions in the earlier Bomas draft.
2007-8	Post-election violence leads to urgency for devolution
2010	New constitution adopted with devolution at its core
2018+	Following the disputed 2017 election, opposition leaders have called for the Constitution to be amended to bring in the parliamentary system proposed by the Bomas draft.

Further central government constraint of decentralisation initiatives was evident when Mwai Kibaki took office in 2002; the new president reneged on a pledge to support genuine constitutional change (commitment to which had brought him to power) by weakening the significant devolution provisions in the constitutional reform document, the 'Bomas draft' (Chitere et al., 2006). Opposition to the dilution of these reforms saw the emergence of the Orange Democratic Movement (ODM) opposition group which campaigned successfully to defeat the proposed constitution in the 2005 referendum (with a clear 58% 'no' vote). Following the referendum, ODM advocated decentralisation in the run up to the 2007 election as a means to unify communities outside Kibaki's central province heartland, while Kibaki sought to side-line the process to consolidate centralised power.

However, persisting with the centralised status quo became no longer tenable in the wake of the violence following the disputed 2007 election, which claimed over 1000 lives and displaced almost 700,000 people (Lynch 2009). Deep rooted ethnic tensions came to the fore particularly over the historically emotive issue of land rights; an issue exacerbated by successive elite regimes using land as a patronage resource to mobilise electoral support (Boone, 2011), creating the conditions where extended civil conflict seemed a distinct possibility (Cheeseman, 2008). While the election was seen

³² Kenyatta was Prime Minister from 1963-64 before constitutional amendments conferred on him the role of president.

as having ignited the crisis, the root cause was broadly understood to lie in Kenya's highly centralised, corrupt winner-takes-all ethnic-based polity (Mueller, 2008; Branch & Cheeseman, 2009): D'Arcy and Cornell (2016, p.247) summarising the "underlying pathologies of Kenyan politics" as:

the over-centralization of the state that allowed certain ethnic groups to dominate leading to inequitable resource distribution, politicized ethnicity in ways that fuelled violence, and stimulated a political culture of "our turn to eat".

Stakeholder recognition of these deep-rooted causes in the negotiations to end the violence resulted in the political elite committing to seek constitutional reform incorporating devolution "as a means to address Kenya's chronic ethnic conflicts" (Cheeseman et al., 2016, p.3). This gave rise to the 2010 referendum where a new constitution was overwhelmingly passed with 68.6% in favour; surveys conducted by Kramon and Posner (2011, p.96) finding devolution along with "a simple desire for change" the two most commonly cited reasons for support.

Overall, the pre-devolution context highlights the contentiousness of decentralisation in Kenya due to the various ways it was mobilised by Kenya's political elite, used variously as a defensive measure against economic and political domination, a symbol of ethno-nationalism, or as a vehicle for greater representativeness. These tensions have implications for the current devolution process as they indicate the potential ways the Constitution and its provisions for decentralised energy governance might be mobilised by stakeholders to serve significantly different political agendas – a critical issue which reiterates the importance of research question 2 in interrogating how the interactions and agendas of energy stakeholders have shaped the emergent decentralised energy governance in Kenya.

3.2.2 Energy policy and governance 1963-2010: centralisation and inequality in Kenya

The tension over decentralisation noted in the previous section was influential in the development of Kenyan energy policy and governance prior to devolution. This backdrop is thus important to explore if the influences on the current stakeholder interactions and agendas shaping decentralised energy governance (the subject of RQ2) and their spatial variations (the focus of RQ3) are to be fully understood. To this end, this section adopts the novel approach of exploring the historical development of Kenyan energy policy and governance through the lens of decentralisation, addressing a gap in the literature which has paid insufficient attention to correlations between the two themes.

The influence the degree of centralisation has had on Kenyan energy policy and governance has been evident from independence and echoes the notions of energy paradigms mirroring economic paradigms noted in Chapter 2 (cf. Goldthau, 2012). Following independence, the Kenyan economy was heavily influenced by the ideals of modernisation theory which were articulated via the key planning document, 'Sessional Paper No. 10 of 1965'³³. Although entitled "African Socialism", the document espoused a mixed economy, combining aspects of the free market with strong centralised control and the nationalisation of key sectors (Speich, 2009). The paper conceived entirely economic means to

³³ Competing visions for Kenya's post-colonial economy existed but ultimately Planning Minister Tom Mboya's modernist vision prevailed over vice-president Oginga Odinga's socialism, leading to the latter's departure from KANU in 1966.

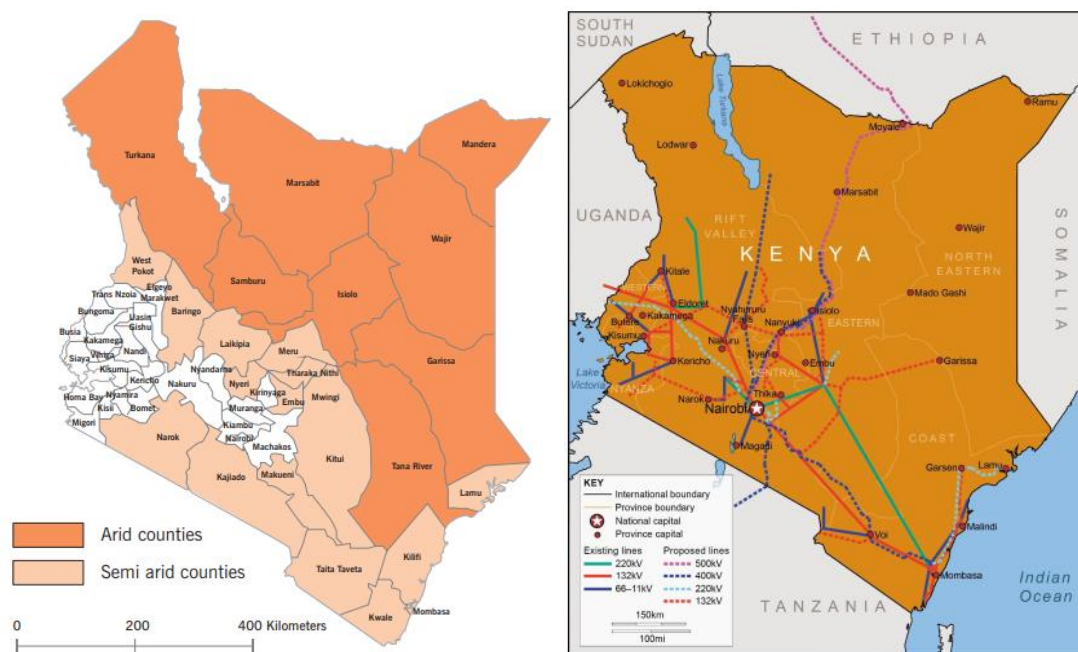
achieve its objectives of social justice and humane living conditions (Odhiambo, 2013), an end which led to the conscious marginalisation of ‘less developed’ areas as indicated in Article 133:

One of our problems is to decide how much priority we should give in investing in less developed provinces. To make the economy as a whole grow as fast as possible, development money should be invested where it will yield the largest increase in net output. This approach will clearly favour the development of areas having abundant natural resource, good land and rainfall, transport and power facilities, and people receptive to and active in development (Government of Kenya).

This belief in trickle-down economics deliberately created the now recognised historical marginalisation of arid and semi-arid lands (ASALs - Figure 3.5), a policy reinforced by attitudes within the highest levels of government (Odhiambo, 2013). Former senator for Mandera (an ASAL county), Billow Kerrow, arguing with reason that it was “a deceptive attempt to create political equality, equal opportunities and social justice” (Kerrow, 2015, p.1).

The implications of the highly centralised and geographically unequal control proffered by ‘Sessional Paper No. 10 of 1965’ were evident for energy policy and governance. Indicative of the then prevailing statism paradigm, energy investment centred on large state subsidised capital infrastructure projects, built by foreign investors which created a highly centralised governance structure and a reliance on large hydropower (Newell & Phillips, 2016). The geographical inequities insinuated by Sessional Paper No. 10 of 1965 also appeared striking, given the distinct lack of electricity coverage in ASAL regions areas which still resonates today (Figure 3.5). Former senator for Mandera (an ASAL county), Billow Kerrow (2015, p.1), arguing “The consequences of such skewed socio-economic policies and development blueprints formed the basis for the pursuit of devolution to address inequitable resource allocation”.

Figure 3.5 Lack of grid electricity coverage in ASAL areas of Kenya in 2013 (Source: Pueyo, 2015)



With the economy faltering in the 1980s, Kenya ostensibly aligned with the prevailing 'neoliberal turn', becoming the first sub-Saharan Africa nation to agree to World Bank and International Monetary Fund (IMF) structural adjustment programme in 1980 (Gertz, 2008). However, the government initially ignored specifications to adopt more open, market-based approaches, with Moi reluctant to implement reforms which "threatened [the] rent-seeking opportunities and political patronage" proffered by centralised state control of the economy (Were et al., 2006, p.51). The centralised control of the energy sector was thus largely unaffected by this initial foray into neoliberalism.

Moi's lack of compliance eventually led to an aid embargo by the World Bank and IMF in 1991, which particularly hit the energy sector: the scale of corruption surrounding the Turkwell Gorge Dam project (built 1986-91) causing "donor allergy" towards the sector (Wrong, 1995 cited in Elliot, 1997, p.529), which resulted in the suspension of international donor aid for energy projects until 1996 (Hawley, 2003). The pressure imposed by this embargo contributed to the subsequent liberalisation of the economy and introduction of multi-party elections in 1992 (Crawford, 2007) while the deterioration of energy services in Kenya during the longer energy sector aid embargo led to a greater willingness to adhere to the prescriptions of the Bretton Woods institutions vis-a-vis the energy sector.

However, as Newell & Phillips (2016, p.42) remark "clear distinctions cannot be made between an era of state-led and privatised energy in Kenya". This appears evident in the conditional loans of the World Bank and IMF that followed the embargo's lifting in 1996 which prescribed the partial privatisation of Kenya's energy sector³⁴, reflecting the shift in developmental thinking to more flexible hybrid state-market approaches (Goldthau, 2012). Central to these recommendations was restructuring state owned and public/private energy utilities to operate on a commercial basis (Newell & Phillips, 2016), a reform fulfilled by a series of legislative acts between 1996-2006 which unbundled the vertically integrated Kenya Power and Lighting Company (KPLC): the discrete functions of the electricity sector now run by separate semi-autonomous parastatals with access enabled to the private sector (Table 3.4)³⁵.

³⁴ See 'Economic Reforms for 1996-1998: Policy Framework Paper' (Government of Kenya, World Bank and IMF, 1995)

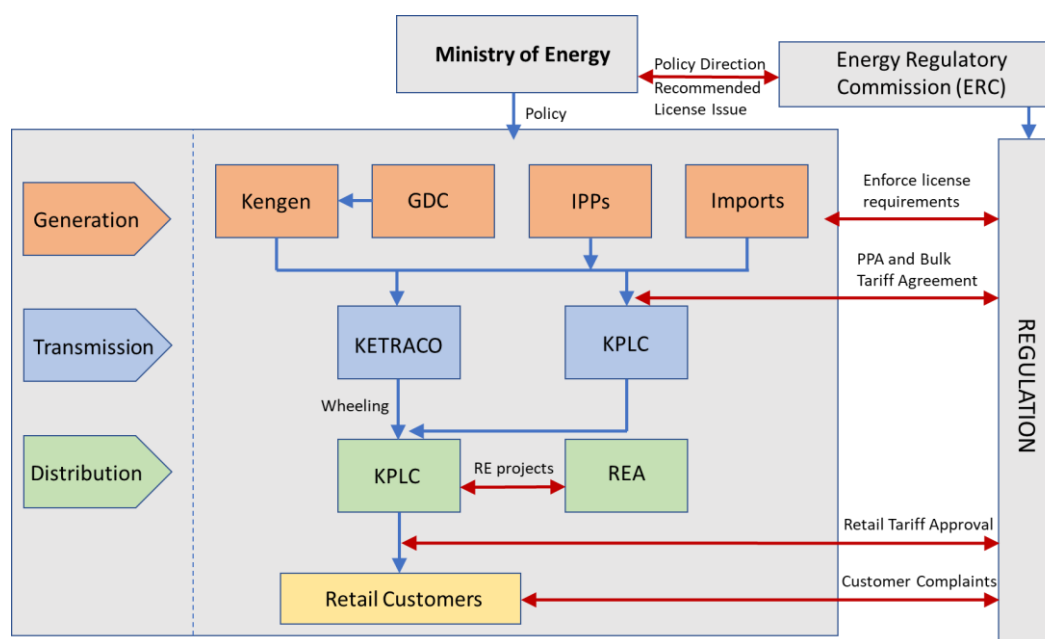
³⁵ Kenyan law defines 'parastatal' as: "a State Corporation established by an order of the President to perform specific functions" (Kamau, 2013). There were 119 parastatals in 2015; nine 'energy parastatals' under the Ministry of Energy and Petroleum (MoEP) (Muriuku, 2015).

Table 3.4 Key Kenyan agencies established after 1995 neoliberal reforms (adapted from Dong & Mori, 2017)

Legislation	Year	Agencies established	Functions
Economic Reforms for 1996-1998 Policy Framework	1995	First Independent Power Producers (IPPs)	Private sector generation selling bulk power to Kenya Power & Lighting Company Ltd. (KPLC)
1997 Electric Power Act	1997	Kenya Electricity Generation Company (KenGen) breaks from KPLC	KenGen: Electricity generation. KPLC: Off-grid generation, power purchase, transmission, distribution and retail.
Energy Act 2006	2006	Rural Electrification Authority (REA)	Implementation of the Rural Electrification Program (scheme construction).
	2006	Energy Regulatory Commission (ERC)	Enforcing regulations, licensing, customer protection, approving power purchase agreements and tariff reviews.
	2006	KenGen part privatised (30%)	As above
	2007	Energy Tribunal	Hear and determine appeals brought against the decisions of the ERC.
	2008	Geothermal Development Company (GDC)	Development of geothermal resources.
	2008	Kenya Electricity Transmission Company (KETRACO)	Development and ownership of new transmission lines.

Yet, this restructuring did not envisage a role for the sub-national level and while reforms provided private sector investment opportunities, most notably for independent power producers (IPPs) to generate electricity, actual control of the electricity sector remained highly centralised. The terms and conditions of power purchase agreements (PPAs) for IPPs were determined by the Energy Regulatory Commission (ERC) while, moreover, KPLC remained the sole off-taker, retailer and predominant distributor of grid electricity, thus ensuring a de facto national government monopoly (Figure 3.6). Thus, these structural reforms clearly constitute a form of ‘delegation’ (see Chapter 2), with the parastatals and IPPs still responding and accountable to the centre.

Figure 3.6 Institutional structure of grid electricity in Kenya in 2017 (adapted from KETRACO, 2017)



Following the structural reforms, the part liberalised status of the Kenyan energy sector facilitated a range of state, donor and private sector actors to play significant roles in the governance of energy (Newell & Phillips, 2016). Off-grid solar energy was a particular beneficiary of this new regime. Having emerged in the mid-1980s, donor support mainly in the 1990s helped create demand, build networks and absorb risks that the private sector alone could not bear (Ockwell and Byrne, 2016). This support was particularly critical given the state offered little support and at times was deliberately obstructive (e.g. by setting uncompetitive feed-in tariffs for solar) due to off-grid solar conflicting with central government grid electricity interests (Newell & Phillips, 2016).

The growing influence of South-South investment has also provided Kenyan energy governance with alternative policy options to those advocated by the Global North, a situation which continues to resonate today. In particular, Chinese financing has been viewed as less conditional, lending itself to energy investments (e.g. in fossil fuels – see Figure 3.3) where Global North agencies have often been more circumspect due to the prevailing sustainable development agenda (Newell & Phillips, 2016). This broader range of financing options seemed to resonate with Kenyan energy governance in the late 2000s. The key energy policy developments: *Kenya Vision 2030* (Kenya’s long-term development plan) and the *Least Cost Power Development Plan 2011-2031* (LCPDP) made provisions for both fossil fuel and renewable investment while also incorporating nuclear power into long-term planning (Table 3.5).

Table 3.5 Key Kenyan energy policies launched before the Constitution (adapted from Dong & Mori, 2017)

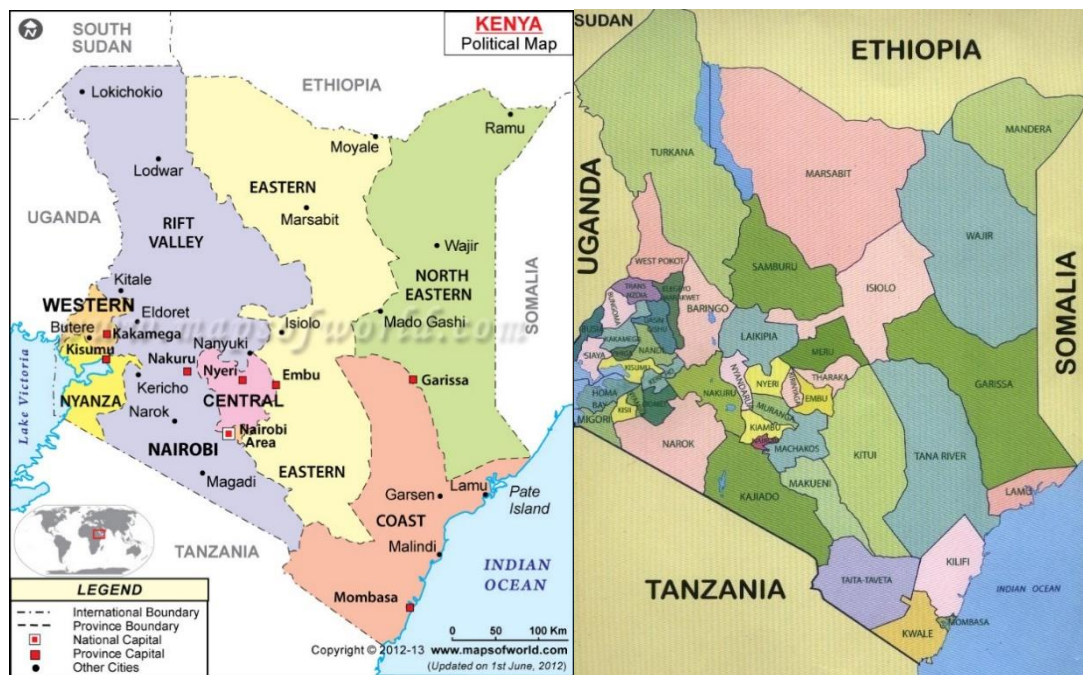
Legislation	Year	Outcomes
<i>Kenya Vision 2030</i>	2008	long-term development blueprint
<i>Feed-in-Tariff policy</i>	2008	Allows IPPs to sell renewable electricity to off-takers at a pre-determined tariff for a given period of time.
<i>Least Cost Power Development Plan 2011-2031</i>	2009	Forecasts future power demand and how best it can be met at least cost. Targets multiple renewable sources and fossil fuels

Overall, it seems Kenya’s prevailing highly centralised energy governance has played a significant part in the nation’s energy access inequities. Policy development was skewed to marginalise less developed areas while measures which could have mitigated the impact of these policies, such as off-grid solar and decentralising control of the sector, received little to no state support. The implications of this historical context bear significant weight for the current devolution process as they raise questions concerning how stakeholder agendas and power relations entrenched in the highly centralised top-down MLG1-esque energy governance of the pre-devolution era can be integrated into the devolved, ostensibly MLG2, form proposed by the new constitution. The lack of provision for decentralised energy governance pre-2010 also raises concerns over how capably counties will assume devolved energy powers. Much would appear to depend on the clarity and guidelines of the constitution and surrounding legislation which is where this study turns its attention next.

3.3 The 2010 constitution: a new system of governance?

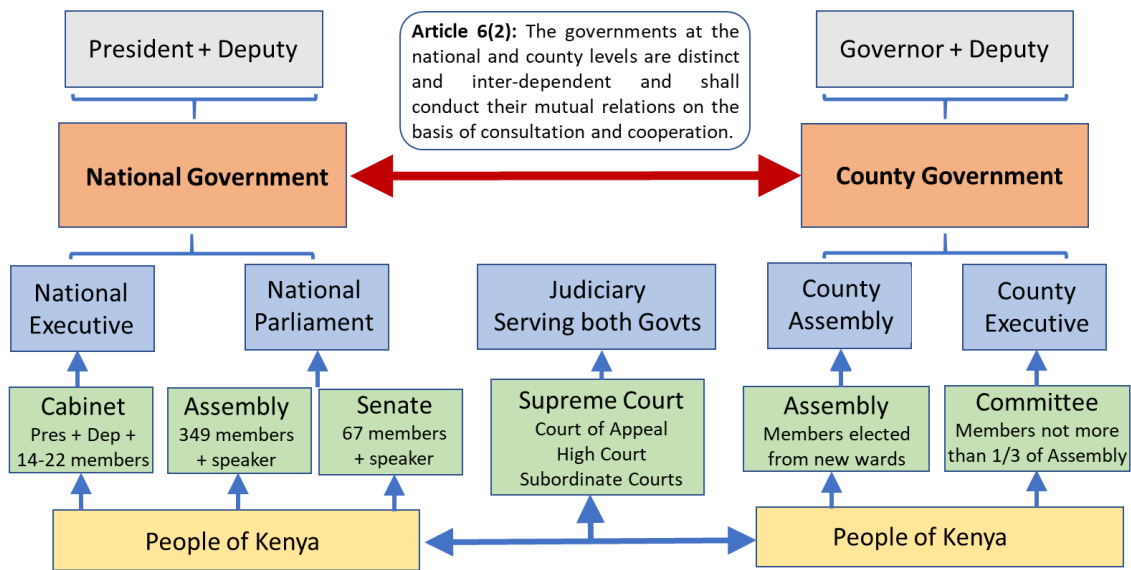
Promulgated in 2010, the new Kenyan Constitution has devolution at its core (Kangu, 2015), providing for 47 county governments³⁶ in an attempt to add checks and balances to centralised power (particularly the president’s) and mitigate ethnic-based politics (Figure 3.7). Each county has an elected assembly and governor (heading the county executive) while representation at the national level is achieved via an elected women’s representative in the national assembly and a senator in the newly formed upper house, established to represent county government interests (Figure 3.8). The Constitution depicts Kenyan devolution as a system of multilevel government, comprised of two levels (national and county) which are “distinct and interdependent” and required to “conduct their mutual relations on the basis of consultation and cooperation” (Article 6(2)). Power is thus separated both vertically through distinct national and county functions and horizontally with both levels required to collaborate and provide checks on the other (Lumumba & Franceschi, 2014, p.18), thus implying a MLG2-esque vision of governance.

Figure 3.7 Political map of Kenya pre- and post-implementation of the 2010 Constitution (Maps of World, n.d.; Herstory, n.d.)



³⁶ Previously, Kenya was divided into 8 provinces which were subdivided into a number of districts (40 + the Nairobi area at independence in 1963 and later 46 + the Nairobi area in 1992. However, these former sub-national levels were unelected and had little autonomous power, with Anderson, (2005, p.546) noting: “the daily administration of the provinces and districts remains under the direct control of the Office of the President without reference to Parliament”. The 47 counties in the 2010 constitution are based on the 46 districts + Nairobi which existed in 1992.

Figure 3.8 Structure of governance under the new Kenyan Constitution (adapted from Express Communications Ltd, 2015)



Kenyan devolution is thus more extensive than most decentralisation processes in sub-Saharan Africa (D’Arcy & Cornell, 2016), its checks to centralise power further reinforced by the constitution’s protections to governors and senators, reallocation of key functions to counties, and guarantee of at least 15% of national revenue to the counties³⁷ (Cheeseman et al., 2016). This extensiveness, encompassing devolved political, administrative, and fiscal powers means the Kenyan system is closer to federalism (Crawford & Hartmann, 2008) as constitutional law expert, Kangu (2015, p.15) explains:

devolution in the Kenyan context ... is not mere decentralisation. The system has quite a number of federal features which are entrenched in the Constitution and cannot be changed on a whim of the national government. The system closely resembles the South African one and may correctly be described as quasi-federal.

This extensive “quasi-federal”, consultative and cooperative form of devolution presented in the Constitution reinforces the notion of a governance system more in line with MLG2 than MLG1.

Yet, the viability of devolution was questioned. There were concerns from county governments that national government would not fully relinquish power and instead steer counties to acquiescence with its own objectives (Cheeseman, 2014). Others saw scope for corruption, political patronage and a new ‘winner-takes-all’ ethnic politics to be devolved to the county level, potentially reigniting existing or creating new ethnic conflict (Boone, 2012). The cost of devolution was also a frequently raised concern, understandable given the creation of 47 new administrations, which also increased the scope for duplication of services (World Bank, 2011).

³⁷ Counties are allocated a share of this revenue based on five parameters: population (45%), poverty Index (20%), land area (8%), basic equal share (25%), and fiscal responsibility (2%); a method employed to facilitate more equitable redistribution of wealth than under the previous system (CRA, 2017). The Constitution also sets aside a further 0.5% of annual national revenues for the national government equalisation fund to be shared among the 14 historically marginalised counties.

In addition, there appeared to be potential for contested understandings of the functions (i.e. roles) assigned to each level of government as certain functions overlapped both national and county government mandates. In such cases, the functions need to be understood with reference to the articles listed in Table 3.6, particularly 186(2) which highlights that in instances of overlap, jurisdiction is “concurrent” (i.e. shared). However, as Dr John Mutakhu Kangu (2015, p.192), a leading constitutional law scholar and author of the sole text centred on interpreting the devolution provisions in the Kenyan constitution, explains: concurrent functions “must be determined through interpretation” as they are not explicitly identified by the constitution. Kangu (2015) states overlaps should be addressed via the ‘bottom up’ approach of the South African Constitution³⁸ which argues the exclusive powers of the subnational powers should be determined first before the remainder are allocated to the national level. This rationale was first established by the South African Supreme Court of Appeal (2010, p.157) as:

It is to be expected that the powers that are vested in government at the national level will be described in the broadest of terms, ... the provincial government ... in narrower terms, and ... the municipalities will be expressed in the narrowest terms of all. To reason inferentially with the broader expression as the starting point is bound to denude the narrower expression of any meaning and by so doing to invert the clear constitutional intention of devolving powers on local government.

It is thus to this task of interpretation that this thesis now turns as it seeks to understand the intended provisions for decentralised energy governance in the new constitution.

Table 3.6 Key articles governing concurrent functions in the *Constitution of Kenya*

Article no	Article description
6 (2)	The governments at the national and county levels are distinct and inter-dependent and shall conduct their mutual relations on the basis of consultation and cooperation
186 (2)	A function or power that is conferred on more than one level of government is a function or power within the concurrent jurisdiction of each of those levels of government.
186 (3)	A function or power not assigned by this Constitution or national legislation to a county is a function or power of the national government.
191 (1-2)	Re conflicts between national and county legislation over matters within the concurrent jurisdiction of both government levels. National legislation prevails over county legislation if: a) the national legislation applies uniformly throughout Kenya and any of the conditions specified in clause 3 is satisfied; or b) the national legislation is aimed at preventing unreasonable action by a county that: (i) is prejudicial to the economic, health or security interests of Kenya or another county; or (ii) impedes the implementation of national economic policy.

3.3.1 Interpreting devolved energy in the *Constitution of Kenya*

Although the broad motivations behind the devolution of energy are not explicitly stated by the constitution, they can be assumed to align with the underlying “objects [i.e. objectives] ... of devolved government” in Article 174 (Table 3.7). Arguably most relevant given the sector’s recognition as a key

³⁸ The Kenyan Constitution borrows heavily from South Africa’s constitution vis-a-vis devolved government (Kangu, 2015)

enabler of development and poverty alleviation, is the objective “to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya” (Article 174f. In addition, the geographical inequities in energy access in Kenya pre-devolution suggest 174e and 174g might also particularly resonate with energy although 174h and 174i appear challenging due to the pre-existing elite capture of the highly centralised Kenyan energy sector (see Section 3.6).

Table 3.7 Objects of devolved government in the *Constitution of Kenya, Article 174*

The objects of the devolution of government are:	
a)	to promote democratic and accountable exercise of power;
b)	to foster national unity by recognising diversity;
c)	to give powers of self-governance to the people and enhance the participation of the people in the exercise of the powers of the State and in making decisions affecting them;
d)	to recognise the right of communities to manage their own affairs and to further their development;
e)	to protect and promote the interests and rights of minorities and marginalised communities;
f)	to promote social and economic development and the provision of proximate, easily accessible services throughout Kenya;
g)	to ensure equitable sharing of national and local resources throughout Kenya;
h)	to facilitate the decentralisation of State organs, their functions and services, from the capital of Kenya;
i)	to enhance checks and balances and the separation of powers.

However, whilst the motivations for the devolution of energy can be assumed to align with these objects, the specificity of the powers devolved is far less easily deduced as the Constitution provides only a broad overview of county energy roles³⁹. As Table 3.8 highlights, the main county energy role is not uniquely demarcated and is instead found as a subsidiary of function 8, which stipulates the county energy role as “county planning and development [of] ... electricity and gas reticulation and energy regulation” but provides no specifics of what that planning should encompass.

Further county energy roles can be found in the sub-sections of other sectoral functions (Table 3.8), with the county responsibility for street lighting embedded within function 5, ‘County transport’⁴⁰. Opaquer still, the responsibility for air pollution is contained within the broad remit of function 3 “Control of air pollution, noise pollution, other public nuisances and outdoor advertising”. As air pollution is the most pressing energy issue facing Kenya due to the severe health and environmental impacts from cooking with biomass (see Chapter 1), it seems critical to explicitly state the direct causality between energy and air pollution. Failing to do so appears to run the risk of the responsibility not being interpreted as an energy function, particularly as it is not clear whether this clause refers to indoor pollution or only pollution experienced outside (i.e. from cars, factories)⁴¹.

³⁹ The allocation of national and county government functions is found in the Fourth Schedule to the Constitution. 35 functions are allocated to national government and 14 for county governments

⁴⁰ Although transport is directly connected to energy, it is not incorporated into this PhD as the county functions centre on the communications aspects (e.g. roads, parking) of the sector rather its energy requirements.

⁴¹ The other responsibilities in county function 3 are redolent of issues experienced outside the house, possibly suggesting air pollution is also conceived as outdoor rather than the critical indoor concern.

Table 3.8 Allocation of energy functions in the *Constitution of Kenya*

National Government function	County Government function
Protection of the environment and natural resources with a view to establishing a durable and sustainable system of development, including energy policy (22d)*	County planning and development (8) including: (e) electricity and gas reticulation and energy regulation.
Energy policy including electricity and gas reticulation and energy regulation (31)	County transport (5) including... (b) street lighting
	Control of air pollution, noise pollution, other public nuisances and outdoor advertising (3)
*function number as listed in the Constitution provided in brackets	

The lack of detail concerning county energy roles contrasts markedly with sectors such as agriculture and health, where the Constitution provides a detailed breakdown of specific county responsibilities (Table 3.9). This difference stems partly from health and agriculture being more devolved but also suggests the devolution of energy was not as clearly envisaged compared to other sectors. Support for the latter interpretation appeared to derive from the comments of a senior national government devolution officer, who stated that he was unaware of the criteria for deciding why energy would be largely concurrent unlike water and agriculture which are more fully devolved [4]⁴².

Table 3.9 Allocation of agriculture and health functions in the *Constitution of Kenya*

National Government function	County Government function
Agricultural policy (29)*	Agriculture (1) including: (a) crop and animal husbandry; (b) livestock sale yards; (c) county abattoirs; (d) plant and animal disease control; and (e) fisheries.
National referral health facilities (23) and Health policy (28)	County health services (2) including: (a) county health facilities and pharmacies; (b) ambulance services; (c) promotion of primary health care; (d) licensing and control of undertakings that sell food to the public; (e) veterinary services (excluding regulation of the profession); (f) cemeteries, funeral parlours and crematoria; and (g) refuse removal, refuse dumps and solid waste disposal.
*function number as listed in the Constitution provided in brackets	

The overlapping nature of the Constitution’s energy roles offers potential for roles to be misconstrued, particularly the main county energy function: “county planning and development [of] ... electricity and gas reticulation and energy regulation” which appears to closely mirror the national government function: “Energy Policy including electricity and gas reticulation and energy regulation”. Legal expert, Omuko-Jung (2016, p.1) highlights that “pursuant to Article 186(2) ... energy regulation (including planning) is a concurrent function of the two levels of government”. Kangu (2015, p.179) agrees, but warns that the Constitution “may be misinterpreted as conferring powers upon national government to reticulate electricity and gas”, stressing that “the operational phrase is ‘energy policy’, which demarcates and limits the responsibility and powers of national government to policy or legislative matters only”. Thus, Kangu (2015, p.179) concludes “national government may make policy or legislate to govern the reticulation of electricity and gas, but may not itself reticulate electricity and

⁴² The number within square brackets refers to a code assigned to each stakeholder interviewed. The full list of interviewees and their codes can be found in Appendix 1.

gas”. Under this bottom-up analysis, Kangu demarcates the energy functions of the Constitution as shown in Table 3.10.

Table 3.10 Kangu’s Interpretation of concurrent energy functions (adapted from Kangu, 2015, p.200)

National exclusive powers	Concurrent powers listed as national function	Concurrent powers listed as county function	County exclusive powers
	Protection of the environment and natural resources with a view to establishing a durable and sustainable system of development, including energy policy (22d)*	County energy regulation (8)	Implementation of national government energy policy in respect of intra-county matters (implied by 22(d))
	Energy policy including electricity and gas reticulation and energy regulation (31)		County electricity and gas reticulation (8)

Overall, the constitutional articles governing energy suggest an MLG2-esque model of energy governance was intended for Kenya. This leaning towards MLG2 in the energy sector seems arguably more pronounced than for Kenyan governance generally given the prominence of overlapping energy functions and the non-hierarchical structure interpreted by Kangu and Omuku. However, there appears clear potential to revert to a MLG1 position as articles 186(3) and 191(1) provide national government with jurisdiction in matters of unclarity or conflict; articles which, although understandable given Kenya remains a unitary or “quasi-federal” state (Kangu, 2015, p.15), could significantly impact on energy governance given the prevalence of concurrent roles. In addition, while both levels of government can legislate in terms of reticulation and regulation, this study disagrees with Kangu’s interpretation of energy policy as concurrent as the extent to which policy under article 31 is (or will be interpreted as) the preserve of national government and will dictate the sector is unclear (Table 3.10). Whether correct or not on a theoretical basis, the empirical findings of this thesis will reveal that in the four years following Kangu’s work, policy has largely resembled a national exclusive power (see Chapters 5,6 & 7).

3.3.2 Devolved energy: interpreting the broader legislative framework

The lack of detail concerning the devolution of energy roles in the Constitution is partly addressed by the Sixth Schedule to the Constitution (section 7) which states:

All law in force immediately before the effective date continues in force and shall be construed with the alterations, adaptations, qualifications and exceptions necessary to bring it into conformity with this Constitution.

It therefore follows that any jurisdiction assigned to the sub-national level before the enactment of the Constitution is conferred to the county government, the successors of that sub-national authority. Thus, an examination of the key pre-Constitution legislation governing sub-national jurisdiction is required to help determine the scope of devolved energy powers. An overview of the county roles deduced from these legislative acts is provided in Tables 3.11-3.12, although the constraints of the word limit dictate only those acts considered to have most bearing will be analysed in detail.

Table 3.11 Deduced county energy roles from legislation enacted before the Kenyan constitution

Legislation	County energy role
<i>Environmental Management and Coordination Act 1999</i>	Prepare a district environment action plan every 5 years. Identify hilly /mountainous areas in risk of degradation and plan for their reforestation, afforestation and sustainable use. Comment on emission license applications
<i>Energy Act 2006</i>	Designate petroleum tankers parking site (99). Counties to be informed of applications for energy generation, transmission & distribution licences (28.3)
<i>2005-10 Forest/Charcoal Acts</i>	Hold in trust unregistered community land.
<i>Energy (Electricity Licensing) Regulations 2010</i>	May undertake generation, transmission or distribution of electricity once issued with a license.
<i>Physical Planning Act 2010</i>	Grant development permissions within the area of county authority

Energy Act 2006

Guided by *Sessional Paper No. 4 of 2004* which cemented Kenya’s neoliberal reforms (see section 3.6) into energy policy, the *Energy Act 2006* was the operative law governing the energy sector at the time of the Constitution’s enactment and remained so until March 2019 when the *Energy Bill 2017* was enacted. The Act posed challenges for devolution as significant powers were not delegated to the districts (the sub-national level prior to devolution); the districts only mandated with the designation of petroleum tanker parking sites and the need to be informed of applications for energy generation, transmission and distribution licences.

Subsequent amendments to the *Energy Act 2006*, shown in Table 3.12, specified additional roles for local authorities which should be conferred to the county. The potential to undertake generation, transmission or distribution of electricity stipulated in the *Energy (Electricity Licensing) Regulations 2010* is potentially transformative but subject to approval by national government, thus constraining autonomy. The latter two are far less significant. The *Energy (Solar Water Heating) Regulations 2012* create a county role enforcing national solar heating systems policy role while the *Energy (Energy Management) Regulations 2012* stipulate counties ensure their own facilities comply with national energy saving regulations. Therefore, it seems the *Energy Act 2006* and its later amendments do not significantly aid the interpretation of the intended devolved energy role under the Constitution.

Table 3.12 Effect of *Energy Act 2006* amendments on devolved roles in Kenya (adapted from Omuko, 2016)

Regulation	Local authority role now applicable to county governments
<i>Energy (Electricity Licensing) Regulations 2010</i>	May undertake generation, transmission or distribution of electricity once issued with a license (pursuant to the Energy Act, section 27).
<i>Energy (Solar Water Heating) Regulations 2012</i>	Before approving building plans, enforce requirement that all premises within the county jurisdiction with hot water requirements exceeding 100 litres per day install and use solar heating systems. Premises heating water via cogeneration or excess renewable energy are exempt (3-4).
<i>Energy (Energy Management) Regulations 2012</i>	Develop energy management policies, have energy audits undertaken, prepare investment plans and proposals for energy conservation, and take measures to realize 50%+ of the energy savings identified for facilities either owned or occupied by the counties (5-8).

In addition, although the post-*Energy Act 2006* milieu saw the launch of key policies, such as the development blueprint, *Kenya Vision 2030*, and the energy planning document, the Least Cost Power Development Plan (LCPDP) (Table 3.12); neither provided much assistance in interpreting how energy roles were to be devolved. *Kenya Vision 2030* (2007, p.159) envisaged “a democratic decentralisation of decision making and resource distribution ... that takes account of local needs and priorities” as a guiding principle, specifying devolved funds and roles for health and urban planning yet not for energy. The LCPDP (2011, p.95) provided no explicit reference to devolution, suggesting only that local authorities have “substantial potential” to use municipal waste for power generation. However, there was tacit understanding at the time of the Constitution’s unveiling of the need to clarify and ‘unbundle’ the energy roles; “the Constitution can’t have everything” as a senior NGO officer remarked [73]. An energy bill to replace the *Energy Act 2006* was being considered during the second administration of President Kibaki (2008-2013), yet the first draft was not released until 2015 and not promulgated until March 2019 (see Chapter 5).

Post-Constitution legislation

Following the promulgation of the Constitution on August 27th, 2010 but prior to its implementation after the 2013 General Election, several key legislative acts were passed which had bearing on the interpretation of devolved energy roles (Table 3.13). Chief among these was the *County Governments Act 2012*, considered by Omuko (2016, p.2)

the main legislation that gives effect to, among others, Article 186 and the Fourth Schedule to the Constitution by providing for the powers, functions and responsibilities of county governments.

The Act charges the counties with developing five-year County Integrated Development Plans (CIDPs) and ten-year County Sectorial Plans (Articles 108-109), with Article 106(2) stating these plans are to be “based on the functions of the county governments as specified in the Fourth Schedule to the Constitution and on relevant national policies”. As the Constitution stipulates energy regulation as a concurrent function, it follows that counties are mandated to develop county energy plans.

Table 3.13 2010 - 2013 post-Constitution legislation and its effect on devolved energy roles in Kenya

Legislation	County energy role
<i>Urban Areas and Cities Act 2011</i>	Provides for the management and governance of urban areas and cities including the preparation of an integrated urban area or city development plan,
<i>County Governments Act 2012</i>	Develop five-year County Integrated Development Plan (CIDP) and 10-year County Sectorial Plans
<i>Energy (Solar Water Heating) Regulations 2012</i>	Enforce requirement that all premises within the county jurisdiction with hot water requirements over 100 litres per day install and use solar heating systems.
<i>Energy (Energy Management) Regulations 2012</i>	Counties to develop energy management policies, have energy audits undertaken, prepare investment plan and proposals for energy conservation, and take measures to realize at least 50% of the energy savings identified in the plan for facilities either owned or occupied by the counties.
<i>Transition to Devolved Government Act 2012</i>	No specific reference to energy but provides a framework for the transition to devolved government pursuant to the Sixth Schedule (15) of the Constitution, which states parliament shall ensure the phased transfer not of the functions assigned to the county does not exceed three years.
<i>Intergovernmental Relations Act 2012</i>	No specific reference to energy but establishes a framework for consultation and co-operation between the national and county governments and amongst county governments, including mechanisms for resolving intergovernmental disputes.
Public Private Partnership (PPP) Act 2013	Provides for the county to engage in a PPP enabling private sector involvement (e.g. financing, construction, operation) in government infrastructure or development projects (including energy). For each PPP, the county is mandated to establish various institutions while projects exploiting natural resources under Article 71 of the Constitution must be ratified by (national) Parliament.
National Government Co-ordination Act 2013	No specific reference to energy but establishes in each county (in hierarchical order): a county commissioner, deputy and assistant county commissioners, and chiefs to co-ordinate national government functions. This effectively constitutes a repackaging of the pre-devolution deconcentrated administration system, running parallel to the newly devolved system. (Cheeseman et al., 2016)

These energy plans clearly seem the most significant energy role charged to the counties, yet the requirement for these plans to be guided by national policy suggests the national level may still be the driver of sub-national energy sector interventions. In addition, power dynamics are further clouded by the reimplementing of the national government deconcentrated administration system, which was “smuggled” into the new governance arrangements via the *National Government Co-ordination Act 2013*, passed in the final weeks of Kibaki’s government (Cheeseman et al., 2016, p.24)⁴³. Thus, how policy power is wielded and the power relations between the two levels of government seems highly likely to influence whether the MLG2 form of governance depicted by the Constitution reverts to a more hierarchical MLG1 form.

3.4 Conclusion

This chapter has provided a discussion of how the conceptual and theoretical debates discussed in Chapter 2 have unfolded in Kenya and, more broadly, sub-Saharan Africa. Through this critical engagement, I begin to show how the novel application of MLG to energy governance provides an

⁴³ A senior law academic at a Kenyan university contended that the retention of the pre-devolution national government administration system “made no sense [and] was a political compromise” to ensure support from commissioners and chiefs for the 2010 referendum on the Constitution.

easily comprehensible means to understand how the inherently complex processes of decentralisation and decentralised energy governance have developed in Kenya – the aim of research question 1 and a focus resumed in Chapter 5.

The use of MLG helps identify that the legislative framework surrounding Kenyan devolution strongly implied an MLG2-esque form of governance was intended for Kenya and even more so for the Kenyan energy sector, evident from the overlapping national and county government jurisdictions which operate at several scales and the explicit requirement for both levels of government to collaborate and provide checks on the other (cf. Table 2.5 - Hooghe & Marks, 2003). The MLG framework then helps reveal three clear tensions between the legislative rhetoric of Kenyan devolution and on the ground realities – disconnects which have significant scope to undermine decentralised governance.

Firstly, Kenya's historical context of entrenched highly centralised governance, which contributed considerably to the nation's energy access inequities, has direct implications for the current devolution process. Most pertinently, it questions the feasibility of integrating the power relations ingrained in the previous MLG1-esque system into the new constitution's ostensibly MLG2 form – a tension exacerbated by the energy sector remaining a de facto state monopoly despite structural reforms. The lack of provision for decentralised energy governance prior to devolution is also of concern as it suggests counties are unlikely to inherit sectoral experience, casting doubts over how capably they will assume devolved energy roles.

Secondly, the study finds that the overlapping legislative framework for devolved energy in Kenya had several key weaknesses: namely a distinct lack of detail concerning the nature of devolved energy roles and the potential for certain overlapping functions to be misinterpreted. Aside from the county energy plans provided for in the *County Government Act 2012*, devolved energy roles tended to be subsidiary and did not forge a comprehensive picture of how energy under devolution was to be understood. This suggests the devolution of energy was not clearly envisaged, particularly in comparison with other sectors.

Critically, the ambiguities present in the energy legislation offers potential for the ostensibly non-hierarchical and overlapping MLG2 model indicated by the Constitution to be reimagined as a more hierarchical MLG1 structure dependent on the ensuing power relations between the two levels of government. This appears to be a distinct possibility given the historic legacy of highly centralised governance within Kenya and the likely national government interest in energy remaining a de facto state monopoly.

Chapter 4 - Methodology

This chapter justifies the predominantly qualitative methodology of the thesis and explores the debates surrounding the use of the approach in studies investigating energy governance in the Global South. During nine months' fieldwork in Kenya, the qualitative data collected comprised 70 semi-structured interviews with Kenyan based energy sector stakeholders, 14 questionnaires with County government officials, and seven focus group discussions with rural communities. Attending various energy conferences, workshops and forums in Kenya also constituted a critical component of the research process. Various challenges were encountered during fieldwork and the chapter aims to draw lessons on conducting research within this context in order to inform future research within the field.

The chapter is structured as follows. Section 4.2 provides a critical discussion of research paradigms which justifies the qualitative approach taken, while section 4.3 evaluates the various qualitative research methods used. An appraisal of the data analysis approach then follows in section 4.4, with section 4.5 reflecting on the challenges of cross-cultural fieldwork and the critical issues of positionality and ethics concerning Global North research in the Global South. Lastly, section 4.6 provides a conclusion, highlighting the PhD's contribution to research best practice.

4.1 Research Approach

Justification of a predominantly qualitative approach

A predominantly qualitative research approach is most appropriate for this study given the focus of the research questions and underlying ontological and epistemological assumptions. The research questions centre on human interactions and power relations, themes which align with a constructionist ontological position, where 'truths' are considered as human generated or 'constructed' as opposed to discoverable phenomena. This leads to an interpretivist epistemological stance, where the focus is on critically appraising the various, subjective, and often competing, stakeholder actions, interests, and perceptions which constitute these human constructed 'truths'.

The research questions and corresponding ontological and epistemological stance align with the use of qualitative methods, noted by Miles & Huberman (1994) as aiding the interpretation of different stakeholder perceptions and motivations, the drivers and barriers behind the pursuit of their interests, and how their behaviours are influenced by contextual factors; dynamics particularly pertinent to this study. Limb & Dwyer (2001, p.1) concur, adding that such methods enable the researcher to "explore the feelings, understandings and knowledges of others ... to gain a deeper insight into the processes shaping our social worlds".

In keeping with most qualitative research of this ilk, this PhD primarily adopts an inductive approach (rather than testing a pre-conceived hypothesis), allowing findings to emerge from the data and for multiple interpretations. This is appropriate as the PhD aims to understand decentralised energy governance within different geographical contexts, rather than test a generalisable phenomenon across populations. Yet, assumptions concerning a study's empirical object(s) are inevitable; for instance, the study presumes energy governance to have geographical variations. However, the study does not specifically seek to test this assumption, rather it uses the notion as a starting point to

understand and develop new theory from findings bound to particular (i.e. non-generalisable) political and socio-economic contexts within particular localities.

Quantitative approaches were not deemed central to this study's focus on human interactions despite being widely used elsewhere in the energy studies literature (Sovacool, 2014). This position aligns with the rationale of Lutzenhiser and Shove (1999, p.217) who argue quantitative methods mask the aspect of "human choice as critical and controlling in energy use and technology choice". Similar issues exist in the decentralisation literature, with Batchelor et al. (2014) noting that quantitative studies, although commonplace, fail to assess the quality of decentralisation, often concealing how many central authorities maintain control of power despite the existence of decentralised sub-national governance structures; a common feature of decentralisation as seen in Chapter 3 (cf. Cabral, 2011).

Batchelor et al. (2014) suggest studies investigating the quality of decentralisation assess various factors not easily ascertained by quantitative means including: the interrelationships between different scales of government; participation in governance by local citizens; decision making power and autonomy; upward and downward accountability; and access to resources. Similarly, Conyers (2007) notes that as decentralisation is a process, assessment should accordingly be process and not outcome centred, taking into account the wide array of highly influential social, economic, historical and political factors; a rich complexity more readily assessed by qualitative analysis. However, despite, not being central to addressing the research questions, quantitative methods are deemed useful as a means to assess the representativeness of qualitative data. While still requiring triangulating with qualitative approaches, quantitative analysis presents an opportunity to scale the findings from qualitative data.

Overall, this PhD's assessment of the power relations operating in and through Kenyan decentralisation and decentralised energy governance necessitates a predominantly qualitative approach to measure the quality of decentralisation and address the overlooked human dimensions present within the energy sector, with quantitative methods used in a supportive role to help determine the scalability of qualitative findings.

A geographical research approach

This PhD explores notions of governance, power relations, energy for development, and decentralisation, themes which have seen contributions from academics spanning a wide range of disciplines, reflecting the interdisciplinary nature of decentralised energy governance (Table 4.1). Although this research draws on theories and concepts heavily imbued within other disciplines (notably Multilevel governance's prominence within political science), the study is situated within human geography owing to the explicit emphasis on exploring the spatial variations of the human interactions within decentralised energy governance. This relevance of geography, particularly in relation to more theorised understandings of governance and power relations was underscored by Griffin (2012, p.208), who viewed the discipline as critical in "remain[ing] open and attuned to the complex geographies of power that might actually operate in practices of governance on the ground". Critiquing "theoretical models that have prior, inherent assumptions about dominant modalities of power", she emphasises the need for more empirical, spatially contingent, geographical approaches as "power relations are not present in models, territories or networks: they are made and remade in relationships, exchanges and interactions" (Griffin, 2012, p.209).

Table 4.1 Varying disciplines of leading academics in decentralisation and energy governance

Discipline	Examples of leading academics
Geography	Prof. Ed Brown, Dr. John Harrison, Dr. Jon Cloke, Prof. Dave Ockwell, Prof. Harriet Buckley,
International relations / Political science	Prof. Andres Goldthau, Prof. Peter Newell, Dr. Stephen Ndegwa, Dr. Jan Erk, Prof Dickovick, Prof. Rachel Reidl
Anthropology	Dr. Ben Campbell, Dr. Jamie Cross
Law	Dr. John Mutakha Kangu, Dr. Luis Francheschi, Prof. PLO Lumumba
(Socio-) Economics	Prof. Ben Sovacool, Prof. Subhes Bhattacharyya, Dr. Shonali Pachauri
Social science / Development studies	Dr. Diane Conyers, Dr. Njeri Wamukonya, Dr. Lidia Cabral, Dr. Helene Ahlborg (environmental science)
Other	Prof. Andrew Stirling, Dr Rob Byrne (both Science & Technology Policy (SPRU)), Prof Izael Da Silva (engineering)

Griffin’s arguments clearly chime with the spatially contingent, multi-scalar relationships between transnational, national, county and community level stakeholders that are the focus of this study. Traditional geographical and political approaches have tended to view such multi-scalar arrangements as spaces where “decisions are cascaded from international, to national, and then local scales” with the state seen “as the primary arena of political power” (Bulkeley, 2005, pp.876–878). This study differs, placing the county level as the central focus owing to it being the site of the recently decentralised, energy governance powers. This is in keeping with contemporary human geography axioms which regard scales as constructed and contested (e.g. Brenner, 2001), challenging the conventional notion that the ‘national’ is always ‘higher up’ the hierarchy than ‘the local’ (Bulkeley, 2005, p.897). Adopting this approach also aligns with the methods used by the precursor to this PhD, the Loughborough University geography department Renewable Energy and Development (READ) project (see Chapter 2); although this study has a narrower local focus contrasting with the more macro regional analysis its forerunner provided.

4.2 Data Collection and Methods

Overview

The research process consisted of three broad phases: pre-fieldwork research design and planning including an initial literature review; just under 9 months’ fieldwork in Kenya; and post-fieldwork data analysis and write up of the thesis. The fieldwork comprised four separate site visits to Kenya between 2016 and 2018, during which data was collected using various predominantly qualitative research methods (Table 4.2). These methods were used concurrently, with data acquired informing subsequent application and adaption of these methods.

Table 4.2 Site visits to Kenya

	Dates	Duration	Interviews	Focus groups	Questionnaire responses	Key conferences
Site visit 1	28/05/16 - 11/06/16	2 weeks	4	0	0	0
Site visit 2	28/10/16 - 03/06/17	7 months	64	7	14	6
Site visit 3	24/11/17 - 19/12/17	4 weeks	2	0	0	3
Site visit 4	08/04/18 - 16/04/18	1 week	0	0	0	1
Total	-	~ 9 months	70	7	14	10

During fieldwork, I was based in Nairobi, which assisted with accessing stakeholders as most key institutions were based in the capital. Connections made in Nairobi were also often able to assist with accessing stakeholders in other counties by contacting them on my behalf. In Nairobi, I was hosted by Strathmore University Energy Research Centre (SERC), which proved incredibly valuable, enabling an immersion into a context where conversations concerning Kenyan energy governance, the accompanying political debates, and different world views were a day-to-day norm. This was critical in facilitating a deeper understanding of the various dynamics operating in and through Kenyan decentralised energy governance. Engaging directly with local academia also helped avoid extractive research and foster collaborations with local stakeholders, aiding the development of Global South/Global North partnerships. In addition to SERC, collaborations with the following local organisations were particularly fruitful: the Stockholm Environment Institute (SEI) (Nairobi office); the SE4All Kenya website development committee; the Council of Governors (CoG); the African Centre for Technology Studies (ACTS); and the National Environment Trust Fund (NETFund).

Site visits

The aims of the first site visit were to contact existing project partners, develop new contacts, gain experience of conducting fieldwork, and familiarise myself with life in Kenya. This visit proved highly valuable as it enabled me to receive feedback on the scope and objectives of my proposed research from Kenyan project partners. It also eased my transition into the practicalities of living in Kenya as the visit was undertaken with two colleagues with experience of working in Kenya; their insights into the Kenyan context helping me to hit the ground running when I returned alone for site visit 2.

Lasting seven months, the second site visit saw the vast majority of primary data collected, including all focus group discussions and questionnaires. The third visit (undertaken six months after site visit 2) sought to interview stakeholders about ideas emerging from the PhD, whilst gauging any changes in the energy governance milieu after the general election (held in August and October 2017). This ensured the research had a longitudinal component rather than merely being a snapshot of an issue at a certain point in time; critical to this PhD given interviewee responses in site visit 2 may not have been entirely representative in the run up to a general election. The visit also provided an opportunity to assess how decentralised energy governance might be affected by newly elected county administrations, particularly in comparison to those counties where the government was re-elected for a second term. The final visit was taken in conjunction with other Geography department members and timed to coincide with a highly relevant conference Loughborough University was co-chairing.

Case study selection - depth

Fieldwork primarily took place in Migori, Nakuru, Turkana and Nairobi counties, the four operating as case studies and providing the empirical core of the research. Ideally, data would have been collected from all 47 counties to better reflect the assumed spatial variations in energy governance. However, this was clearly beyond the time, cost, and security⁴⁴ constraints of the study. Selecting case study counties was thus required, with Sovacool (2014, p.11) summarising the main selection issues as:

⁴⁴ The Foreign and Commonwealth Office (FCO) advised against “all but essential travel” to several counties, mainly along the Somali border due to perceived terrorism risks.

How does one balance depth—going ‘deep’ on a small sample of respondents—with breadth—producing conclusions sufficiently generalizable beyond those respondents?

To be sufficiently ‘deep’ a case study county was felt to need at least one interview from each of the six major stakeholder groups identified as operating in and through decentralised energy governance (Table 4.3). Given any individual or organisation could potentially be termed a decentralised energy governance stakeholder (i.e. virtually all individuals/organisations use some form of energy service), identifying stakeholder categories was felt necessary as a pragmatic means (or check list) to ensure reasonable coverage of the varied interactions, interests and agendas assumed in decentralised energy governance (cf. the rationale behind RQ2 & RQ3 in Chapter 1). These categories also reflect the MLG theoretical underpinnings of the PhD outlined in Chapter 2, with governance assumed to be operating on multiple scales among multiple governmental and non-governmental actors (Hooghe & Marks, 2001).

Table 4.3 Six key stakeholder groups engaged in decentralised energy governance

Stakeholder group	Details
1. National government	Includes politicians and civil servants working for national government and its institutions, including those working for any of the nine energy parastatals.
2. County Government	Includes politicians and civil servants working for the county government
3. Domestic non-government actors	Includes representatives of organisations such as NGOs, community based organisations (CBOs), civil society organisations (CSOs), and research institutes whose operations are wholly or predominantly based in Kenya
4. Domestic Private Sector	Includes representatives of commercially orientated groups whose operations are wholly or predominantly based in Kenya
5. Community scale actors	Includes state and non-state actors predominantly operating within the sub-county level, including ward administrators, village elders, church leaders, SACCO leaders ⁴⁵ , chiefs, local businessmen/women, and citizens.
6. Transnational actors	Includes all TAC1, TAC2, and TAC3 actors (Table 4.4)

The six key stakeholder groups identified were derived from findings in the MLG literature (principally Hooghe and Marks (2011)) and the implications of the Kenyan devolution legislation (Chapter 3). Groups 1 (national government) and 2 (county government) reflect the emphasis in MLG on authority being diffused to subnational institutions (Hooghe & Marks, 2001) and the relationship between the national and county governments at the core of the new Constitution (Article 6(2)). Similarly, groups 3 (domestic non-government actors) and 4 (domestic private sector actors) respond to the acknowledgement of non-state actors as a core part of MLG (Hooghe & Marks, 2001) and the recognition of the role of public-private partnerships in Kenyan devolution (Kenyan County Governments Act, Article 6(3)). Although groups 3 and 4 could potentially have been merged, the distinct primary mandates of each – typically advocacy and service provision with group 3 and commercial interests with Group 4 (Goode, 2007) – were deemed likely to result in significantly

⁴⁵ SACCO = Savings and Credit Cooperative Organisation. A SACCO is a type of cooperative where the savings of members are pooled and then used to provide members with credit facilities – the objective being to promote the economic interests and welfare of members.

different interactions, agendas and interests within decentralised energy governance. Thus, two groups were considered warranted.

Both MLG and Kenyan devolution infer a role for actors (state or non-state) operating at smaller scales than the county. MLG1 recognises multiple hierarchical subnational jurisdictions while MLG2 depicts a vast number of jurisdictions operating at diverse territorial scales. Multiple scales are also a feature of Kenyan devolution: counties are divided into 290 constituencies (each with an elected member in the national assembly) which in turn are divided into 1450 wards (the smallest electoral unit, each conferring an elected member to the county assembly). Further decentralisation occurs within wards, with county assemblies charged with establishing village units run by appointed village councils composed of 3-5 village elders and chaired by a village administrator (County Governments Act 2012). Group 5 was thus created to reflect the actors operating in these multiple sub-county scales and the emphasis and starting point of the Constitution (Article 1(1)) that “all sovereign power belongs to the people of Kenya”.

MLG also envisages authority being diffused from the state upwards to supra-national or international bodies (Hooghe & Marks, 2001), long a feature of Kenyan governance as notably seen with the World Bank and IMF's structural adjustment programmes in the 1980s (Gertz, 2008), and their conditional loans between 1996-2006 which prescribed the liberalisation of Kenya's energy sector (Newell & Phillips, 2016). This considerable, and ongoing, influence of international organisations informed the identification of group 6: 'transnational actors'.

However, the term 'transnational actor' was considered opaque given the myriad types of institutions whose operations could be deemed at least partly international. For this thesis, the term was therefore clarified as meaning an actor whose operations are predominantly centred on one or more overseas territories, often with the ability to influence, control and coordinate. This definition was derived from the work of Vertovec, (1999) who viewed transnationalism as denoting economic, social and political processes which occur across international boundaries. Transnational actors were then further defined, organised into three categories according to their operational scale and membership and funding composition (Table 4.4). Although significant differences exist between institutions within each category (e.g. in terms of funding, reach and influence), this broad categorisation facilitated a macro-level exploration of the impact of transnational actors on energy governance which was more precise than using 'transnational actor' as one all-inclusive term, yet not so convoluted as would have been the case had each type of transnational institution been referred to individually.

Table 4.4 Transnational actor categories 1-3 (TAC1-3)

Transnational actor category	Operational scale, membership and funding	Examples
TAC1: Multilateral governmental organisations	Organisations whose membership and funds derive from multiple different governments. Operational scale is generally larger than bilateral organisations, with funds typically spent on development issues across a wide range of countries.	UN agencies, World Bank, AfDB
TAC2: Bilateral governmental organisations	Organisations that operate directly between two parties (typically, two countries) and whose membership and funds derive from its home government. Operational scale is generally more targeted than multilateral organisations, with funds typically spent on development issues in countries that the donor deems most needy or which reflect donor interests.	Dfid, GIZ, USAID
TAC3: International 'a-governmental' organisations	Organisation without direct government representation in its governance, operating in one or more countries outside their domicile. Operational scale varies considerably from singular localised interventions to organisations with global reach (e.g. WWF).	NGOs, charities, research institutes, corporations with an international outreach

Case study selection – breadth

Energy governance was also expected to vary significantly among counties, shaped by widely varying social, political, and economic factors. Thus, to have adequate 'breadth', three county case studies was initially considered a suitable compromise between being sufficient to illustrate the assumed spatial variations in governance, and the aforementioned logistical constraints. Developments during the course of the fieldwork later led to the number of case studies being increased to four.

Nakuru county was selected first, largely because it was the site of previous Loughborough Geography department research into energy governance (see READ and SONG projects in Chapter 2) which enabled the PhD to follow up on previous findings and access the department's existing network. Migori county was then chosen following discussions with the Stockholm Environment Institute (SEI). The county was seen as a suitable counterpoint to Nakuru, being an opposition stronghold, predominantly rural, with very low access to modern energy services, compared to Nakuru's support for the ruling coalition, and increasing levels of urbanisation and energy access. SEI had also assisted Migori with developing community participation in county energy planning, thus providing opportunities to gain access to the county stakeholders involved and their valuable insights into this key decentralised energy planning role.

The choice of the third and fourth case studies was influenced by a discussion with a Kenyan energy consultant, who mused whether counties with different energy profiles (such as Nakuru and Migori) should be selected to assess the extent the energy profile impacts on governance, or if removing this variable and having counties with similar energy profiles might more readily highlight governance issues. These reflections relate to Sovacool's (2014) deliberations over whether case studies should be selected on the basis of being outliers or commonplace, with both considered critical in enabling conclusions to be drawn with greater confidence. Reflecting on these deliberations led to Turkana, and later, Nairobi being selected as they were felt to address both concerns: operating as outliers on an individual basis, yet forming certain commonalities when combined with Nakuru and Migori.

Turkana’s outlier status derives mainly from its vast recently discovered oil resources, arguably the most contentious issue affecting energy governance in Kenya, with interactions between national and county government particularly tense. Nairobi was added as a fourth case study during the latter stages of site visit 2, partly due to the large quantity of primary data collected on the county, but mainly because the capital’s decentralised governance emerged as particularly unique, providing an interesting counterpoint to the other three counties. The county effectively superseded the pre-devolution Nairobi province, meaning many decentralised governance structures were in place, but were subject to influence from the highly tangible presence of national and regional power structures.

Although both clearly outliers, in combination with Nakuru and Migori certain commonalities emerge. Turkana and Migori are both predominantly rural, poorer counties with low energy access rates, while Nairobi and Nakuru have far higher rates of urbanisation, wealth and energy access. This presence of shared and distinct political, socio-economic, and energy features enables conclusions to be drawn with greater confidence over which variables more readily impact decentralised energy governance.

Data gathered from stakeholders representing other county administrations further supported these conclusions (Table 4.5). Officers from many of the other 43 counties were engaged at major national conferences, while questionnaires were sent to every county government. Interviews were also held during shorter visits to Trans Nzoia, Uasin Gishu, and Machakos counties, but not in sufficient number to achieve the depth needed for a case study county.

Table 4.5 County administrations engaged during fieldwork

Research method	County administrations engaged
Semi-structured interviews	Machakos, Migori, Nairobi, Nakuru, Trans Nzoia, Turkana, Uasin Gishu,
Focus group discussions	Migori, Nakuru, Turkana
Questionnaires	Responses from: Baringo, Busia, Garissa, Homa bay, Kiambu, Kisumu, Kitui, Machakos, Marsabit, Nakuru, Nyamira, Siaya, Taita Taveta
Conference: 4 th Annual Devolution Conference	47 counties present. Direct engagement with Baringo, Kajiado, Kiambu, Kitui Machakos, Marsabit, Migori, Nairobi, Siaya, Taita Taveta
Conference: NETFund Renewable Energy in County Planning	37 counties present. Direct engagement with Kilifi, Kisumu, Kitui, Mandera, Migori, Turkana, Wajir

4.2.1 Semi-structured interviews

Rationale for use of method

Semi-structured interviews were the primary research method used during fieldwork due to their expediency in investigating the “complex behaviours, opinions and emotions and for collecting a diversity of experiences” which are key to this PhD’s focus on stakeholder interactions within decentralised energy governance (Clifford & Valentine, 2003, p.128). The use of semi-structured interviews was also advantageous as their fluidity provided space for participants to speak more freely and deviate from my questions, potentially raising issues of interest not anticipated by the research design (Bryman, 2008). This was particularly pertinent to the study given the dynamic, constantly evolving nature of decentralised energy governance in Kenya, where interviewees were often at the forefront of the process and privy to the most recent developments. The method’s flexibility also permits the interviewer more scope to unearth the reasonings, meanings, and significance behind respondents’ answers, which under a more rigid line of enquiry may remain concealed (Hoggart et al.,

2002). This was critical for a study grounded in power relations, where it often took time to build trust with participants to become more candid about these often sensitive and complex stakeholder dynamics.

Participant selection

The participant selection process was designed to achieve a relatively even spread of interviewees from the six key stakeholder groups identified (Table 4.3). This reflected the theoretical underpinnings of the PhD, which assumes governance to be operating on multiple levels among multiple actors (see Hooghe & Marks, 2001). Discussions with project partners and attendance at key Kenyan energy conferences and meetings in the early stages of site visit 2 initiated an ongoing critical stakeholder analysis process, which proved useful in identifying “relevant stakeholders for a specified project or policy, ... their relative power, influence, and interests, ... [and] the broader context in which they interact” (Sovacool, 2014, p.13)

Across the three site visits, 70 interviews were conducted in total (Table 4.6). Most interviews (20) were conducted with national government representatives mainly due to the number of different energy parastatals in operation, whose interests varied by organisation and location. County government officers were the second most interviewed group (15), reflecting the primary focal point of the study. There was a relatively even distribution of interviews with representatives from the Transnational actors (10), and Domestic non-government actors (12), and the Private sector (13).

Table 4.6 Number and location of semi-structured interviews with each stakeholder group

Location of interview	National government and parastatals									Other Stakeholder groups				
	National gov	KPLC	ERC	KENGEN	GDC	REA	KETRACO	Energy centre	Total nat. gov	County gov	Domestic non-gov actors	Transnational actors	Private sector	Total
Nairobi	3	2	2	1	1	2	2		14	4	8	9	9	46
Migori		1		1				1	3	3			2	8
Nakuru										2	1		1	4
Turkana		1							1	2	3	1	1	8
Uasin Gishu		1						1	2	1				3
Trans Nzoia		1							1	2				3
Machakos										1				1
TOTAL	3	6	2	2	1	2	2	2	20	15	12	10	13	70

Interviews took place across seven counties, with the majority held in Nairobi where most key national and transnational energy institutions were based. In the week-long visits to the other case study counties, time constraints meant it was not possible to interview representatives from all the stakeholder groups. This was partly compensated for by interviewing Nairobi based transnational actors actively involved in the three counties, while the interview with a Geothermal Development Company (GDC) representative in Nairobi centred on the governance of geothermal resources in Nakuru, helping to partly address the lack of interview with a Nakuru based national government representative. On spec interviews were also held in both Trans Nzoia and neighbouring Uasin Gishu

county following an unexpected invitation to stay with friends in Trans Nzoia county as they were anticipated to add weight to macro level arguments. The interview with a Machakos county government was motivated by the county uniquely combining energy and devolution departments in the same ministry, the two main themes of this PhD.

Location

Interview locations were selected by the participant, and usually held in a private office or demarcated meeting space within the interviewee's workplace. These locations usually proved suitable, being sufficiently free from background noise, while providing an appropriate level of comfort and privacy for participants. The office location also at times enabled participants to draw on other colleagues for information where uncertainties existed concerning particular questions.

In some cases, it was possible that an interview outside the workplace may have led to more frank discussions, with participants possibly fearful of being seen with the interviewer and unintentionally straying from official lines. This occurred very occasionally with energy parastatal officers, who sometimes appeared suspicious of my intentions, perhaps due to their organisations being subject to particular public scrutiny and criticism. Interviews held in cafes or bars were less successful as the background noise made hearing and recording participants more difficult. There was also the very occasional instance of alcohol affecting interviewee coherence.

Formation of questions

The semi-structured interviews were conducted using an interview guide comprised of 45 questions (see appendix 2). These questions were shaped to address the research questions (RQs) identified in Chapter 1 (and the overall aim of the PhD which they serve) and were informed by the debates and literature introduced in Chapters 2 and 3. In particular, the questions were designed to draw together the concepts of decentralisation, governance and energy access, addressing the lack of engagement between the decentralisation and energy studies discourses (Brown et al., 2015), and the neglect of governance within energy studies (Bagley et al., 2018) – deficiencies which have impeded the development of an evidence base to better inform policy on the potential of decentralised energy governance to address Global South energy access issues.

The questions also centred heavily on the themes of changing scalar roles and power relations, informed by human geography arguments which view the state relationally (Jessop, 1990), including in the context of energy (Angel, 2017). This scalar focus was also a response to the more flexible governance patterns assumed by the concept of multilevel governance (Hooghe & Mark, 2011) and the contemporary 'interventionism' and 'fragmentation' energy paradigms (Goldthau, 2012). The questions also had an underlying geographical dimension, reflecting arguments in human geography that the cross-scalar power relations underpinning practices of governance on the ground are spatially contingent (Griffin, 2012).

The guide's 45 questions were organised into five broad topic areas: each primarily addressing two or more of the three RQs (Table 4.7). All topic areas pertained to RQ3 which incorporates both RQ1 and RQ2 but applies the questions to the local scale. During the course of the fieldwork, an inductive approach was taken with topics and questions adapted or added to the guide in order to reflect new findings or the interviewee's area of expertise.

Table 4.7 Interview guide topic areas and the research questions they primarily address

Theme	RQ1	RQ2	RQ3	Mainly discussed in chapter(s):
1. Experiences of devolution	x		x	5
2. Policy development	x		x	3+5
3. Stakeholder Interactions		x	x	6+7
4. Overall evaluations	x	x	x	6+7+8
5. Future visions		x	x	6+7+8

The questions in topic areas 1 and 2 mainly focussed on RQ1 and how the processes of decentralisation and decentralised energy governance have unfolded in Kenya. Topic area 1 centred on stakeholder experiences of devolution: the intention being to capture the contested understandings of the devolution process and decentralised energy governance which the literature has overlooked in the Global South (Brown et al., 2015). The focus of theme 2 on decentralised policy development was intended to better understand the extent to which Kenya had swayed from the intended blueprint of the devolution legislation, a trait the literature notes as common with decentralisation process more broadly (Erk, 2014; Rodríguez-Pose & Gill, 2003), and a feature which has often led to a lack of genuine reform in sub-Saharan Africa (Cabral, 2011; Cheeseman et al., 2016).

Topic areas 1 and 2 provided the context for topic area 3 which primarily focussed on RQ2 and how stakeholder interactions and agendas have shaped Kenyan decentralised energy governance. Questions centred on uncovering the underlying stakeholder power relations (incorporating factors such as decision making power, autonomy, and resource access) viewed by the social sciences as critical to determining the quality of decentralisation processes but overlooked in a Global South context (Batchelor et al., 2014). Topic area 3 also had a particular emphasis on counties and the interactions shaping decentralised energy governance at the local level – the subject of RQ3. This focus enabled spatially contingent empirical data concerning scalar power relations to be gleaned, which the human geography literature notes as key to understanding practices of governance on the ground (Griffin, 2012). Lastly, themes 4 and 5 provide an opportunity for overall reflection, enabling the interviewee to contemplate the discussions stemming from the proceeding questions, facilitating a more macro level (and potentially more balanced) appraisal of the power relations shaping Kenyan decentralised energy governance.

The questions in all five topic areas were grounded in the ontological and epistemological assumptions of the research which consider that studies focussed on human interactions and power relations must contend with there not being one observable truth but rather multiple subjective and often conflicting narratives which must be appraised (Miles & Huberman, 1994). Therefore, to gain insight into these stakeholder perceptions and agendas, interview questions were predominantly qualitative. Further engagement with the notion of multiple narratives and subjectivity is facilitated by several questions asking not only for the interviewee’s opinion but also the interviewee’s opinion of how other stakeholders have viewed events, interactions and agendas. Where differences emerge between stakeholders, the questions invite the interviewee to discuss causes and outcomes. In a sense, this encourages the interviewee to recognise conflicting narratives and offer their own appraisal of differing human constructed ‘truths’, providing valuable insights for the researcher.

Language

Interviews were conducted in English, an official language in Kenya (along with Swahili) and the primary language of government, law, media and education. For most Kenyans, English is a third language behind one of the 67 ethnic languages in Kenya usually spoken as a first language (Lewis et al., 2009), and Swahili, the national language and lingua franca of Kenya. However, Swahili and English are both taught from primary school to university, leaving the neurolinguists Abuom & Bastiaanse (2012, p.5) to comment that “an adult with over 12 years of uninterrupted education in Kenya is generally expected to be equally highly proficient in both languages”. As all participants occupied positions where such an educational background could be assumed necessary, it was possible to use English in all semi-structured interviews.

Despite interviews being held in English, there were occasional communication issues. ‘Kenyan English’ is recognised by scholars as a distinct English variety. Buregeya (2006 & 2007) notes specific Kenyan English grammatical and lexical features while pronunciation is generally seen as the most frequent “deviation” (Schmied, 1991, pp.64–65). During fieldwork, I was able to quickly learn the occasional grammar and vocabulary variations that appeared, such as the use of the word ‘docket’ to mean “the portfolio or jurisdiction of an official, especially of government” (Buregeya, 2007, p.15), and the interjection of the Swahili ‘nini’ (literally translated as ‘that’ or ‘what’) to denote something the speaker cannot remember (i.e. the British English ‘thingy’).

Pronunciation was a more frequent challenge, although still for the most part not an issue. Kenyan English is influenced by pronunciation norms of Swahili, most notably its use of five vowels as opposed to twenty in English, which could cause occasional comprehension issues. In such instances, the context of the discussion would often enable meaning to be deduced. However, if this was not the case, I would seek clarification from the interviewee, often by reformulating what I had understood from the interviewee’s response to mitigate the embarrassment or annoyance potentially caused by repeatedly asking the participant to reiterate what they had said. Reviewing recorded interviews could also assist with comprehension issues, although shorn of visual communication clues, meaning could at times be more opaque.

As a speaker of another English variety, ‘British English’, I was conscious that participants could potentially have had difficulties understanding me. I was also aware there were positionality issues connected with being a speaker of the so called ‘original English’, which could cause interviewees to be uncomfortable asking me for clarification. I therefore tried during interviews to avoid dialectic features of British English, such as idiomatic phrases, or certain pronunciation idiosyncrasies of a South East England accent such as the dropped /t/ consonant in the middle or end of words. Having previously worked as a teacher of English as a foreign language, I was familiar with grading my own language and pronunciation and believe this was not a particular issue during interviews. Kenyan English is also more influenced by British English than US English due to the legacy of colonialism, suggesting there was likely to be a degree of familiarity with the variety of English I spoke.

Challenges

I had a number of difficulties in securing interviews. Requests by email or cold-calling were initially not fruitful due to not fully appreciating the importance of introductions in securing interviews. It was thus necessary to build up contacts to acquire introductions; a process assisted by attending high-stakes

events, such as the planning meetings for the County Energy Framework and SE4All website. However, this took more time than expected and led to the decision to extend site visit 2 from five to seven months.

Interviews with national and county government stakeholders were also impeded by administrative issues. Several government officers stated I needed a letter of support from the Ministry of Energy and Petroleum (MoEP)⁴⁶ to conduct interviews despite being in possession of a similar letter for the questionnaire component of my research. This demand was not stipulated by all officers, suggesting it may not have been strictly necessary and seems most likely a result of certain officers wanting understandably to cover their backs. This second letter of support was secured in February 2018.

The critical breakthrough in terms of securing interviews occurred at the Fourth Annual Kenyan Devolution conference in Naivasha (07-09/03/17), a major national conference attended by key stakeholders from the national government (including the president), private sector, transnational organisations, and, critically, all 47 county governments. Each county had a stand, which facilitated meeting county officers in person, securing their contact details, and at times conducting impromptu interviews if there was an energy specialist present. Subsequent follow up calls to the officers I had met were significantly more successful than previous efforts as the officers knew who I was and were therefore far more willing to assist. This triggered a 'snowball effect' whereby these officers would arrange interviews with relevant stakeholders, who in turn would then often provide additional contacts or arrange further interviews on my behalf.

This process very much aligns with the advice for general research practice and conduct in sub-Saharan Africa given in a Loughborough University first-year review meeting. On reflection, I am not sure why I had not acted upon this advice earlier. It was perhaps due to a lack of confidence in adopting an approach which for the most part would be academically and culturally inappropriate in the UK, which the ideal scenario presented by the conference allowed me to overcome. Seeing this process in action at the conference is essentially where I felt I understood the keys to undertaking research in Kenya.

Having grasped what was required to secure interviews, there then followed an intensive three-month period of interviews across seven counties. While the triggered 'snowball' effect proved hugely beneficial in terms of obtaining data, the sheer concentration of interviews in this period (over 50) proved challenging. I felt I lacked time to process interview content and to use the data obtained to inform subsequent interviews. On reflection, I would have perhaps benefitted from a longer fieldwork period. However, advice received from Kenyan colleagues over potential security concerns in the lead up to the August general election indicated a further field work extension was not recommended.

4.2.2 Focus group discussions

Rationale for use of research method

Focus group discussions (FGDs) were used to capture community level views as an aggregated community response was sought which "generate[d] interchange and debate between respondents"

⁴⁶ The Ministry of Energy and Petroleum (MoEP) was divided into two in June 2018 forming the Ministry of Energy and the Ministry of Petroleum and Mining. This thesis refers to the MoEP as it was the ministry in existence when fieldwork was conducted.

(Gomez & Jones, 2010, p.199). This would have been too time-consuming to achieve via semi-structured interviews, with the need to determine representative community interviewees adding to the challenge. FGDs also lessened the potential for tension over compensation paid to participants as payments were spread across a greater number of people than would have been the case with individual interviews⁴⁷.

Participant selection

FGDs were held in two communities in Migori, Nakuru, and Turkana (Table 4.7), which enabled comparisons to be made within and across counties, facilitating the identification of geographical trends. There was insufficient time to arrange FGDs in Nairobi due to the late decision to use the county as a case study. This shortcoming of the research is partly compensated for by the extensive grey literature on community level energy initiatives in Nairobi (e.g. Lambe & Senyagwa's (2015) focus on informal settlements), and the interviews conducted with three early career energy consultants using the FGD guide which provided representation of urban middle class perspectives in the capital.

In each of the three counties where FGDs were conducted, I worked with a research assistant (RA) who was local to the area, knew the communities, and spoke the local 'ethnic' language of the communities along with Swahili and English. Selected via recommendations from research institutions I had collaborated with in Nairobi, each of the three RAs greatly facilitated the research by carrying out several vital roles, namely: fixing FGDs and interviews; conducting and translating FGDs; providing valuable insight to the local area and stakeholders; and being someone with whom I could reflect on ideas and findings emerging from each day's research activities.

Table 4.8 Community focus group locations and attendees

Location		Attendees		
Community	County	Men	Women	Total
Suna	Migori	6	2	8
Masaba	Migori	5	3	8
Echariria	Nakuru	9	7	16
Lemolo B	Nakuru	11	3	14
Napetet	Turkana	5	3	8
Nakwemekwi	Turkana	4	4	8
TOTAL		40	22	62

Participants for each FGD were selected through discussions between the community and the RA for that particular county. Prior to the FGDs, the RAs would be briefed on the aims and objectives of the FGDs and asked to arrange FGDs in rural communities, locations widely reported in the literature as underserved in terms of energy services and political representation. Mixed gender groups of senior community members (e.g. village elders, SACCO members, religious leaders, and local level political figures such as ward administrators and chiefs) were targeted for the FGDs as they were considered most likely to have engaged with the devolution process and higher-level stakeholders.

Given the patriarchal nature of rural Kenya society, the focus on senior community members likely contributed to women being less well represented in the FGDs although 35.5% of total attendees were

⁴⁷ Compensation for community participation in research is common practice in Kenya.

women enabling a degree of scope for gendered issues of energy to arise. Despite this numerical representation, the active involvement of the women participants in the FGDs varied considerably, with significant contributions noted in the Turkana communities and Masaba, whilst participation was less active in the other communities, particularly Echariria and Suna. The fewer contributions may well be linked to how comfortable female participants felt expressing their views in the presence of community leaders who were all men (Krueger & Casey, 2009).

The emphasis on senior community members also resulted in youth and disabled representation being absent from most FGDs. Two of the six communities had a ward administrator present (both Migori), who tended to be considerably more knowledgeable on energy matters than other community members and may have affected the responses of other community members. National government appointed Chiefs were also present at both FGDs in Migori who tended to be less knowledgeable than the ward administrators but vocal and may also have influenced other community members.

Location

Each FGD was held in a central community location selected by the participants in discussion with the local research assistant (RA) I was working with in each county. In six of the seven FGDs, the discussion was held inside a public amenity (e.g. a community hall, church). This had the advantage of being a shared space, which may have enabled participants to speak more openly than as a guest at a private residence, where they may have been less willing to disagree with the host. In Napetet (Turkana), the FGD took place outside a participant's house, and thus some participants may have felt uncomfortable. However, the distribution of participant contributions was more evenly spread than in most of the other FGDs, suggesting the location was not a particular issue.

Formation of questions

A chronologically structured guide was used with questions divided into three sections: 1) expectations and experiences of devolution; 2) interactions with other key stakeholder groups; 3) future expectations. The guide was structurally similar to that used for the semi-structured interviews but had fewer questions as more time was allocated per question due to the greater number of participants (see appendix). A distinct feature of the FGD guide was the focus in section 2 on the frequency and nature of community engagement with the other key stakeholder groups. This was designed to ascertain the extent of community participation in decentralised energy governance; seemingly a key outcome of devolution and viewed within the literature as a critical factor determining the quality of a decentralisation process (Batchelor et al., 2014).

Language

English is less commonly spoken in rural Kenya and thus five of the seven FGDs required the local RA to conduct the discussion in the community's first language and later transcribe the proceedings into English. The approach had certain benefits, with Clifford & Valentine (2003) highlighting that communicating in the participants' language can help mitigate power imbalances along with status and privileges associated with the ability to communicate in one specific language (particularly relevant given the domination of English in Kenyan public institutions). The authors note that efforts to communicate in the language of the informants are often appreciated by respondents as a sign of

genuine interest in their culture, which I attempted to show by learning sufficient Swahili to greet participants and introduce myself.

However, several issues emerged from conducting FGDs in another language. I was unable to accurately monitor the progress of the discussion, meaning the richness of the data captured depended largely on how the RA conducted the FGD, and in turn the briefing I had given the RA prior to conducting the FGD. Differences often emerged between what was intended and what transpired, particularly in terms of trying to ensure a relatively even distribution of contributions from participants. This is partly a positionality issue as the RA may have felt uncomfortable limiting contributions from more dominant members in a community they knew, while as a former teacher experienced in conducting groupwork, I perhaps expected too much from RAs potentially leading a FGD for the first time and may not have allotted sufficient time to pre-FGD briefings.

The transcribing of the FGDs into English also complicated analysis as culturally specific nuances could be missed, as Smith (1996, p.162) notes, 'any translation always seems to be a reduced and distorted representation of other social texts and practices'. This issue was partly mitigated by following the suggestion of Twyman et al. (1999), who advise discussing the transcription with the translator after completion to clarify potential areas of confusion. There also appeared to be different understandings of what transcribing entailed, with two of the three RAs initially providing summaries rather than verbatim transcriptions. Although, I had briefed the RAs by email on what was expected, it would have been better to show and discuss specific examples to help clarify the intention.

The two FGDs in Migori were conducted in English, which had not been previously arranged and it remains unclear whether this was primarily initiated by the RA or the communities. The use of English was mostly advantageous as I could manage and monitor the discussion, directing impromptu questions, where necessary, to better address the RQs. It also allowed for two first-hand interpretations of the FGD, mine and the RA's, unlike the other FGDs which solely relied on the RA. The clear disadvantage of using English was participants would most likely have felt more comfortable speaking in their first language, and may have provided richer, more nuanced accounts.

Challenges

FGDs constitute a form of interviewing and were thus subject to the same challenges noted for semi-structured interviews. However, specific FGD challenges also emerged. The size of the first FGDs in Echariria and Lemolo B (both Nakuru) was not limited, resulting in large groups which hindered discussion between members and left some voices overshadowed by more dominant members. As each participant needed to be compensated, large groups were also financially challenging. After Nakuru only one FGD was held per community and FGDs were limited to eight attendees, reflecting opinion within the literature which states 8-10 participants as optimal (e.g. Gomez & Jones, 2010). This resulted in more manageable, effective discussions in Migori and Turkana.

4.2.3 Questionnaires

Rationale for use of research method

Questionnaires were used primarily to gain insight into counties which were not visited, adding breadth to the research scope, and enabling a more representative analysis of the assumed spatial

variations in Kenyan decentralised energy governance. It was also anticipated that questionnaire responses may add weight to the findings from the case study counties by reducing the probability of the four counties being outliers.

The questionnaires were initially intended to be used quantitatively as a means to determine how representative the qualitative data emerging from the interviews and focus group was of Kenya as a whole. However, difficulties obtaining responses (detailed in the 'challenges' section) resulted in a small sample size which reduced the meaningfulness of numerical analysis. As a result, questionnaire findings were used both quantitatively and qualitatively, serving mainly as a means to glean a picture of energy governance in each county – i.e. broadly equivalent to a simplified version of the data I might have obtained had I been able to conduct semi-structured interviews in person.

Participant selection

Senior officers of the county administration working in energy were targeted, with the director of the energy department the ideal recipient. However, finding suitable respondents was complicated by 19 counties not having energy departments, with energy either listed as a sub area of another department or not at all. In these instances, third parties advised it was best to contact the County Secretary, who answers to the county executive committee and operates as head of the county public service. They were deemed best placed to assign the questionnaire to a relevant officer and carry sufficient authority to ensure the questionnaire was completed.

Location

Questionnaires were mostly sent via email, with recipients asked to reply within a week. On a few occasions during meetings, it was possible to deliver questionnaires in person. This resulted in some officers electing to complete the questionnaire at the meeting.

Formation of questions

The questionnaire was composed of 41 questions divided into six sections: 1) county energy plan; 2) county energy roles, 3) county ministries, 4) county energy data, 5) devolution, 6) contact with other stakeholders. These sections and their questions broadly aligned with those utilised in the semi-structured interview and FGD guides, although many were altered in form as closed questions were also required to ensure the questionnaire could be completed in a reasonable amount of time.

Following the interest shown by county officers at the Fourth Annual Devolution conference in answering questions concerned with county energy investment needs, a specific question addressing this issue was added to the questionnaire. Whilst a highly relevant question to the field of study, it was also hoped the possibility to shed light on specific funding needs would motivate officers to complete the questionnaire.

Language

The questionnaire was written in English. As the intended respondents held county government posts requiring an educational background, the use of English was not anticipated to be an issue.

Challenges

The process of obtaining responses to the questionnaire from suitable county officials was fraught with difficulty and strategies learned from the process could assist similar future research endeavours. Initially, I contacted prominent non-governmental organisations to request the contact details of any county energy officers they might have from previous collaborations. The rationale being an email sent to a targeted energy officer with a reference to a previous collaborating organisation would be less easily ignored. This process was time consuming but moderately successful in achieving contact details. However, I received no responses from the subsequent emails sent to county officers.

A Kenyan project partner recommended securing letters of support for the questionnaires to add more gravitas to my requests to county administrations. Letters were obtained from Strathmore University and a senior MoEP officer, the project partner instrumental in helping secure the latter. This highlighted again the importance of contacts in Kenyan based field work, yet, despite the letters, I still received no responses.

Following advice from a World Bank representative that senior government officials would be in a more powerful position to coerce the counties as private organisations were often not able to divulge information on the counties who were their clients, I approached the Council of Governors (CoG) where an official offered to email the questionnaire to each county under the auspices of the Council of Governors. The assumption was this significant backing would yield responses, yet none materialised, primarily I believe as the questionnaire was not sent to individual county officers but to a shared CoG institution email address which I felt was more likely to be ignored. A month later, the same CoG official unexpectedly called to invite me to pitch the questionnaire at an energy meeting that day with representatives of most counties. Seven responses were obtained, although an error when printing the 47 questionnaires immediately prior to the meeting, resulted in the questionnaires, and consequently the seven responses, being incomplete.

Over the course of the fieldwork, 14 questionnaires were completed or partially completed (Table 4.8); a debateable cost-benefit ratio given the significant time and effort expended obtaining responses. However, were the process to be repeated, I believe the questionnaire could be administered more effectively by applying learnings drawn from this research process, such as the need to secure letters of support, channel the questionnaire via stakeholders with leverage (e.g. senior government officials), and emphasise explicitly the benefits of the research to counties (such as increased investment opportunities).

The questionnaire also had important secondary benefits as the efforts to secure county government contact details put me in contact with a range of stakeholders which helped embed me within energy governance circles and facilitate other meetings, interviews and conferences invitations.

Table 4.9 Questionnaire responses

County	Former Province	Completed Questionnaire	Partially completed questionnaire
Baringo	Rift Valley	1	
Busia	Western		1
Garissa	North East	1	
Homa bay	Coast		1
Kiambu	Rift Valley		1
Kisumu	Nyanza		1
Kitui	Eastern	1	
Machakos*	Eastern	1	1
Marsabit	Eastern	1	
Nakuru	Rift Valley	1	
Nyamira	Nyanza		1
Siaya	Nyanza		1
Taita Taveta	Coast	1	
Total		7	7

*Machakos completed two questionnaires which contained several contradictory statements, raising questions about capacity, access to data, and coordination within the county.

4.2.4 Conferences and workshop attendance

Rationale for use of research method

Conferences and workshops were regularly attended as a means to engage with key stakeholders and keep informed of the latest developments in the rapidly changing energy sector. These events were a vital research activity, not so much for the programmed content, but because the concentration of high-profile stakeholders in one space provided a time efficient means to engage multiple stakeholders. Certain high-profile attendees (e.g. senior representatives from government or transnational organisations) were also more accessible at these events than they ordinarily would be as they could be approached spontaneously during breaks in proceedings.

Participant selection

Although a list of attendees was usually distributed pre-event, it was difficult to ascertain who would attend and whether it would be possible to speak to them. Therefore, rather than individuals, I tended to target the specific stakeholder groups who were likely to be most prominent at an event; for instance, the United Nations Environment Assembly (UNEA) meeting offered particular scope to engage with transnational actors (Table 4.9). The county government and community level tended to be less well represented at these events, raising questions over the inclusivity of these various governance centred forums.

The Fourth Annual Devolution Conference and the NETFund ‘Renewable Energy (RE) in County Planning’ workshop proved the most useful events as both were county centred (with representation from 47 and 38 counties respectively) and contained coverage of the decentralisation and energy themes of this PhD. Most other key stakeholder groups were also present at the two events, helping replicate the multilevel governance focus of the PhD. One event outside Kenya was also attended: a workshop in Malawi to present the findings of a study into the role of the proposed District (i.e. decentralised) Energy Officers in Malawi. This provided a valuable insight into alternative Global South

processes of energy decentralisation, with Malawi designing the decentralised role before implementing; the inverse of Kenya.

Table 4.10 Key events attended during fieldwork

Event	Date	Stakeholder group present? (bold indicates main group targeted)					
		NG	CG	TA	PS	DNG	Com
GIZ County Energy Planning Framework meeting, Nairobi (Kenya)	24/11/16	Yes(y)	No(n)	y	y	y	n
Official Launch of the SE4All Action Agenda and Investment Prospectus, Nairobi	08/12/16	y	n	y	y	y	n
SE4All website development meetings, Nairobi	01/11/16 - 28/02/17	y	n	y	n	y	n
A Stakeholder Workshop: Blueprinting District-Level Energy Officers. Lilongwe (Malawi)	02/03/17	y	y	y	y	y	y
Fourth Annual Kenyan Devolution conference, Naivasha (Kenya)	07/03/17-09/03/17	y	Y	y	y	y	n
Kenyan Association of Manufacturers (KAM) conference, Nairobi	29/03/17-30/03/17	y	n	y	Y	y	n
Meeting for the United Nations Environment Assembly (UNEA) Nairobi (Kenya)	04/12/17-05/12/17	y	n	Y	y	y	n
NETFund renewable energy in county planning workshop, Lake Elementaita (Kenya)	06/12/17-08/12/17	y	Y	y	y	y	y
Understanding Sustainable Energy Solutions programme (USES) workshop, Nakuru (Kenya)*	09/12/17-10/12/17	y	y	y	y	y	y
Transforming Energy Access (TEA) conference, Kisumu (Kenya)	10/04/18-11/04/18	y	y	y	y	y	n
Key: NG = national government; CG = county government; TA = transnational actors; PS = private sector; DNG = domestic non-government actors; Com = community level *Organised and run by the Low Carbon Energy Development Network (LCEDN)							

Location

When attempting to engage one on one with attendees, location was far less of a consideration than the availability of the stakeholder. Attendees were often occupied with their own networking concerns at these events and thus an opportunistic approach was required, looking for moments (usually during breaks) when stakeholders were available.

Formation of questions

Stakeholder engagement at conferences and workshops tended to consist of impromptu discussions during breaks in event proceedings, and thus interactions were far more informal and spontaneous than during semi-structured interviews. The questions I asked were generally based on those from the semi-structured interview guide but tailored to reflect the stakeholder's expertise and the nature of the discussion. As it was difficult to anticipate when a conversation would finish, it was critical to prioritise, where possible, the most relevant and important questions for each stakeholder.

Language

English was used in all the conferences and workshops I attended, reflecting its status as the language of official proceedings in Kenya and the often significant presence of international attendees. All

attendees I spoke to on a one-to-one basis were proficient English speakers and thus language was not a constraint (outside the issues outlined in the semi-structured interviews section).

Occasionally, conference presenters would briefly switch to Swahili, a phenomenon Nyabola (2017) considers politicians use “to shift personalities” with the “more raucous and combative” Swahili deployed to give speaker and listener the sense “they are getting a truer version of the other” away from English, the language:

in which formal policy is mostly delivered – and usually as a meaningless stream of buzzwords, shielding real questions of power from scrutiny and leaving analysts with little more than hot air to analyse.

The author adds these switches particularly impact the many rural citizens who do not speak English (or in some cases Swahili) as they “are left out of formal policy conversations and left with an especially reductive version of politics”. The reverse was true for me as I do not speak Swahili and was thus deprived of its often revealing use by politicians to manipulate power dynamics in their favour.

Challenges

It was not always possible to speak directly to the most relevant stakeholders, as often they were senior representatives who were invariably the most occupied at these events. This appeared to be partly influenced by positionality issues for although being a white British citizen appeared to open more doors than seemed possible for a Kenyan at a similar career stage, my status as an early career researcher meant I was often not seen as a priority for senior figures. Therefore, it was often necessary to speak to less senior members of organisations, who potentially were less well informed, although these discussions could at times lead to introductions to more senior colleagues.

4.2.5 Use of secondary sources

Rationale for use of research method

Secondary source data was utilised throughout the course of the study, helping to contextualise and triangulate findings from the primary data. Almost all secondary source data was obtained online or in the UK, the exceptions being certain unpublished Kenyan Government policy documents and Memorandums of Understanding (MOUs) which were requested from, or offered by, Kenya based stakeholders. Academic articles formed the bulk of secondary source material used in the thesis, informing the literature review, and helping place empirical findings within the wider body of academic debates. The grey literature was also valuable, particularly in revealing how stakeholders framed their own interventions in decentralised energy governance and those of other actors.

National newspapers and social media (particularly Twitter) proved useful in keeping up to date with the fast-moving energy sector, providing updates and criticisms of various national and county energy initiatives. These sources were used throughout the research process due to the sparse coverage of Kenyan and East African affairs in the mainstream English language media outlets of the Global North. However, it was important to be aware of political leanings. National newspapers had clear editorial lines while worrying trends appeared to be curbing the freedom of the Kenyan media, widely regarded as one of the most open in the region (Cheeseman, 2018c). Most notably in 2018, eight prominent

columnists resigned from 'The Nation', Kenya's largest media group, alleging national government interference in editorial decisions (France 24, 2018). Online publications helped mitigate the curbed editorial freedom of the mainstream media, with several of the resignees from the Nation migrating to the online publication, 'The Elephant'. Twitter also proved highly useful for accessing information outside mainstream press narratives, notably during the disputed 2017 general election.

Challenges

Several important policy documents were challenging to source, notably county energy plans. It was widely recognised among senior energy governance circles that these plans had not been completed by most counties, yet no stakeholder spoken to was able to clarify with any certainty those which had. Further difficulties arose as completed plans were usually not publicly available. A senior Turkana county energy officer stated the county was waiting for the national *Energy Bill 2015* (see Chapter 5) to be promulgated before publishing in case the Bill necessitated the county plan be amended. In Nakuru, the plan was provided following a direct request, but was still in draft form and appeared incomplete.

The plans would have been valuable for understanding county interpretations of their decentralised energy roles, without which County Integrated Development Plans (CIDPs) remain the main indicator. However, these are far broader documents encompassing plans for all sectors under the county remit during the first term of the county administrations (2013-2017), and most lack detail concerning specific energy planning. Most CIDPs were published in the early stages of the first term before the county energy functions proposed in the *Energy Bill 2015* would have been known, raising questions over the status and viability of the energy plans in the CIDPs.

A further challenge concerned accessing a plan of the rollout of KPLC grid extension work, which would have helped gauge whether national and county energy plans were coordinated, particularly given uncertainties over grid extension locations have a detrimental impact on off-grid electricity investment. Certain national government stakeholders indicated the plan might be available if requested through the right channels, but none could assist with accessing the document. This contrasted with approaches in other Global South locations; a Malawian energy consultant stating the grid extension plan for Malawi was publicly available, precisely to facilitate off-grid investment [108].

4.2.6 Fieldwork notes

The use of field notes to record the researcher's own experiences and observations are widely seen as a key part of qualitative investigations (Patton, 2002). Initially, I intended to keep a diary for recording field notes but found establishing a daily writing routine challenging as days were rarely regular. Instead, I adopted a more ad hoc approach, jotting down ideas and thoughts as and when they occurred to me, often following a discussion, whether part of a formal interview or informal conversation. These notes formed a valuable source of primary data and I found this more ad hoc approach more effective and motivating than keeping a field diary as I would be recording the events I felt were most relevant. However, an element of regularised self-reflection was maintained through the weekly progress email I sent my supervisors. This provided an update on progress made the previous week and the plans for the forthcoming week, proving a highly valuable means to reflect on both progress and research approach.

4.3 Data analysis

This section appraises the data analysis methods used. Primary data was analysed using a three-stage process. Data was first transcribed (or notes taken where the interview was not recorded), then coded and finally incorporated into the write up of the thesis.

Transcription/note taking

Where possible, interviews and FGDs were recorded and then transcribed. Five of the 7 FGDs were recorded and 19 of the 70 semi-structured interviews; the low number of recordings for the latter method partly a consequence of several participants not wishing to be recorded in the early stages of fieldwork. One senior National government officer stated, “you can [record the interview], but you may not get the answers you want”, implying greater candidness if the interview was not recorded. A project partner seemed offended when asked to be recorded, possibly because it elevated the discussion to a more formal level than expected from the previously more informal relationship.

This reluctance to be recorded made me reticent to ask the same of later interviewees. I often felt it was inappropriate to ask to record discussions emanating from on spec interview requests as I was concerned the participant would be offended having ‘done me a favour’ by agreeing to be interviewed without notice. Towards the end of site visit 2, having begun asking again to record impromptu interviews, I realised most did not mind being recorded and it seems I may have drawn erroneous conclusions from the disinclination shown earlier.

Unrecorded interviews necessitated notes were taken during the discussion. This affected my ability to fully engage in the conversation as I was writing at the same time, but heightened my concentration as I was aware I only had one opportunity to note down the interviewee’s words. Writing notes rather than transcribing also required me to summarise as there was not sufficient time to note down responses verbatim. This was beneficial in forcing me to think critically during interviews about what was being said and its relative importance, but inevitably resulted in certain details being lost. This last shortcoming the main reason why I would always endeavour to record future interviews.

After interviews I aimed to transcribe or type the handwritten notes as soon as I could, as it was easy to forget particular facets of the interview not deducible from the recordings, such as participant’s manner (which I noted immediately after interviews). During unrecorded interviews, the speed of note-taking led to untidy handwriting and use of shorthand which might also have been difficult to deduce had I not typed the notes soon after the interview.

However, the sheer concentration of interviews and FGDs in the latter half of site visit 2 meant transcriptions (which required five hours per hour recorded) could not always be transcribed within a relatively short time of the interview. This is likely to have affected the quality of transcription as certain contextual information (such as participant emotions at different stage of the interviews) may have been lost, while interpreting unclear pronunciation would also have been easier the closer to the interview the transcription was completed.

I endeavoured to transcribe as closely to the participants words as possible and did not ‘tidy up’ language containing grammatical or syntactical features considered erroneous in written form. Instances of repetition were sometimes omitted if interpreted as not indicative of particular added

meaning although most 'hesitation phenomena' such as pauses, repeats and false starts were transcribed given the insights they potentially reveal into respondent psychology (Maclay & Osgood, 1959). Where meaning was unclear from the audio recording, a '?' in parenthesis would be inserted in place of the inaudible word or next to the closest approximation, thus denoting caution was required when considering the relative weight of that particular utterance.

Coding

All interviews and FGDs, along with the notes taken from key conference proceedings were coded as a means to organise data, develop an analytical structure, and identify emerging trends linking findings to the wider literature. As indicated by Cope (2010, p.445), the process of coding was non-linear and proved to be "inevitably circular, sporadic and, frankly, messy [and] involve reading and rereading, thinking and rethinking, and developing codes that are tentative and temporary along the way". Bryman (2001) agrees, suggesting no correct method of coding exists, rather it is a continual creative process reliant on ongoing and evolving interpretation of the data.

Following advice provided in the literature (e.g. Cope, 2010), I created an initial set of codes by reading through my data set and assigning sections I deemed important with a code. The skeletal framework for the PhD was also used to identify codes. These codes were then applied to the data set using Computer Assisted Qualitative Data Analysis Software (CAQDAS) as managing and analysing in-depth the large quantity of primary data generated by the research would have been far more time-consuming using pen and paper methods (Hoven, 2010). I elected to use MAXQDA software as I found it more intuitive with a clearer interface than the N-Vivo software more widely used in the Loughborough University Geography Department.

However, applying these codes to the data set using MAXQDA still took considerable time (four weeks). In retrospect, I believe I spent too much time on the coding process before writing, as I found it easier to appreciate the codes I required once the writing process had begun and I could more tangibly visualise the composition of paragraphs. Although a degree of initial coding is necessary to ascertain themes to kickstart the writing process, I feel it would have been more efficient to note a few (c. two to four) key themes as I completed each transcription (or typed notes) which I could later use as codes. This would obviate the need to read through the data set to create an initial set of codes.

In addition, I believe it would have been better to spend far less time (approximately one week) applying the initial set of codes; simply enough to secure sufficient gist of the data to begin writing. Once writing had begun, I would then be better placed to judge which codes required creating or adjusting, thus entering at an earlier juncture the aforementioned circular process acknowledged by Cope and Bryman. Ultimately, much of this is personal preference and I feel the lessons learnt via this self-reflection have been highly valuable and will enhance my future research practice

Writing

The critical challenge facing qualitative writing is how to decide whose voices are heard, how much credence each voice is given, and how to incorporate these often differing views with the researcher's own interpretations. This quandary highlights the significant power bestowed on the researcher regarding how participants are represented in research, leading Sovacool (2014, p.11) to question,

“How can researchers minimize bias - their own, and that of their subjects - when doing research?”, McDowell (1992, p.409) adding the challenge is then how “to write this into our research practice”.

To address this predicament, data was triangulated wherever possible using both primary and secondary sources. Similarly, direct quotations were mainly used to emphasise quotes considered emblematic of a particular stakeholder group position, or at times to clearly demarcate how certain stances were distinct outliers. Given the focus on multilevel governance, conclusions were only deemed viable once representation of the various stakeholder groups operating in each locality had been considered and critically appraised. Lastly, inferences from the data were contextualised by using the wider literature to indicate how and where findings were supported by existing narratives.

4.4 Positionality and ethics

It is critical to acknowledge the issue of positionality when conducting research, for as Skelton (2001, p.89) stresses researchers “are not neutral, scientific observers, untouched by the emotional and political contexts of places where we do our research”. For Clifford et al. (2010, p.534) this involves “Recognizing and trying to understand the implications of the social position of the researcher with respect to the subjects, particularly with regard to power relations or cultural differences that may influence the process of the research and its interpretation”. Many factors affect positionality and how researchers conduct research and understand the world including gender, race, class, age, job status, education, being a parent or not, sexuality, and ableness (Skelton, 2001). Similarly, information provided by respondents is dependent on the way the researcher is regarded within that specific context (Clifford et al., 2010). Thus, there is a need for researchers to be respectful to local attitudes in a way that according to Nash (2000, p.146) “respects the cultural as well as the physical environments”.

The positionality issues above are particularly pertinent to research, such as my own, involving a Global North researcher working in the Global South. Highlighting inequities between developed and developing countries, Clifford & Valentine (2003, p.183) emphasise researchers “need to pay attention to how cultures are embedded in, and part of, ongoing global inequalities”. The legacy of the predominant post world war II development model ‘Modernisation theory’ is particularly concerning in this respect, given its implication that development requires a “process of change towards those types of social, economic, and political systems that have developed in Western Europe and North America” (Eisenstadt, n.d., p.1). Instead, advocates of ‘Dependency theory’ argued a country’s development paths is unique and that underdevelopment stemmed not only from internal factors, but also from external Global North exploitation of Global South resources (e.g. Rodney, 1972). Similar concerns were highlighted by Said (1978) who saw Colonialism as leaving a legacy of what he termed, ‘orientalism’, where other cultures are viewed as ‘primitive’ requiring the modernizing influence of the West. This ‘orientalism’ is also visible in studies where the researcher’s own culture or ideology is seen as the benchmark, producing what Cloke et al. (1999, p.43) referred to as ‘self-centered’ or ‘ethnocentric’ geographies.

Following the lead of Clifford et al. (2010, p.159), I aimed to avoid ethnocentrism by seeking “to understand other cultures in and of themselves while also understanding how local places and cultures are connected to national and global processes in uneven and unequal ways”. It was therefore

important to reflect on how my positionality as a white British male conducting research in a former British colony in the Global South impacted the research process. As Clifford & Valentine (2003) note it is often the privileged social position of the researcher within a particular context that enables the research to be feasible, an issue made apparent to me by a Kenyan Strathmore University colleague who upon hearing I was visiting the Ministry of Devolution on spec to request an interview, remarked “Your ethnicity gets you into places. If I went, they would just tell me to go away” [23]⁴⁸.

While the greater stakeholder access my positionality provided was clearly advantageous for my research, a balance needed to be struck so as not to perpetuate the current stereotypes of who does research in the Global North dominated knowledge economy. I therefore adopted, as England (1994) suggests, a deferential stance which emphasised the participant as expert in an effort to support the standing of local knowledges. This approach was aided by drawing on my own 12 years’ experience teaching English as a foreign language, which involved engaging with a wide range of cultures (including many from the Global South), and where, critically, best practice also situates the teacher as listener and facilitator (Scrivener, 2011). In addition, a three-month volunteer placement for a sustainability project in rural Nicaragua provided me with experience of living without modern energy services and of the power dynamics in marginalized rural communities. This, I believe enabled me to better relate to the often similar realities facing participants in Kenya and adopt a more unassuming position during the research process.

The study’s focus on Kenya also brought into question the appropriateness of ‘outsiders’ conducting the research, particularly where a less powerful group is represented by a researcher in a more powerful position. As the leading British Professor of Democracy, Nic Cheeseman (2018b, p.1) notes “Of all the inequalities between the Global North and South, the geographical divide in the knowledge economy is one of the worst”. I often questioned whether my own research was contributing to this inequity as the PhD could have been conducted by a Kenyan, who would know far more about the country. Cheeseman (2018a, p.1) posed a similar question to the Kenyan readership of the Daily Nation (Kenya’s largest newspaper by circulation) over his place writing a fortnightly column in the newspaper. Most responses urged him to stay, many citing that in an era of politically partisan Kenyan politics, ‘neutral’ external perspectives were valuable and “may, occasionally, be better placed to separate the wood from trees”. Whilst clearly I am not as valuable an ‘external perspective’ as a preeminent professor of African democracy, I drew a degree of comfort that Kenyan voices shared my own rationale for the need for outsider views.

However, the support Cheeseman received was not without caveats, with many rightly suggesting (and Cheeseman agreeing) he use his position to foster collaborations with Kenyan writers, creating space for “authors who might traditionally find it hard to bring their experiences and ideas to a larger audience” (Cheeseman, 2018a, p.1). This collaborative aspect is also a critical component of addressing the inequalities in academia between Global North and South, such as the underrepresentation of African authors in energy studies journals, which Sovacool (2014) noted amounted to only 0.8% of global output between 1999 and 2013. Thus, I aimed to collaborate with Global South partners throughout the course of my PhD, through first year discussions with Kenyan project partners over the direction of my research, to being based at Strathmore University during

⁴⁸ Interviewee code. See appendix 1 for table of interviewees and assigned codes.

field work, and being part of ongoing work by the Low Carbon Energy Development Network⁴⁹ (LCEDN) to foster Global North-South partnerships. These collaborations have contributed to a number of mutual benefits including ongoing partnerships on LCEDN projects (e.g. the Modern Energy Cooking Services (MECS) programme) and a recently published journal paper (see Zalengera et al., 2020).

Another potential positionality issue regarding the knowledge economy concerns the study's MLG framework as it has been dominated by Global North thinking. The research aims to address this issue by operating as a critical appraisal of the concept, drawing on rarely acknowledged Global South perspectives in its analysis. Incorporating these voices, along with the adjustments for positionality noted in this chapter, facilitates a more balanced application of MLG to decentralised energy governance, which in turn leaves the study better placed to deliver a more inclusive response to Goldthau's (2014, p.139) call for research investigating "when multi-scale governance arrangements work, and under what circumstances they deliver - or not".

Working with gatekeepers

Gatekeepers were hugely important in terms of accessing stakeholders, with most successful applications of the research methods a direct result of gatekeepers providing introductions on my behalf. However, there has been concern within the research methods literature that gatekeepers can lead to researchers being directed to certain individuals deemed representative while other stakeholders or groups are excluded (Willis, 2006).

This issue was not a particular problem in Nairobi as I had a broad base of contacts and sufficient time to allow for more independent decision making, but the visits to Nakuru, Migori and Turkana were more challenging. For the week I was in each county, a research assistant (RA) was employed who I was far more dependent on to organise FGDs and interviews as I lacked the time and contacts I had in the capital. Thus, in situations where it was not possible to speak to the specific stakeholder I had requested or if I was seeking to speak to a generic stakeholder group, I was almost entirely reliant on the RA to source stakeholders

I attempted to mitigate the impact gatekeeper impartiality might have on the research by briefing each RA on the aims of the research prior to my arrival. While the briefing was mostly successful in terms of facilitating representative participant selection, other misunderstandings occurred regarding research objectives and conduct. The role and form of transcription was misunderstood by two of the three RAs, while one RA joined me in several interviews and often asked interviewees largely irrelevant questions. This emphasises the importance for researchers in establishing clear communications with gatekeepers and factoring in time for questions, doubts and suggestions to be raised.

However, the benefits the three RAs brought to the research process far outweighed the drawbacks. Each provided highly valuable insight into the local context and culture, while providing company and someone with whom to reflect on the research findings – a rarity during the often very solitary fieldwork process. This also assisted my own personal security as I was generally always accompanied and going somewhere with purpose. Without their assistance, it is highly unlikely the FGDs could have

⁴⁹ The LCEDN is a leading UK-based platform for energy stakeholders to engage on research for low-carbon development (see <https://www.lcedn.com/>) (LCEDN, 2019).

taken place as the RAs provided shortcuts to addressing the language and cultural barriers which would have made organising the FGDs by myself highly challenging.

Ethics

Prior to fieldwork, ethics and risk assessment forms were completed, along with a full and frank supervisory meeting covering health and safety arrangements. Research partners in Kenya were also contacted in advance to ease transition and improve safety. The ethics form was approved without issue as participants were not classed as vulnerable groups.

However, the tendency of ethics forms to focus on discrete issues largely fails to capture the more fundamental 'everyday' morality required for ethical research. This was far better encapsulated by the human geographer Hay (2010, p.35), whose well-established work on ethics notes:

To behave ethically in geographical research requires that you and I act in accordance with notions of right and wrong - that we conduct ourselves morally. Ethical research is carried out by thoughtful, informed and reflexive geographers who act honourably because it is the 'right' thing to do, not just because someone is making them do it.

Integration of Hay's ideals into my own research was assisted by attending a Masters module in Global South research methods prior to fieldwork. Particularly relevant was the course content on how not to unwittingly contribute to the propagation of Global North-South power imbalances. Regular analysis of my own practice also helped maintain and improve the ethical standards of my work, aiding a reflexivity process described by Clifford et al. (2010, p.534) as "Critical and conscious introspection and analytical scrutiny of one-self as researcher ... in order to gain new insights into research".

On completion of my PhD, I intend to have a briefing paper of my thesis translated into Swahili as a small step towards mitigating the inequalities of the knowledge economy, whilst enabling non-English speaking participants access to the work they contributed towards. The latter reason partly inspired by a discussion with a Global North sociology researcher working at Kakuma refugee camp, who remarked how camp residents had grown skeptical of the numerous studies conducted at the camp as they were never provided the opportunity to read the outputs. The Swahili briefing paper also aims to mitigate the "cultural bomb" of English, the term the renowned Kenyan author and post-colonial theorist Ngũgĩ wa Thiong'o (1986, p.28) coined to describe how colonising languages have impacted development and education, namely via a:

deliberate disassociation of the language of conceptualisation, of thinking, of formal education, of mental development, from the language of daily interaction in the home and in the community.

4.5 Conclusion

The main argument of this chapter lies with its espousal of a predominantly qualitative methodology, with quantitative methods deemed largely irrelevant to the central focus on the spatial variations of human interactions in decentralised energy governance. This represents a departure from most studies within the decentralisation and energy studies literatures. The thesis also innovates by

adopting an organisational structure based on scale reflecting to an extent the MLG framework it critically appraises. This helps ensure representation is provided to the various stakeholders operating at multiple scales within decentralised energy governance; a key concern of the methodology.

The process of conducting research for this PhD has also unearthed a range of methodological strategies and approaches which are likely to be of use to future researchers in the field. As a whole these strategies amount to a researcher's toolkit for energy governance research in the Global South. Of particular note was the importance of contacts, with introductions to other stakeholders heavily reliant on prior (mostly face-to-face) engagement with these gatekeepers. Positionality issues were also stressed, particularly how Global North researchers working in the Global South may exacerbate the existing geographical inequalities in the knowledge economy. This was argued to be partly mitigated by a process of ongoing collaboration with in-country partners.

Overall, this chapter endeavours to be of use as a resource for future research and it is hoped that the experiences and lessons contained within will be of benefit to other researchers working in the field of governance and more broadly, the Global South

Chapter 5 – Developments in Kenyan Decentralised Energy Governance: The Reticence of National Government to Devolve

The aim of this first empirical chapter is to uncover the developments in Kenyan decentralisation and decentralised energy governance since the implementation of the first county governments in March 2013. This focus addresses research question 1, extending the analysis begun in Chapter 3 which focussed on the period pre-2013. The chapter appraises the various interpretations of these developments, which the ontological and epistemological grounding of this study assume to be subjective and contested. In doing so, the chapter explores how varied understandings of the concepts of decentralisation, governance and energy access intersect, themes the energy studies and decentralisation discourses have rarely drawn together in a Global South context (Brown et al., 2015).

Bridging these disciplines, enables the study to engage with and extend broader debates in the decentralisation and political science discourses which have increasingly questioned assumptions concerning decentralisation's benefits for service delivery (Conyers, 2007). The tendency for stakeholders to mobilise conceptualisations of decentralisation to retain or assume powers outside those stated by legislation has received particular focus (Erk, 2014; Rodríguez-Pose & Gill, 2003), suggesting energy decentralisation reforms may also be subject to similar concerns. These issues could potentially impede energy access issues being addressed; yet, detailed qualitative analysis of how these debates intersect with decentralised energy governance in a Global South context has not been undertaken (Brown et al., 2015). This is a critical epistemological issue hindering the development of an evidence base to better inform policy on the potential of decentralised energy governance to address Global South energy access issues – a knowledge gap also detrimental to ongoing debates over how the polycentric governance approaches advocated by leading energy studies scholars might work in practice (Goldthau, 2012; Sovacool, 2014).

To address this scholarly shortcoming, section 5.1 begins by critically evaluating the energy legislation which has emerged since 2013 and the extent to which the ambiguities of the pre-2013 legislation have been clarified. The chapter then turns to on the ground developments in decentralised energy governance practices to help determine any disconnects between policy and reality. Institutional developments are first assessed, followed by developments in the governance of grid electricity, off-grid electricity, and clean cooking (Sections 5.2-5.5). The progress made by county governments in terms of developing energy sector institutions, capacity and initiatives is then interrogated in section 5.6. As with Chapter 3, Hooghe and Mark's (2011) twin concepts of MLG1 and MLG2 are used to help deduce and then compare the form of energy governance intended by legislation with that materialising on the ground, enabling further insights into debates over the usefulness of MLG as a concept for understanding decentralised governance processes. Lastly, section 5.7 concludes by revealing the impact developments in decentralised energy governance have had on addressing Kenyan energy access issues.

5.1 The impact of post-2013 energy legislation on decentralised energy governance

Since 2013, further legislation governing devolved energy has been enacted or drafted (Table 5.1), adding to the pre-existing framework discussed in Chapter 3. This section explores this more recent legislation in order to assess the extent to which clarification of the ambiguities of the pre-existing

legislation has occurred and ascertain the broader implications for the development of decentralised energy governance. This form of analysis is critical as the clarity of devolved legislation and sub-national roles are factors viewed by the decentralisation literature as likely to have a significant influence on the stakeholder interactions shaping decentralised energy governance (Ribot, 2002).

Table 5.1 Post 2013 election legislation affecting devolved energy roles

Legislation	County Energy Role
<i>Energy (Improved Biomass Cookstoves) Regulations 2013</i>	No role stated
<i>2014: Forest Policy</i>	Counties named as one of the organisations responsible for sustainable management of forests but no specific role stated
<i>National Energy and Petroleum Policy 2015 / Petroleum Bill 2017</i>	Various, see Tables 5.2-5.4
<i>Energy Bill 2015 / 2017</i>	Various, see Tables 5.2-5.4
<i>Climate Change Act 2016</i>	Mainstream climate change into relevant sectors by incorporating the National Climate Change policy into county plans (e.g. CIDPs). Autonomy to enact legislation to implement the Climate Change Act

5.1.1 Energy Bill 2015 & 2017

Of the post-2013 legislation, the 2015 and 2017 drafts of the *Energy Bill* have had most impact on determining devolved energy roles. This thesis centres on the 2015 draft as it was the version pending when fieldwork was conducted. However, the 2017 draft (the version ratified in March 2019) assigns identical roles to the national and county governments and thus does not invalidate the analysis.

The *Energy Bill 2015* most notably differs from its predecessor, the *Energy Act 2006*, through its incorporation of the county level, providing a detailed breakdown of the national *and* county government energy roles in an attempt to ‘unbundle’ the broad functions articulated by the Constitution. These more detailed roles are categorised under three headings: ‘Planning’, ‘Regulation’, and ‘Operations & Development’ which the following sub-sections explore in turn⁵⁰.

Planning functions

Echoing the Constitution, the planning functions of the *Energy Bill 2015* (Table 5.2) allocate to national government the formulation of national energy policy (see national function 1a (NF1a)), and to the counties the preparation of county energy plans incorporating petroleum, renewable energy, and electricity (county function 1a (CF1a)). The remaining county planning functions (CF1b-1e) provide further indication of the content required in the energy plans, expanding on the planning role only articulated (i.e. not content specified) in the *County Governments Act 2012*. Once completed, all 47 county plans are to be consolidated by the national government into an integrated national plan (NF1b). This process potentially lowers concerns that national interests will dominate policy (see section 3.9) as it appears to provide a feedback mechanism for counties, although power relations between the two levels still seem a more likely indicator of whether recentralisation and a movement towards MLG1 occurs, a trait noted in the literature (Rondinelli et al., 1989).

⁵⁰ The Draft *Energy and Petroleum Policy 2015* contained the same list of functions, but this list was omitted from the 2017 update, the *Petroleum Bill*. By this time, the Petroleum and Energy departments were no longer in the same Ministry and presumably including energy functions in a specifically petroleum focussed document was considered unnecessary.

Arguably of most concern is the clear overlap between NF1c and CF1c over land rights, which is likely to be contentious given the highly emotive nature of land in Kenya, which has historically been subject to various, and often competing, interests (see Chapter 3). Here, the extent to which national or county jurisdiction holds sway is likely to be a critical determiner in whether a more MLG1 or MLG2 form of governance emerges as the mobilisation of this function has the potential to block energy infrastructure initiatives from either level of government.

Table 5.2 Planning functions in the *Energy Bill 2015*

1. National policy formulation and integrated national energy planning functions	1. County energy planning functions
(a) Formulation of the National Energy Policy.	(a) Preparation of County energy plans, incorporating petroleum, renewable energy and electricity master plans.
(b) Preparation of Integrated National Energy Plan, incorporating fossil fuel, renewable energy and electricity master plans.	(b) Physical planning relating to energy resource areas such as dams, solar and wind farms, municipal waste dumpsites, agricultural and animal waste, ocean energy, woodlots and plantations for production bio energy feedstock.
(c) Provision of land and rights of way for energy infrastructure.	(c) Provision of land and rights of way for energy infrastructure.
	(d) Facilitation of energy demand by planning for industrial parks and other energy consuming activities.
	(e) Preparation and implementation of disaster management plans.

Regulation functions

The regulation functions in the *Energy Bill 2015* significantly unbundle the concurrent provision for energy regulation conferred by the Constitution to the extent there no longer appear to be any shared roles (Table 5.3). Electricity regulation remains solely with national government, which seems prudent in the case of grid electricity and its inherent natural monopolies (e.g. one state-owned grid network), but not for off-grid electricity which is devoid of many of these monopolies and operates on a more localised scale which appears to align well with the county mandate. Exclusive national control is likely to impede county government opportunities in off-grid electricity by creating added bureaucracy and limiting scope for autonomous initiatives. This is particularly the case with smaller scale off-grid systems whose more localised scale suggests counties are ideally placed to facilitate and which are unlikely to affect national level grid electricity operations (or could be later integrated into the grid)⁵¹.

County regulation functions are instead centred on fossil fuels and biofuels primarily for domestic purposes, with provision also made for end point petroleum services and energy efficiency. The latter role (CF2h) sees the only use of the word ‘customise’ (or equivalent synonym) in the entire bill, which seems an oversight given it is regarded an implied component of devolution processes (Hunold, 2010)⁵². Moreover, its more frequent inclusion would have likely helped clarify the overlaps in both the planning and operations & development functions.

⁵¹ This thesis uses the common convention of defining small-scale electricity generation as 10 kW to 10 MW (EU, 2014).

⁵² For instance, the synonyms ‘modify’, ‘tailor’, and ‘adapt’ are never used to describe county government responsibilities.

Table 5.3 Regulation functions in the *Energy Bill 2015*

2. National energy regulation functions	2. County energy regulation functions
(a) Regulation and licensing of importation, refining, exportation, transportation, storage and bulk sales of petroleum and their derivatives.	(a) Regulation and licensing of retail petroleum service stations.
(b) Regulation and licensing of production, conversion, distribution, supply, marketing and use of renewable energy.	(b) Regulation and licensing of county gas reticulation systems.
(c) Regulation and licensing of generation, importation, exportation, transmission, distribution, retail and use of electrical energy.	(c) Regulation and licensing and supply of retail coal products for domestic use.
(d) Approval of energy purchase agreements, network service contracts as well contracts for common user facilities.	(d) Regulation and licensing of designated parking for petroleum tankers.
(e) Protection of consumer, investor and other stakeholder interests.	(e) Regulation and licensing of biomass production, transport and distribution.
(f) Preparation and enforcement of regulations and standards.	(f) Regulation and licensing of biogas systems.
(g) Formulation of national codes for energy efficiency and conservation in buildings.	(g) Regulation and licensing of charcoal production, transportation and distribution.
(h) Issuance of energy saving certificates to enhance energy efficiency and conservation.	(h) Customize national codes for energy efficiency and conservation in buildings to local conditions.
(i) Setting, review and adjustment of energy tariffs and tariff structures	
(j) Resolution of complaints and disputes between parties over any matter in the energy and petroleum sector.	
(k) Prosecution of offences created under the Energy Act	
(l) Certification of petroleum tanker drivers, electrical workers and contractors, solar system installation technicians and contractors.	

Operations & development functions

In contrast to the regulation functions, five of the eight county operations and development functions can be interpreted as either partly overlapping or concurrent with national roles (Tables 5.4-5.5). This is potentially concerning given the warnings in the wider literature that poorly defined stakeholder roles can reduce the effectiveness of decentralised energy governance (Brown et al., 2015). The concurrent electricity and gas reticulation⁵³ functions (NF3d and CF3a) appear particularly susceptible to misinterpretation because they seem to contradict interpretations of the Constitution which placed responsibility exclusively with the county (cf. Kangu’s, 2015).

Exacerbating this legislative ambiguity is the reality that opportunities for counties to play a role in electricity reticulation seem, aside from smaller off-grid systems, largely unfeasible due to the de facto

⁵³ The Energy Bill 2015 (Art. 2) defines ‘Electricity reticulation’ as “the planning and construction of the network consisting of low and medium voltage electric supply lines together with service lines to enable a consumer to get supply of electricity”, and gas reticulation’ as “the planning and construction of the system through which a consumer gets a continuous supply of gas at the turn of a tap through a piping network or from a centralised storage system”. The latter seems an improbable county function as no piped gas network exists in Kenya while developing a county network seems highly infeasible given the costs and capacity and constraints.

monopoly over grid distribution and retail held by the national government parastatal, the Kenya Power and Lighting Company (KPLC). This may lead to tension between county aspirations (raised by the legislative provisions of the *Energy Bill 2015*) and what is feasible, as remarked upon by a transnational actor category 2 (TAC2) representative:

There are things they [the counties] would still want to do that the national government has as part of its mandate. Of course, on the one hand, you will say 'yes, reticulation lies with both', but to what extent can a county be able to do reticulation? ... [the counties] may want to, but does it make sense? ... For mini-grids it makes sense, but for the grid it doesn't [Interviewee 67 - cf. Appendix 1].

The quotation reinforces that national government dominance over grid electricity both legislatively (e.g. NF3d) and institutionally means the county mandate aligns more realistically with off-grid electricity and clean cooking. In addition, it highlights the growing and prudent sense among development agencies (but less so counties as later discussed in section 5.6) that the practical implications of implementing certain concurrent energy functions need to be first assessed rather than automatically assumed to require being fulfilled by county administrations.

Table 5.4 Operations and development functions in the *Energy Bill 2015*

3. National operations and development functions	3. County operations and development functions
(a) Exploration and production of geothermal and other energy based natural resources.	(a) Electricity and gas reticulation.
(b) Importation, exportation, and refining or processing of petroleum and its derivatives.	(b) Provide and maintain adequate street lighting.
(c) Transportation, storage and bulk sales of petroleum, coal and their derivatives.	(c) Provision of designated parking for petroleum tankers.
(d) Generation, transmission, distribution (including reticulation) and retail supply of electricity.	(d) Collect and maintain energy data.
(e) Collect and maintain energy data.	(e) Implementation of county electrification projects.
(f) Implementation of the Rural Electrification Programme and management of the Rural Electrification Programme Fund.	(f) Undertake feasibility studies and maintain data with a view to availing the same to developers of energy resources and infrastructure.
(g) Undertake feasibility studies and maintain data with a view to availing the same to developers of energy resources and infrastructure.	(g) Establishment of energy centres for promotion of renewable energy technologies, energy efficiency and conservation.
(h) Provide technical and other capacity building support to county governments.	(h) Protection of energy infrastructure inc. oil and gas fields/pipelines, refineries, power plants, control centres, electric supply lines, substations and depot.
(i) Administration and management of the Consolidated Energy Fund and the National Energy Conservation Fund.	(i) Undertake energy efficiency and conservation within the county.
(j) Protection of energy infrastructure including pipelines and storage depots, refineries, power plants, control centres, electric supply lines and substations.	

Table 5.5 Concurrent or overlapping operations and development functions in the *Energy Bill 2015*

National function	Concurrent or overlapping county function
3d	3a, 3e
3e	3d
3f	3e
3g	3f
3h	Potentially all county functions
3j	3h

5.1.2 Clean cooking in post-2013 legislation

The critical issue of clean cooking is not explicitly addressed by the *Energy Bill 2015* with the word ‘cook’ entirely absent from the bill, although devolved responsibility for upstream aspects of clean cooking is alluded to via the county regulatory functions over biomass, biogas and charcoal (CF2e/f/g). While the ‘establishment of energy centres’ (CF3g) also suggests a county role in disseminating clean cooking initiatives, this function seems likely to cause contention as it overlaps with the interests of the national government who already run 16 such centres which predate the devolution era.

A county role in clean cooking is also not specified in other post-2013 legislation concerning the energy sub-sector. The *Energy (Improved Biomass Cookstoves) Regulations 2013*⁵⁴ confer to the Energy Regulatory Commission (ERC) regulatory and licensing responsibilities over improved biomass cookstoves⁵⁵ and institutional use of biomass fuels for cooking and heating. These regulations appear to overlap the upstream biomass functions of the county in the *Energy Bill 2015* (CF2f), again providing scope for misinterpretation of roles. The potential for confusion over upstream biomass roles is increased by the *Forest Policy 2014*, which names counties as one of the institutions responsible for sustainable management of forests but does not establish the specific role they are to play.

The *National Energy and Petroleum Policy 2015* (Article 6.8.2) partly attends to the lack of clean cooking legislation, calling for the provision of:

incentives for use of clean modern household energy to eliminate the use of wood-fuel, charcoal and kerosene as an energy source [and] support and promote conversion of cook stoves to uptake modern and clean fuels in households and institutions.

As the policy does not explicitly assign this role to either level of government, the function is allocated to national government under article 186(3) of the Constitution and therefore does not cater for a county role. The policy also calls for stakeholder collaboration on afforestation and biogas initiatives, providing for multi-stakeholder, but not necessarily decentralised, energy governance⁵⁶. Thus, overall, the post 2013 legislation does not sufficiently address the failings of the Constitution to address clean cooking and contains little provision for a county role. This is clearly a missed opportunity as the more

⁵⁴ The Energy (Improved Biomass Cookstoves) Regulations, 2013 fall under the Energy Act, 2006

⁵⁵ This covers manufacturers, importers, distributors, technicians, and contractors of improved cookstoves.

⁵⁶ See articles 2.4.2 (5), 3.4, 3.6.3, and 6.8.2(16 & 20) of the National Energy and Petroleum Policy (2015)

localised nature of clean cooking which is largely free from the natural monopolies inherent in grid electricity seems to readily align with decentralised energy governance.

5.1.3 The Climate Change Act 2016

Aside from the *Energy Bill 2015*, the *Climate Change Act 2016* has been the most significant post-2013 legislative act affecting devolved energy roles. Unlike the *Energy Bill* and most key energy legislation affecting devolved energy roles, county governments were directly engaged in the drafting of the *Climate Change Act 2016* as an NGO representative involved in the drafting of the document revealed:

We engaged head to head with these guys [the counties] and said to them, ‘ok, ok what is it you want, give us your opinion’, and we asked all 47 CECs responsible for climate change act, so we worked it out⁵⁷ [73].

This collaborative drafting seems far more likely to lead to the well-defined roles deemed essential for successful decentralised governance interventions (Brown et al., 2015); which the high degree of county autonomy derived from the Act seems to support. Under the Act, counties are charged with incorporating the National Climate Change Action Plan (NCCAP) devised by the national government into their sectoral plans and CIDPs. Autonomy is provided for the county to enact legislation to implement the Act while technical assistance for county initiatives is available via the NCCAPs newly established Climate Change Fund, which provides finance for climate change interventions. These provisions are of direct benefit to county energy initiatives as the energy sector is integral to the emphasis of the *Climate Change Act* on low carbon transitions. In addition, the county integration from the offset of the Act’s development perhaps helps explains why workshops focused on implementing the Act have had significant county uptake⁵⁸.

5.1.4 Promulgation issues with energy legislation

Despite the *Energy Bill 2015* offering a far more detailed breakdown of the county energy role than the Constitution, this benefit was largely diminished by the lengthy impasse over the Bill’s promulgation which left devolved energy in a legislative void. Passed by parliament, the *Energy Bill 2015* along with the *Energy and Petroleum Policy 2015* were both vetoed by President Uhuru Kenyatta in 2016. The latter policy was the more contentious as the president sought to reduce and cap the proportion of petroleum revenue allocated to county governments and local communities (Kenyatta, 2016), an issue brought to prominence following the discovery in 2012 of significant oil reserves in Turkana county (see Chapter 7 for a fuller discussion). Yet, as the *Energy Bill 2015* delineated national and county functions over petroleum, its enactment was also blocked whilst the revenue sharing issue remained unresolved. A clause in the *Energy Bill 2015* stating KPLC pay compensation for electricity outages over three hours was the other key reason for the president’s refusal to assent (Ngirachu, 2016). These reasons given for not promulgating the two Bills appear a clear attempt to consolidate centralised governance interests and a movement towards MLG1, redolent of the recentralisation tendencies widely noted to affect broader decentralisation reforms (Cheeseman et al., 2016).

⁵⁷ CECs refers to County Executive Committee members who head each of a county’s ten ministries.

⁵⁸ For instance, the 2017 NETFund workshop discussed in sub-section 5.6.2 provides a clear example of this uptake.

Speculation that the President would acquiesce to the new but largely unchanged *Energy Bill 2017* emerged towards the end of 2017. One Turkana county energy officer remarking on the apparent volte-face of the national executive, stated “they’ve done their sums over oil”, referring to the belief that the national government was now willing to remove caps limiting the revenue counties and local communities could receive⁵⁹ [31]. This appears to have been the case as the *Energy Bill 2017* and *Petroleum Bill 2017* were eventually promulgated into law on March 12th, 2019 with only minor changes taking into account the president’s objections⁶⁰. The provision for compensation for outages lasting over three hours is maintained, whilst the share of petroleum revenues is kept at 20% for the county government, with the national government share raised from 70% to 75% at the expense of the local community whose allocation is lowered from 10% to 5%. However, the highly contentious caps limiting county and community allocations have been removed (KCSPOG, 2018) in what has been seen as a “big win” for the county governments and local communities (ESAL, 2019, p.5).

Nevertheless, the prolonged failure to replace the *Energy Act 2006* and promulgate energy legislation incorporating the counties has had a detrimental effect on decentralised energy governance, with a wide range of energy stakeholders, commenting on how this void created significant uncertainty over policy, governance and development within the energy sector. A senior energy consultant stressed this issue was “the biggest blip on the horizon for ... the energy sector” arguing that without a bill “there’s no clear regulation for them [the counties] to operate in” [60]. A representative from a Nairobi based research institute concurred emphatically: “Without national legislation to enact energy policy, county governments are impotent” [80]. Within government, a representative from the Council of Governors cited the *Energy Bill 2017* as “the key piece of legislation” but warned that it is still “not clear where national functions end and where the counties’ start” [81].

These promulgation issues contrast markedly with the *Climate Change Act* which had county involvement from the offset of its formulation. While undoubtedly less contentious as it does not concern revenue sharing from petroleum, the *Climate Change Act* still serves as an example of how more collaborative engagement is likely to lead to more productive intergovernmental relations and swifter promulgation. This is reinforced by the strong ongoing support for the Act from both levels of government as evidenced by very well attended national government run workshops on incorporating the Act’s provisions for renewable energy into CIDPs. A senior energy officer from Wajir described one such workshop⁶¹ as “a game changer” for the support it provided and the fact that funds were provided for all the counties to attend; not just those closest to the workshop venue as often seen which precluded the more remote ASAL counties [82].

Overall, it seems that while the various legislation passed (or drafted) since 2013 has helped to delineate devolved energy roles, there are still significant issues which are likely to impede

⁵⁹ The move in June 2018 to separate petroleum from the MoEP and form two ministries: the Ministry of Energy and Ministry of Petroleum and Mining was also seen as a means to stop the petroleum dispute delaying the *Energy Bill 2017* enactment.

⁶⁰ The headline feature of the enactment of the bills was the establishment of three new energy entities to manage and regulate Kenya’s energy resources: the Energy and Petroleum Regulatory Authority, the Rural Electrification and Renewable Energy Corporation and the Nuclear Power and Energy Agency, which replace ERC, REA and the Kenya Nuclear Energy Board (KNEB) respectively (Kandie, 2019). The enactment of the bills coincided with the completion of this research and thus it has not been possible to fully explore the implications of these new entities.

⁶¹ The National Environment Trust Fund (NETFund) workshop. Held in December 2017, the three-day workshop was attended by energy officers from 37 counties as well as actors from all the key stakeholder groups.

decentralised energy governance. Several of the key legislative acts passed contain little to no provision for autonomous, streamlined county level decision making. While this is understandable for grid electricity, the lack of scope for a devolved role in off-grid electricity and in particular clean cooking seem critical oversights. In addition, a number of the energy functions proposed by the *Energy Bill 2015/2017* are concurrent or overlapping. Although this aligns with the cooperative and consultative MLG2 governance indicated by the Constitution, there is often no clear demarcation of where national government responsibility ends and the county starts. This has the potential to lead to ambiguity over responsibilities, and possibly erroneous shifting or assuming of roles, particularly over the emotive issue of land rights which seem to have clear scope to create inter-governmental tension.

Moreover, the deadlock over the promulgation of the *Energy Bill* for the first six years of devolved government created ongoing legislative uncertainty over county roles, suggesting counties may understandably have been unwilling to devote time and limited resources to roles which might not have come into being. This impasse, driven by national executive efforts to consolidate centralised control, seems particularly likely to have impeded the emergence of MLG2-esque decentralised energy governance. These legislative issues suggest the realities of decentralised energy governance materialising since 2013 may well differ considerably from the legislative blueprint, a common occurrence within sub-Saharan Africa (cf. Erk, 2014). It is to these on-the-ground governance developments in the Kenyan energy sector that this thesis now turns.

5.2 Institutional developments since 2013

As discussed in Chapter 3, the predominance afforded national government by the pre-2013 legislation was mirrored in the heavily centralised institutional structure of the energy sector. The neoliberal reforms to the energy sector in the 1990s and 2000s constituted a form of ‘delegation’ establishing semi-autonomous parastatals and independent power producers (IPPs) responding and accountable to the national government. This structure maintained the de facto national government monopoly over grid electricity distribution and retail, providing little scope for interventions from the sub-national level and raising questions over how capably decentralised governance stakeholders would be able to assume newly devolved energy roles. Building on this analysis, this section uncovers the extent to which the institutional set up has developed since 2013 to accommodate the counties and the legislative provisions for devolved energy in the *Energy Bill 2015*.

In doing so, this section provides the first of five sub-sections (5.2-5.6) assessing on the ground developments in decentralised energy governance since 2013 which are used to help determine whether and to what extent there has been a disconnect between policy and on the ground realities. This appraisal is critical to developing knowledge on how decentralised energy governance is understood to have developed in a Global South context (the focus of RQ1), an area little studied in the literature and a deficiency impeding the development of an evidence base to better inform policy on effective forms of decentralised energy governance.

Structural developments

The six energy parastatals (ERC, GDC, KenGen, KETRACO, KPLC, and REA) running the various constituent parts of the Kenyan grid electricity have varied considerably in the extent to which they

have restructured to accommodate devolution⁶². The changes at KPLC have been most noticeable, establishing offices, supportive sub-offices and sub-stations in all 47 counties, adding to the 10 regional offices in existence pre-devolution in what appears to constitute a form of administrative decentralisation or ‘deconcentration’. The Rural Electrification Authority (REA) was seen to be looking to “copy the KPLC structure” by establishing representatives in each county and larger regional offices [47], although a senior REA officer pointed out this process was not complete and certain counties remain without REA officers on the ground [14]. The other four parastatals, whose activities operate at a more national scale and are less customer facing, have remained heavily centralised, operating from central headquarters in Nairobi, although the Geothermal Development Company (GDC) and KenGen have representation in the specific counties where their activities are sited.

The KPLC structural changes have been viewed positively by most stakeholders. KPLC officers based in-county tended to praise the restructuring, arguing it enabled county needs to be better represented and resources to be more effectively used. Several county energy officers agreed, stating that it facilitated access to the parastatal, thus enhancing coordination and accountability [49, 52]. Yet, at the central KPLC headquarters in Nairobi, a senior planning manager saw the restructuring more negatively, complaining that “statistics and data and new configurations of our operating structures, and our tracking of historical data is now complicated because the way we define our regions is now different” [6]. This suggests central KPLC administration priorities may differ from their county-based colleagues, with the manager seemingly more concerned about the challenges imposed on top-down governance by the need to accommodate the counties.

County governments were more ambivalent concerning the structural changes adopted by REA, with many feeling the parastatal should be more, or even fully, devolved. At the 2017 National Devolution Conference, the governor of Wajir publicly called for REA to be fully devolved to the counties, a sentiment shared by a senior Uasin Gishu county water officer who highlighted in an interview that a draft document from the National Transition Authority (NTA) showed most of REA’s functions were intended to be devolved to the county [49]. The document was explained by a senior REA officer as a misunderstanding between the MoEP, who had “indicated rural electrification was a function that took place at a lower level but that didn’t mean it should be devolved”, and the NTA who “were asking what should be devolved and took it to mean that rural electrification [and consequently REA] should be” [14]. This ambiguity over whether REA was intended to be devolved supports Kangu’s (2015) concern over the potential for roles to be misinterpreted.

Calls for REA to be more fully devolved were unanimously dismissed by parastatal officers. A KPLC officer argued it would be impractical and less effective for counties to implement key national government policies assigned to REA, such as the Digital Literacy Programme (DLP): “If the electrification of primary schools had been devolved, it wouldn’t have been done to the extent it has” [30]. The senior officer from REA saw political motivations behind the call for REA to be fully devolved, stemming from some counties wanting “to dictate which projects are done and by who”, while also warning that the large funding requirements made full devolution impossible: “REA has to be public and has to be at national level because the kind of funding requires government and development

⁶² At the time of research, there were nine energy parastatals. Representatives from the other three (Kenya Nuclear Electricity Board (KNEB), Kenya Pipeline Company (KPC), Kenya Petroleum Refineries Limited (KPRL)) were not interviewed as part of this PHD as their mandates had less significance in determining access to electricity and clean cooking.

partners” [14]. The quote highlights how REA is in effect the corporate social responsibility arm of KPLC, working in non-profitable areas that would not satisfy the need of either KPLC (with its public-private ownership model) or the private sector to make a profit and satisfy shareholders. This suggests REA should not be fully devolved as the funding limitations of counties would preclude them from financing national initiatives such as the DLP⁶³.

Operational developments

Although structural changes have been mainly restricted to KPLC and REA, officers from all the six aforementioned energy parastatals highlighted significant operational changes to accommodate the county governments. Most emphasised was the need to engage with counties on day-to-day operations. A GDC officer remarked “anything that we do, we have to inform the county government”, highlighting licensing as a particular “major change” with the parastatal’s projects now requiring county authorisation [15]. Supporting the GDC officer’s sentiments, an ERC officer was particularly emphatic concerning the need for county consultation:

Nowadays we don’t do anything with the county without consulting them [the counties] ... stakeholder consultations is [sic] mandatory. It means that we can’t even approve an energy project, whether geothermal, hydro, if you didn’t do stakeholder consultation. So, you have really to bring everyone on board [12].

The quotes from the GDC and ERC officers suggest the devolution process has created a consultative process between national and county government, resulting in checks and balances to centralised control. The ERC officer also stressed such checks and balances were applied to counties, emphasising that ERC’s role regulating, monitoring and approving licences for county energy projects had become critical as “you can’t tell the county government to regulate itself” [12].

These mutual checks and balances embrace the “consultation and cooperation” proclaimed by the Constitution. However, actors from all key stakeholder groups noted this engagement has led to cases of intergovernmental deadlock, particularly over projects where counties have mobilised community sentiment over land rights (see sub-section 6.3.3). Thus, a trade-off has emerged where the consultative process seems to function, at least over land, but often leads to the delayed implementation of energy initiatives where there are competing national and county agendas. This brings to light the tension anticipated in section 5.1 regarding the overlapping functions over land rights provision in the Energy Bill 2015. An ERC officer added the failure to enact the *Energy Bill 2015* which contained provisions for a collaborative framework had also hindered intergovernmental coordination [11], reinforcing the argument that the Bill’s delayed promulgation has significantly impeded effective decentralised energy governance.

In addition, the extent to which this inter-governmental consultation is indicative of the intended devolution process is questionable as comments by parastatal officers revealed top-down is still prevalent at national level. Several officers argued operational changes needed to be limited until after national government initiatives had been completed. A Migori KPLC officer suggested “after energy structures are 80%-90% done, then we can maybe have more devolving of energy powers –

⁶³ The more pertinent question of whether the DLP should have been implemented at all is discussed in Chapter 6

but only once we are there, after the Last Mile [Connectivity] Project” while a Turkana counterpart argued devolution is “still a toddler, we’re still putting structures in place, so we may not add more to their [the counties’] roles” [38, 30]. The above quotes seem indicative of support by national government representatives for top-down MLG1-esque governance, which while largely pragmatic in terms of implementing grid electricity infrastructure is far less so when broader, more accurate conceptualisations of energy access are used which account for spatial inequities (Pachauri, 2011).

Other parastatal arguments concerning devolution were far less cogent, particularly the regularly expressed idea that KPLC and REA were “already devolved” [30, 51]. This is plainly untrue if devolution is taken to incorporate political decentralisation (Cabral, 2011), and suggests, as widely acknowledged in the literature, that different understandings of devolution are being mobilised to serve different agendas (Rodríguez-Pose & Gill, 2003). The misinterpretation of the ‘deconcentration’ reforms of KPLC and REA since 2013 as genuine devolution may possibly be disingenuous, potentially serving national government interests in avoiding a deeper decentralisation process. A representative from KPLC Turkana appeared to confirm deconcentration was the *modus operandi*, stating that devolution has “basically not affected our work since the function is under national government, so no effect. Everything is done up-down [sic i.e. top-down]” [30].

Overall, compared with the highly centralised energy governance in operation prior to devolution which was largely responsible for the severity of the historical energy inequities in Kenya, the structural and operational changes adopted by the parastatal agencies represent an improvement in terms of equitable governance. The distribution of officers to the counties, especially by KPLC, appears to have aided accountability by virtue of bringing those responsible for service provision closer to the people they serve. However, these changes constitute a form of deconcentration rather than devolution, with sub-national offices having little or no political or financial autonomy from the MoEP and national government. Thus, despite increased consultation between national and county governments, MLG1-esque governance remains.

This has led to a growing sense that administrative decentralisation is what the national government would prefer to see, rather than any form of autonomous, political and fiscal decentralisation that might lead to resources and revenues being drawn from the centre, particularly as the national government still holds a *de facto* monopoly over grid electricity distribution and retail. This suggests resources will continue to be consolidated in national government interests, potentially at the expense of smaller scale off-grid electricity and clean cooking initiatives where national government enjoys less control. Given energy is one of the top three most lucrative ministries (Wafula, 2017), and widely alleged to be subject to elite capture (Musau, 2018), the central government preference for deconcentration seems to reflect how energy, far more than other resource areas, is seen as too politically and financially important to more fully decentralise.

5.3 Developments in grid electricity since 2013

Given the legislative and institutional control of national government over grid electricity, it is perhaps unsurprising that the allocation of resources in the energy sector since 2013 has primarily centred on grid electricity (Table 5.6). Guided by the Least Cost Power Development Plan (LCPDP), these grid-based investments do not appear to have been specifically enabled by devolution as the LCPDP

predates and makes no reference to the process, while county engagement on grid centred projects such as the Last Mile Connectivity Project (LMCP) and DLP has been limited as Chapter 6 will reveal. Instead, these initiatives appear a continuation of pre-devolution energy policies fixated on centralised governance of a centralised grid electricity system.

Table 5.6 Largest national government led initiatives in each energy sub-sector by US\$ of investment (Kenya Power, 2017a; Anyanzwa, 2018; Kipsang, 2018; EU, 2019; World Bank, 2019)

Energy sub-sector	Projects	Financed by	Investment
Grid Electricity	LMCP (phases I & II) ⁶⁴	World Bank (US\$450), AfDB (US\$270), Government of Kenya (US\$30M), EU (33M)	US\$783M
Off-Grid electricity	Kenya Off-Grid Solar Access Project (KOSAP)	World Bank	US\$150M
Clean cooking	LPG	Government of Kenya	US\$31M

The largest of the national government grid electricity initiatives, the ongoing LMCP was launched in 2015. Funded by international donors and the national government, the program aimed to connect 70% of the population by 2017 by extending the grid to those living within 600m of the existing network and subsidising their connection charges from 34,000Ksh (US\$340) to 15,000ksh (US\$150)⁶⁵. National government figures indicate the programme has been successful, with connectivity rising sharply from 32% in 2013 to 73% of all households by April 2018 (KPLC, 2018). An energy consultancy representative backed the LMCP, citing the reduced connection fee as crucial: “it even went to 150 dollars, and that’s really what has increased the connectivity of Kenya Power ... the numbers have really jumped in the last few years” [60]. This increased connectivity appears to leave Kenya on track to meet the national government’s targets of 70% connectivity by 2017 and possibly its ambitious goal of universal access by 2020 (KPLC, 2018).

However, the government connectivity figures do not elaborate on the likely disparities between rich and poor, urban and rural, and quality of supply – with blackouts frequent, particularly in rural areas (IEA, 2014). The figures also represent availability or physical connection rather than actual consumption, echoing concerns in the wider literature over misleading energy access definitions (Bhatia & Angelou, 2015). Most notably, Lee et al (2016) remark on the common phenomenon of being ‘under-grid’, that is where grid electricity is available yet inaccessible (or unwanted) due mainly to cost. Lee et al. (2016) conclude that despite the LMCP’s reduced connection fees, the affordability of grid electricity is still the critical barrier to access. As a Nairobi county officer remarked in 2017: “70% have access to electricity, the 30% who don’t, it’s because they can’t afford it” [22]. Evidence of the inaccessibility of energy is further highlighted by excess electricity capacity standing at 500MW in 2017⁶⁶. This surplus resulted in KPLC abolishing its target to have 5000MW of total capacity in place by the end of 2017 in what seems tacit acknowledgement of the failings of over-prioritising grid electricity.

⁶⁴ The funding for the third and final phase of the LMCP has yet to be confirmed.

⁶⁵ US dollars (US\$) have been used. The dollar is the international business currency in Kenya and the exchange rate of around 100ksh to 1US\$ makes currency conversions more easily comprehended than the pound which stands at around 130ksh.

⁶⁶ Stated by a senior KPLC officer at the ESCoBox workshop at the University of Nairobi on 11th January 2017. Similarly, in 2018, national peak electricity demand stood at 1,832MW against a total installed capacity of 2,351MW (Olonyi, 2019).

The national government driven ‘World Bank Global Partnership on Output-Based Aid’ (GPOBA) sought to address this issue of affordability by further subsidising the grid connection fee from 15,000ksh (US\$150) to 1160ksh (US\$11.60) for those living in informal settlements. According to national government figures, GPOBA connections accounted for 60% of the 1.28 million new grid electricity customers during the financial year 2015/16 (Kamau, 2016). Despite these connections, it appears new beneficiaries may not become consistent electricity consumers as many are still to purchase tokens to top up those provided free on installation (Kenya Power, 2017b). This is partly for reasons of affordability but mainly due to the very low electricity consumption of poorer customers (Ndii, 2019). In addition, an EU representative disputed the extent to which GPOBA was primarily a connectivity programme: “this is not really about connecting people as they are already [illegally] connected, it is about getting payment from the illegally connected” [69]. Thus, while GPOBA has enabled significant numbers of people to access grid electricity, the extent of its success as indicated by national government figures is likely overstated.

Another major national government initiative, the ‘Digital Literacy Programme’ (DLP) was a flagship policy of the Jubilee Party government in their victorious 2013 election campaign. Initiated in 2013, the US\$170M DLP aimed to provide every primary school child with a laptop, which thus required 100% electrification of primary schools. Electrification was to be mainly achieved via grid extensions, with off-grid solar used for more remote areas (ICT Authority, 2016). Implemented by the Rural Electrification Authority (REA), the DLP had according to national government figures connected 95% of primary schools 2016, up from 43% in 2013 (Wanzala, 2016). However, more recent reports have highlighted laptop provision has been scaled back, with the programme facing significant financing, electricity reliability and teacher training issues (Nyaundi, 2019). This casts doubts over the long-term sustainability of the DLP, which increasingly resembles a populist political project rather than one in tune with Kenya’s long-term energy and education development needs⁶⁷.

The continued dominance of national government over the allocation of resources in the energy sector has fuelled a growing sense among counties that grid electricity has not been devolved in any meaningful way. This sense of powerlessness is compounded by the difficulty of a county intervening in an energy subsector which is a de facto state monopoly and prohibitively capital-intensive, leaving an ERC officer to conclude: “the risk in investing in energy [i.e. grid electricity] is substantial and the only area for [non-national government] investors is mini-grids” [11]. This corroborates findings in the literature discussed in Chapter 3, which suggest decentralisation in Kenya has not significantly altered the energy governance landscape, with investment and policy continuing to align with national government grid electricity interests (Ockwell & Byrne, 2017; Newell & Phillips, 2016). Although some opportunities exist for county grid electricity interventions, such as lobbying and coordinating the rollout of grid electricity at local level (see Chapter 6), the notion that grid electricity governance remains top-down and has yet to be meaningfully devolved appears accurate.

5.4 Developments in off-grid electricity since 2013

Despite resources being primarily focussed on extending and modernising the grid, there is a critical need for off-grid energy systems in Kenya as grid extensions alone will not reach the entire population

⁶⁷ The DLP’s educational merits have also been questioned, critiqued as more “political than pedagogic” by Omanga (2018)

of Kenya in the foreseeable future. This is primarily due to the dispersed nature of Kenya's large rural population and its low energy demand characteristic, which leaves grid extension initiatives to those areas both logistically and economically unfeasible. An extensive World Bank funded report indicated that 4.3 million people (9.5% of the total population) live beyond the grid's viable reach and therefore require off grid solutions (NRECA International, 2017). As the minimum value of the solar resource in Kenya stands at a monthly average of 4.7kWh/m²/day and is even higher in the ASAL regions most lacking grid electricity access, solar powered off grid systems offer particularly significant opportunities to increase electricity access⁶⁸ (WorldClim, 2017).

Despite the significant potential for off-grid systems in Kenya, interventions have been limited since 2013, and where they exist, mainly national government run. Data from the World Bank administered Energy Sector Management Assistance Program (ESMAP, 2016) found only 21 national government run mini grids in operation in 2016 constituting approximately 1% of Kenya's total installed capacity⁶⁹. ESMAP (2016) also estimated "at least a dozen" much smaller off-grid systems exist; installed by the private sector or civil society, and often community owned and operated.

The struggles to establish off-grid electricity appears largely regulatory. A key barrier for investors has been the question of what happens if the grid is extended to the area where their off-grid installation is sited, as a senior MoEP officer admitted:

We haven't developed policy on off-grid ... the biggest problem for supporting the private sector are guaranteeing the national grid won't arrive shortly & guaranteeing what the [feed-in] tariffs will be⁷⁰ [2].

Evidence of this issue can be seen in two TAC3 financed community scale off-grid initiatives, the Energy for Development (E4D) and Solar Nano Grid (SONG) projects, where the grid arrived shortly after or during the projects' implementation despite government assurances to the contrary⁷¹. The first, and to date only, grid tied solar photovoltaic (PV) system in Kenya – the 660kW PV array atop Strathmore University – has also been beset by regulatory issues due to national government delays over the establishment of net-metering regulation [107]. By 2017 it was still to receive any payment for the electricity supplied to the grid since 2014, leading the university to consume the vast majority of generation itself and essentially become an off-grid 'captive system'; a precedent which has seen other private sector off-grid operators eschew becoming grid-tied (see Chapter 7). These regulatory issues seem highly likely to disincentivise private investment in off-grid initiatives.

Cost is also a key barrier to off-grid energy initiatives particularly as communities living outside the current and predicted reach of the grid tend to be poorer and more dispersed (African Progress Panel, 2015). The low energy consumption of such communities (initially only likely to use electricity for lighting and mobile phone charging) has ramifications for potential off-grid energy investors as it

⁶⁸ 100 solar mini-grid sites were identified in Northern Kenya alone (GIZ, 2017)

⁶⁹ The 21 mini-grids have an installed capacity of 24.8MW (23.7MW thermal, 0.569MW solar, 0.55MW wind). 19 are owned by REA and run by KPLC; the other two (in Lamu and Garissa) are owned and run by KenGen and have been incorporated into the grid (ESMAP, 2016). State figures give Kenya's total 2016 installed capacity as 2341MW (Senelwa, 2016).

⁷⁰ A representative from ERC reported that mini-grid regulations would be released "hopefully by the end of [2017]" [11].

⁷¹ The University of Southampton developed the Energy for Development (E4D) initiative (Gollwitzer, 2017) while Loughborough University led the Solar Nano Grid (SONG) project (Blanchard et al., 2017).

creates a lengthy payback period for the large upfront capital expenditure (CAPEX) required as a (senior) energy consultant explained:

The CAPEX of just setting up a grid let's say in a far-flung area of Kenya like Turkana is so expensive and the people pay such low amounts. ... Kenya Power say that private developers don't see it as profitable to set up let's say a 10million dollar plant and people will be spending two dollars per month and you may get just 500 customers. So, mini-grids have been trying to go to densely populated areas in Kenya where people may eventually use more energy: so instead of just two dollars, [they spend] ten dollars and above - that's where it makes sense for them [private investors]. But in those far-flung areas like Turkana, Wajir, you know the North, it may not make sense and that's why Kenya Power is going there [60].

This highlights that the cost implications of off-grid electricity development in the poorer ASAL areas (where it is most needed) mean investment from the private sector investment and county government is unlikely with only the national government and transnational actors having the means to shoulder and subsidise the cost involved⁷².

Indeed, the primary initiative to expand mini-grids is a joint national government and TAC1 venture: the ESMAP supported and financed 'Kenya Off-Grid Solar Access Project' (KOSAP), which aims to provide off-grid electricity to the 14 "traditionally underserved" ASAL counties (Kenya Power, 2017a). However, this initiative also seems to have adverse effects for private and county sector involvement in the off-grid sector, a possibility acknowledged by ESMAP (2017, p.41):

A major objection to KOSAP is its possible effect on existing regulation and the new mini grid regulation. Many of the already proven and implemented models would no longer be feasible. Programs as KOSAP are seen as hindering innovation and additional revenue streams, putting control back with KPLC that already enjoys a quasi-monopoly. Some suggest that MoEP and ERC consider leaving existing agreements unchanged; and keep the market open for models that work outside the KOSAP program, which comes with limited funding.

The quotation indicates that major national government led off-grid electricity initiatives, such as KOSAP, can potentially limit the role of other stakeholders in the off-grid sector. This may well be detrimental to the sector, given findings in the literature emphasise the need to build broad networks of diverse stakeholders to support learning and develop off-grid markets (Byrne et al., 2014).

Similar off-grid initiatives financed by the aid departments of Global North nations (i.e. TAC2 actors) were also primarily conducted through national government. The Nordic Development Fund (NDF) financed via national government the hybridisation of a KPLC owned mini-grid in Turkana from diesel only to one also incorporating solar energy (NDF, 2015). The current DfID financed Green Mini Grid Facility Kenya initiative (GMG), partly addresses the issue of innovation being limited by through seeking to develop the off-grid market via grants and technical assistance to private mini-grid

⁷² The suitability of the ASAL counties for off-grid investment is indicated by the Commission on Revenue Allocation (CRA, 2017), who define the 14 counties as 'marginalised' in terms of infrastructure, investment and services, with a population density four times lower than the national average, and un-electrified households estimated to number 1.2 million.

investors. However, this is still conducted through the auspices of the national government who form the 'program committee' with little county engagement, save for when negotiating approvals (GMG, 2018). The approach of the GIZ Pro Solar project was similar to the GMG, although ongoing GIZ capacity building on county energy planning provides some scope for the county to lead such initiatives (GIZ, 2018).

The predominance of national government over off-grid systems may also be detracting from the more feasible role counties could play in smaller community level off-grid systems and solar home systems (SHS)⁷³, which have lower costs and payback periods. County led initiatives in this field have been limited, with collaborations on initiatives such as the donor driven SONG project in Nakuru an isolated example of what such interventions could achieve (Blanchard et al., 2017). There appears particular scope for the county to facilitate SHS initiatives given the strength of the industry in Kenya. The country is the world's second largest SHS market after China and the world's largest per capita (Czek, 2013), with "well in excess of 300,000 SHSs ... sold through a vibrant private market" (Ockwell & Byrne, 2017, p.71). In addition, the widespread use of mobile money in Kenya facilitates payment of SHSs in instalments, vital for poorer customers for whom upfront costs are prohibitive. This has given rise to the dominant perception of SHS as a market-driven private sector led phenomenon (e.g. Van der Plas & Hankins, 1998; Jacobson, 2007), which seems likely to have contributed to the limited number of county SHS initiatives: counties deterred by the sense that the SHS market is already dominated by well-established private sector players, such as M-Kopa and D-light.

Yet, more contributions from the innovations systems literature have highlighted how the development of the SHS market was driven by a range of capacity building initiatives undertaken by a diverse MLG2-esque network of actors, which enabled the market to grow by reducing the risks that would have deterred private investment (Byrne et al., 2014). These capacity initiatives helped build networks of diverse local stakeholders, conduct market research, raise awareness and fund experimental initiatives to foster community scale off-grid electricity and SHSs (Ockwell & Byrne, 2016). The lack of county SHS and other small scale off-grid electricity interventions therefore seems to be a clear missed opportunity as the more localised scale of county governments seems ideally placed to facilitate and coordinate these capacity building activities, without which more recent and convincing treatments suggest the Kenyan solar market phenomenon may never have occurred (Ockwell & Byrne, 2017).

5.5 Developments in clean-cooking since 2013

As highlighted in Chapters 1 & 3, clean cooking remains the most urgent energy issue in Kenya and the Global South due to the severe health and environmental impacts associated with the traditional use of biomass. Yet, in Kenya, the resources allocated to clean cooking since 2013 have been far less than those assigned to either grid electricity or off-grid electricity. A representative of the Global Alliance for Clean Cook Stoves (GACC) highlighted the governance filing behind this state of affairs:

I would call it [clean cooking] the least prioritised as well as the least understood, and particularly by the government structures that we have [66].

⁷³ Solar home systems are off-grid photovoltaic systems used predominantly to supply electricity to individual households

The GACC officer's concerns help explain there has been far less progress in improving clean cooking access compared to electricity (see Figure 3.4), an issue compounded by the relative lack of resources to the sub-sector. Despite the completion of several detailed energy mapping exercises for electricity access (e.g. NRECA International, 2017), the linear trajectory of the results for clean cooking access suggests the use of less comprehensive aggregated data (see Figure 3.4) (World Bank, 2018a). In addition, there has only been one major national government initiative: the 'Mwananchi [ordinary citizen] Gas Project', which sought to ease the transition from biomass to cleaner, liquid petroleum gas (LPG) by subsidising the upfront costs. Yet, the project has stalled due to fraud issues with the pilot schemes, raising questions over whether the parastatal running the project, the National Oil Corporation of Kenya (NOCK), complied with due diligence (Ngugi, 2018). Decentralised energy governance was largely bypassed; the project run through NOCK with local sensitisation efforts assigned to Chiefs (Muchiri, 2017), who are accountable to national government and often seen as vestiges of the pre-devolution system (Cheeseman et al., 2016).

Indeed, the county appears to have played a limited role in clean cooking as seen by the limited focus in county CIDPs, with only five counties identifying the energy sub-sector as a priority action (UK AID, 2017). A senior Nairobi based research institute representative stressed that both "national and county governments are not focusing on biomass burning energy for cooking" [80]. As with small scale off-grid electricity, this seems a clear missed opportunity as the more localised nature of clean cooking suggests the counties are ideally placed to facilitate networks of local stakeholders to develop innovative and locally appropriate initiatives. The lack of county prioritisation seems partly due to the insufficient attention paid to cooking energy in the pre- and post-2013 legislation, an issue compounded by the absence of a regulatory framework as an officer from ERC revealed in 2016:

we were developing an improved biomass cook stove regulations, they're still in the process, we're still doing the justification for that regulation ... but that regulation will mostly focus on cook stoves for institutions [12].

This regulatory deficit is likely to disincentivise county clean cooking initiatives as it creates investor uncertainty. In addition, ERC's focus on the institutional level is of concern as it suggests the more urgent need to address clean cooking at the household level may be neglected.

Efforts to address clean-cooking at both institutional and household level have mainly been led by non-governmental actors, with varying degrees of county engagement. Transnational actor initiatives have had a long-standing presence in clean cooking, such as GIZ's Energising Development (EnDev) Kenya project 2006-2019 which focussed on improved cook stoves and incorporated capacity building for county governments "to enable them to drive forward the energy access agenda at grass roots levels" (GIZ, 2019, p.1). In addition, a recent £37.6M (US\$48.5M) clean cooking initiative funded by DfID, the Modern Energy Cooking Services (MECS) programme, incorporates a multi-stakeholder approach, suggesting a greater emphasis on decentralised energy governance to address clean cooking issues (MECS, 2019)⁷⁴.

⁷⁴ MECS centres on addressing clean cooking barriers, with a notable focus on electric cooking. The five-year project will take place across a number of Global South states, including Kenya (MECS, 2019).

Most prominent in driving clean cooking have been representative NGO bodies, particularly the Clean Cooking Association of Kenya (CCAK) and GACC. The two facilitated the development of an inter-ministerial committee on clean cooking in 2014 comprising members from national government and over 15 government agencies. The committee included members of government from sectors outside energy, such as health, education, and agriculture, in an effort to address the cross-cutting nature of cooking. However, the committee has not had county representation, a critical oversight as one energy consultant explained:

I think the county should play a role in clean cooking and ... for clean cooking, it's really more about awareness ... they can instil an awareness of the people in the counties on why [they should] consider either purchasing a clean cook stove or looking to clean cooking rather than the other forms [61].

The failure to incorporate the county level into the committee has likely exacerbated the limited role counties have so far played in clean-cooking, although committee members recognised the urgent need to address this. A representative from a leading Kenyan clean cooking NGO stressed, “we really need to engage with county government officials, it doesn't make sense to only engage with national government officers”, while she also reported that the chair of the committee, a senior MoEP officer, had more bluntly stated, “cooking should be a devolved function” [72].

The quotes above highlight the issues concerning the limited approach to clean cooking adopted by decentralised energy governance since devolution. Despite the counties being able to play a critical role in facilitating clean-cooking initiatives, there has been a lack of engagement in the sector partly because their potential role has not been adequately recognised legislatively or institutionally. The fact the chair of the inter-ministerial committee on clean cooking goes as far to say clean cooking should be devolved emphasises the deeply flawed nature of the current clean cooking governance set up.

5.6 The development of county governments since 2013

As sub-sections 5.2-5.4 have indicated, there is a sense of unfulfilled potential regarding county energy interventions since 2013. This is particularly striking when compared to other sectors, where there have been notable county achievements. Most evident is the implementation in previously marginalised counties of infrastructure, such as tarmacked roads and health facilities, which prior to devolution was rarely or never seen. Among county government interviewees, consensus was that these successes had been primarily enabled by the guaranteed share of national revenue and independent control over this budget enshrined in the constitution [19, 46, 49]⁷⁵. Yet positive developments of this ilk have been far less common in the energy sector and while national government policies and institutional control have limited county energy initiatives, this section reveals that underlying capacity and institutional issues at the county level are also a critical impediment on the development of effective decentralised energy governance.

⁷⁵ Since 2013, this share has far exceeded the minimum 15% share mandated by the constitution although opposition politicians and prominent county governors have called for this to be increased further to 45% (Munya, 2016).

Broader Kenyan devolution trends are also likely to have implications for decentralised energy governance. Devolution is perceived to have improved local governance accountability, with communities gradually re-focusing on leadership at the local level, realising their problems do not necessarily emanate from central government. This was particularly evident in the 2017 general election where over half of Kenya's incumbent governors – 62% of its MPs and 79% of its women representatives – lost their seats (Waddilove, 2017). This possibly suggests county leaders may have to be more accountable to a more issues-based polity rather than relying on ethnic based support.

Yet, devolution has not been without its critics, with many pointing to the costs. Recurrent expenses such as public worker salaries now form over 50% of the national budget, reducing the budget for development efforts (Kimanthi, 2018). Others have pointed to cases of ethnic tension being devolved to the county level, a tendency of decentralisation reforms acknowledged in the wider literature (Selway & Templeman, 2011). More recent analysis suggests the effect of devolution may change with each electoral cycle due to shifting national electoral coalitions that shape both the national and county landscape (Waddilove, 2019), indicating the quality of decentralised energy governance may also be strongly influenced by temporal dynamics.

5.6.1 Developments in county institution building

Part of the reason county energy interventions have thus far been limited seems to stem from a lack of institutional energy structures at the sub-national level. 19 counties do not have a standalone energy department within their ten permitted ministries, indicating that the prioritisation of energy varies significantly among county administrations (Figures 5.1-5.2). Legislative and institutional uncertainty seem to have been a significant factor in some counties not establishing energy departments as a senior Uasin Gishu county water officer explained:

We don't know if REA will be devolved – the national government would like to hold on to it. If they are devolved, we [the county department] would absorb it, so we are delaying the creation of the energy department [49].

This again reiterates the detrimental impact of the prolonged failure to promulgate the *Energy Bill 2015*. In other cases, the lack of energy department appears to be a response to what is electorally beneficial, with energy often seen as a far lower priority for citizens than water, food, health and roads. As one Migori county officer remarked, "if you've never had energy, you don't realise you need it" [83]. This neglect of energy seems to imply a lack of awareness among county electorates regarding how energy is critically interconnected with other, currently more politically expedient, sectors such as food, water, health, and the economy generally.

Figure 5.1 Departments found in county ministries containing energy

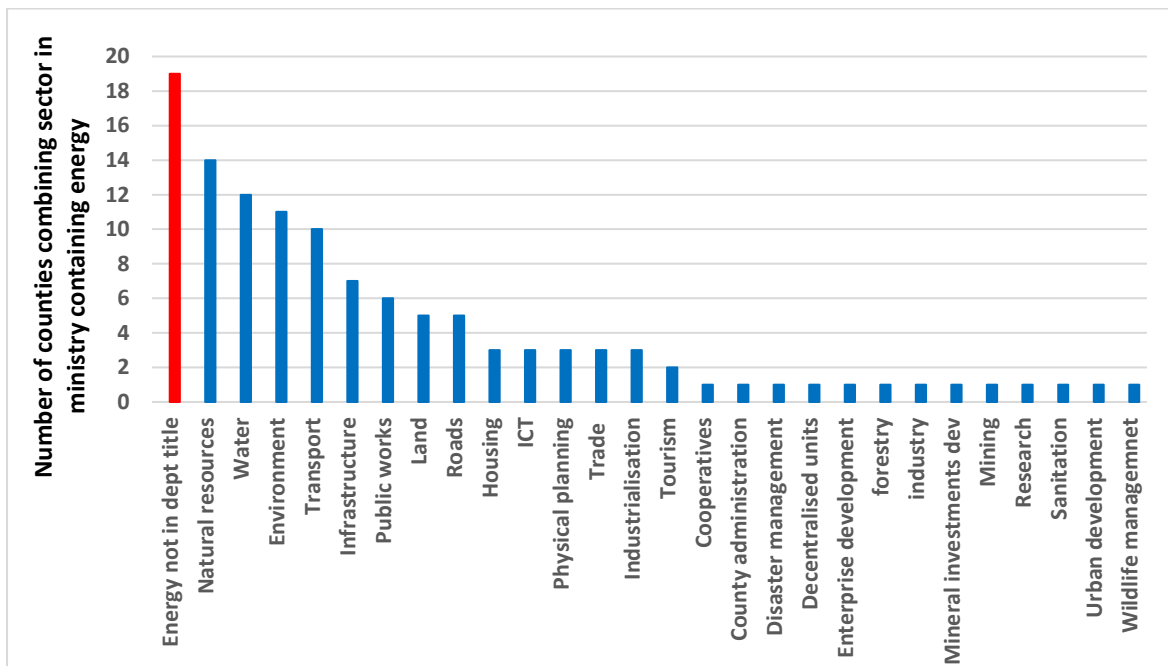
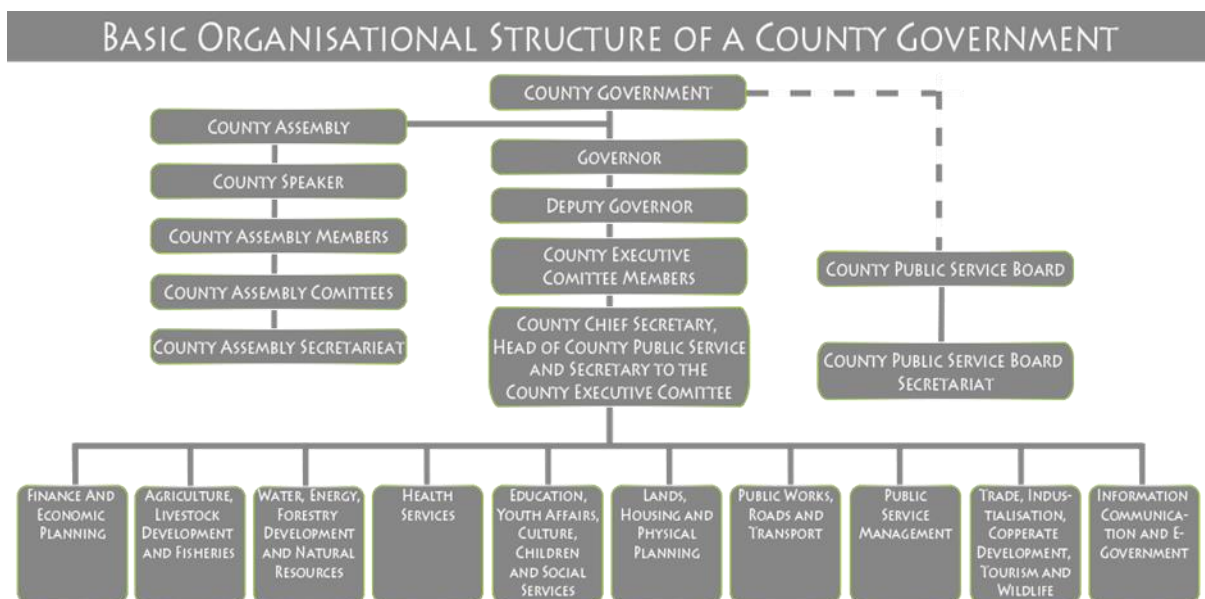


Figure 5.2 Example county government structure⁷⁶



These structural issues at county level are intensified by challenges surrounding the levels of coordination between the different departments held in each of a county’s ten ministries. The questionnaire of 13 counties conducted as part of this PhD (see Chapter 4) found inter-departmental

⁷⁶ The departments which makeup each of the ten ministries (see bottom of figure) vary from county to county, with an energy department absent from many counties.

coordination varied considerably among counties (Table 5.7), with awareness of potential cross-sector nexus synergies often lacking depending on personnel. Rather than an atmosphere of collaboration, county energy departments emphasised there is often competition with the other departments for the limited resources allocated to a ministry, resulting in a zero-sum logic taking hold.

Table 5.7 Perceived level of inter-departmental coordination in county ministry containing energy

Responses to the statement: 'In the ministry containing energy, policy for energy is well integrated with the other sectors found in that ministry'.	
Strongly agree	0
Agree	5
Neither agree or disagree	3
Disagree	3
strongly disagree	2
Sample size: 13 questionnaires from 13 different counties	

Compounding the lack of inter-departmental coordination is the varied and often incoherent manner departments are combined within a county ministry (Figure 5.2). County officers reported that some departments were grouped rationally to exploit cross-sector synergies, while other combinations reflected vested interests and political patronage concerns, particularly those of the governor, responsible for the departmental composition of ministries and the appointment of the senior executive who head each ministry: the County Executive Committee members (CECs) and Chief Officers (COs). Being political positions, the CECs and COs provide a further coordination issue as they are unlikely to have experience in more than one of the sectors within their ministries; a notion reinforced by a range of stakeholders reporting critical capacity issues concerning how county executives govern energy [74, 76].

Further institutional deficiency is evident from the issues surrounding the allocation of funds to county administrations. Several county officers interviewed argued the resources allocated were insufficient to carry out their energy mandates, and that the national treasury is slow to release state funds, hindering county efforts to budget for and implement energy projects [52, 84]. This reflects the discussion in Chapter 3 which highlighted the broad acknowledgement in the sub-Saharan Africa decentralisation literature of the reluctance of central governments to cede effective control and resources (e.g. D'Arcy & Cornell, 2016). However, there have also been several instances of counties returning funds to the national treasury unspent (Shiundu, 2013), while a Nairobi county energy officer highlighted that "Where counties don't have an energy department, it can cause issues with budgeting" [19]. This again suggests structures have been inadequately established at county level to ensure funds are effectively allocated. There does appear to be consensus though regarding the energy project implementation process, with both county and national government representatives commenting the process is overly bureaucratic and needs streamlining.

5.6.2 Developments in county capacity building

Further impeding county engagement in the energy sector are critical internal capacity issues, which vary considerably among county administrations (UK AID, 2017). This is particularly apparent in the 19 counties without standalone energy departments, while the departments in the other 28 counties are often critically understaffed and lack expertise. This is partly because energy (unlike other sectors)

was not a function of the former districts and thus experienced staff and capacity were not inherited. Brown et al. (2015) note capacity challenges particularly affect the political class, with a lack of energy specialists in the county executive and assembly impeding energy planning.

The need for county capacity building was widely acknowledged by various actors. At the National Energy Trust Fund (NETFund) county renewable energy workshop in December 2017, all six key stakeholder groups⁷⁷ concurred on this point, including all the county energy officers present (with 38 counties represented). Among the specific capacity issues emphasised at the workshop by county energy officers was the challenge of navigating the lengthy energy project implementation process, along with proposal writing for energy project funding. The latter was seen as time-consuming for a typically understaffed energy department, but critical, in order to avoid relying on the often-delayed disbursement of funds from the national treasury.

Limited technical expertise was also highlighted by many county officers at the workshop, who stated their departments lacked the qualified personnel to conduct energy audits, manage energy portfolios, and assess the merits of various energy technologies to make informed procurement decisions. The latter point chimes with a Kenyan energy consultant's assertion that understanding investor intentions and the various benefits and pitfalls of such projects has been "a significant bottleneck" for county administrations [65]. These findings provide specificities of broader technical capacity issues acknowledged within the literature; Johnson et al. (2016, p.34) emphasising the general need of county governments to "develop their capacity to deal with energy issues ... [through] hiring new staff and training new and existing staff", while Brown et al. (2015) noted capacity challenges for the sub-national level in developing renewable energy resources, implementing decentralised energy projects, and coordinating the installation and maintenance of infrastructure.

Officers also highlighted that technical capacity issues (e.g. engineering) often impact more on the former marginalised ASAL counties compared to other counties as it tends to be more difficult for these counties to attract and retain such personnel to work in their energy departments. A Mandera county officer stressed "we don't have technical people in this county and nobody wants to come" [85]. This supports the well-established principal that a key pitfall of decentralisation is its facilitation of agglomeration economies, where skilled civil servants are attracted to the centre (Cabral, 2011b). Thus, as a response, it seems critical for initiatives to prioritise capacity building of the county civil service on a geographically even basis. Civil servants are also seen as "the key dimension of capacity" (Azfar et al., 1999, p.24) as they are more likely to keep their jobs from one administration to another. Thus, to aid continuity, it seems prudent to focus capacity building on the civil service rather than politicians (e.g. CECs and COs) who may not be reappointed when a new administration takes office.

To address capacity shortcomings, county officers at the NETFund workshop called for greater research development, energy data documentation, and resource mapping⁷⁸ to support county research development and planning in the energy sector. In addition, they argued for benchmarking activities (e.g. against other leading counties), and technical institutes within counties to help address these technical capacity shortcomings. These sentiments recognising the importance of inter-county

⁷⁷ The six key stakeholder groups as outlined in Table 4.3.

⁷⁸ The resource mapping called for included county energy needs, renewable energy sources, and spatial planning.

best practice sharing have recently come to prominence within the academic community via a major 2018 joint UK/Kenyan multi-stakeholder initiative to develop a county energy information sharing platform (Chengo, 2018)⁷⁹.

However, efforts to address county capacity needs have been undermined by legislative and institutional uncertainties concerning energy as a Baringo county officer noted:

If the energy sector and regulatory framework is not well defined, it is more difficult to define the role and capacity required of staff within a county energy department [86].

The quotation indicates that national government has been largely responsible for county capacity shortcomings due to their prolonged failure to promulgate the *Energy Bill 2015* which would have helped address the legislative uncertainty surrounding energy roles and which also mandates the national government to “Provide technical and other capacity building support to county governments” (NF3h - Table 5.4)⁸⁰. As the next sub-section will reveal, national government support of this ilk has been critically lacking in many regards, hindering county energy initiatives.

5.6.3 Developments in county energy initiatives

This sub-section explores the various developments in county energy initiatives since 2013. These developments have been notably impacted by the ambiguities of devolved energy legislation and issues of county capacity highlighted in this Chapter.

County energy plans

As noted in Chapter 3, the formulation of county energy plans was the most significant devolved energy role affecting decentralised energy governance, expected to form the basis for county facilitated energy initiatives and seen as key for attracting private investment (Newell et al., 2014). Yet, by the end of the counties’ first four-year term, most had not completed energy plans. Stakeholders interviewed were unable to provide a definitive list of which counties had plans although the questionnaire of 13 counties conducted for this PhD indicate the task had been completed by only three - Kiambu, Marsabit, and Nakuru (Table 5.8).

Table 5.8 highlights various factors potentially contributing to counties completing energy plans. The data between counties varies significantly, highlighting how decentralised energy governance is spatially contingent. The table suggests the number of officers working on the plan and external capacity building support are the most significant factors in determining the likelihood of plan completion⁸¹. The three counties with completed plans reported an above average number of officers working on the plan, contrasting with the below average score of counties with uncompleted plans. External assistance with planning (either from national government or another organisation) appears

⁷⁹ The 2018 proposal emerged from a conference which formed part of the DfID funded Transforming Energy Access (TEA) Initiative and is jointly led by the LCEDN and the Kenyan research institute, the African Centre for Technology Studies (ACTS)

⁸⁰ The Constitution and *Transition to Devolved Government Act, 2012* also charge the national government with building county government capacity more broadly to enable counties to deliver on all their functions effectively.

⁸¹ Budget seems likely to have an impact but large allocations for Busia, Kisumu and Homa Bay (counties without plans) indicate it may not be decisive. It is difficult to assess as data is missing for the three counties with completed plans.

highly significant, with all counties receiving such help emphasising its positive impact. The three counties with completed plans received assistance: the Kenyan Association of Manufacturers (KAM) (funded by the UK Department for International Development (DfID)) assisted Kiambu and Nakuru, while the German development agency (GIZ) supported Marsabit. In addition, Kiambu and Marsabit also received help from the national government. These findings align with sources in the literature which attribute the failure to complete energy plans to capacity issues along with a lack of resources and data at the county level (Johnson et al., 2016).

Table 5.8: Potential factors contributing to county energy plan completion

	County energy dept.	Years in position	Years in energy sector	Officers working on plan	Planning budget (Ksh)	Help from nat. gov	Help from other org	No green cells ¹	Completed Plan
Baringo	Y	2	2	1-5	2M	Y	N	2	N
Busia	Y	0.66	2	Unsure	6.5M	N	N	2	N
Garissa	Y	2	2	1-5	0.5M	N	N	1	N
Homa bay	Y	3	5	6-10	3.5M	N	Y	5	N
Kiambu	N	2	25	6-10	No info	Y	Y	4	Y
Kisumu	Y	3	10	1-5	6M	N	N ²	5	N
Kitui	Y	4	10+	Unsure	None	N	N	3	N
Machakos	Y	3	3.5	10+	Unsure	Y	Y	4	N
Marsabit	Y	4	4	6-10	Funded by NGO	Y	Y	6	Y
Nakuru	Y		3	11-15	No info	N	Y	3	Y
Nyamira	N	1	25	1-5	No info	N	Y	2	N
Siaya	N	1	6	1-5	0.1M	Y	Y	2	N
Taita Taveta	Y	0.25	0.25	Unsure	None	Y	N	2	N
Average		2.2	7.3		3.1M			3.2	

¹ Cells shaded green indicate a 'yes' answer or a figure above the mean average where questions give a numerical answer.
² Kisumu answered 'no' but KAM and Carbon Africa stated they provided assistance to the county.

The critical need for external planning support is also evident from the ongoing MoEP/GIZ collaboration to develop the County Energy Planning Framework which aims to guide and standardise county energy plans by:

improving the quality and consistency of county energy plans, and their strategic content ... facilitating a more efficient integration into an integrated national energy plan (Jobs in Kenya, 2016).

Despite what seems a striking and obvious need for this framework, particularly given the ambiguities in the legislation, the framework has been slow to develop. The process only initiated in 2015, while in 2019 an international NGO representative indicated that it was still not clear whether the framework had been mainstreamed across all 47 counties [106]. The development timeframe of the framework highlights how the counties have been working without standardised guidance on the formations of these plans for most if not all of the period since 2013, exacerbating the regulatory uncertainty caused by the impasse over the *Energy Bill 2015* and impeding the development of decentralised energy governance.

A senior representative from Integral Advisory Limited, the consultancy awarded the contract for finalising the framework, emphasised these legislative hindrances when addressing a workshop in 2016: “Counties are ready to move on energy plans but are waiting for guidance from the planning framework, and for the Energy Bill to be cleared”. The quote indicates that the lack of framework and delayed promulgation of the *Energy Bill 2015* are the main reasons why, understandably, most counties have not completed energy plans. These issues appear to be an ongoing concern as it is still unclear whether a finalised framework is in circulation. Given the expectation that county energy plans would form the basis for the planning and implementing of sub-national scale energy initiatives, their incompleteness is likely to be significantly detrimental for decentralised energy governance.

County Integrated Development Plans (CIDPs) and energy initiatives

Despite most counties not completing energy plans during their first terms, each incorporated energy into their first term County Integrated Development Plans (CIDPs), a much broader document (mandated by the *County Governments Act 2012*) within which the main strategies and activities are outlined for addressing issues across all key sectors. The energy component of the CIDPs seems to indicate counties have different understandings of their energy roles. Some counties have implemented initiatives specific to their locality, such as Kitui county’s development of a county charcoal policy reflecting their position as one of Kenya’s largest charcoal producers. However, a number of counties have stated intentions to develop large scale grid-electricity generation projects, which do not fall under the county remit. Such proposals suggest either a misunderstanding of the county role, or perhaps a desire to pursue politically expedient policies regardless of whether it forms part of the county mandate.

Arguably the most prevalent energy feature of the first term CIDPs was street lighting initiatives. Nearly all counties embarked on a street lighting installation drive, with many proclaiming it a flagship policy and a means to emphasise county achievements under devolution; a county officer from Kiambu commenting in 2017: “since 1963 they [the national government] haven’t done it [street lighting], but in three years we’ve been able to” [87]. Counties pointed to improved security and longer trading hours for market centres and street vendors as the principal reasons for their focus on street lighting. The improved visibility was also argued to increase the chance of there being witnesses to transgressions, reducing corruption and improving accountability –one county officer commenting: “police officers are more honest in the light” [43].

The tendency so far for county governments to focus energy sector interventions on street light programmes may have political motivations. Such programmes are highly visible and therefore have political prestige. Street lighting is also one of the few clearly demarcated county specific functions in the Constitution, while a representative from GIZ added that counties have focussed on street lighting because “it’s not that difficult to do” [67]. Although the benefit of longer trading hours has the potential to enable greater income generation and increase demand for energy (county energy planning function 1d) not all economic opportunities derive from street lighting and energy for productive means is also vitally needed outside the market centre context. Thus, street lighting programmes only play a part in ‘the provision of services to address broader developmental objectives’, the multi-dimensional definition of energy access used by this thesis and acknowledged by social science contributions to energy studies (Pachauri, 2011). It therefore seems that populist

decision making rather than the interests of overall development has led to street lighting being prioritised over other energy initiatives.

5.7 Conclusion

Empirical findings

This chapter has sought to add to current limited understandings of decentralised energy governance in the Global South by assessing the subjective interpretations of how Kenyan decentralisation and decentralised energy governance have developed since 2013 (the focus of RQ1). The chapter's main argument is that on the ground developments in decentralised energy governance have deviated from the MLG2-esque form envisaged by the legislative blueprint for devolved energy due mainly to underlying power relations; in particular, the unwillingness of national government to cede effective power to devolved units. The chapter argues these developments have been to the detriment of equitable energy access and finds five key factors contributing to this situation.

Firstly, the post-2013 legislative changes have not significantly altered the energy governance landscape. The overlapping roles and protracted promulgation of the *Energy Bill 2015* failed to sufficiently address the ambiguities over devolved energy roles in the pre-2013 legislation, disincentivising decentralised energy governance interventions and propagating the prevailing MLG1-esque regime. Secondly, on the ground institutional developments have reinforced centralised control. Despite improving accountability, the structural and operational changes adopted by energy parastatals to accommodate devolution clearly represent a form of deconcentration helping to maintain national government's de facto monopoly of grid electricity.

Thirdly, the chapter notes national government interests have been further consolidated by resources continuing to be predominantly focussed on national government led initiatives. Aided by finance from TAC1/2 actors, resources have particularly focussed on grid electricity, which has yet to be meaningfully devolved due to the ongoing national government monopoly. Off-grid electricity initiatives have also been dominated by national government, with cost barriers and delays from national government in establishing a regulatory framework for mini-grids disincentivising the development of off-grid initiatives by more MLG2-esque networks of other actors. Despite being most urgent, clean cooking initiatives have been least prioritised by both levels of government, with the county role again hindered by legislative and institutional barriers. This suggests clean cooking access, is likely to continue to be unable to keep pace with population growth.

Fourthly, the chapter finds that while national government dominance has curtailed the scope for effective county interventions, capacity shortcomings at the county level have also fundamentally impacted the effectiveness of decentralised energy governance. Capacity varies considerably among county administrations, but it seems many have not realised the potential for decentralised governance initiatives, with counties often lacking the expertise and resources to develop energy plans and investor initiatives. In particular, counties seem ideally placed to expediate the key dynamics cited by the innovation systems literature for developing distributed energy technologies; namely by facilitating, coordinating and potentially subsidising local capacity building and networks of diverse local stakeholders to foster urgently needed clean cooking, SHS and community-scale mini-grid initiatives (Ockwell & Byrne, 2017). The fact that hitherto these multi-stakeholder decentralised

interventions have been limited represents a significant missed opportunity. Thus, the need for county capacity issues to be addressed is critical if the multi-stakeholder decentralised governance seemingly intended by the legislative framework is to be realised.

Yet, the fifth contention is that national government has primarily been responsible for the insufficient development of county capacity. National government delays over the promulgation of the *Energy Bill 2015* and the County Energy Planning Framework have created sector uncertainty over roles and impeded the development of county energy plans, a prerequisite for active county engagement in decentralised energy governance. The *Energy Bill 2015* also explicitly mandates the national government with providing capacity building support to counties, a requirement that has been unevenly addressed and, in many cases, critically lacking. This lends credence to the argument that energy is considered too important to devolve more fully and more MLG1-esque deconcentration is the national government preference for the sector; a reluctance to cede power characteristic of broader decentralisation processes in both Global South and North (cf. Rodríguez-Pose & Gill, 2003).

This continuation of a MLG1 system has had a detrimental impact on addressing Kenyan energy access issues. National government interests in grid electricity extension initiatives have been prioritised, increasing access to electricity but sub-optimally and inequitably. Specifically, the increased scale of uptake publicised by national government figures is overstated as many connections are largely inactive due to the electricity being unaffordable for many households. KPLC are thus left burdened with the costs of maintaining loss-making connections and running a surplus of generation; costs subsequently passed on to consumers which further disincentivises uptake, creating additional surplus and costs: a vicious circle. The chapter argues that these failings could have been mitigated had a more MLG2 form of governance developed, where decentralised energy governance had greater capacity to check the excessive emphasis on grid extension and facilitate, where locally appropriate, more small scale off-grid electricity and clean cooking initiatives.

Conceptual and theoretical implications

The findings from this chapter have a number of wider conceptual and theoretical implications for decentralised energy governance in the Global South. Firstly, the novel application of MLG to decentralised energy governance is shown to have clear uses when comprehending the overlapping jurisdictions and scales in the energy sector, aligning with findings from MLG's application to other complex sectors (Moss and Newig, 2010). Most notably, the framework is found to be particularly effective in terms of deducing and comparing the form of decentralised energy governance intended by legislation with that emerging on the ground.

Partly deduced from this use of MLG, the finding that Kenyan decentralised energy governance has deviated from its legislative blueprint due to underlying power dynamics helps highlight how decentralisation has distinct relevance to energy and its governance in the Global South. This is because grid electricity (particularly transmission and distribution) typically remains one of the few de facto monopolies under centralised control in the Global South; the Kenyan experience suggesting that central governments will see this control as too financially and politically important to risk being reduced by decentralisation reforms. This understanding aligns with the commonly acknowledged view in the literature that broader Global South decentralisation processes frequently deviate from legislation as central governments seek to limit reforms threatening their hold on power (D'Arcy &

Cornell, 2016; Erk, 2014). Yet, this chapter extends this debate by arguing that monopolistic control of such a lucrative sector makes central government reluctance to decentralise particularly likely with energy – more so than most other sectors – which, by extension, lends support to arguments suggesting energy paradigm shifts involving more flexible governance forms (i.e. interventionism and fragmentation) may also be resisted (Herington et al., 2017).

Furthermore, the Kenyan case study shows that the continuation of centralised MLG1 control prioritising grid-centric policies has been detrimental to addressing the country's energy access issues, a finding likely to have wider applicability as this combination of energy governance and policy approach is widespread in the Global South (Africa Progress Panel, 2015). In particular, grid-centric approaches seem highly disadvantageous to sub-Saharan Africa where the IEA (2019) notes off-grid solutions are the least cost option for 55% of the population attaining electricity access. The side-lining of off-grid solutions aligns with increasingly prominent arguments regarding the potential for such technologies to disrupt centralised grid monopolies in both Global South and North (cf. Burgen, 2018; Farrell, 2019), although the sense that decentralised governance could facilitate this off-grid disruption is a point rarely made. The example of KPLC in Kenya also suggests the likelihood of erroneous grid-centric policies being pursued is heightened in cases where the energy sector is controlled by a part-privatised state monopoly, which, by combining monopoly control with a profit motive, merges detrimentally contradictory elements of the statism and liberalism paradigms.

The Kenyan experience also suggests politically expedient conceptualisations of energy will be key to how the pursuit of frequently inappropriate grid solutions is justified. In Kenya, such policies were rationalised by the national government defining energy access as physical availability of electricity. This erroneous unidimensional conceptualisation has been and may continue to be adopted by other Global South centralised governance institutions pursuing grid-centric policies as it side-lines multidimensional definitions of energy access (incorporating aspects such as reliability, affordability, access to energy services) which the social science literature stresses as vital for addressing the inherent geographical variations of energy access that often necessitate off-grid solutions (Pachauri, 2011). The under-prioritisation of clean cooking in Kenya is also indicative of wider Global South and North failings to conceptualise energy beyond electricity, an issue which, if unaddressed, suggests urgently needed clean cooking initiatives will continue to be overlooked in the Global South (cf. UNDP, 2009).

Centralised control over policy, regulation, resources, and capacity building – a feature of many Global South decentralisation contexts (Cabral, 2011) – is indicated by the Kenyan findings to be another key tool with which central governments will curtail the development of decentralised governance in order to consolidate their hold on power. This supports the argument of Brown et al. (2015) that centralised governance in the Global South will seek to retain authority over the management and regulation of any movement towards decentralised energy (both in terms of technology and governance). To help counter this control, the decentralisation literature (particularly findings from the recent Malawian energy decentralisation process) indicates that legislation and regulation concerning decentralised energy governance needs to be: a) in place when sub-national authorities assume roles; b) a product of collaborative multi-stakeholder engagement to facilitate support and understanding; and c) have clear minimum standards for sub-national level roles to avoid excessive central government oversight (Buckland et al., 2017; Ribot, 2002).

Having explored how decentralised energy governance has developed since 2013, the following chapters employ geographical approaches to facilitate a deeper understanding of the power relations shaping these developments. Firstly, the scalar dimensions of power relations in Kenya are explored in chapter 6 and then the spatial variations of these dynamics across four counties are examined in chapter 7.

Chapter 6 - Power Relations between Key Stakeholders in Decentralised Energy Governance: The Difference between Rhetoric and Reality

The aim of this chapter is to address research question 2 by analysing the power relations underpinning developments in Kenyan decentralised energy governance. As discussed in the previous chapter, these developments thus far have seen the emergence of governance more akin to MLG1 than the MLG2-esque form seemingly intended by the legislative framework: decentralised institutions are nominally in place, yet there has been a reluctance to cede energy powers by national government which has been detrimental to addressing energy access issues. This chapter seeks to better understand this discrepancy by uncovering the agendas and interactions which have shaped power relations and the emergent decentralised energy governance.

In doing so, the chapter explores the concept of scale and how power relations play out at smaller and larger levels of analysis than the state (the primary unit of analysis in traditional political approaches (Gallaher et al, 2009)), engaging with human geography debates that question the notion of the state as simple vertical hierarchy and posit instead that scalar relationships are constructed and thus require the state to be viewed relationally (Brenner, 2001; Brown & Purcell; Jessop, 1990). By applying these arguments to Global South decentralised energy governance, this chapter extends debates concerning the implications of decentralisation for the role of the state – typically the gatekeeper to the energy sector in sub-Saharan Africa (Cheeseman, 2015) – and develops new knowledge on how the complex political economy of energy issues plays out at multiple scales of analysis. Given the increasing recognition by leading social science energy scholars that how energy interventions are effectively governed at different scales is crucial to addressing Global South energy access issues yet critically understudied (Bagley et al., 2018; Ockwell & Byrne, 2017), the scalar approach of this chapter to power relations is an urgent undertaking.

To achieve these aims, the chapter centres on the county governments – ostensibly the principal site of decentralised energy governance – and analyses their power relations with key stakeholders at three different scales. First, section 6.1 examines their interactions with transnational actors, revealing how engagement is predominantly dictated by the interests of the latter. Section 6.2 then focuses on county engagement with the national government, uncovering how the county voice has been largely constrained by the limited deconcentration reforms of state institutions. A similar pattern emerges in section 6.3 vis-a-vis the county relationship with the community level. Here the participatory politics envisaged by the devolution process are found to have remained largely unrealised except over land where the community retains a degree of leverage. Alongside this and as appropriate, the chapter also explores county interactions with other key stakeholder groups, such as NGOs and the private sector. Conclusions are then drawn in section 6.4, establishing the nature and extent of the cross scalar power imbalances underpinning the discrepancies between the rhetoric and reality of Kenyan devolution.

6.1 Transnational actor interactions with decentralised energy governance

Chapter 5 illustrated how transnational actor energy sector funding has primarily been channelled into national government initiatives, seemingly entrenching top-down governance in the energy sector and at odds with the intended Kenyan devolution process. This has significant implications for decentralised energy governance as the limited transnational actor support for counties has proved

highly beneficial, particularly with the development of county energy plans which are the bedrock of decentralised energy governance initiatives. This section builds on these findings by analysing the engagement between transnational actors and county governments in order to better understand the power relations behind this consolidation of MLG1 structures in the energy sector. The section uses throughout the three transnational actor categories (TAC1-3) identified in Chapter 4 (see Table 4.4), which were defined on the basis of their operational scale. The acronyms used for these categories and their meanings are reproduced below for ease of use.

TAC1 = Multilateral governmental organisations. Examples include the UN, World Bank, and AfDB.

TAC2 = Bilateral governmental organisations. Examples include DfID, GIZ and USAID.

TAC3 = International ‘a-governmental’ organisations. Examples include NGOs, charities, research institutes, and corporations with an international outreach.

National government: a conduit for transnational actor engagement

The period since devolution has seen a lack of direct energy sector engagement with counties by transnational actors from all three categories mainly due to national government being the primary conduit of transnational actor funding. This is despite significant transnational actor investment in the devolution process more broadly, with the World Bank and UNDP funding initiatives to strengthen the capacity of national and county institutions to transition to a devolved system of government⁸². Yet in the energy sector, it seems to be mainly TAC3 actors who have circumvented the national government to directly interact with counties and decentralised energy governance.

TAC1 actors appear particularly fixed to interacting with counties via national government, with a representative from the United Nations Industrial Development Organization (UNIDO) acknowledging that “most development partners are scheduling their cash to the national government” [88]. The EU county energy planning sensitisation provided a rare case of TAC1 funds being directly delivered to counties, although a senior representative of the organisation revealed this was only after initial discussions and a scoping study conducted with the national government had been carried out [69]. A senior representative of a major World Bank financed mini-grid mapping project conducted via national government highlighted the data gathered would be passed to both the MoEP and the counties, but that the process was not prescriptive, and it was for the MoEP and counties to make the final investment decisions themselves [89]. This suggests a slightly detached approach to county engagement unlikely to facilitate MLG2 forms of governance.

Reasons for this modus operandi were at times vague. A senior UN Environment Programme (UNEP) officer insinuated it was simply the status quo: “it [direct engagement with counties] hasn't been really considered much at UNEP because everything seems to go through national government” [90]. A leading academic on sustainability transitions viewed this funding prioritisation as an issue of scale, with individual counties not sufficiently sizeable to warrant funding from TAC1 actors [91]. An ERC officer agreed, adding that counties would not be able to access TAC1 finance as their auditing

⁸² Examples include the UNDP project ‘Support to Devolved Governance in Kenya’ (UNDP, 2014) and the World Bank ‘Kenya Devolution Support Project’ (World Bank, 2016)

processes were not considered sufficiently robust by donors unlike the national government [12]. These issues of scale along with the sense of funding via national government being the norm indicates the first port of call for TAC1 actors is likely to continue to be the national government.

The interactions between counties and TAC2 actors have also tended to occur via national government. The assistance provided by state run overseas aid agencies such as DfID and GIZ in developing county energy plans was secured via bilateral negotiations between the respective national governments. A GIZ representative acknowledged that the “the agreements we have [for providing county planning support] are with the central government”, with the MoEP and REA the lead executing agencies [67]. A similar subsidiary county role was evident in the stakeholder interactions concerning the County Energy Planning Framework discussed in Chapter 5. An NGO representative contributing to the process reported county participation was largely subordinate to that of national government, only occurring after several drafts of the template had been first assessed and discussed by national government and other transnational actors [92]. This lack of county consultation again defies the recommendation within the literature for multilevel collaboration (cf. Brown et al., 2015) and highlights both the imbalance in intergovernmental power relations and the challenge counties face securing support from TAC2 actors independently of national government.

However, TAC3 actors seem less constrained by the issues of scale and bilateral relations affecting TAC1 and TAC2 actors, with a number of organisations engaging more directly with county administrations. Initiatives by research institutes, such as the SONG project highlighted in Chapter 5, have often been steered primarily through county channels. International NGOs have also negotiated directly with counties in seeking to form collaborations. For instance, the Catholic Agency for Overseas Development (CAFOD) capacity building work in Kitui county stemmed from the presence of county-based strategic partners whom already had an existing relationship with the county government.

Path dependency skews power relations in TAC/county engagement

Further indication of uneven power relations can be seen in how transnational actors from all categories choose the counties they support. For TAC2 actors, the choice tended to reflect their own policy preferences and various economic and geopolitical interests. GIZ worked in Turkana, Marsabit and Narok, three ASAL counties with limited grid coverage and significant renewable energy resources (RECP, 2015), a context aligning well with GIZ’s preferred model of developing sustainable energy supply mainly through off-grid renewable energy and improved cookstoves (GIZ, n.d.).

In the case of DfID’s county planning support, the choice of county appears to have reflected the interests of their in-country partner: the Kenyan Association of Manufacturers (KAM) who supported the development of county energy plans in Nairobi, Machakos, Kiambu, Nakuru, Kisumu, Mombasa and Uasin Gishu. These seven counties have the largest population centres and industrial bases, serving well KAM’s *raison d’être* as “the representative organisation for manufacturing value-add industries in Kenya” which advocates for “a competitive environment for businesses to operate” (KAM, 2018, p.1). However, this apparent path dependency was not always openly acknowledged. A senior KAM representative was evasive when asked the criteria behind KAM’s county selection by an energy officer from Kitui, a county not working with KAM. A direct response was not forthcoming, only

a pledge that five, as yet unspecified, counties would be included in the next phase; a vagueness likely to frustrate county efforts to engage with the transnational scale [59].

In other instances, it seems counties were often chosen by TAC1-3 actors based on long standing relationships. This was the case with the World Wide Fund for Nature (WWF); a representative stating that county engagement had been:

easy because for WWF already we have certain counties where we have offices where we have engaged with them over the years on other issues, we've built that trust, basically we've partnered over the years [71].

This seems to suggest that counties which do not have a history of engagement with the WWF might face difficulties to receive assistance. Echoing the opacity of KAM, the WWF representative also provided a vague answer as to how certain counties were able to establish relationships with WWF:

WWF has what we call priority landscapes, so the counties that are within our priority landscapes ... we deal with them. One of our priority landscapes is the coast, so the counties that fall there we've worked with them over the years [71].

It is perhaps this opaqueness that frustrates counties, as the notion of 'we've always worked with them' is of little use to counties seeking assistance, yet unable to determine the criteria by which to help align themselves with transnational actor interests. This suggests it will often be difficult for counties to influence TAC actors on where they collaborate.

Despite these challenges, it seems opportunities for increased county engagement with transnational actors may arise when counties adopt a more proactive approach. Most transnational actors operate on a partnership model, whereby funding and support is not implemented directly, but channelled through a local partner operating on the ground. Hence, if a county administration can take steps to establish links with these local partners, it has a greater chance of receiving assistance. This was clearly evidenced by Kitui county's partnership with CAFOD on the international development charity's Energy Delivery Model (EDM) project which focussed on inclusive community energy planning. According to a senior CAFOD representative, Kitui was chosen,

purely in terms of which partners have expressed an interest ... the choice of counties is determined by where CAFOD has strategic partners doing development work that have expressed an interest in the energy advocacy and EDM work, Caritas Kitui is the main one and they have good relationships with the county government⁸³ [93].

The intervention of KAM in supporting the most industrialised counties is also suggestive of this trend. Although, as previously discussed, the KAM representative would not be drawn on how the seven counties supported were selected, it seems highly likely that county and private sector representatives would have actively advocated for this assistance. Similarly, a representative from the African Centre for Technology Studies (ACTS), a Kenyan think-tank with access to transnational funding, stated invitations for the organisation's capacity building workshops are prioritised to counties who have

⁸³ Caritas is the umbrella confederation of Catholic development, relief, and social service organisations.

actively expressed an interest rather than those whose attendance is understood to be primarily motivated by remuneration [94].

Counties which adopt this 'proactive' approach are also often the beneficiaries of multiple streams of assistance due to the nature of development sector networking, particularly among TAC3 actors. The NGO, Practical Action engaged in capacity building activities to develop county energy plans with Migori county following discussions with the Stockholm Environment Institute (SEI) who had conducted participatory planning analysis there. Commenting on their involvement in the CAFOD EDM project in Kitui, a representative of the research organisation, the International Institute for Environment and Development (IIED) highlighted their standard model of operations is to work through local partners, but with the Kitui EDM project "we're taking our guidance and lead from CAFOD" [95]. This emphasises the snowball effect of multiple transnational actor involvement that can occur once a county has begun to successfully engage such institutions.

Yet, the extent to which a proactive approach can facilitate collaboration with TAC1 and TAC2 actors seems more questionable. A representative from GIZ appeared to acknowledge this in her response to why only a few counties had managed to overcome the legislative challenges facing the completion of county energy plans:

I think it's only proactive counties that have been able to start putting their policies in place or sometimes not necessarily proactive but also counties where development partners have had an interest, they've also gotten the discussion going [67].

The quote suggests proactiveness or transnational support are key but not that one may lead to the latter. Moreover, the quotation reinforces the sense that the lack of legislative guidance for county energy plans has created a context where counties are highly dependent on transnational actor support, which a proactive approach may or may not facilitate.

Overall, it seems that transnational actor engagement with decentralised energy governance has largely consolidated the MLG1 approach which aligns with national government interests. Direct county engagement from TAC1 actors has been lacking due to funding criteria and conventions which see support channelled through national government, while support from TAC2 and TAC3 stakeholders has been uneven as it is often dependent on pre-existing relationships or aligned interests. This has significant implications for decentralised energy governance. Without greater, and more even engagement from transnational actors, albeit combined with a more proactive approach by county administrations, it seems probable that disparities in the quality of decentralised energy governance will emerge between counties. In particular, the critical county function of county energy planning, which could facilitate a more representative MLG2 system of energy governance, is likely to be more slowly, and less effectively realised.

6.2 National government interactions with decentralised energy governance

Despite the Constitution's (2010, p.14) decree that the national and county governments "shall conduct their mutual relations on the basis of consultation and cooperation", this has yet to clearly materialise in energy governance. As the previous chapter noted, the reforms adopted by national

government parastatals have resembled deconcentration, with resources continuing to be mainly focussed on national government priorities, particularly grid electricity where the national government retains a de facto monopoly. This section builds on these findings by analysing how these limited changes have laid the foundations for the power dynamics between national and county governments to be marked by a tendency for the national government to adopt a domineering attitude towards the counties in the energy sector, leaving the county voice constrained.

6.2.1 Interactions over grid electricity

Counties willing to concede lead role

Inhibited county engagement was particularly clear over grid electricity, with county officers appearing content or resigned to accepting certain grid electricity functions as outside county jurisdiction despite legislation stating otherwise. A case in point was reticulation, stated as a concurrent function of national and county government by the Constitution (albeit ambiguously), yet an area where county administrations felt the county role was largely redundant: “KPLC is still dominating [electricity and] no one is doing [gas] reticulation as no infrastructure network exists” a senior Nairobi county energy officer explained [19].

The affordability of grid electricity, seen in the literature as the key barrier to access in Kenya, is not specifically demarcated a national or county function but was also viewed by county officers as a critical issue over which they had little control. A senior Uasin Gishu county water officer argued: “Energy costs are very high, especially bills. We need to come up with a solution for this, but this is a national level issue and they can handle that” [49]. Although billing is clearly the remit of KPLC, it seems counties are failing to consider other potential measures to address cost, such as part-subsidising electricity costs. This is perhaps most viably achieved by supporting income generating activities (a county function) rather than by directly subsidising the cost of grid electricity which is likely beyond the means of a county budget and fails to address the issue that many households cannot afford electrical appliances or the electricity to power them even when heavily subsidised (Lee et al., 2016; Ndi, 2019).

This view of a grid electricity sector dominated by KPLC was also recognised by representatives of national government; an ERC officer acknowledging, “KPLC is not a monopoly because of a lack of legislation because the framework is open to all, but investment in distribution is very high so no one wants to compete with KPLC” [11]. The quote is revealing as it constitutes tacit confirmation from national government of the de facto KPLC monopoly, which suggests national government are fully aware that the Constitution’s provisions for county grid electricity initiatives are unlikely to be viable. However, a senior representative from the EU commission in Kenya felt a limited grid-electricity role would not be of great concern to counties:

The counties probably don’t mind that the national government and not themselves are running this – the county governments are unlikely to feel a sense of being undermined by the national government [69].

The counties ‘not minding’ the national government’s MLG1-esque control of grid electricity appears a rational position, given KPLC’s stranglehold on grid electricity retail and reticulation, county capacity

deficits, and the capital expenditure costs of grid electricity being beyond the means of county budgets. Thus, understandably, counties have come to view a lead role in grid electricity as an unfeasible and unattractive proposition, resulting in the continuation of the MLG1 system of running grid electricity that existed pre-devolution.

Collaborative efforts hindered

Although county officers tended to discount a lead role in grid electricity initiatives, most felt collaborating on certain aspects was both possible and beneficial. However, officers frequently complained such endeavours were being hindered by national government operations. A Nakuru county energy officer saw this as the case with small scale generation⁸⁴:

We can't handle everything, but generation, we can feed in, but in small scale. [However] KPLC are working independently ... because they are a monopoly, they have all the powers ... if KPLC shares their data on energy loads, consumption, we can plan for projects [26].

A senior Uasin Gishu county water officer also agreed there was a limit to the county grid electricity role, but felt there was scope for collaboration over reticulation:

Energy can't be fully devolved, with the grid it's not practical to devolve everything, not all counties generate electricity. But the linkages [between KPLC and counties] should be stronger. ... when they are doing new lines, we'd like to be involved [49].

In theory, these calls for collaboration on small scale generation and reticulation make sense as they are areas likely to be facilitated by the better access to local information county governments ostensibly have. Although county generation only seems financially and institutionally viable for small scale systems which are initially off-grid but with the functionality to be later grid connected as such systems are not beholden to KPLC's monopoly over distribution and retail.

The viability of collaboration also depends greatly on the varied capacity and institutional strength of individual county administrations, as acknowledged by the senior Uasin Gishu county water officer, who objectively conceded, "the weakness may be with us because we don't have an energy department" [49]. A KPLC planning manager at the central Nairobi headquarters also felt national government institutions were not to blame. The manager highlighted that since devolution his department had implemented "regional planning" whereas before "all our planning was just centralised", noting efforts had also been made to "build capacity within the counties to carry out energy planning" [6]. Yet, the manager acknowledged uncertainties behind these processes: "we are working in a kind of vacuum in terms of guidelines and policy for engaging with counties", adding that senior government officials had advised not to engage directly with counties but via intermediary consultants.

[Senior government officials] were saying we shouldn't try to ... help [counties] with their planning but ... let consultants try to bring us together ... who will work with counties to prepare their energy plans. Then we should also spread some

⁸⁴ Small-scale electricity generation is assumed to refer to 10 kW - 10 MW, a commonly used convention (e.g. EU, 2014).

guidelines saying that counties cannot do certain activities unless they've taken into account the Kenya power master plan , and err, so I think the advice we were given [sic] is that there should be some kind of government circulars directing counties on how to act in terms of energy planning ... That is advice we were given in a meeting; I don't know whether it reflects official policy [6].

The quote indicates doubt over whether outsourcing capacity building for county energy planning constitutes official policy. Although not necessarily a disadvantageous strategy, the overall uncertain tone seems detrimental as it suggests intergovernmental collaborations are likely to be impeded if a KPLC manager for regional planning is unsure on county engagement policy. Given the significance of capacity building to effective county energy planning noted in Chapter 5, this uncertainty concerning the national government capacity building role (which the constitution specifics as a national function) is likely to be highly detrimental to decentralised energy governance.

Thus, it appears the county is being hindered from playing a collaborative role in certain aspects of grid electricity, such as supporting the planning of grid extension, facilitating small scale off-grid systems with grid-tied functionality, and possibly subsidising the costs of grid electricity for the poorest. This partly stems from the institutional and capacity shortcomings of counties administrations but equally, if not more, from the unclear county engagement policy of national government, seemingly indicative of a reluctance to cede power.

Evolving county interpretation of energy roles

Efforts to facilitate national and county government coordination on grid electricity also appear to have been hindered by counties having unrealistic expectations of the role they might play in grid electricity, particularly in the early stages of devolution. County statements at several capacity building workshops expressed a keen interest in large scale grid tied projects, suggesting the legislative provisions for devolved energy and the realities of the KPLC monopoly had not been realised.

The sense that counties had initially been unrealistic over their grid electricity roles was shared by national government stakeholders. The KPLC planning manager stressed that initially “most counties felt they could go it alone”, not realising they needed national government approvals for grid tied initiatives [6]. He added “they are learning the hard way that they have to co-ordinate with us” while pointing out that investors often held the same erroneous misconceptions concerning generation projects:

[Investors] just thought that once they work with counties and get approvals from counties, then they can put up their solar plant or their mini hydro, or their wind plant and it can generate and sell. But then they realised the off-taker of all the grid energy is Kenya power, it's not the counties, and the counties have not built their distribution network structure, so they realised that even though they've got approval from the counties they still have to come and knock on our door [6].

The quote provides tacit acknowledgement from a senior KPLC source that stakeholder coordination has suffered because counties and investors did not appreciate how the realities of the KPLC monopoly would essentially skew the rhetoric of the concurrent energy regulation functions in the Constitution. With KPLC as “the off-taker of all the grid energy” and counties not having their own distribution

networks there is effectively no scope for counties to bypass national government and operate independently in grid electricity and grid-tied off-grid initiatives. The need for counties to ‘knock on KPLC’s door’ was only confirmed by the subsequent *Energy Bill 2015*, which clarifies that all electricity regulatory functions are conferred to national government; once more emphasising the damage its delayed promulgation has caused to effective stakeholder coordination.

However, there is a sense that county interpretations of their grid electricity roles have evolved to become more realistic, recognising both the legislative and practical limitations of the devolved role. This seems largely because county energy institutions have taken time to settle, understandable given unlike other sectors there was no forerunner in the pre-devolution districts, while the difference between policy rhetoric and reality has been particularly pronounced in the energy sector. At a 2018 county capacity building workshop, a Kisumu county energy officer indicated counties were not interested in competing with national government but merely wanted to be provided with the regulatory framework to carry out their roles, requesting frustratedly “can we just have the guidelines” [96].

Interest in major infrastructure initiatives also appears to be dissipating, with signs county officers are increasingly focussing their role in grid electricity on lobbying and keeping national government institutions accountable, particularly KPLC. A Trans Nzoia county CEC felt improvements to grid connectivity within Trans Nzoia were due to the “county putting KPLC under pressure” [52]. A senior Uasin Gishu county water officer shared similar sentiments, arguing pressure was now easier to apply:

Before devolution, energy was handled at parastatal level, but [you] couldn’t really push the parastatal agencies ... but now there are ‘line ministries’ which you can push. Energy wasn’t like the water sector, where before devolution, there were local level offices where people could complain [49].

The two county officers’ comments appear to be evidence of the bottom up pressure generated when MLG2 type systems function effectively; indicating that the proximity of county governments to a deconcentrated KPLC has compelled greater accountability, while suggesting lobbying forms one of the most important roles of county administrations in grid electricity. The latter quote also indicates a lobbying role may be more challenging within energy relative to other sectors as it was not a component of the pre-devolution system, reiterating the sense that devolved energy institutions will require time to settle.

National government monopolies prohibit transformational change

Despite improvements to accountability and service delivery from county lobbying, most stakeholders outside national government felt real transformational change to grid electricity governance enabling more equitable energy access was only possible via measures to either end or mitigate KPLC’s monopoly. Ending the monopoly by creating competition was seen as desirable but challenging, leaving most to call for mitigation measures, primarily that KPLC should pay compensation for the outages caused by its widely acknowledged poor reliability (see Chapter 5 cf. IEA, 2014). A senior Nairobi county energy officer elaborated:

Compensation is the only way to make KPLC efficient as it is too late to introduce competitors. But KPLC is worried about too much compensation as they are aware of how inefficient they are [19].

This focus on compensation seems a more realistic initial target for county lobbying, given the entrenched centralised governance and elite capture of grid electricity suggests national government are unlikely to facilitate the introduction of competition for KPLC (Daily Nation, 2013; Musau, 2018).

This call for compensation was unanimously rejected by KPLC officers, who consistently reasoned that the difficulty of establishing and strengthening an electricity network to cover the highly dispersed Kenyan population was of such magnitude for a developing country that outages were inevitable [30, 47, 51]. Several emphasised the technical challenges, highlighting the frequent need to disconnect consumers to allow grid extension work to be conducted, particularly in rural areas lacking alternative grid loops. Officers also stressed ‘external’ factors, such as weather, fallen trees and traffic accidents, were causes of outages which KPLC could not be held responsible for: a Turkana county KPLC manager claiming, “every day there has to be an outage” [30]. Perhaps, most emphasised was the financial challenge of compensation. Most KPLC officers felt compensation would leave KPLC unsustainable as a business, particularly as a capital injection was already required to refurbish the ageing network [30, 38, 47], with one Migori based officer claiming compensation would mean “the entire energy sector would collapse” [38].

However, other stakeholder groups were less sympathetic to KPLC’s arguments, disputing the claimed financial challenge. A senior energy analyst highlighted the parastatal was “profitmaking ... [and] one of the better performing utilities in Africa”, arguing compensation “is the necessary push for them to just make sure they update all their system” [60]. A KETRACO officer was particularly forthright, arguing “if they’re not obliged to pay, there’s no motivation to improve ... it’s completely in bad taste” [10]. These calls for compensation seem prudent given the need to incentivise performance from a state monopoly, particularly given KPLC’s unwillingness to address reliability appears to stem from the parastatal’s profitmaking focus as a manager at a Kenyan energy consultancy explained:

refurbishing and upgrading the current systems *should* be of interest to [KPLC] ... and why it may not be is ... that you still have the same number of customers, but you invest in upgrading. Extending it however adds numbers onto your books so you have a larger customer base, and that will be of great interest to them [61].

The quote indicates the inherent weakness of KPLC status as a part-privatised state monopoly, where the need to satisfy shareholders and fulfil election pledges has resulted in grid extension being prioritised over pre-existing reliability issues. Thus, the introduction of compensation via the recently enacted *Energy Bill 2017* seems critical although it remains to be seen how effectively it will be implemented: energy analysts stressing it would be complex without digitised monitoring⁸⁵ [29, 62].

⁸⁵) The *Energy Bill 2017* (Article 194(1-2)) states “a licensee shall be liable to compensate a consumer [for] power outages that exceed a cumulative three hours within a twenty-four hour period, where the licensee has not issued a twenty-four hours prior notice”.

Transformational change hindered by national government policy

Transformational change to grid electricity governance has also been hindered by key national government policy decisions, which appear to have been made with minimal county consultation. Most significant was the shift in REA policy from the mass grid connection of public facilities and households via maximising existing transformers to the electrification of primary schools through the Digital Literacy Programme (DLP)⁸⁶. A senior REA officer highlighted that the change in focus was due to the DLP being a key component of President Kenyatta's 2013 election campaign.

[The initial REA policy] might not have got the same traction as it was not an election deliverable ... so all the funding went to primary schools, previously it had not been so much of a focus, but the new government made it a promise, so it became a deliverable [14].

The quote reveals how the campaign concerns of national government elites have seen REA's funding reallocated to the DLP, a policy which provides less electricity coverage than the previous mass connectivity programme. Thus, its prioritisation seems unmerited; the REA officer arguing the previous plan was preferable as it "targets the bigger picture" [14]. Compounding this issue was the subsequent transfer of responsibility for mass grid connections to KPLC as part of the Last Mile Connectivity Project (LMCP). Part-privatised and required to make a profit, KPLC's connection fees have been higher than they would have under REA⁸⁷, which the senior REA officer stated would have involved "no upfront cost or 500ksh (US\$5) max". Thus, the shift in REA policy appears to have increased the unaffordability of grid electricity, hindering efforts to address the energy needs of the rural poor REA was set up to address.

The negative impact of this policy shift was argued by the REA officer to have been exacerbated by an accompanying deterioration in the parastatal's engagement with counties:

It is very possible that a county might not be aware of REA plans. ... In the 2014-2015 and 2015-2016 tax years, the focus of REA was almost entirely on primary schools and entirely national run, so hardly any engagement with county governments other than on identifying schools. If the old REA CEO plan had been kept, counties would be more aware of REA and would have been happy⁸⁸ [14].

Discontent with REA was reflected in the statements of most county officers interviewed. A senior Kitui energy officer saw the county relationship with REA as "cordial"; praising a 2014 MOU assisting capacity building but criticising the parastatal for not providing invoices which aligned with the county's administrative system [46]. REA's engagement was more strongly criticised by senior county officers in Uasin Gishu and Turkana for a lack of staff on the ground. The REA officer responsible for

⁸⁶ The DLP pledged every child would have access to a laptop, thus necessitating the electrification of schools and the shift in REA priorities (see section 5.3).

⁸⁷ Under KPLC, the standard cost of connection is 15,000ksh (US\$150), reduced to 1160ksh (US\$11.60) under the GPOBA scheme for customers in certain low-income areas (see Chapter 5).

⁸⁸ Internal parastatal politics may also have facilitated the policy shift. In July 2013, the REA Chief Executive Officer (CEO), Zachary Ayieko, a proponent of the initial REA policy, chose not to pursue a second term, while in February 2015 the new MoEP Principal Secretary, Eng. Joseph Njoroge, a former CEO of KPLC, reassigned KPLC to the task of maximising existing transformers as part of the LMCP. N.B. Principal Secretaries head national government departments.

Turkana was stationed over 350km away in Eldoret, a situation the Turkana county energy officer felt was exacerbated by the parastatal's condescending attitude to county engagement:

Sometimes they have this big brother attitude, 'we've been in this longer than you' [i.e. we know better]. We have never received communication from them, not even courtesy acknowledgement of receipt of emails [31].

The quote above clearly supports the REA officer's warning of a lack of county engagement since REA shifted policy to the DLP and suggests REA's focus on the DLP has led to top-down governance being the norm, with far less emphasis on addressing county needs. Thus, overall it seems the policy shift imposed on REA has had a detrimental effect on equitable energy access and decentralised energy governance, leading to less county engagement as national government reverts to a MLG1-esque system to fulfil a populist election pledge.

6.2.2 Interactions over off-grid electricity

As with grid electricity, county engagement with national government in off-grid electricity has also been constrained due to the limited deconcentration reforms adopted by the energy parastatals since devolution, with control still residing primarily with national government. This is particularly the case with larger off-grid electricity initiatives which are predominantly owned and run by national government. In Turkana, a senior county energy officer criticised the county's two donor funded mini-grids being run by KPLC⁸⁹ but felt the county was limited in what they could implement autonomously as the county budget "doesn't allow us to do our own mini-grids" [31]. These budgetary constraints suggest large scale off-grid initiatives are likely to remain in national government hands.

National government control of large scale off-grid systems was essentially confirmed by a senior KPLC planning manager, who highlighted their cost meant they would require financing from TAC1 actor soft loans, which as section 6.1 noted are almost entirely channelled through national government. The manager noted likely roles for the private sector in "constructing mini-grids" and possibly "concessionary terms to operate them" but, notably, made no mention of a county role. In addition, the manager cautioned that:

Retail will always be with Kenya Power. They [investors] may wish to retail but I don't think the government will approve such a policy because of the tariff issue, we'll have customers in some parts of the country paying more per kilowatt hour than similar customers in another part of the country, it's like discriminating against some Kenyans because they're living in a remote location [6].

Although the flat tariff reasoning appears egalitarian, the quote highlights how national government control of licensing can be used to preclude competition, thus acting as a deterrent to investors in off-grid initiatives. The manager conceded KPLC's monopoly on retail would not be popular with investors as "they want to be free to operate on their own commercial terms wherever they have their grids". The national government's official position on larger scale off-grid systems was confirmed by a senior

⁸⁹ One was funded by the World Bank, the other by GIZ.

consultant for the County Energy Planning Framework, who informed counties at a capacity building workshop they should not be considering electricity generation projects over 40MW.

There are also instances of the constitution's rhetoric being ignored by national government: counties have often been left uninformed of grid electricity expansion plans, whilst off-grid county-based reticulation initiatives have been blocked. A case in point was Remba island in Homa Bay county, a location not covered by the grid, where national government authorities disconnected an off-grid electricity system supplying 10,000 residents, stating the system was operating without the permit required under the *Energy Act 2006* (ERC, 2018). In a twitter post, prominent government critic and economist, David Ndi (2018), rightly blamed the legislative shortcomings noted in Chapter 5, namely that the impasse over the *Energy Bill 2015* had left the country reliant on outdated legislation:

County function 8. County planning and development, including (e) electricity and gas reticulation and energy regulation. This is because of failure to revise the *Energy Act* to align with Constitution. Microgrids should be regulated by counties.

It thus appears clear that National Government intends for larger off-grid electricity systems to remain centrally controlled in a MLG1 system dominated by KPLC. Large scale off-grid initiatives run by KPLC essentially form small 'islands' of the national grid. They are structurally 'off-grid' in so much as they are not connected to the main grid, but from a governance perspective they are 'grid', subject to the same centralised KPLC control on matters such as tariffs and service. This reclassification of centrally controlled off-grid electricity as 'grid islands' constitutes a finding of this PhD, shaping how such systems are analysed as, essentially, the governance arguments applied earlier to grid-electricity are also applicable to 'grid islands'.

6.2.3 Small scale off-grid electricity and clean cooking

Small scale off-grid electricity systems and clean cooking initiatives have been subject to less dominant national government control and less contested inter-governmental interactions than seen with grid electricity. This appears to reflect the tendency by both levels of government to under prioritise these sectors, particularly clean cooking. Although less contested, engagement between national and county government over these two energy sub-sectors has been marked by disconnect over how the role of each should be interpreted, resulting in the decentralised energy governance of these energy sub-sectors being noticeably uneven.

County officers tended to see initiatives in small scale off-grid electricity and clean cooking as areas where they could clearly play a role. A former Nakuru county energy officer felt despite control of the energy sector remaining predominantly at national level, counties could play a role in implementing small scale off-grid energy initiatives, including solar street lighting, and by raising awareness of green economy activities, citing locally generated clean cooking materials such as briquettes from human waste as an example [27]. Similarly, a senior Turkana county energy officer emphasised that "energy is not yet fully devolved" but pointed out the county has focused on small scale off-grid renewable energy systems in public institutions, which the energy department considered a devolved responsibility [31].

These understandings of the county role in small scale off-grid and clean cooking differ from national government interpretations, with KPLC officers inconsistent vis-à-vis the role of county administrations. A KPLC Migori officer deemed the national and county roles as “very clear, the roles are complimentary” [38], while a KPLC Turkana officer argued “not all energy functions are devolved. renewable energy is devolved, so county governments should be able to play a role in renewable energy” [30]. Both interpretations of the county role seem flawed: the former appears not to acknowledge the uncertainty caused by the pending *Energy Bill 2015* with its numerous overlapping functions, while the latter is clearly erroneous as although there is legislative provision for a county role in renewable energy, neither the Constitution nor the *Energy Bill 2015* state renewable energy is 100% devolved. Inaccurate understandings of the county energy role, particularly in renewable energy, were not uncommon and are likely to have caused coordination issues between the two levels of government, with each having different expectations of the other’s mandate.

Non-government stakeholders felt the strained engagement between the two levels of government over small scale off-grid electricity, stemmed from national government not wanting to support a sector directly threatening its interests. A private sector representative from the solar power sector elaborated:

The government is getting a lot of money from KPLC. Solar will eventually be free and the government knows this will lose them business. KPLC have been going for a long time, they still want to dominate power. When they see solar, they see competition. KPLC ... just want revenue, [and so there’s] no solar [58].

The reasoning provided in the quote above is supported by findings in the literature which argue national government has used policy control to deter solar off-grid investors, such as uncompetitive feed in tariffs (see Chapter 3 cf. Phillips & Newell, 2016). This sense that the national government might feel threatened by small scale off-grid electricity seems rational. Free from the monopolistic control of KPLC, small scale off-grid initiatives appear to be the only aspect of the electricity sector where power relations between county and national government are relatively even, and where interactions between the two have the potential to be conducted “on the basis of consultation and cooperation” as stated by the constitution.

Further evidence of the national and county disconnect over small scale off-grid electricity and clean cooking roles can be seen from their engagement over the ‘Energy Centres’: institutions charged with disseminating renewable energy and energy efficiency technologies, including those for small scale off-grid electricity and clean cooking. As anticipated in Chapter 5, the fact that the centres are demarcated an exclusive county function by the *Energy Bill 2015* but the 16 currently in existence are national government run has led to tension, seemingly disincentivising engagement⁹⁰. Although Kitui and Marsabit noted regular interactions, most county administrations interviewed reported having

⁹⁰ A senior MoEP officer stated the 31 counties without Energy Centres should establish their own Energy Centres to run parallel to the 16 existing centres which would remain under national government control. However, this seems ill advised given the high chance for roles to be conflated, while counties seem unlikely to commit limited resources to an entity not firmly established as under their mandate and one which the national government provides for in those counties containing the pre-existing centres.

little or nothing to do with the Energy Centres, with several officers questioning the capacity of the centres [42, 49].

A manager for the Global Alliance for Clean Cookstoves (GACC) went further, unflatteringly labelled the centres “a lame duck” [66], while a senior REA officer appeared to confirm complaints that capacity issues render the Energy Centres ineffective, stating, “the staff level at the Energy Centres are too low, they are not so free to engage counties who are at a much higher level” [14]. The REA officer argued the centres should be absorbed by REA to provide the parastatal with the regional offices they required, enabling REA to “be better able to solicit business from counties, [and] help with plans” [14]. This seems prescient in terms of the additional offices addressing county criticisms of a lack of REA staff on the ground, yet it remains unclear whether REA’s proposed takeover of the Energy Centres will improve interactions with counties as it would still entail a county function being run by a national entity. This ongoing disconnect seems a missed opportunity for effective decentralised energy governance as the mandates of the counties and the Energy Centres suggest they are ideally placed to collaborate on facilitating small scale off-grid electricity and clean cooking initiatives.

6.3 Community level interactions with decentralised energy governance

At the legislative core of the Kenyan devolution process is the object of enhancing participatory politics, a mandate which falls within the roles of both national and county government. The Constitution (Fourth schedule, part 2(14)) outlines the responsibility of the latter as:

Ensuring and coordinating the participation of communities and locations in governance at the local level and assisting communities and locations to develop the administrative capacity for the effective exercise of the functions and powers and participation in governance at the local level.

However, as will be demonstrated in this section, the evidence of counties “ensuring and coordinating the participation of communities” is limited in the energy sector, which seems a clear missed opportunity given Chapter 5 found counties to be ideally placed to facilitate urgently needed community-scale off-grid electricity and clean cooking initiatives. Drawing upon data from the focus groups discussions (FGDs) conducted in 2017 as part of this PhD, this section reveals this lack of engagement has caused tensions in the interactions between communities and decentralised energy governance to emerge.

6.3.1 Community expectations of devolution

General expectations of devolution

Uncertain and at times erroneous community expectations of the devolution process seem to have contributed to the lack of participatory politics in Kenyan energy governance. While, most members of the FGDs were aware of the devolution process, approximately half recall first hearing of devolution during the inaugural 2013 county elections, implying they had not been fully aware of the key devolution component of the 2010 referendum on the new constitution. This is significant as it is likely to influence expectations of devolution. Those hearing in 2010 seem more likely to associate devolution with the conceptual notions of participatory politics, that formed part of the referendum debate; an association less likely for those hearing in 2013 as election campaigns in Kenya revolve

heavily around short term promises of tangible services and infrastructure. This appears evident from comments emanating from the community in Echariria:

I think we never understood the meaning of the subject before, but once it was with us, many people heard the president saying that the national government would be disbursing resources to our governors at the county level for the community to get assistance in the building of roads, schools and to implement interests of the majority and not individuals. We ... understood that we had devolution because we witnessed the construction of roads, provision of water and building of schools, all without our contributions. However, to date most of us have not really understood what devolution is and thus the opinion that the previous centralised governance system was much better, while others are saying the opposite. Most of us have not really understood what devolution is [102].

The quote reveals members of the community did not fully understand what they were voting for in 2013, and that their understanding of the concept of devolution is still limited. The phrase “all without our contributions” indicates a passive relationship with the county government; the increased resources received perceived a result of devolution, but not of community participation. The quote also suggests the community’s opinion on the relative merits of devolution compared to “the previous centralised governance system” is based on which brings more services, rather than which brings greater equity in terms of participation.

An understanding of devolution centred on improved access to resources, services and infrastructure (particularly health, education and jobs), was common in all FGDs, emerging as the main reason why all communities reported being mostly optimistic about the newly installed county governments in 2013. All spoke of their expectation that livelihoods and living standards would improve for *mwananchi* [the ordinary citizen] as the more localised county government would bring services closer to the people. In contrast, understanding devolution in terms of community empowerment and grassroots participatory politics was far less common, although it was mentioned or alluded to in every FGD. This suggests communities may not appreciate that active community participation may be required if improved services, the more commonly assumed benefit of devolution, are to be realised. It also indicates that raising awareness among communities of the participatory politics component of devolution will be required if more active community engagement in politics is to materialise.

Yet, this initial 2013 optimism concerning devolution had not been maintained in all communities, with geographical correlations appearing. The communities in Migori and Turkana were still mostly positive, emphasising developments the county government had made in health, education, and local roads, although water remained a critical issue. The two Turkana communities were the most enthusiastic, stating most of their expectations had been met, a Napetet community member noting “It has drastically changed and gotten better” [104]. Much of the credit for this change was attributed to the county government now having control over a set budget, contrasting sharply with the pre-devolution era, where national government had held on to funds, meaning according to a member of Napetet community that “Turkana had been left behind” [104]. This sentiment was widely held across all stakeholder groups in Turkana, highlighting how perceptions of devolved governance can be significantly shaped by their relative performance to pre-devolution governance in a given locality.

This positive view was not shared by the communities in Nakuru, who had become largely despondent with the county government failing to provide the personnel and infrastructure needed within their communities, particularly roads, electricity, and health and education services. In Echariria, several reported poverty had worsened since devolution, with the “very corrupt” county government widely blamed [102]. Corruption charges centred on the county government’s suspected embezzlement of national government allocated funds, something also alleged by the Suna community against Migori county government; the relative immaturity of the devolved system and inexperience of county governments in managing large budgets seen as contributing factors [100]. In Echariria, a senior community member viewed the corruption as exploitation of uninformed citizens, remarking:

The Constitution guarantees local citizens the right of access to information on monies allocated to the county government by the national government However, due to a lack of awareness among the local citizens on the provisions by the constitution, resources set aside by the national government for their benefit are more often than not misused by the county officials [102].

The quote reaffirms the tendency for communities to associate devolution with access to services rather than participatory politics, but also suggests this trait has resulted in insufficient bottom-up pressure to hold local governance accountable in the manner intended by the constitution.

Energy related expectations of devolution

In terms of specific energy expectations being met, similar regional variations appeared, with the two Turkana communities again most positive. In Nakwemekwi, 70% of the community were estimated to be connected to grid electricity due to the reduced GPOBA programme connection fee; a price cited as one that “everyone can afford”, contrasting with prevailing views in the literature (Lee et al, 2016) [105]. Credit for the reduced connection fee was attributed to the county government despite GPOBA being a national government policy, although county advocacy may have contributed to the GPOBA fee being applied to the community. Ongoing energy issues reported by both Turkana communities include increasing charcoal and LPG prices, while KPLC grid connected street lights were criticised as much more unreliable than the off-grid solar street lights installed by the county government.

As before, the two Nakuru communities were most critical of county energy endeavours. In Echariria, the community complained that grid electricity was only available in the market centre, with county politicians and KPLC blamed for the lack of household access:

The grid connection plans by the government are hardly known to us despite the president’s decree to have power distributed across the country. The KPLC officers collected our names almost six months ago and promised that our households would get connected to the grid in two months’ time, but we have been waiting since then. It is difficult for us to understand what their plans are. At times, the grid connection process can be disrupted by local politics [102].

The quote highlights the perceived unreliability and lack of transparency of KPLC, shared by many other stakeholder groups (see section 6.2), which has contributed to the widespread distrust of the energy parastatal among communities. In Lemolo community complaints centred on a lack of market centre street lights and the fact that grid electricity had become available since devolution but

remained inaccessible due to cost [103]. This contrasts with the community perception in Nakwemekwi (Turkana) but supports the consensus in the wider literature which cites cost as the key barrier to access (see Chapter 5 cf. Lee et al., 2016) [105].

The two communities in Migori were less positive about devolution in terms of energy than when speaking about the process in general, with the affordability of grid electricity the main grievance. Members of Suna community expressed disappointment that the county government had not made connecting to grid electricity free as allegedly promised pre-election, now believing this pledge to be merely campaign rhetoric [100]. In contrast, a public official within Masaba community argued somewhat unreasonably that unaffordability stemmed from grid electricity not being devolved:

the situation is the same as it were before at the national level, it's only that we have these stations at county levels but their workings are the same In that perspective then we cannot say that electricity was devolved. If it was devolved, it meant everybody now should be having electricity in their homesteads, but now only few, the able ones, have the ability to pay for connection, it's not cheap, therefore we cannot say there has been good results from the Kenya Power team in terms of devolution [101].

The quotation criticises the restructuring of KPLC, often branded by KPLC officials as being devolved, but in reality, a form of deconcentration which has left the poor largely uncatered for: the comments from Suna and Masaba indicating urgently needed initiatives to subsidise electricity have either been insufficient in the case of the national government or lacking altogether in the case of the county. However, the public official's assertion that these issues would be addressed were energy fully devolved is highly questionable given the costs and logistical issues of running grid electricity (see Chapter 5). What seems more pressing is to have more collaborative and representative MLG2-esque governance to tailor policy to local needs; better achieved by more balanced intergovernmental power relations which not only attend to national government interests.

Evidence of the pitfalls of KPLC's MLG1-esque centralised model were noted by both Migori communities; wealthier residents along with most large institutions, such as school, hospitals and market places, had been connected to the electricity grid, but the domestic energy situation of the less wealthy Masaba and Suna communities were viewed as little changed since devolution, with grid electricity cost prohibitive, and cooking still dependent on firewood. In the words of a Masaba community member: "it's only the able [rich] ones that gets electricity, the institutions" [101]. These sentiments lend further support to the critique of REA's change in policy from mass grid connections to public institutions (as argued in 6.2.1). The acute unreliability of grid electricity was also particularly emphasised by the two communities in Migori, with blackouts reported "almost every day", leading people to opt for solar instead:

So, what I've come to realise, that the electricity also is not reliable, yet it is there but not reliable, you'll find most of the residents have resorted to solar system because of unreliability of electricity, especially in Migori county [101].

The quote highlights the geographical inequity of grid electricity reliability, which varies significantly between counties, as corroborated by stakeholder observations (see section 6.2.1) and Kenyan

blackout data (Millien, 2017). Ongoing issues of reliability along with lack of affordability again bring into question the continued prioritisation of national government grid electricity initiatives, where KPLC's monopoly means the parastatal is less incentivised to improve services. Suna community blamed this monopoly for enabling KPLC to operate *carte blanche*, resulting in corrupt practices and poor service⁹¹:

So, the monopoly has given the Kenya power to do what they like, maybe if the government would get another company or maybe solar to come up to compete with Kenya power, it might allow the common man access, [until then] that one [i.e. the common man] still will suffer [100].

The above quote reinforces what appears increasingly clear: that the cost, reliability and trust issues associated with KPLC grid electricity are incompatible with the purchasing power of many citizens, lending credence to sources within the literature that cite the grid electricity centric policy of the national government as containing intrinsic inequities (Newell & Phillips, 2016).

Overall, the findings indicate community satisfaction with energy governance since devolution varies considerably, with geographical differences appearing to emerge. The perceived effectiveness of the county government in each locality appears to correlate with the relative effectiveness of governance in that county prior to devolution. Turkana, arguably the most underserved area in the whole of Kenya prior to devolution, appears most positive of devolution. Similarly, the Nakuru communities seem least satisfied, perhaps linked to being the closest of the three communities to the centres of power in Nairobi and thus an area more likely to have benefited from the more centralised form of resource allocation pre-devolution.

6.3.2 The extent and nature of community interactions with other key energy stakeholders

Geographical variations were also clear in the engagement communities had with other stakeholders, an issue which has affected the extent to which communities' pre-devolution expectations of decentralised energy governance have been met. The data from Table 6.1 and Figure 6.1 highlight the two communities in Nakuru had most interactions with other stakeholders, followed by those in Migori, with the communities in Turkana experiencing least. Across all three counties, community interactions with both national and county government over energy issues have been lacking, with communities more likely to engage with non-government actors such as NGOs and the private sector (Table 6.1). Yet, the extent and nature of these interactions varied considerably by community and county as this sub-section now explores.

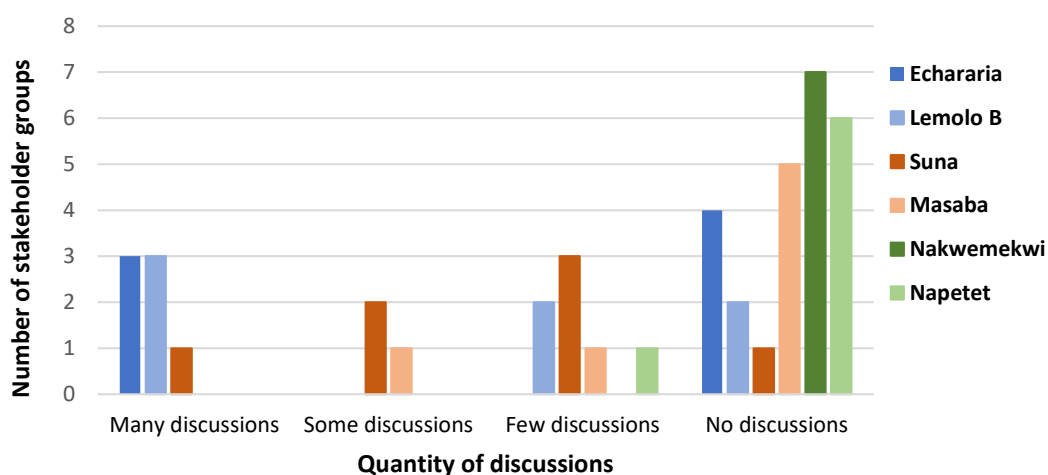
⁹¹ Accusations include inconsistent quantities of energy from pre-paid tokens and the use of middlemen for sales of connections and tokens, whose fees increased costs for the consumer. Regarding the issues with pre-paid tokens, a Migori KPLC manager argued it was more likely that confusion over KPLC's complex billing was the cause rather than corruption.

Table 6.1 Stakeholder discussions with communities on energy issues

Stakeholder		Number of discussions communities have had with key stakeholders				
		Many	Some	Few	None	Not sure
Government	County government			1 (S)	5	
	KPLC	1 (E)	1 (S)	1 (L)	4	
	REA			1 (L)	5	
	Other			1 (S - Energy Centre)	5	
Non-gov	NGOs	2 (E, L)		2 (M, S)	2	
	Private companies	2 (S, L)	1 (M)	1 (Np)	2	
	Other communities	2 (E, L)	1 (S)		3	

Sample: 6 FGDs with 6 communities across 3 counties: Migori, Nakuru and Turkana. Key: E=Echariria, L=Lemolo B (both Nakuru); M=Masaba, S=Suna (both Migori); Nk=Nakwemekwi, Np=Napetet (both Turkana)

Figure 6.1 Quantity of discussions with each stakeholder group by community



Across all counties, the engagement of county administrations with their electorate has been lacking, with five of the six communities reporting no discussions with county officers, who were criticised by most communities for only appearing during election campaigns. Only Suna community reported an interaction with the county level, notifying them of a biogas seminar. Described as “useful” by a community attendee [100], this provides an isolated example of the beneficial awareness raising activities counties could facilitate⁹². Although not directly related to energy, Masaba and Echariria communities spoke of engaging with the county over the annual county budgetary approval process, yet both were dismissive of the process, complaining that the outcomes and implementation of the budget were never as expected or discussed, leaving community needs unmet. A Masaba community member elaborated:

You see in that case, they do come with an idea of public participation, but they come here for formality, ... they come with that paper yes, we go through it in the

⁹² While not direct interaction, one community mentioned national and county government environmental preservation campaigns targeting communities, particularly over the need to reduce the burning of trees for charcoal production.

shortest time, any little comment you give out, do not affect anything in that paper, so it is a kind of dictatorship [101].

The quote suggests low levels of community participation in politics stem not only from a lack of awareness among communities, but also from the inclusivity processes adopted by county governments and other, higher levels of governance, lacking credibility with communities. This supports findings in the literature, which note the lack of county participatory processes in energy decision-making in Kenya (Johnson et al., 2016). A Migori county officer added the caveat that “the challenge of bottom up planning [is] if people don’t know what’s in it for them” [83], suggesting raising community awareness of their roles within the new multilevel energy governance emerging in Kenya is a necessity. The irony being that county governments are ideally placed to coordinate various actors to facilitate this capacity building role, yet most likely require their own capacities to be built before doing so (see Section 5.2).

Community engagement with national government entities appears similarly sparse; most had never heard of the Rural Electrification Authority (REA) nor the national government run Energy Centres despite both having mandates specifically catering for the energy needs of rural or poorer communities⁹³. Interactions with KPLC, while more frequent, were limited to complaints, billing issues, or the energy parastatal trying to sign people up. A public official in Masaba indicated community discussions were not a concern to KPLC:

In fact, there is no discussion in this perspective because the KPLC will give a contract to a contractor, and when the contractor comes to the ground, there is no consultative meeting done, we'll see them doing their work [101].

This lack of community engagement in planning had also negatively impacted a two-year project to install small 3kW nano-grids in the two Nakuru communities. Working with a local NGO and international research institute, Lemolo B and Echariria had been selected for the project based on national government information that the grid was not set to be implemented in the two communities. However, two months before the project implementation date, grid infrastructure was installed by KPLC, subsequently delaying the off-grid project as well as harming investor and community confidence in the potential of future off-grid initiatives. The uncertainty over grid expansion plans was compounded by KPLC’s slow customer response times; Echariria and Masaba communities emphasising the only way to obtain information was a time-consuming trip to the KPLC county office as phone contact was ineffective. An Echariria community member expanded:

We have never held any discussions with KPLC on our energy needs. In most cases, it is the villagers who are always forced to visit their offices for information on their grid connection plans [102].

The quote highlights the lack of transparency over locations for the expansion of grid electricity infrastructure, shedding further light on the reasons for community distrust of KPLC. Critically, initiatives to provide communities with electricity from off-grid means are hindered due to communities and investors likely being deterred by the opacity of KPLC’s grid rollout intentions.

⁹³An Energy Centre was located near the Migori and Turkana communities. Nakuru county does not have an Energy Centre.

Engagement with the private sector was reported in four of the six communities, mainly in terms of companies (e.g. M-Kopa, D-Light) seeking to promote and sell household solar products or energy saving cookstoves, rather than assess community energy needs. Yet, the associated marketing used appears to have had an element of awareness raising even if not for purely altruistic reasons. A public official in Suna, noted the companies often highlighted the health and safety benefits of solar (particularly in comparison to the local lighting source, paraffin/kerosene), along with the cost effectiveness and environmental benefits of energy saving cookstoves [100]. However, private sector engagement appears to have been undermined by issues surrounding the reliability and quality of solar products. This was strongly emphasised in Suna, with several community member associating the purchase of a good quality energy product with “being lucky” and “trial and error”, stating they had “no information” to base decisions on which products they buy:

We call them M-Kopa, I don't know, I think it is the best in Nairobi, we only receive their products here, but we don't know the industry, how they work, but the products we get here [100].

This quote highlights the need for quality standards of energy products to be more rigorous monitored, promoted and enforced if the community/private sector relationship is to become more mutually beneficial; an issue commonly acknowledged by stakeholders across the Kenyan energy sector, and the wider academic literature as a barrier to uptake (Painuly, 2001).

The presence of NGOs was noted in Migori and Nakuru, with the two communities in Nakuru particularly positive over the close working relationship they had developed with a local NGO and its overseas partner in establishing small scale solar ‘nano-grids’ as part of the SONG project (see Chapter 5 cf. Blanchard et al., 2017), reporting that “the NGOs make frequent visits to our village making it easier for us to reach them”. NGOs were also viewed positively in Suna, where community members highlighted the work of the UN International Fund for Agricultural Development in promoting energy saving cookstoves. In contrast, the Turkana communities reported no interactions with any of the stakeholder groups, aside from one recollection in Napetet of a private sector organisation (D-light) distributing solar panels to primary schools [104]. Both Turkana communities stressed contact with other stakeholders is both rare and difficult, occurring only when they actively seek the often unavailable person or organisation. This lack of contact was seen as highly challenging, with Nakwemekwi community emphasising the lack of repair facilities for energy products [105], while those in Napetet pointed out the need to bribe a KPLC officer or be in a senior county government position to secure a prompt connection to the grid [104].

There was also regional variation in terms of which stakeholder group communities felt could help most with their energy needs. Given the NGO led nano-grid project, the two Nakuru communities unsurprisingly stated NGOs could help most, commenting they were the only entities to take the time to use participatory processes to understand and address their energy needs. The growing relations with NGOs were seen as more promising and reliable than other stakeholders, particularly in contrast with the county government who according to a member of Echariria community, “shows up when they need our votes only to vanish as soon as they are elected into office” [102].

Conversely, in Turkana, alongside NGOs, the county government was seen as the key entity in addressing community energy needs due to the assistance provided for grid connections. NGOs were

also viewed as helpful in terms of their provision of humanitarian aid and free energy products, with GIZ's improved cookstoves (see Chapter 5) mentioned in Nakwemkwi community who were particularly positive: "these organisations have changed our lifestyles, we are closer to these organisations, we can ask for assistance and we get without hesitation" [105]. In Napetet, the beneficial impacts of NGOs were associated with these organisations successfully collaborating with the county government⁹⁴.

The lives of people within the county is improving and there is a good correlation between the people and the organisations available, especially when the county government come, some organisations have worked hand in hand with the Turkana government [104].

In Migori, most in Suna community felt the question of which stakeholder could help most with their needs was moot owing to the KPLC monopoly: "energy here is solely owned by Kenya Power" [100]. In addition, several community members felt even though some organisations might be able to help, they wouldn't be able to afford their assistance, adding there were no organisations to assist with financial issues "it's you and you alone". However, a Suna public official saw the county government as a potential source of assistance: "if energy is fully devolved and the county takes charge of energy, I think there can be a difference", adding that county efforts to empower citizens would improve economic growth and citizen purchasing power, enabling greater numbers to access energy services [100]. The official's views concerning full devolution of energy seem unlikely given the national government stranglehold and appear distinct from the rest of the community, partly reflecting that public officials are likely to be better informed but also that they are accountable to the county and thus more likely to tow the county line. Other community members later agreed with the official, indicating the scope for awareness raising and/or agenda setting that senior community members have⁹⁵.

Overall, adopting a geographical lens reveals the quantity of community engagement appears to correlate with the county it is located in. Yet, paradoxically, the quantity of engagement a community receives is also the inverse of how well energy governance has been received since devolution: the Nakuru communities least positive despite most interactions; the Turkana communities vice-versa. This further supports the notion that communities value services received more than participation and that the perceived effectiveness of decentralised energy governance is relative to its pre-devolution performance.

In addition, it seems calls in the literature for greater participatory politics in the energy sector (Johnson et al., 2016) have so far been inadequately addressed by both national and county government, with communities far more likely to have energy discussions with organisations operating outside of government. Yet, this is to be expected as meaningful direct engagement addressing the energy needs of every community within a county where settlement patterns are

⁹⁴ Some organisations were reported to have reduced support since inception of Turkana county government. There is also reluctance in some of the organisations when the county government was introduced, e.g. Oxfam, World Vision have started to withdraw some of their support because now the county is in place.

⁹⁵ Community level public officials can be divided into two groups: those accountable to the county government (i.e. sub-county commissioner, ward administrators) and those accountable to the national government (i.e. Chiefs). Both groups were present in the Migori FGDs and proved to be dominant, agenda setting participants.

dispersed is unrealistic for a county government, indicating that to ascertain community energy needs, intermediaries are required, most likely in the form of private sector or NGO/CSO organisations. Implicit within this conclusion is an emphasis on the importance of MLG2-esque forms of governance if community energy needs are to be understood and addressed, which county governments seem ideally placed to facilitate and coordinate.

6.3.3 Community level interactions with decentralised energy governance over land rights

Although decentralised energy governance has largely failed to engage communities since devolution, the critical issue of land rights provides a notable exception. The Kenyan land tenure system decrees community permission is required to use community owned land, which, when combined with the deep-rooted, emotive nature of land ownership in Kenya (see Chapter 3 cf. Boone, 2011), has resulted in land rights being an issue communities are far more likely to actively defend compared with other constitutional entitlements. Most energy parastatal officers interviewed stressed land rights were a major, if not the most significant, issue affecting their work. Complaints centred on communities protesting (sometimes using violence) for ever increasing sums of compensation to secure their permission to use community owned land, a process frequently causing significant project delays.

The need to engage communities over land rights has particularly affected national government grid electricity initiatives, whose infrastructure covers vast tracts of land. Wayleaves were seen as particularly challenging, especially for the larger transmission lines, as noted by an engineer from an overseas engineering firm contracted to construct the major 428km transmission line between the Lake Turkana Wind Power Station and the KETRACO substation at Suswa [64]. The engineer estimated the transmission wire between any two pylons could cross approximately 50 separate landowners, all requiring compensation⁹⁶. This issue was exacerbated by inconsistencies over compensation payments caused by the failure of the *Land Act* to set fixed compensation rates for land⁹⁷. According to the engineer, this encouraged land owners to be more obstinate in seeking to negotiate the optimum price for their land, leading to lengthy project delays: the project eventually completed two years behind schedule with significant cost overruns (Mutai, 2018).

Most parastatal officers interviewed shared similar experiences to the engineer, but others saw the root cause of such issues lying with elites rather than the communities. Commenting on the Lake Turkana-Suswa project, a Kenyan CSO representative argued vested elite interests were seeking to block power from the Lake Turkana wind project coming online: “those who benefit from thermal generation IPPs don’t want the connection” [97]. An officer from KETRACO also alluded to this issue, “[the issue of land rights] just needs good legislation, but Parliament, are not very keen to sort this out” [10]. Elite insider trading compounded the problem, two senior MoEP officers acknowledging the widely held suspicion that speculators were buying or building on land having been informed it was designated for an upcoming energy project and thus liable for compensation⁹⁸ [1, 2]. Transnational actor modus operandi was also seen as partly responsible, a senior REA officer revealing wayleaves

⁹⁶ This differs from the Global North where land tends to be concentrated in the hands of far fewer people.

⁹⁷ The engineer also highlighted a geographical dimension, the issue being more difficult to resolve in the central region where small scale farming was prevalent, compared with Narok county where the resident Masai owned larger tracts of land resulting in the need to engage with fewer landowners [64].

⁹⁸ A phenomenon common in other sectors in Kenya, such as with the standard gauge railway project (see Sayagie, 2019).

compensation was not paid before TAC1 actors introduced the practice; REA instead engaging with communities in open dialogue which according to the officer enabled more effective operations:

Initially REA would say to people ‘there’s 5million for the project, if you want 1.5million for wayleaves, we can only do 3.5million worth of electricity’. But people were generally very happy when electricity came in, so they weren’t worried about funds for wayleaves [14].

The quotation indicates contestation over land rights is partly a symptom of transnational actor practices out of sync with the Kenyan context and suggests consultative approaches may be the key to gaining traction with communities. Critically, the varied underlying causes behind the delayed transmission infrastructure highlights how it is too simplistic to place the blame on community protests as many parastatal officers seem keen to do.

Several high-profile electricity generation projects have also been impeded due to community protests over land. A KenGen officer argued generation projects were particularly vulnerable because “our operations are on the ground and we are dealing with natural resources which are sitting in a certain county”, further emphasising the sense of ownership communities have over land and the resources contained within [16]. Particularly notorious within the Kenyan energy sector was the collapse of a 61MW wind power project at Kinangop (Nyandarua county)⁹⁹, where investors withdrew following ongoing, sometimes violent, community protests, which centred on lack of community benefits, health concerns, and inconsistencies with compensation payments (Waruru, 2015). The collapse was widely blamed on local opposition politicians seeking political gain prior to the 2017 election; the Nyandarua County governor, Waithaka Mwangi (of the ruling Jubilee coalition), stating at a public rally: “All the problems around this project are a result of incitement by politicians taking advantage of people’s ignorance about this project to excite emotions” (cited in Waruru, 2015, p.1). This view was shared by a Kenyan NGO officer who felt Kinangop represented “a failure of devolution”.

However, while the communities’ misplaced fears over the health impacts of wind turbines are suggestive of incitement and manipulation, their other complaints have found support from industry experts. A renewable energy analyst for an overseas consultancy in sub-Saharan Africa backed the community, stating:

any project that a community felt was of no benefit to it or had no relevance to the lives of its people was bound to be met with hostility (cited in Waruru, 2015, p.1).

This seems a fair assessment, especially given engagement with communities over energy has been critically lacking (see sub-section 6.3.1). The analyst’s comment also reflects growing recognition within the literature of the importance of community buy-in to local scale energy initiatives (Blanchard et al., 2017). Although widely seen as a poster child for devolved energy’s failings, this thesis argues Kinangop has left a positive legacy as it has helped consolidate the need for consultative MLG2-esque governance as a KenGen officer inadvertently acknowledged:

⁹⁹ See also KenGen’s 400MW wind farm in Meru (Aboo, 2017), and the Olsuswa Energy’s (an IPP) geothermal plant in Turkana for other examples of energy generation projects impeded by land rights issues.

you have to deal with those two groups because if you [only] deal with the county government and you forget about the local community, they will do what they did at Kinangop [16].

Responses to the issues over land rights are revealing of underlying governance preferences of stakeholders. Several parastatal officers appeared to accept that community leverage meant MLG2-esque consultative governance was the new reality when dealing with land rights, such as a KETRACO officer who emphasised counties now had a key sensitisation role to play:

Counties need to engage communities because when it comes from [county] leaders, they believe it ... but when it comes from KETRACO, it's just [national] government ... [County] leaders need to educate people [9].

A KenGen lawyer agreed, emphasising this was in fact a legal obligation: “you cannot deal with the local community without representation from the local government” [16], while a GDC officer added that trilateral coordination was financially prudent: the county government was better placed to negotiate with communities for better rates, which only the national government had “the muscle” to subsequently foot [15]. Yet, many stakeholders felt county administrations had failed in this sensitisation role, ignoring the long-term development benefits of energy projects, and championing instead community compensation in return for electoral votes as seen in Kinangop. Whether this is the case in the majority of disputes is unclear; a Migori county KPLC officer viewing community land protests as “mostly ignorance, and to a small extent politically motivated” [38].

For other, predominantly national government, stakeholders the issues over land required reverting to a more top-down MLG1 form of governance as seen prior to devolution. Many argued reasonably that the absence of set compensation rates for in the *Land Act* needed to be addressed [1, 2, 10] while a representative of an overseas research institute argued strongly that national government should conduct land negotiations and not KPLC [80]. The latter point makes sense constitutionally and perhaps from a consistency basis, although as noted in the previous paragraph, it seems preferable for counties to conduct sensitisation efforts.

Other points seemed less just. A Migori county KPLC officer felt “government should have rights [over land] if it benefits the general public” [38], seemingly ignoring how this has historically entrenched the energy interests of the centre and led to the marginalisation of areas outside that sphere (see Chapter 3). A KETRACO officer blamed the *Land Act* for not stipulating physical obstruction of projects was illegal and that land disputes must be resolved in court. According to the officer, this would ensure energy projects could proceed as:

[the] chance of a court ruling in the claimant's favour are basically 'zero' as a lot of process occur prior to building, such as feasibility studies. So, the court case would be more about getting more adequate compensation [10].

The quote suggests the officer's primary concern is the facilitation of more streamlined MLG1 governance rather than the legitimacy of the communities' protests. The reference to 'a lot of processes' is also questionable given well documented instances of this not occurring (see Chapter 7 cf. Mullins & Wambayi, 2017), with arguably the most contentious example being the National government initiative to construct a 1050MW coal plant in Lamu County.

The Lamu plant has been widely derided as unviable given Kenya already has surplus grid supply and will be largely relying on costly imported coal despite having vast untapped renewable energy resources (Olonyi, 2019). Local grassroots opposition groups have also been highly critical of the lack of community engagement and the project's unsuitability for the local context, citing detrimental health, environmental and cultural impacts to produce power destined for Nairobi (Kazungu, 2018; Onyach, 2019a). National government top-down governance practices have been blamed for the project's approval, namely acquiescence to corrupt tendering processes and vested overseas interests (Onyach, 2019; Ndi, 2017), with Chinese firms set to part finance and operate the plant in what seems indicative of the less conditional lending of Chinese financing noted in Chapter 3. However, construction has not yet begun (despite an initial 2015 start date) due to ongoing community led protest initiatives, spearheaded by 'Save Lamu' a coalition of local CSOs, and domestic and international NGOs (Kazungu, 2018; Onyach, 2019a). The folly of the Lamu coal project clearly demonstrates the need for community land rights engagement not to be bypassed for the sake of national government project development expediency.

Overall, it seems clear the issue of land rights presents one of the few instances where the participatory politics envisaged by the devolution process have been realised. Community awareness and willingness to protest over land has provided the community with a degree of leverage, creating bottom-up pressure which has coerced stakeholders from all scales (transnational, national, county) to engage with the community level in a form of consultative and cooperative MLG2-esque politics that the Constitution ostensibly prescribes. Although this leverage has been misused at times by county governments to further their own agendas, it seems vital as the main bulwark against a continuation of the pre-devolution politics which saw large parts of the country critically underserved by self-interested national government energy policies. The fact that national government continues to promote policies wholly inappropriate to local contexts, such as in Lamu, highlights both the dangers of reverting to more MLG1 forms of governance over land rights and the critical need for ongoing community participation in decentralised energy governance.

6.4 Conclusion

Empirical findings

Overall, this chapter's analysis of stakeholder interactions within decentralised energy governance reveals engagement has been characterised by significant power imbalances at each of the three scales explored, helping to explain why, as Chapter 5 noted, a more MLG1 form of governance has emerged despite the ostensibly MLG2 form indicated by the legislative provisions for devolved energy.

At the transnational scale, TAC1-3 actors have tended to interact indirectly with counties, primarily using national government as a conduit for distributing funding and capacity building support. This has consolidated top-down MLG1-esque governance, particularly as counties appear to have limited scope to lobby for greater transnational actor engagement, whose support is often dependent on political economy factors such as pre-existing relationships or aligned interests. Similarly, the county voice has been inhibited in its interactions with national government, particularly over grid electricity and 'grid islands' where the monopolistic control of KPLC has seen counties accept that a lead role is unfeasible. Yet, efforts to play a collaborative role in these energy sub-sectors have also been hindered

by a lack of support and clear engagement from national government, reducing the effectiveness of the checks and balances counties were supposed to bring although counties could still play a more active role in lobbying and potentially subsidising costs. This has had a detrimental effect on energy governance as policy decisions have often prioritised the interests of national elites rather than local needs, as seen with the digital literacy programme.

KPLC's monopolies are absent in small scale off-grid electricity and clean cooking, resulting in the two sub-sectors being one of the few areas where interactions between national and county government are on a broadly even footing. Yet, both levels of government have tended not to prioritise small scale off-grid electricity and clean cooking, their engagement characterised by a lack of coordination due largely to inconsistent understandings over the roles each should take. This seems a missed opportunity as counties with national government support (e.g. from the Energy Centres) seem ideally placed to facilitate initiatives in these sub-sectors.

The domineering approach of national government vis-a-vis the counties has largely been replicated by the latter's engagement with the community level, with participatory politics remaining largely unrealised except over land rights where the community retains a degree of leverage. Yet, meaningful direct engagement between a county and every community within its jurisdiction seems unrealistic, and instead requires locally based intermediaries (e.g. NGO/CSOs) to ascertain community energy needs. This implies counties adopt a role of facilitator rather than implementor of energy initiatives, which is a key finding of this thesis and the central role this PhD advocates counties play. Counties seem ideally placed to gather data from intermediary locally-based stakeholders on the nature, extent and likely solutions of local energy issues; information they can subsequently use to direct actors who they deem most likely to address these issues in a manner appropriate to the local context.

Ultimately, the findings from this chapter suggest cross-scalar governance arrangements have worked most effectively when one key stakeholder group is not operating at an overwhelming position of strength compared to the other(s); a scenario evident in: county interactions with NGOs and the private sector; community interactions with stakeholders over land rights; and also (albeit largely unfulfilled) county and national government engagement over small scale off-grid electricity and clean cooking. These relationships veer most closely towards the consultative power dynamics envisaged in MLG2 but are not replicated in the counties' interactions with other stakeholder groups, where critical power imbalances persist.

Conceptual and theoretical implications

The findings from Kenya highlight that concepts of scale and power are fundamental to how decentralised energy governance processes are shaped, highlighting that decentralised energy governance needs to be understood relationally – a view supporting human geography arguments concerning both governance (Brenner, 2001; Jessop, 1990) and energy governance more broadly (Van Veelen, 2018; Angel, 2017). Notably, the Kenyan experience shows decentralised energy governance to be less effective when significant cross-scalar power imbalances are present. This issue is widely recognised to affect broader decentralisation processes in the Global South (Cabral, 2011); however, the findings from Kenya suggest these imbalances are likely to be more prominent in Global South energy decentralisation processes due to the widespread but erroneous conceptualising of energy access as grid electricity (Brown et al., 2015). This understanding is often inferred to mean energy

concerns scales of governance higher than the sub-national level due to the costs and national reach of grid infrastructure, an issue exacerbated by the tendency for energy stakeholder engagement to mainly occur between stakeholders operating at similar scales due largely to their budgets and auditing processes being more aligned [12, 90, 91].

Thus, while the grid narrative remains dominant, stakeholder engagement in the Global South is likely to remain centred on the national and transnational scale who have the resources to pursue grid-centric policies – a *modus operandi* shown to be encouraged by Global South and North central governments that seek to prioritise the grid (Baker, 2012; Farrell, 2019). While these power dynamics persist, the potential for decentralised energy governance to facilitate urgently needed smaller scale off grid electricity, energy efficiency and clean cooking initiatives is likely to be overlooked. To counteract these scalar power imbalances and ensuing energy access inequities, the findings from Kenya indicate decentralised energy governance roles in the Global South should complement the grid where appropriate but primarily focus on developing robust networks of local actors capable of providing checks and balances to ‘top-down’ governance.

However, developing sub-national governance roles is commonly acknowledged to require significant capacity building (Conyers, 2007). This chapter extends this understanding by highlighting that capacity building of this ilk in a Global South decentralised energy governance context is likely to also be subject to pronounced scalar political economy issues. As sub-national capacity building is largely dependent on resources from or via the centre, the findings from Kenya indicate central governments may use this control to limit capacity support in order to curtail the potential threat decentralised governance poses to *de facto* state monopolies. Capacity building from transnational actors is also shown in Kenya to be subject to political economy factors, principally path dependency dynamics. These issues are recognised to be prevalent in the development sector in general [71, 93, 95] and thus seem likely to be replicated in other Global South energy contexts.

From a more theorised perspective, the importance of these scalar power dynamics to Global South decentralised energy governance processes questions the validity of MLG to adequately understand these governance forms. Hooghe and Mark’s (2003) twin concepts of MLG1 and MLG2 provide a useful starting point for comprehending the complexity of multilevel institutional and operational arrangements, but as critics have argued, do not attest to where power imbalances lie or which actor will be casually most important (Blom-hansen, 2005; Bache, 2008). Thus, future studies using MLG to investigate Global South decentralised energy governance require either an additional analytical framework (cf. Blom-hansen, 2005; Warleigh-Lack, 2008) or empirical data to build on the foundations provided by MLG and unearth the critical power dynamics shaping decentralised energy governance.

Chapter 7 - Decentralised Energy Governance and its Impact on the Local Level: Spatial Variations of Four County Case Studies

This chapter explores how decentralised energy governance in four counties has been shaped by the interactions between key stakeholders since the county governments were instituted in 2013. Building on the findings of the previous empirical chapters, the aim is to examine how the power relations (and their inequities) found at the broader state level have played out in the energy governance present in individual Kenyan counties (the focus of research question 3). In doing so, the chapter takes the concepts and debates explored in the earlier empirical chapters and examines how they interact with the concepts of space and spatial variation, engaging with human geography debates that argue power relations are spatially contingent and that geographical approaches have particular relevance to governance in terms of uncovering the interactions and agendas which shape power relations and practices of governance on the ground (Griffin, 2012).

This focus situates the study between the more theoretically and conceptually driven forms of enquiry associated with the decentralisation and political science discourses and the more spatially contingent empirical approaches espoused by geographers: the latter seen as critical for more accurately verifying the former (Griffin, 2012). This intersection of disciplines is understudied. There exist a number of important political economy treatments of Global South energy transitions (e.g. Newell & Phillips 2016; Newell et al., 2014) but very few which engage with spatial debates and as far as the author is aware none which assess the implications of space and scale debates for a Global South energy decentralisation process. This spatial focus is a critical form of enquiry given the wide disparities in capacity and socio-economic development found within Kenyan counties (cf. Chapters 3 & 5) and thus is key to better understanding and facilitating the development of more locally appropriate and effective forms of decentralised energy governance.

The chapter focuses on four counties, selected due to their contrasting socio-economic conditions and energy governance issues: Migori (rural, opposition stronghold, capacity issues); Nakuru (urban, ruling coalition stronghold, significant geothermal resource); Turkana (rural, historically marginalised, significant oil resource); and Nairobi (urban, centre of power, unreliable electricity). Each county is analysed in turn through Sections 7.2-7.5, replicating the approaches in Chapter 5 and 6 whereby developments in decentralised energy governance are first critically appraised before the underlying power relations are examined at transnational, national, and local scales. A key energy issue pertinent to each county is also explored along with its impact on the community level. Conclusions are then drawn in Section 7.6, revealing the extent to which power relations and decentralised energy governance vary spatially and whether the MLG1 energy governance emerging at state level has been replicated within individual counties.

7.1 Migori

Located in the far south west of Kenya, bordering Tanzania and Lake Victoria, Migori has a humid climate with fertile soils. The county is predominantly rural, with a dispersed, ethnically diverse population of whom 80% work in agriculture, particularly the cash crops of tobacco and sugar (UK AID, 2017). Politically, the county has been an opposition stronghold, voting overwhelmingly in the 2013 and (annulled) 2017 election for opposition presidential candidate, Raila Odinga (Table 7.1).

Table 7.1 Presidential and governor election results for Migori county in 2013 and 2017 (MCI Maps, 2017).

Presidential election results				Governor election winner	
2013		2017 (annulled)#		2013	2017
Kenyatta (Jubilee) 10%	Odinga (ODM) 86.4%	Kenyatta (Jubilee) 14.2%	Odinga (ODM) 85.3%	Okoth Obado (PDP*)	Okoth Obado (ODM)
2017 Registered voters: 388,967 *part of opposition CORD coalition # The opposition did not participate in the rerun of the 2017 election					

7.1.1 Developments in decentralised energy governance

Migori formed an energy department in 2013, initially placed in the Ministry of Water, Energy, Forestry, Environment & Natural Resources, but then transferred to the Ministry of Roads, Transport, Public Works and Energy. The motivations for the change seem unclear; a Migori sub-county administrator considered the move “just pragmatism” after a minister was removed [42], while an officer from the Migori national government run energy centre vaguely assigned it to “a political decision at county level” [40]. The lack of clear purpose suggests synergies between the energy sector and other departments are unlikely to have been considered, to the probable detriment of inter-departmental coordination; a trait broadly noted across Kenya in Chapters 5 and 6.

In terms of county energy policy, the ‘County Integrated Development Plan (CIDP) 2013-2017’ provides an overview of the energy issues and proposed plans (Table 7.2). However, it lacks the detail of a specific county energy policy, which, along with a CIDP for the second term 2018-2022, have yet to be developed. These omissions are likely to impede development in the energy sector given their criticality for attracting investment (see Chapter 5 cf. Newell et al., 2014). An SEI/Practical Action collaboration with the county into community participation in energy planning appears a positive step towards the formation of a county energy policy (Johnson et al., 2016), although SEI representatives were uncertain whether the county had begun to implement the report’s recommendations [74, 80].

Table 7.2 Migori energy related polices developed since 2013

Policy and planning documents	Published	External collaborators
CIDP (2013-2017)	n.d. (presumed 2013)	None
Community participation in energy planning	2016	SEI & Practical Action

Data from the CIDP reveals access to modern energy services in Migori is amongst the lowest in Kenya, with only 2% of households connected to grid electricity and very low uptake of off-grid electricity and clean cooking (Table 7.3). The grid electricity supply was also widely viewed as unreliable (although improved since 2013), hindering the economic development of the county, such as the ability to “establish cold rooms for agricultural produce” as noted by a Migori county engineer [43]. Paraffin was used by the vast majority (94%) of households for lighting, with only 0.01% of households using solar for lighting, indicating very limited penetration of off-grid electricity. In keeping with the national tendency noted in Chapter 5, a street lighting programme focussing on lighting market centres to facilitate longer periods of economic activity appears to have been the principal focus of county government energy interventions.

Table 7.3 Energy access in Migori in 2013 (% of households) (Migori county government, n.d.)¹⁰⁰

Grid Electricity	Off-grid electricity	Cooking fuel
2%	0.01% solar for lighting	77.4% firewood, 18.8% charcoal, 2.8% paraffin, 0.01% biogas

7.1.2 Transnational actor interactions with decentralised energy governance

Transnational actors have been viewed as critical actors by parastatal officers in Migori decentralised energy governance due to their assistance in addressing the significant capital expense of grid electricity initiatives, particularly the donor financed Last Mile Connectivity Plan (LMCP) and GPOBA project (introduced in Chapter 5) [38, 39]. A senior Migori county KPLC officer stressed how these initiatives had greatly assisted the funding challenge of expanding the grid electricity network, labelling the projects as the “best connectivity solutions that ever came” [38]. As evidence, the officer noted connectivity had increased from 8000 to 44,000 people between 2013 and 2017 (50% via GPOBA), but dismissed the impact of devolution, stating “GBOBA would have happened regardless of devolution, it’s a global initiative” and felt if the synergies between the LMCP and GPOBA were exploited, Kenya “will have universal access by 2020”. Similar sentiments were expressed by a KenGen officer at the Gogo Falls hydro power station in Migori who felt development was more dependent on stakeholder interventions than the devolution process itself [39].

However, these dismissive views of devolution seem redolent of a top-down governance mindset, which appears to ignore that many in Migori will not be well served by grid solutions and that devolution ostensibly offers a platform for different stakeholders to voice that reality. Transnational actor interventions were further critiqued by a Migori county officer for mostly bypassing the county level, as seen generally across Kenya (see Chapter 6) [83]. This he felt had been particularly detrimental to off-grid electricity initiatives as transnational actor led global governance policies, such as the Paris Agreement, had created a dense regulatory environment too costly for the sub-national level to invest in off-grid solutions:

Our people need energy, but regulations increase the cost of these appliances.
How can we get costs down if you don’t let mini-grids compete with KPLC? [83]

Although, this seems an overreaction as the Paris Agreement promotes the off-grid solutions the officer is arguing for, the reasoning has more sense when viewed more broadly in terms of how transnational financing for such solutions is predominantly channelled via national government, enabling, as the officer remarked, the sector to continue to be run to “protect the interests of the elites” [83]. Thus, it appears transnational financing rather than the international regulatory, environment has helped consolidate national government grid interests at the expense of off-grid solutions, an issue particularly damaging to counties with rural, dispersed populations such as Migori, where grid solutions are often not viable.

In keeping with the broader Kenyan trait noted in Chapter 6, TAC3 actors appear to have interacted more with local scales of governance through their focus on county government capacity building

¹⁰⁰ The CIDP uses data from 2009 and so access rates can be expected to have risen. This emphasises the challenge to county planning arising from the lack of available data at the county level noted in Chapter 5 (cf. Johnson et al., 2016).

initiatives. An SEI representative working on the aforementioned collaboration on community participation in energy planning stressed that engaging with the county executive and, more importantly, the community level ward administrators had been “crucial” to undertaking the study:

In terms of mobilising the community, you have to approach them [the ward administrators] first to get things done. They are a bridge to the village elders and the local community, very influential. [There is a] potential barrier if the ward administrator is not keen on a project or doesn't benefit from it [74].

This highlights the power vested in senior community level stakeholders, highlighting the necessity of transnational organisations engaging such actors in cases, particularly given the potential leverage community protests over land rights can have. Yet, the coordination of this process is hindered by the competing power structures at community level, with both ward administrators (who respond to the county) and chiefs (accountable to national government and often viewed as vestiges of the pre-devolution system) highly influential in community awareness raising and agenda setting as noted in Chapter 6's discussion of the Migori FGDs.

Overall, the interaction of transnational actors in Migori appears to reiterate the national picture discussed in Chapter 6: the post-2013 flow of resources from transnational actors has remained primarily channelled via national government, with county government engagement largely bypassed save for TAC3 capacity building engagement. This has largely consolidated MLG1 structures in Migori emerging decentralised energy governance, resulting in the continued prioritisation of often locally inappropriate national government grid electricity initiatives.

7.1.3 National government interactions with decentralised energy governance

Grid electricity

Representatives from national and Migori county government appeared to agree on how they should collaborate over the distribution of grid electricity. A Migori sub-county administrator felt, “Our work down here at county level just compliments the parastatals work. Our role is to generate ideas, as we know the ground better” [42]. Similar sentiments were expressed by a senior Migori county KPLC officer, who stated “the roles are complimentary”, citing the county government partnership to map and locate priority LMCP areas as an example [38]. This seems a constructive and realistic relationship, aligning with the reticulation roles outlined in the Constitution and *Energy Bill 2015*.

However, differing opinions existed concerning county grid electricity generation initiatives. The Migori CIDP highlights ambitions to attract investment to develop hydro power from the Gogo waterfalls in Migori; a site the sub-county administrator felt should be “county owned, so resources can be ploughed into the county” [42]. Noting debates concerning the share of oil revenues in Turkana (see Chapter 5 & section 7.4), the officer called for the expansion of Gogo Falls but stressed “how do we [Migori] get rewarded for this”. This sense of county ownership was disputed by other stakeholders. A KenGen officer at Gogo Falls remarked, “The county government feel Gogo Falls is their resource and want to benefit from it, but it's not the case”, arguing for future collaborations rather than transfer of ownership: “long term, we can partner with county government and upgrade Gogo Falls” [39]. A county government engineer concurred, stating realistically that the county budget

was “not enough for major energy projects” which require financing from national government or NGOs [43], while SEI and Practical Action representatives felt grid-tied generation on this scale was a national government role, the latter stating a preference for the county to facilitate the private sector to develop infrastructure [74, 70].

These counter arguments seem prudent for while there is a case for Migori county to receive a share of the revenue from Gogo Falls, the notion that the asset should be transferred to the county seems unconstitutional, impractical and unjust. As noted in Chapter 5, The *Energy Bill 2015* states generation is a national function while the chapter also indicates that broader sub-national capacity and budgetary constraints mean the development of Gogo Falls is almost certainly beyond the means of the county¹⁰¹. This suggests that within Migori, county interpretations of their grid electricity roles have not evolved to the same extent seen elsewhere in the country, where there has been greater recognition that legislative and practical limitations mean a supportive rather than a lead role.

Off grid electricity

Migori’s poor roads and dispersed communities have contributed to the county being seen as well suited to off-grid electricity initiatives; an SEI representative earmarking the county as an “interesting place for small-scale mini-grids” [74]. However, national government representatives were critical of county government endeavours in this sector. An officer from the national government Energy Centre in Migori, an institution charged with disseminating small-scale renewable energy and clean cooking technologies, stated that, aside from street lighting, their interactions with the county government had continued to be very limited since devolution:

At the moment the county doesn’t have any input ... If the county had brought financial support and experts to the energy centre, then we could work as a team, but it’s not happening. I don’t see any tangible activities they are undertaking [40].

The officer highlighted there had barely been any contact with the energy department since a street lighting initiative one year ago, comparing Migori unfavourably with Homa Bay (a county the Migori Energy Centre also covered) who were in contact daily, “Homa bay county have much more interest, ... they are more active than Migori, they are doing their best”. This seems a significant oversight for the county government to not engage with an institution, whose activities seem to readily align with county energy roles. The SEI representative confirmed this lack of interaction, but suggested the fault may lay more with the Energy Centre:

In Migori, there is a county energy office and a national government energy centre on the same side of the road in different compounds, but they never coordinate anything together. The National Energy Centre just follow what their [national level] bosses tell them [74].

Despite the apparent ease of communications, the quote indicates a top-down power structure, absolving the Energy Centre of local accountability and thus likely disincentivising the need to interact

¹⁰¹ In addition, the decentralisation of national grid electricity power stations would appear to unfairly benefit the recipient county, as not all counties have such generation assets but have indirectly financed their construction and the adjoining distribution network via taxation and electricity bills.

with the county government and local communities. A Migori county representative concurred, stating “Energy centres, there is one in Migori, but it’s not doing much, it should be devolved, but it’s not as it’s a way of the national government keeping their people in” [83]. The Migori sub-county administrator was also damning, noting the “old equipment” and questioning, “is it really effective, quite a number of people have gone there to be educated, ... because of a lack of resources, it hasn’t developed the way it should have” [42]; a point conceded by the Energy Centre officer who stated insufficient funding from the national treasury was an issue¹⁰² [40].

Top-down governance was also seen as hindering the development of the national government run South Nyanza Sugar Company (SonySugar) factory as a waste-to-energy producer¹⁰³. The plant currently delivers 4MW of off-grid electricity to the factory facilities via bagasse co-generation, although a senior SonySugar electrical engineer stated there was potential for 20MW of which 11MW could be exported to the grid [44]. However, KPLC terms were seen as unattractive by the engineer, having led to a rival competitor, Mumias, abandoning their grid tied system:

[The] tariffs are not attractive ... There were also lots of penalties imposed by KPLC [on Mumias] if there were any breakdowns/stoppages on power generation [44].

The imposition of fines seems particularly ironic given KPLC’s firm opposition to paying compensation for their own outages [see Chapter 6], and more critically appears to have disincentivised Sony Sugar from generating low carbon electricity which Migori urgently needs; the engineer distancing the factory from future national government collaborations, preferring to incorporate more solar energy “instead of relying on KPLC”. This echoes many of the difficulties Strathmore university faced establishing a grid tied system (see Chapter 5 and section 7.5), reiterating the barrier regulatory deficiencies pose to sub-national level off-grid electricity initiatives.

As with Gogo Falls, the sub-county commissioner felt Sony Sugar should be devolved, reasoning “we own the surplus and the cane” [42]. The commissioner added any transfer would have the support of local sugar farmers allegedly underpaid by Sony Sugar and lacking a say in the national government dominated governance of the factory. Yet, it seems the county has not been actively engaging in facilitating more representative governance. The Sony Sugar engineer reported little interaction with the county government, with co-generation expansion talks occurring only with national government parastatals [44]. A manufacturer of cooking briquettes from the waste bagasse at Sony Sugar felt this was due to the county not being interested in financing any scaling up of co-generation [45].

Overall, the lack of engagement by both national and county government institutions in the off-grid sector appears significantly detrimental to the county’s development. It also points to the failings of a MLG1 governance approach whereby national government grid extension initiatives have been prioritised over off-grid initiatives which appear more apt for the Migori geographical context.

¹⁰² The Migori Energy Centre was visited as part of the fieldwork for this PhD and the equipment demonstrated appeared outdated, corroborating the sub-county commissioner’s view.

¹⁰³ Sony Sugar is almost entirely state owned, with the national government a 98.8% shareholder (SonySugar, 2018).

Clean cooking

In line with the national picture, clean cooking did not appear to be high on the priorities of either national or county government in Migori. An officer at the national Energy Centre stated that clean cooking aims were “either biogas or jikos” but was vague on details of specific initiatives [40]; a concern given it should be a critical component of the institution’s mandate. The sub-county administrator felt biogas initiatives had been undermined by national government political patronage and corruption, although conceded the county government had not yet established a regulatory framework (part of their mandate under the *Energy Bill 2015*) [42]. This assertion was shared by a representative from an African biogas firm, who cited difficulties working with both levels of government in Kenya, but particularly the national government whose overly bureaucratic and corrupt processes had slowed development of biogas in Kenya [57]. Interestingly, he compared the enabling environment in Kenya as unfavourable compared to Rwanda (where the firm also had operations), stating “the Rwandan government is very keen in promoting their farmers; the government in Kenya doesn’t really represent ordinary people, just big business”. This is again suggestive of national government protecting vested interests in the energy sector, a prevailing trend in Kenya as noted in Chapters 5-6.

Cheaper electricity was seen as the key to clean cooking by the sub-county administrator and senior KPLC officer [42, 38] contrasting with the biogas and jikos emphasised by the Energy Centre officer and a surprising proposition given the low electricity access rates in Migori and very low use of electric cooking across sub-Saharan Africa (Brown et al., 2017). For the sub-county administrator, reduced electricity costs would only be possible if competition was provided for KPLC, while the KPLC officer felt further investment in geothermal was required. Although geothermal is likely to assist the provision of cheaper and more reliable electricity generation, the KPLC officer appears to have overlooked the more immediate barriers to grid electricity access: poor reliability and prohibitive cost stemming from distribution issues and the KPLC monopoly over retail. This current state of affairs suggests that without innovative financing mechanisms, electric cooking via the grid is not likely to be an option for most Migori households. Although recent findings in the literature indicate that off-grid electric cooking is becoming increasingly affordable in sub-Saharan Africa, with Kenya showing particular promise due largely to its “strong track record for innovation in the energy for development space” (Batchelor et al., 2018, p.266).

Yet, despite health and environmental issues suggesting clean cooking should be a priority, county government concerns seemed overwhelmingly focussed on street lights. A Migori county representative felt this was unfortunate but politically pragmatic:

Intellectually, you would invest in clean cooking, but people want street lights, so they can make more money. ... it seems that people want street lights more than the thing they should want. However, people have been going without clean cooking for a long time, so will ask, why do I need this? [83]

The county representative added that raising awareness of health implications was key to addressing the lack of traction clean cooking had in the county: “when people think of health, in Migori they’re thinking of malaria, aids, etc, and not the effects of three stone cooking”. This reiterates calls in the

wider literature for a cross sector approach to clean cooking which focuses primarily on social/behavioural factors rather than technological dimensions (Brown et al., 2017).

Community sensitisation thus appears vital in raising awareness of clean cooking's importance, a role the county seems well placed to assist in the facilitator role outlined in Chapter 6, helping coordinate local communities and other stakeholders who could deliver sensitisation programmes. Yet, the county representative, reflecting the broader political economy issues behind street lighting initiatives noted across Kenya in Chapter 5, was pessimistic this would be achieved, stating: "Energy for a county is 5th or 6th in the line of priorities, ... trying to do a clean cooking programme is a lot of effort to show people why they need it, so instead they go for street lighting" [83].

7.1.4 Key county issue: uncoordinated power structures and their impact on the community level

A lack of coordination between key energy stakeholders appears to be the key issue undermining Migori county energy governance. This issue seems clearly evident within the county government, where the energy department was widely seen as under supported. A local research analyst stated the county energy director was "basically the only person in the department, he maybe has an admin person under him, but he is the only energy specialist" [98], while the sub-county administrator recalled the director had stated in response to being asked how he covered all the wards, "I am one county, I cannot work effectively" [42].

Representatives of SEI working in Migori confirmed this paucity of staff and also highlighted a lack of energy expertise at the senior county executive level [74, 79, 80]. They noted how this had resulted in coordination issues between the department and the executive, with the latter appearing to continuously undermine the director:

There's only [the director] to do all the work. He's not a career politician, he is actually an engineer. Talk [was] that he was feeling demoralised because those above him were taking decisions, telling him what was to be done regarding energy, and these people weren't 'energy' people, the people above were in charge of several sectors [74].

The quote reflects warnings from academia that capacity challenges particularly affect the political class (Brown et al., 2015) and highlights the issues raised more broadly in Chapter 5 of civil servants with sectoral expertise being managed by CECs and COs who often only have expertise in one of the departments combined within the ministry they head. This could potentially arise in the coordination of county ministries across the country but appears to have particularly manifested in the energy governance of Migori.

The problems of this structure were inadvertently highlighted in a critique of county capacity by a Nairobi-based ERC officer: "the main issue with counties is raising awareness. Migori is putting up street lights because that's what they understand. With more awareness, it can open up the roles" [11]. However, this prioritisation of street lighting over more pressing energy issues is again reflective of the expertise-lacking senior executive overruling the director, who criticised the focus, commenting incredulously: "people think street lighting is energy [i.e. it isn't]" [41].

Other institutions also appeared to eschew coordination with the county energy department. An SEI representative reported the national government operators of Gogo Falls Hydro Power plant were bypassing the county energy director to engage directly with the community:

Kenya power [sic KenGen] says itself we just do it [engage communities]; we don't have to involve the minister or director of energy. Yet it's the role of the director of energy to know the different projects that are happening at the county level so ... there's still that disconnect [74].

While KenGen's community engagement in Migori is to be lauded, the bypassing of the county energy director significantly undermines the governance structure intended by the devolution process, as elaborated by the SEI representative, "people haven't really understood why the director of energy is at the county level, [it] is so that he can be your first contact person and then he can send the information from the communities" [74]. These occurrences of institutions not coordinating activities with the energy department seems highly likely to impede the development of urgently needed county energy planning; key to facilitating county energy initiatives and investment.

7.1.5 Migori conclusion

Overall, decentralised energy governance in Migori has been marked by uncoordinated stakeholder engagement which has facilitated the continuation of the national government's MLG1 approach to energy in the county. The lack of capacity at various scales within Migori has further hindered coordination, diminishing the scope for the county government to challenge the national government dominion and facilitate more locally appropriate solutions to community energy needs: the demographic and geographical context suggesting a greater emphasis on small scale off-grid electricity and clean cooking is required.

7.2 Nakuru

Nakuru lies within the Great Rift Valley and is the fourth largest county in terms of population. The population is mainly rural (62%) although the county has several important urban centres (Nakuru County Government, 2013). The county capital, Nakuru town, is the centre of the flower industry (Kenya's leading export), while Nakuru's second and Kenya's 11th largest town, Naivasha, is a hub for geothermal energy and set to become an important industrial centre as a terminus to the Standard Gauge Railway (SGR) extension and site of a newly constructed dry port.

The county's relative proximity to the centres of power in Nairobi 160 km away has seen Nakuru relatively well served by resources, with many governance structures in place owing to Nakuru Town's pre-devolution status as the capital of the former Rift Valley province. Politically, Nakuru has tended to vote for the ruling coalition (Table 7.4), although the political landscape has been highly contested, which combined with its cosmopolitan demographic mix led to some of the most severe post-2007 election violence (Anderson & Lochery, 2008).

Table 7.4. Presidential and governor election results for Nakuru county in 2013 and 2017 (MCI Maps, 2017).

Presidential election results				Governor election winner	
2013		2017 (annulled)		2013	2017
Kenyatta (Jubilee) 80.2%	Odinga (ODM) 17.1%	Kenyatta (Jubilee) 84.7%	Odinga (ODM) 14.8%	Mbugua (Jubilee)	Kinyanjui (Jubilee)
2017 registered voters: 948,668					

7.2.1 Developments in decentralised energy governance

Since 2013, Nakuru has had an energy department, placed in the Ministry of Environment, Natural Resources, Energy, and Water to synergise energy with natural resources and best exploit the county’s geothermal resources [26]. The department has developed several energy related policies in collaboration with transnational actors and their in-country partners, including a county energy plan with KAM (Table 7.5). The development of these policies represents a significant achievement given few counties have completed energy plans, which are critical for developing initiatives and attracting investment (Newell et al., 2014).

Table 7.5 Nakuru energy related polices developed since devolution

Policy	Published	External Collaborators
County Clean Energy Policy (i.e. the County Energy Plan)	2016	KAM, Integral Advisory Ltd
Renewable Energy Plan	n.d.	UNIDO, CoG
First CIDP (2013-2017)	2013	None

These county policy documents indicate access to electricity has improved, rising from 34% in 2009 to 54% in 2016 (Table 7.6). This has predominantly been achieved via national government grid electricity initiatives and is thus subject to the same concerns illustrated in Chapter 5 regarding whether the data records usage or merely availability. No data exists in the policy documents concerning overall off-grid electricity access rates although it seems likely to be low given the Renewable Energy Policy states the exploitation of renewable energy as “minimal” (Nakuru County, n.d., p.iii). A senior Nakuru county energy officer [99] reported the costs of off-grid schemes had limited the county to pilot schemes for solar boreholes and waste-to-energy, although two community scale nano-grids were implemented as part of the donor led SONG project¹⁰⁴. Access to clean cooking also remains low and has not been subject to any major national or county initiatives.

Table 7.6 Energy access in Nakuru (Nakuru County, 2016)

Grid Electricity	Off-grid electricity	Cooking fuel
54%	No data	46% firewood, 40% charcoal, 8% paraffin, 5% LPG, 0.7% biogas, 0.1% solar

7.2.2 Transnational actor interactions with decentralised energy governance

Nakuru county government has interacted with several transnational actors, predominantly on energy policy development (Table 7.5). This policy support was viewed by the county as key in helping collect energy data and guide clean energy activities; a county environment officer [26] feeling there was now

¹⁰⁴ SONG = The Solar Nano Grid Project (see section 1.3)

potential for “county implementation of projects, with the aid of the guidelines, priority areas and directions we now have coming from the two plans”. A senior KAM official concurred, highlighting the county government had already begun implementing aspects of the energy plan they collaborated on, integrating policies into the broader CIDP while also starting to implement solar powered boreholes. Representatives from the WWF and Practical Action also reported collaborations with the county, and the extent and success of overall transnational engagement appears to have stemmed from networking and a proactive approach on behalf of the county, supporting the analysis of the previous chapter which argued these two factors as key to successful transnational actor engagement.

These interactions with transitional actors appear to have been positively received by the county government; a Nakuru county CEC stating publicly at the major 2017 NETFund county renewable energy workshop the county’s readiness to work with different transnational actors on renewable energy initiatives. A senior Nakuru community-based organisation (CBO) representative agreed transnational actor capacity support was critical, but felt it was essentially national government driven:

the other day ... the ministry of energy [came] with the consultants from Nairobi [i.e. from KAM] and you can already see ... there is the national government coming to meet the county government and they are actually doing the plan for them [28].

This appears concerning for it questions the independence of Nakuru’s energy policies if the national government is utilising transnational funding and effectively ‘doing the plan for them’, potentially leading to national rather than county government interests being prioritised. This was reinforced by the CBO representative’s assertion that “on the ground, the MoEP doesn’t have any presence, it hasn’t devolved, so even in terms of contact with the county governments, it’s not there” [28].

The involvement of Integral Advisory Ltd in delivering the Nakuru energy plan perhaps further supports this view, given they were also contracted by the National Government to deliver the nationwide ‘County Energy Planning Framework Template’ and thus likely to be aware of national government interests¹⁰⁵. A CAFOD energy consultant’s analysis of the Nakuru plan listed several criticisms which appear to reinforce the notion of national government influence:

[The plan] relies solely on government data, where available; no independent analysis or additional surveys or FGDs and consultations. ... Very top line: no mention of CIDP projects and energy interventions for them [106].

The county’s perceived reliance on transnational actor funding for energy initiatives also appears to be limiting Nakuru’s scope to operate independently; a Nakuru county environment officer [26] revealing: “The energy component of this department [sic ministry] is really underfunded, they’re not able to do any projects independently, only through donors and stakeholders”. While funding constraints are almost certainly an issue for larger grid electricity initiatives, the attitude appears somewhat short-sighted given the array of cost-effective roles a county energy department could engage in and appears reminiscent of the broader sense of counties not realising potential opportunities noted in Chapters 5-6. Community sensitisation on clean cooking and small-scale

¹⁰⁵ At a 2016 workshop it was announced that the template for the GIZ backed County Energy Planning Framework (see Chapter 5) was based on the Nakuru energy plan being drafted by KAM and Integral Advisory Ltd.

renewable energy seems a particularly critical and feasible role for the county if acting, as this thesis contends, as facilitator rather than implementor; the lack of which thus far indicating a facilitating role of this ilk is not being sufficiently emphasised by transnational actor capacity building and policy initiatives.

Overall, the positive response of the county to transnational actor engagement and the energy policies developed highlights the importance of the latter in assisting the urgently needed county capacity building. However, it appears these interactions are being unduly influenced by national government and thus may reflect their interests more than the county's. A greater emphasis on building county government capacity to be a facilitator of off-grid electricity and clean cooking initiatives appears prudent to help maintain Nakuru's scope to operate independently of national and transnational actor interests.

7.2.3 National government interactions with decentralised energy governance

Grid electricity

Interactions between national government and the Nakuru administration over grid electricity were seen as being dominated by the former. Responding to the community criticisms of the county government over the lack of improved electricity access A senior representative of a local CBO felt this was understandable, given the county role was currently limited:

As things stand right now, they [the county government] have very little control over what would happen or not happen ... whether that is going to be electrified, the best they can do is to lobby the government to extend those services in those [i.e. their] areas, and if they are within the government plan for that period then perhaps all they can do is try and make sure it happen slightly earlier [28].

The limitations of the county role were also seen by the CBO representative as why the community criticisms of the county from the Nakuru FGDs (see Chapter 6) over the lack of improved electricity access were misdirected. This analysis aligns with the findings of the previous chapter, which argues the de facto monopoly of KPLC and prohibitive costs of grid electricity render a lead county role unfeasible, although the community complaints suggest sensitisation of national and county government roles needs to be undertaken to help ensure bottom-up pressure is effectively channelled.

County efforts to lobby the national government for “earlier” grid connections (a suggested by the CBO representative) appear to have been hindered by funding and capacity constraints. A county environment officer criticised the “minimal” funding the county energy department had received, stating it was sufficient “only for devising the energy plans, and even then, it wasn't really enough” [26]. This was compounded by the widely cited issue of the national treasury's unpredictable and piecemeal release of county funds, which meant, according to a Nakuru county health officer “counties have to budget for what they expect or hope to get” [27] – a particularly testing issue given the environment officer's assertion that the “common challenge is that halfway through the financial year, something unexpected comes up which has to be funded” [26]. This appears to reflect the reluctance of central government to cede adequate resources for sub-national mandates as widely

acknowledged in the sub-Saharan Africa decentralisation literature (Chapter 3 cf. D'Arcy & Cornell, 2016). However, the environment officer acknowledged the county was also culpable for the lack of funding reaching the energy department. The officer noted there was a chain of institutions deferring payment as the county treasury also delayed disbursement of funds, while particular criticism was reserved for the county planning department:

The planning docket doesn't see it [energy] as a priority area ... [an energy] plan is submitted to the treasury asking for funds, and then the macro planning department slashes funds and re-prioritises¹⁰⁶ [26].

This highlights the challenge posed by internal competition between county ministries and departments for a share of the county budget, leading the Nakuru county environment officer to conclude energy governance had “not really” improved since devolution, adding “We have the plans but can't implement the projects in this financial year (ends in June) because the amount of funding has been minimal and was only for devising the energy plans”. The quote also indicates the importance of energy plans in securing resources, and perhaps indicates why energy has often been underfunded at county level given many counties do not have completed plans. However, this overlooks the more pertinent issue emphasised in Chapter 5 that the absence of an energy plan stems largely from insufficient national government support for county capacity building (a constitutional requirement) and a lack of policy and framework to guide these plans (i.e. from the prolonged failure to promulgate the *Energy Bill 2015* and establish the County Energy Planning Framework).

The senior Nakuru CBO representative agreed that the dearth of resources for energy at the county level, which he felt was “near zero if not zero”, stemmed from the national government not establishing a planning framework to guide counties:

currently what we find ourselves in is a situation where the counties can't do that much but perhaps by the end of this year, you will have templates [i.e. a planning framework] adopted and from next year counties can start sending their county energy plans to the ministry and get allocations directly from the national government [28].

For the CBO representative, developing county energy plans was paramount:

if you don't have a plan, then you don't have resources allocated, so you can only respond very ad hoc-ly, or if you have partners who are generous enough and they have come with the resources [28].

The quotes emphasise how counties are currently hamstrung by a lack of national energy planning guidelines, which partially explains the low prioritisation of resources by Nakuru county to its energy department. However, despite the lack of planning framework, Nakuru county appears partially culpable for not exploiting opportunities which do exist, as inadvertently alluded to by the county environment officer: “Right now, we don't have someone specific for energy, so we need guidelines, structures to help focus efforts” [26]. Given Nakuru appears to have received more support than most counties, the comment is concerning as it suggests the political considerations involved in county

¹⁰⁶ Docket refers to ‘the portfolio or jurisdiction of an official, especially of government’ (see Chapter 4 cf. Buregeya, 2007).

institution building rather than a lack of capacity may be behind the energy staffing deficiency. Thus, it seems the county's energy governance issues are not solely a product of insufficient financing, but to an extent self-inflicted by the county administration not prioritising personnel for the energy department.

Off-grid electricity and clean cooking

Interventions by national and county government in off-grid electricity and clean cooking appear to have been lacking. A representative of Solinc (an East African solar panel manufacturer) argued off-grid renewable energy initiatives were not a priority for the county, citing a Nakuru county renewable energy street lights project which he felt was "only for show purposes, it's not backed up by strong policy" [58]. A senior CBO representative felt the lack of county activity was largely due to capacity issues:

If you touch on matters of renewable energy, you will find that most of these [county] leaders are not really well conversant on the issues that are affecting the people. Now [it] becomes the duty of organisations or CBOs like us, trying to put all that into perspective and bring[ing] it to them so they are able to put that into consideration in policy making, in implementations of their activities [28].

The quote highlights the critical need for local energy needs to be articulated by third parties to the county government. This seems reasonable given the capacity constraints at community level and the near impossibility of the county government having the resources to assess every community's needs as argued in Chapter 6. Going forward, the CBO representative felt the role of non-government actors in decentralised energy governance was to bridge the gap between "being in touch with the needs of the community on the ground and being able to articulate the same issues at the next level so that they're taken care of"; objectives the representative felt had "yet to be fully achieved" but could be facilitated by devolution: "now you have policy makers very close to where you live" [28]. The CBO representative's argument is highly convincing given the well-documented issues of lobbying in the pre-devolution era which necessitated costly and time consuming travel to Nairobi and reflects the well-established arguments in favour of decentralisation, namely that local governments can allocate resources more efficiently due to having better information about local needs and the way local systems operate (Cabral, 2011).

Evidence of the need for organisations like CBOs to bridge the knowledge gap to county governments can be seen through the fact that the initiatives in off-grid electricity and clean cooking in Nakuru have primarily been driven by non-governmental organisations. The SONG project involved a collaboration between overseas research institutes, a local CBO: Sustainable Community Development Services (SCODE), and the village energy committees established by the project to represent the two communities. As noted in Chapter 6, the two communities praised the regular on the ground engagement of the other stakeholders, particularly with SCODE, which contrasted (albeit understandably) with the lack of national and county engagement. The beneficiaries of having an established local partner for attracting transnational investment from actors noted in Chapter 6 was reiterated by SCODE's track record of working with leading transnational organisations on clean cooking initiatives. SCODE previously collaborated with the Netherlands Development Organisation

(SNV) and SEI on their respective community biogas and clean cookstoves programmes, which again were largely devoid of government impetus (Johnson et al., 2015).

This view of the importance of non-government actors also seems to be partly reciprocated by the county energy department. In the survey conducted for this PhD, the Nakuru county energy department listed three local stakeholders: SCODE, Solinc, and Gogar farm¹⁰⁷ as the organisations communicated with most on energy issues. This contrasts with the vast majority of the other eleven counties surveyed, with ten naming transnational and national government actors as the stakeholders most connected with although all 12 counties still considered national government to be the key stakeholder at the county level. This engagement with local stakeholders indicates a movement in Nakuru county energy governance towards MLG2, suggesting Nakuru may be more responsive to local energy needs than the other surveyed counties, who still appear to be engaging primarily with national government.

7.2.4 Key county issue: geothermal energy and its impact on the community level

Nakuru contains over 90% of Kenya's current 636MW of geothermal power, which has been at the forefront of national government drives to increase the nation's installed grid electricity capacity and reduce dependence on drought affected hydro power (Energy Siren, 2018). Although widely seen from a national perspective as successful in achieving these aims, most local stakeholders felt the geothermal projects lacked local ownership and direct benefits to the county. The senior CBO representative stated, "here in Nakuru, we are saying that we need to get a bit of resources from geothermal", while the Nakuru county health officer highlighted the negative impact on the local economy:

Nakuru generates a lot of electricity. We should benefit but we are not. For example, people next to generators aren't connecting to the grid. Connecting people to the grid should be done at county level. Local industries can't progress [28].

The lack of local benefits indicated in the quote seems to partly stem from Nakuru having less engagement with GDC than other counties with geothermal resources. This is due to the parastatal having different operational procedures in the pre-devolution era when most of Nakuru's geothermal facilities were installed as a GDC officer explained:

For the Menengai project [in Nakuru], devolution came and found us already there, so all you had to do now is walk the new government to what we have been doing so I think in that instance, I have not seen any challenge. But in terms of implementation of projects, from now on, anything that we do, we have to inform the county government [15].

The quote suggests Nakuru have missed out on the mandatory engagement with GDC required since devolution, which stipulates that the parastatal secures a county letter of no objection (Johnson & Ogeya, 2018). This appears to have led to the national government dominating the sector in Nakuru as the senior CBO representative emphasised: "who's signing the contracts, who's prospecting or

¹⁰⁷ Gogar farm is the site of a proposed private sector 10MW solar project in Nakuru (Lakini, 2018)

exploring, who's deciding what energy will be generated and used in Nakuru county by everybody – [it's] the national government” [28]. The Nakuru voice also seems to have been relatively inhibited compared to other counties due to its geothermal resources lying in land classified as forest reserve and thus falling under the remit of the national government entity, the Kenya Forestry Service. A GDC officer described this as “lucky” for it absolved the parastatal from needing to undertake the same level of engagement in Nakuru as seen at other sites in Baringo and Turkana counties

[In Baringo and Turkana] the land is community owned [and] it's entrusted to county government. So, this really calls for close relations between us, the implementing entity, and county government [15].

The quote suggests Baringo and Turkana counties have been able to use community land rights as leverage over GDC in a similar vein to the community protests over transmission lines and power station infrastructure discussed in the previous chapter. This appears to have ensured county engagement and a governance system more redolent of MLG2, which has not been possible in Nakuru due to the GDC sites falling on national government land. This perhaps helps explain why geothermal has developed more extensively, yet less equitably, in the county: the more streamlined top-down MLG1 governance unencumbered by participatory politics.

7.2.5 Nakuru conclusion

Overall, it appears decentralised energy governance in Nakuru has been largely dominated by national government interests, with the lack of resources assigned by the county to the county energy department a significant contributing factor to this largely uncontested space. However, the county appears to be making initial steps to engage with the activities of local non-government stakeholders, which may enable a more MLG2-esque governance to emerge. This could have subsequent benefits in enabling the county to adopt a more facilitatory role developing off-grid electricity and clean cooking initiatives.

7.3 Turkana

Turkana lies in the far north west of Kenya and has a hot semi-arid/desert climate with unreliable rainfall, leading in recent years to regular droughts (UK AID, 2017). Sparsely populated and remote, Turkana is the second largest and poorest of Kenya's 47 counties (Munda, 2016). 94.3% of the mainly pastoralist population live below the poverty line (Mullins & Wambayi, 2017), with human development indicators, such as illiteracy (79.25%), among the lowest in the country (Turkana county government, 2014).

The lack of development predates devolution. Both colonial and post-colonial governments marginalised Turkana (Mkutu Agade, 2014), with local CSOs pointing correctly to the 1965 'Sessional Paper Number 10' as evidence the non-allocation of funds to Turkana and other “lower potential areas” was official national government policy (see Chapter 3). Since the enactment of devolution, this marginalisation has been formally recognised and Turkana is one of 14 historically 'underserved' counties receiving a share of the national Equalisation Fund. This historical context has seen Turkana mostly vote for the opposition, although there was a sizeable shift to the ruling coalition in 2017 (Table 7.7), which political analysts have assigned to the Jubilee party being more united and running a more

effective campaign emphasising local infrastructure achievements, such as road construction and electrification (Cheeseman et al., 2017).¹⁰⁸

Table 7.7 Presidential and governor election results for Turkana county in 2013 and 2017 (MCI Maps, 2017).

Presidential election results				Governor election winner	
2013		2017 (annulled)		2013	2017
Kenyatta (Jubilee) 29.9%	Odinga (ODM) 67.5%	Kenyatta (Jubilee) 44.8%	Odinga (ODM) 54.3%	Nanok (ODM)	Nanok (ODM)
2017 registered voters: 188,617					

7.3.1 Developments in decentralised energy governance

There is consensus that the post-2013 devolution landscape has radically increased the pace of development in Turkana, leading to the implementation of infrastructure and services not seen before 2013¹⁰⁹. This echoes the sentiment noted more broadly across Kenya but felt more keenly in Turkana and the other historically marginalised ASAL counties. A Nairobi based GIZ representative stressed the stark contrast between a visit made in 2012 and subsequent visits to the county following the implementation of county governments in 2013:

Now, when I go back to Marsabit and Turkana, the difference you cannot believe it, those two towns [sic counties] have grown and it is growth that if devolution hadn't happened, would never have happened, would never have happened [67].

Attributing these developments to devolution was echoed by all stakeholders interviewed, with the county having its own budget seen as key. Turkana has consistently had the second largest county budget allocation after Nairobi, receiving Sh10.3billion for 2019-20 (Mutai, 2019); a benefit extolled by a Turkana Chief Officer who stated, “the biggest advantage, the extra money... before devolution, the money from the government was probably less than 1billion Ksh (US\$10,000,000)” [32].

Turkana has had a county energy department since 2013, placed initially in the Ministry of Energy, Environment and Natural Resources but then moved to the Ministry of Lands, Energy, Housing and Urban Area Management in 2017 to exploit synergies between energy and land rights in oil exploration [31]. A county energy plan has been developed by the department in collaboration with GIZ (Table 7.8), although it remains unpublished with the county awaiting the promulgation of the national *Energy Bill 2015* according to a senior Turkana county energy officer [31]. Interviewees also reported the county government has implemented several small scale off-grid solar initiatives, including street lights, boreholes, and panel installations in remote schools.

Table 7.8 Turkana energy related policies developed since devolution

Policy	Published	External collaborators
Energy sector plan	Completed but unpublished	GIZ, EED
CIDP (2013-2017)	2014	GIZ

¹⁰⁸ President Kenyatta was keen to emphasise electrification in the run up to the 2017 election, commissioning a KPLC project in July 2017 with the words “From now on there will be no darkness in Turkana” (ESI Africa, 2017).

¹⁰⁹ These include a referral hospital, Early Childhood Development and Education (ECDE) centres, tarmac roads, street lighting and electricity in the major urban centres.

National government initiatives have seen electricity coverage from diesel powered mini-grids increase from two to five urban centres, while 2017 saw Lokichar and Kalemungorok become the first urban centres in Turkana connected to the national grid (Ayemba, 2017)¹¹⁰. However, access remains low, with only 15% of households using electricity for household lighting (Table 7.9). The quality of electricity is also an issue; a GIZ officer based in the capital, Lodwar, reporting the supply was now “a bit more stable ... but we still very often have 5-6-hour blackouts” [37]. Clean cooking remains under addressed by both levels of government; the vast majority of the population remaining reliant on firewood and inefficient traditional stone fires (Table 7.9). This is a critical issue given the interconnected problems of deforestation and drought in the county (UK AID, 2017).

Table 7.9 Energy access in Turkana (Turkana county government, 2014)

Grid electricity/Grid islands	Off-grid electricity	Cooking fuel	Cooking stove
10% for household lighting	5% for household lighting	89% firewood; 9.3% charcoal; 1.7% other	85.9% traditional stone fire; 11% jiko; 0.9% improved jiko; 1.8% kerosene stove; 0.4% gas stove.

7.3.2 Transnational actor interactions with decentralised energy governance

Transnational actors have played several significant roles in the Turkana energy sector. GIZ and the World Bank have funded the implementation of mini-grids in three urban centres via negotiations with the national government. Subsequently run by KPLC (and thus equating to the ‘grid island’ concept defined in Chapter 6), the governance of these mini-grids has mainly bypassed the county government. The current World Bank KOSAP scheme to fund an additional 120 KPLC run mini-grids in the 14 underserved counties seems set to consolidate this national government control. As noted in Chapter 5, the potential impact on private sector competition is acknowledged, if not wholly accepted, by a World Bank report: “some mini grid players in Kenya believe that the program will make KPLC more powerful” (ESMAP, 2017, p.76).

However, in other aspects of the energy sector, transnational actors have worked in partnership with the county government. A senior county energy officer praised the collaborations with GIZ on capacity building, which directly engaged the county administration (despite emerging from bilateral discussions between the German and Kenyan national governments – see Chapter 6) and supported the development of the vital county energy plan. The officer highlighted this assistance was crucial as “the skills base, technicians, engineers, in Turkana is limited” [31]. This lends further support to the comments of the Mandera energy officer in Chapter 5 concerning formerly marginalised counties struggling to attract and retain expertise; reinforcing the well documented concern that decentralisation facilitates agglomeration economies (Cabral, 2011).

The senior energy officer also stressed that support from the national government had been lacking: “Capacity building, this is where national government *can* help [i.e. but they don’t], they know the plans, we are the same country” [31]. The notion of being ‘the same country’ appears a call for the national government to lay aside political based rivalry, pertinent given the high-profile clashes

¹¹⁰ The senior Turkana county energy officer also highlighted that the urban centres of Lodwar, Lokichogio, Lokitaung, Lokori, and Lorugum also have access to electricity via KPLC mini grids (or ‘grid islands’ – see Chapter 6)

between the President and county over the sharing of petroleum revenues (see Chapter 5 & subsection 7.4.4). The officer's comment also reiterates the argument made in earlier chapters that national government has been mainly responsible for the insufficient development of county capacity impeding the development of decentralised energy governance.

Transnational actors have also supported local, grassroots organisations. A representative of a local CSO highlighted significant support from the Catholic transnational development organisation, 'Cordaid' (part of the CARITAS confederation) to fund CSO advocacy work on land rights, environment and governance issues concerning Turkana's oil resource, resulting in the CSO being hired by the MoEP to conduct a baseline survey on community perceptions of oil [33]. This significant role seems to reflect the highly influential position the church has historically had within Turkana; a GIZ officer stating the "Diocese Caritas effectively replaced the local government pre-devolution" [37]. The power of the church within the county also appears to represent a check on central government authority, challenging national government efforts to implement MLG1-esque governance in Turkana to the same extent seen more broadly in Kenya (see Chapters 5-6).

7.3.3 National government interactions with decentralised energy governance in Turkana

Grid electricity/grid islands

Interactions between national and Turkana county government over electricity were strained by diverging views over KPLC's running of the county's 'grid islands'. The senior county energy officer felt the management was not aligned to the local context, criticising the solar power upgrade of the Lodwar mini-grid for not including storage: "it doesn't make sense", and the GPOBA connectivity initiative for its unaffordability: "this GPOBA scheme, who is going to pay [i.e. be able to pay] the monthly charges after they have been connected", adding that "some people who shouldn't benefit from GPOBA are benefitting" [31]. The comments highlight the challenges inherent in applying a national policy without adjusting to local contexts; the relative poverty of Turkana rendering GPOBA far less effective than in other counties where the scheme has been seen as an enabler (e.g. by stakeholders in Migori and Nairobi – see sections 7.2 and 7.5). It also brings into question the stated effectiveness of the cross subsidisation at the heart national government electrification initiatives if those who can afford the standard connection fee are paying the reduced GPOBA rate.

The energy officer saw the unsuitability of these KPLC initiatives as a product of the lack of devolution in the energy sector:

I don't see why we would have KPLC here, that's the problem with having to wait for decisions to be made 700 miles away, when mini-grids are locally managed, decision making is easier We are taking a cradle to grave approach, in order not to leave people worse off [31].

The quote reiterates the sense that KPLC has merely undergone deconcentration, with local operatives still bound to centralised, top-down decision making from Nairobi; the implication being that this more MLG1 form of governance has failed to consider policy holistically resulting in increased local poverty. Given the historic tension between Turkana and the centre, this weak form of decentralisation also seems to serve the well-established purpose noted in the literature of elites using deconcentration to

consolidate central power by creating posts (particularly in opposition areas) which are filled by personnel willing to tow the central government line (Crook, 2003). A senior Turkana county KPLC officer seemed to fit this mould, arguing the continuation of top-down governance was positive: “KPLC tells the county what it’s going to do, the county then sensitises the community, the relationship is working well, no confrontation” [30]. This disparity between the county and KPLC officers’ view of their mutual relationship appears to emanate from contrasting energy governance ideals: the KPLC officer’s predilection for the de facto MLG1 position and the more MLG2 approach favoured by the county energy officer and seemingly intended by the Constitution.

These distinct governance preferences appear to have resulted in working practices which lack inter-governmental coordination. The KPLC officer noted the county government was “usually” aware of national government grid development plans but added “It’s not a must that you [i.e. KPLC] inform the county. If they ask, we give them the information about the extension” [30]. The comment contradicts the concurrent status of reticulation operations in the Constitution and *Energy Bill 2015* (see Chapter 3&5), reinforcing the sense that MLG1 thinking dominates the Turkana grid islands space. This seems likely to strain relations between the national and county government, undermining the KPLC officer’s assertion the relationship was “working well”.

Small-scale off-grid electricity

Inter-governmental coordination was also affected by misinterpretations concerning responsibilities for small-scale off-grid electricity systems (i.e. not grid islands). The senior county energy officer defined the county role as limited to “renewable energy at small scale, for example, standalone systems in public institutions, dispensaries, schools” [31]. While not a comprehensive list of the bill’s county functions, it is a reasonably realistic overview of the county’s role, supporting the positive assessment of county energy department capacity by an ERC officer: “in Turkana, they have someone well-versed in the docket, [who] appreciates the role and can lobby” [11].

This contrasts sharply with the senior Turkana county KPLC officer’s view that “RE is devolved” [30]; a clearly flawed understanding as there is no provision in either the Constitution or the *Energy Bill 2015* for 100% devolution of renewable energy. As noted by the senior county energy officer, such a proposal would not be feasible given county budgetary constraints: “They say renewable energy is at county government, but funds are limited, so if you’re going to do a larger mini-grid project, it could exhaust all the county funds” [31]. This uncertainty suggests the well-documented issue of power and resources not matching responsibilities in decentralisation reforms is likely to be exacerbated if key stakeholders are unaware of where responsibilities have been allocated (cf. Conyers, 2007).

These different understandings of roles appear to have led to conflicting views on sectoral progress. The senior county energy officer emphasised the increase in energy access within Turkana stemmed from devolution affording the counties “a mandate to prioritise what they want”, highlighting small scale off-grid initiatives such as mini-grid connections, solar lanterns and solar boreholes as evidence. Further conflation of energy roles seems evident from the county officer’s assertion that REA’s mandate in Turkana was currently being implemented by the county due to the poor performance of the parastatal’s contractors:

We've started [electrifying] public institutions, this is being done by the county, not REA. We've had a lot of complaints about REA contractors. REA just electrify individual classrooms for the laptops programme ... not the whole school [31].

This quotation reiterates the sense emerging more broadly across Kenya that REA since switching focus to the Digital Literacy Programme has become more concerned with hitting politically expedient national government targets (i.e. number of laptops) than more broadly beneficial institutional electrification which could enhance development. In addition, it indicates that progress in addressing energy access issues in Turkana since devolution has been primarily county driven.

Yet, the near opposite view of the county energy department's performance was expressed by the KPLC officer:

We have not seen much input from the county. They have plans, but I don't know how advanced they are. We have not seen a proactive approach into tapping into renewable energy [from the county]. We have really high solar and wind potential [30].

The veracity of this criticism seems doubtful given the positive appraisal of the county energy department by other stakeholders such as the aforementioned ERC officer and the two Turkana FGD communities; the latter seeing the county alongside NGOs as the key entities facilitating improved energy access (see Chapter 6). The KPLC officer's comment seems more indicative of a lack of collaboration and possibly trust between the two levels of government, with the manager unaware of how far developed the county renewable energy plans are. These coordination issues appear to have serious implications, with the role of developing small scale off-grid energy (vital in a county with vast renewable energy resources and a dispersed population) potentially left unfulfilled if both levels of government believe the other is responsible.

Similar disengagement could be seen over street lighting; the one area the KPLC officer agreed "a disconnect" existed, acknowledging that the county felt "the national government was imposing" its grid powered scheme on the county whose preference was for "a mix of [off-grid] solar and grid" [30]. The presence of grid and solar street lights placed directly next to one another in Lodwar (as shown on the cover page) highlights the resulting inefficiencies of this disconnect and is redolent of a non-consultative top-down approach by the national government, especially given street lighting is an exclusive county function under the *Energy Bill 2015*. Community voices tended to side with the county; a Napetet community member complaining the KPLC lights were more unreliable than the county solar lights, while another deemed the KPLC lights a political manoeuvre to counter the credit the county lights had garnered the governor, a prominent opposition figure [104].

Clean cooking

Reflecting the national picture discussed in Chapter 5, there has been limited engagement by either national or county government over clean cooking in Turkana. A senior county energy officer praised the county collaboration with GIZ on clean cookstoves on the Endev programme but felt county interventions had been limited by the "very lean budget for clean cooking" and legislative constraints, with "clean cooking not in the *Energy Bill*" and "charcoal ... under both natural resources and energy" [31]. Although this is an accurate reading of the current legislation's glaring failure to adequately

incorporate clean cooking, there still appears scope for critical county interventions despite limited funding, such as community sensitisation. A Turkana based GIZ officer suggested deforestation was one cooking energy related issue where such initiatives were required [37]. The officer highlighted that community awareness was improving but the importance of trees for soil, water and agriculture was still not fully appreciated; with the use of local acacia trees for producing Nairobi bound charcoal particularly damaging.

Local CSOs deemed both county and national governments as culpable. A representative from a CSO working towards environmental issues criticised the national government's introduction of the ecosystem damaging prosopis plant for charcoal production [34], while a counterpart at a CSO focussed on pastoralist issues felt the county government could do more to assist rural communities unable to access gas by either "giving everyone a modern jiko [which would] at least be a little better", or promoting kerosene as a firewood alternative: "Kerosene is available from oil and everyone can access it" [35]. The latter seems a more prudent proposal as within the development literature handouts are widely discredited (Moyo, 2009), while kerosene has found some support (albeit highly contested) as a transitional fuel (EED Advisory, 2016), and could potentially become economical in Turkana if county oil resources were to be locally distributed. These critiques of government clean cooking initiatives in Turkana indicates the county follows the national pattern which has seen the energy sub-sector predominantly driven by non-governmental actors.

7.3.4 Key county issue: oil and its impact on the community level

Since the discovery of oil in Turkana in 2012, the sharing of petroleum revenues has been the most contentious energy issue in the county and arguably nationwide. As noted in Chapter 5, it was the main reason for the prolonged refusal of the president to sign the *Energy Bill 2015*; the president seeking to both reduce and cap the share counties and locally affected communities would receive. Although as Chapter 5 reveals, the revised *Energy Bill 2017* was eventually passed in March 2019 with most of the county demands met, this sub-section reveals the legacy of the deadlock on decentralised energy governance is likely to be longer lasting as it has seemingly strengthened a more MLG2-esque form of governance in the county.

Much of the tension which arose from the impasse over revenue sharing from petroleum emanated from a sense that the central executive was seeking a continuation of the highly centralised MLG1-esque governance, which had been responsible for the historical marginalisation of Turkana (and other ASAL areas) that had left the county the poorest in Kenya. This sense was heightened by the reason for not assenting to the Bill given by the president who argued the proposed 20% share of revenues to counties and 10% share to affected communities would be beyond the "absorption capacities" of counties unless capped (Kenyatta, 2016).

This rationale was widely dismissed; many stakeholders in Turkana countering logically that capacity could be built or hired. Noting the "168 NGOs" in the county, a CSO representative added dryly, "there's a lot of capacity within NGOs, the UN is here, so there's no experts" [35]. Most saw the capacity argument as a smokescreen for the *Energy Bill* impasse becoming increasingly politicised between the competing interests of the president and the prominent opposition governor of Turkana. This seems to have created local distrust over national government intentions; the CSO representative

stating the Turkana people viewed the president as “here to take our oil” [35]. This tension has been intensified by the lack of community engagement from the national government and Tullow Oil, the Anglo-Irish transnational commissioned to extract the oil. Since Tullow Oil began exploration in 2010, the issues over engagement have had many dimensions, beyond the scope of this sub-section to cover in their entirety. Thus, three key phases of the dispute which have proved crucial in shaping developments over the decentralised governance of oil have been selected as focal points for this sub-section.

2010-2015: Communities and land rights

The initial period of Tullow Oil involvement in Turkana (2010-2013) was marked by a distinct lack of community engagement. A representative of a CSO focussed on natural resource management argued the paucity of interaction with communities was acquiesced to by the national government:

they [Tullow Oil] were criss-crossing pastoral land, cutting trees, fencing land, all this with national government permission, but not local community permission. The local community didn't even know who they were [33]

The CSO representative pinned this bypassing of community engagement on national government exploitation of the Constitution, which decreed resources found below six feet as state owned unless a private title deed is held¹¹¹. This clause hugely disadvantages pastoralist Turkana, where land is communally not privately owned, allowing the national government and Tullow Oil carte blanche to circumnavigate community engagement.

A counterweight to this highly top-down form of governance only appeared after community protests, mostly focused on demands for jobs and contracts for local companies, forced Tullow Oil to cease operations for two weeks in 2013. The stoppage highlighted “the need for clear rules of engagement between investors and hosts” (Akumu, 2013, p.1), as acknowledged by Tullow Oil’s Deputy General Manager for Operations, Frederic Briens, who conceded Tullow Oil had made mistakes over its community engagement which had been the most challenging part of the operation (Mullins & Wambayi, 2017, p.23). A more consultative approach appears to have emerged following the protest; local CSOs reporting a subsequent three-month period in which a series of meetings between Tullow Oil and the communities improved the relationship. This reiterates how community protests over land rights have been a key bulwark to national government imposition of MLG1-esque governance in Kenya.

2015 -16 Transnational actors and FPIC

Community engagement has also benefitted from Tullow Oil needing to comply with Free, Prior and Informed Consent (FPIC) of affected communities under the terms of its International Finance Corporation (IFC) financing with the Canadian transnational, Africa Oil. Mullins & Wambayi (2017) report Tullow Oil’s community engagement was almost universally seen as improved once the FPIC process was triggered in 2015. However, communities criticised the county government and CSOs for their lack of active involvement in the FPIC process, calling for the county “both to oversee the process

¹¹¹ The Constitution makes no mention of depth as a qualifying criterion for resource ownership but does stipulate that “all minerals and mineral oils are public land ... [which] shall vest in and be held by the national government” (Article 62(1-3)).

and to help ensure compliance with agreements” (Mullins & Wambayi, 2017, p.38). This inactivity indicates transnational actors have exerted greater pressure on Tullow Oil to adhere to global compliance norms than the county government elected to represent community interests.

However, this is perhaps understandable given the senior Turkana county energy officer reported county sensitisation over oil was not possible legislatively, and more pertinently because the national government was not releasing information concerning Tullow Oil’s operations [31]. The legislative argument is debateable as the Constitution mandates counties with “ensuring and coordinating the participation of communities and locations in governance at the local level” although the realities of the national government withholding information seems to make this point moot. This seems indicative of the broader trend of transnational actor activities being channelled primarily through national government (see Chapter 6) and reflects findings in the literature which emphasise how uncodified structural factors tend to distort decentralisation from its legislative blueprint (Erk, 2014).

2016 -2018 CSOs and the Early Oil Pilot Scheme

Despite the pressure exerted primarily by communities and transnationals, the national government has appeared reluctant to cede control of oil. This was evidenced by the lack of transparency surrounding the Early Oil Pilot Scheme (EOPS); announced by the national government in 2016, ostensibly to determine the cost and logistics of transporting Turkana oil by truck (Otuki, 2018). Previously, the intention had been to transport the oil by pipeline in 2022 as part of the Lamu Port-South Sudan-Ethiopia-Transport (LAPSSET) project (Ochieng’, 2015), which was supported by Tullow Oil who had reservations over the costs of EOPS. Local CSO representatives saw this national government push for the EOPS and its earlier start date as a result of vested interests: a representative from a natural resource management focussed CSO explaining “the sitting president wants to be champion of the project [i.e. preside over the first oil sales]” [33].

Clear evidence of these vested interests can be seen in the national government’s continued non-disclosure of the EOPS production sharing contract (PSC) (*Business Daily*, 2018), an industry standard, which would determine the share of the resource the government, Tullow Oil, and the community receive. A CSO representative emphasised how the national government was “reluctant” to sign the Extractive Industry Transparency Initiative [ETTI], a global standard for accountable governance of oil, gas and mineral resources, which CSOs had been advocating for and would push the government to disclose the PSC [33]. This secrecy over the PSC has understandably caused significant tension among local communities as recognised by a Tullow Oil representative:

For the community, it’s all about the percentage they get ... the community doesn’t want oil to be transported before they have agreed their share [i.e. via the PSC], they think it’s the start of extraction for real [36].

The fear seems reasonable, given the previous lack of engagement and the broader context of historical marginalisation. A CSO representative also empathised with the community, arguing:

National government think they’re in charge and it’s their mandate to do whatever they want with oil. Decisions are made in Nairobi which the county doesn’t know about [33].

This supports the senior county energy officer's earlier assertion that national government was withholding information from the county, limiting scope for county engagement. For the CSO representative, this meant "CSOs are critical in order to represent the masses" particularly in terms of community awareness and negotiating on behalf of communities. Given the illiteracy rate in Turkana, the CSO representative stressed this representation was vital "so people are aware of their rights" but felt the responsibility also partly fell on "religious organisations and the county energy ministry", which seems redolent of the networked governance of MLG2 [33]. This appears logical given the county's proximity and the strong influence of the church within Turkana. However, it seems the county role would perhaps be best conducted by energy department civil servants rather than county politicians; Mullins & Wambayi (2017) noting community calls for greater county involvement but distrust of elected officials who had "played self-serving roles as intermediaries in the past".

Overall, it seems only aspects of a MLG2 system have restricted the national government and Tullow Oil from developing the oil resource without engaging affected local communities. In each of the three phases, the interactions of non-governmental actors have been instrumental in ensuring community engagement. However, this more representative, multi-stakeholder governance has been weakened by the apparent national government side-lining of the county government in oil governance. This is potentially critical given the EOPS seems to eschew participatory politics; the CSO representative warning the "Early Oil Project is very top-down, President to the Ministry to Tullow, completely against devolution" [33].

7.3.5 Turkana conclusion

Despite national government efforts to impose top-down energy governance in Turkana, most notably over the county's grid islands and petroleum resources, the presence of a range of stakeholders operating at various scales with leverage over national government interests has lessened the impact of this MLG1-esque approach, coercing engagement. The presence of a capable county energy department has also assisted the development of power relations between county and national government, which are more evenly balanced than in the other three case study counties.

7.4 Nairobi

Nairobi County is the smallest (696.1 Km²) yet most populous county in Kenya, with a population estimated to reach 4.9million in 2018 (Nairobi County Government, 2017). The county borders are coterminous with the capital city of Nairobi, a national and regional power hub containing most of Kenya's key power structures, notably almost all national government ministries and the regional headquarters of a number of major transnational organisations, including the UNEP.

The presence of these power structures has led to the county contributing most to national GDP, although at 13%, this contribution is significantly less than the 60% figure commonly perceived (Bundervoet et al., 2015). Yet, despite the lowest poverty rate in Kenya, the wealth generated has not been evenly dispersed: 22% of the county population live below the poverty line (KNBS & SID, 2013), while over 60% live in informal settlements (or 'slums') (Nairobi County Government, 2017).

Politically, the county's demographic diversity has led to highly contested elections. The county's informal settlements saw notable post-election violence in 2007 (Anderson & Lochery, 2008), while

the 2013 and 2017 elections, although not as charged, also witnessed violence and were tightly run (Table 7.10). The latter saw a change of governor, the new incumbent dismissing the entire cabinet of his predecessor, raising questions concerning the balance between continuity and political patronage (Business Today, 2017).

Table 7.10. Presidential and governor election results for Nairobi county in 2013 and 2017 (MCI Maps, 2017)

Presidential election results				Governor election winner	
2013		2017 (annulled)		2013	2017
Kenyatta (Jubilee) 46.75%	Odinga (ODM) 49%	Kenyatta (Jubilee) 48.4%	Odinga (ODM) 51%	Kidero (ODM)	Sonko (Jubilee)
2017 registered voters: 2,304,386					

7.4.1 Developments in decentralised energy governance

Governance in Nairobi differs significantly from the other 46 counties as many administrative structures were in place as the county effectively superseded the pre-devolution Nairobi province. This particularly benefitted sectors, such as agriculture and water, where power had been bestowed on the former provinces, but less so energy, which was almost entirely centralised before 2013.

Developments since 2013 have seen Nairobi form an energy department, sited in the county Ministry of Water, Energy, Environment, Forestry & Natural Resources (MoWEFNR). The Ministry has received relatively little of the county budget, averaging 6.8% over four financial years between 2013-17 (Nairobi county government, 2017), which divided among five departments, suggests little resource for county energy. This allocation is further diminished by recurrent expenses averaging 67%, and 60% of the residual 33% ‘development budget’ remaining unused (Nairobi county government, 2017).

The lack of resources was emphasised by a senior Nairobi county energy officer, who highlighted he was the lone officer working on energy within the MoWEFNR, and that the energy department had received “no allocation ... in any of the last 4 years since the county government was formed ... it all went to environment” [19], strongly indicating energy has not been a priority for the county. Yet, despite these constraints, the energy department has developed a *County Energy Policy & Action Plan* in collaboration with KAM, UNIDO and Practical Action (Table 7.11). Neither the policy nor plan appear to be publicly available, possibly denting investment opportunities, although a KAM representative stated that aspects of both had been integrated into the publicly accessible second CIDP [59].

Table 7.11 Nairobi county energy policies developed since 2013

Policy and planning documents	Published	External collaborators
First CIDP 2013-2017	2014	None
Second CIDP 2018-2022 (draft)	2017	None
County Energy Policy & Action Plan	Unpublished	KAM, UNIDO Practical Action

The widespread availability of energy services from the pre-devolution era (grid electricity coverage was estimated at 90% by the senior county energy officer) has resulted in Nairobi having the highest access rates to grid electricity and clean cooking fuels in Kenya (Table 7.12). However, electricity outages were still common, with stakeholders reporting the quality of supply had only slightly

improved since 2013. No data exists concerning off-grid electricity access rates, while the use of clean cooking fuels such as LPG is the highest in the country.

Table 7.12 Energy access in Nairobi (Nairobi county government, 2017)

Grid Electricity	Off-grid electricity	Clean cooking access
68.2% use electricity for lighting (doesn't say off-grid or grid), 28.8% paraffin, 2.9% grass, 1.7% dry cells	No data	63.2% paraffin, 20.2% LPG, 10.5% charcoal, 3% firewood

7.4.2 Transnational actor interactions with decentralised energy governance

As the site of (almost) all national government ministries, many major transnational organisation headquarters, and the main international airport, transnational actor engagement with other energy stakeholders has been centred in Nairobi. Most major transnational run energy conferences are held in the capital, which suggests opportunities for Nairobi county to engage transnational actors and potentially access funding which time and travel costs may preclude from other counties. The triumvirate of KAM, UNIDO, and Practical Action, the transnational actors who supported the county's energy policy development can perhaps be seen as evidence of Nairobi benefitting from its locality.

Yet, many transnational run events I attended in Nairobi during my fieldwork period were notable for being well represented by all energy stakeholder groups except county governments and the community level; a Nakuru environment officer remarking: "this happens a lot" [26]. At a GIZ workshop to design the County Energy Planning Framework, a representative of Hivos¹¹² expressed concern that county administrations had not been involved in any of the initial meetings [92]. Thus, in these cases it seems Nairobi county's proximity has made little difference to opportunities to engage with transnational actors. The highly tangible presence of the Nairobi situated national government has also possibly disincentivised the need for transnationals to engage the county, particularly given their predilection for using national government as a conduit for resources; a tendency most likely encouraged by the county administration's own lack of prioritisation of energy.

More common have been transnational actor interactions with the county government over waste-to-energy initiatives, where energy is seen as the secondary objective. The AfDB financed a municipal waste-to-energy scheme in Kibera (Nairobi's largest informal settlement), while efforts to establish a Ksh28billion waste-to-energy recycling plant in Dandora have been ongoing. The county's failure to secure title deeds for the land in Dandora saw the Austrian contractor, Strabag, pull out from the initiative in 2016, although the current governor has renewed efforts having made waste disposal a major 2017 election campaign pledge. This pledge reinforces the notion that energy is the secondary concern; with the significant county funding and enthusiasm a result of waste's greater political expediency and strengthens the sense that capacity building initiatives may often need to emphasise these nexus benefits in localities or sectors (e.g. clean cooking) where energy would otherwise be overlooked.

¹¹² Hivos (the Humanist Institute for Cooperation with Developing Countries) is a major Dutch NGO with projects covering a broad range of development fields.

7.4.3 National government interactions with decentralised energy governance

Grid electricity

National governance interactions over grid electricity in Nairobi seem little altered from the pre-devolution era. A senior electrical engineer noted “in terms of electrical energy, devolution has not changed anything in Nairobi” [20], while a senior county energy officer added “KPLC is still dominating” [19]. Yet, county government stakeholders reported positive relations with the national government, commending the memorandum of understanding signed with ERC for a subsidised county electricity tariff, while collaborations on street lighting and wayleaves provision were also praised by county officers.

This positivity seems to reflect the sense within county government that little county intervention is required in grid electricity; the senior Nairobi county energy officer remarking “in Nairobi electrification is already done” [19]. Although this is clearly not the case as 30% of the county population lack access; the position has some justification as affordability is the key barrier, which the county government seems to have little scope to address as most who cannot afford grid electricity live in Nairobi’s informal settlements where widespread illegal connections¹¹³ or the national government run GPOBA programme are likely to undercut any county initiative (Lambe & Senyagwa, 2015). The electrical engineer viewed GPOBA “a success” for reducing the number of residents risking the dangerous practice of tapping into the grid [20], although a senior REA officer felt the primary motivation of the KPLC run initiative was to capture revenue lost to these illegal connections in line with the sentiments expressed by an EU representative in Chapter 5 [14].

Yet, the view that electrification was ‘done’ was not shared by actors outside government; local energy consultants argued the distribution network was not keeping pace with the county’s rapid population growth, leading to frequent outages [24, 60]. In line with arguments made nationally in Chapter 6, consultants argued compensation for outages or bottom-up pressure was required to incentivise KPLC to upgrade their systems; the latter a role the county government seems well placed to facilitate through lobbying, mobilising grassroots pressure, and potentially via helping coordinate reticulation upgrades. However, a Practical Action representative seemed doubtful this ‘pressure’ would transpire:

for Nairobi, everyone is electrified This is where wastage comes in because they [the county government] think everything is okay, or we really don't need to put much effort in [70].

Given the capacity constraints in the county energy department and KPLC’s general reticence to invest in upgrading lines over developing new lines, the NGO representative’s pessimistic outlook seems realistic concerning grid distribution upgrades.

However, this view seems less valid for another aspect of grid infrastructure: street lighting, where the increased county coverage was viewed by many stakeholders as a significant county energy intervention, and by some, ‘the only’ intervention. The devolution process was seen as highly facilitatory by a county communications officer, who emphasised how it had enabled the county to negotiate with national government for the funding required for the lights. A senior county electrical

¹¹³ These illegal connections usually charged a flat rate of approximately 500ksh per month (Lambe & Senyagwa, 2015).

engineer partly agreed, noting devolution had increased bottom up pressure: “MCAs [Members of the County Assembly] are competing with each other. ... the residents in a given ward see other wards with street lights and then pressure their MCAs to do the same”, but felt the emphasis on the programme’s was mainly due to political interests: “MCAs want things they can see the following day so that people will elect them, this also extends to the top leadership” [20]. The senior county energy officer concurred, noting how “money was channelled through national government to KPLC for lighting up Nairobi” after “[the] President pushed the 24-hour economy idea” [19], reflecting the broader Kenyan picture which has seen street lighting initiatives prioritised for their political value. Thus, it appears that aside from politically expedient street lighting, the county’s extensive pre-existing electricity network has reduced the incentive for national and county government engagement over grid electricity, leaving MLG1-esque governance the status quo in Nairobi.

Off-grid electricity

The widespread coverage of the grid also appears to have diluted national and county government interactions over off-grid electricity. A senior county electrical engineer argued there were no “signs of support for renewable energy in the county, or awareness of how to enhance it” [20], which he felt stemmed from election interests: “the county government is not interested in long term plans, no immediate impact”, contrasting sharply with the more quickly delivered and tangible street lighting.

A senior county energy officer also acknowledged the county had not placed much emphasis on off-grid renewable energy electricity but argued this was mainly due to national government prioritising subsidies for grid electricity connection fees, which the officer felt was justified as it was cheaper than the upfront costs of establishing off-grid renewable energy infrastructure [19]. This seems accurate, although it does not address the issue of the long-term costs incurred from billing where the literature finds off-grid systems may find parity or be cheaper (Roche & Blanchard, 2018). The officer also felt county off-grid initiatives had been stymied by regulatory barriers, including outdated national legislation, “we’re still being guided by the *Energy Act 2006*”, low feed-in tariffs, and the need to obtain national government approvals for any form of electricity generating projects. This bureaucratic challenge was confirmed by an ERC officer, who recognised “there is a need to streamline ... for power project licencing there are a large number of clearances required” [11], while it also reflects the concern raised in Chapter 5 that the legislative failure to provide counties with a regulatory role in off-grid electricity is likely to hinder county initiatives.

Although national legislation, bureaucracy, and subsidisation priorities have impeded county interests in off-grid generation, there appears scope for initiatives in energy efficiency as the senior county energy officer acknowledged when highlighting collaborations with the private sector on energy efficiency in buildings. This seems a sensible step with energy efficiency conventionally acknowledged in the literature as a ‘low-hanging fruit’ although more recent treatments have begun to question its prioritisation over measures with greater long-term benefits (Annunziata et al., 2014). More prudently, a Nairobi-based energy consultant stressed the key county role was to lobby and “institute policies that push companies in certain directions” [23]. This suggestion of a facilitatory, rather than implementing, role for the county is a key recommendation of this thesis and seems particularly apt for the current Nairobi context given the lack of resources in the county energy department.

Overall, the widespread coverage of the grid appears to have diluted national and county government interventions in off-grid electricity. Yet, the county still has a key facilitator role it can play which has so far only partially been fulfilled. This is particularly so in terms of lobbying for a more streamlined off-grid regulatory environment and incentivising Nairobi’s diverse private sector to engage in off-grid electricity.

Clean cooking

National Government fuel taxation policies have had a disproportionate effect on cooking energy in Nairobi as the capital has a significantly higher proportion of households using gas compared to other counties (Table 7.12). Levies have been imposed on kerosene exacerbating the wealth divide as the fuel tends to be used by low-income households (Ilako, 2019), while subsidies have been applied to LPG (most notably as part of the National government Mwananchi Gas Project – see Chapter 5) which is primarily used by wealthier residents. Although the national government justification for these fiscal incentives appears well meaning in terms of being a push towards safer, cleaner LPG, a petroleum consultancy director argued rationally against “premature tax penalties on kerosene until alternative affordable fuels (including LPG) are availed to the lower income households” (Wachira, 2016, p.1).

This sense of inequity over these tax priorities is supported by findings in the literature; Dalberg (2018, p.2) noting the high upfront cost of an LPG cylinder and stove leaves Kerosene “often the only truly affordable option for the poorest urban residents” and “the primary fuel for 70- 80% of slum households in Nairobi” (Table 7.13). In addition, the ‘Mwananchi Gas Project’ which aimed to ease the transition to LPG has stalled due to issues of fraud (cf. Ngugi, 2018). These taxation interventions seem indicative of top-down governance as they have mainly bypassed the county government. An energy consultant argued the removal of VAT from LPG had “nothing to do with devolution” [25], while a senior county energy officer remarked: “Not much has been done on gas and oil, it’s still basically with national government” [19].

Table 7.13 Cooking fuel costs (reproduced and adapted from Dalberg, 2018)

	Charcoal	Kerosene	LPG
Fuel retail price	\$0.30 - 0.45/kg	\$0.75 -0.85/L	\$1.75/kg: 6/13kg cylinder refill >\$3.00/kg: PAYG
Annual fuel cost for average Nairobi household	\$207 - 249	\$224	\$233
Stove retail price	\$7 Kenya Ceramic Jiko \$25-35 high efficiency jiko	\$6-20	\$40-50: stove & cylinder

Non-governmental organisations tended to emphasise sensitisation as the key role for counties in clean cooking. An energy consultant felt there was a clear need to raise consumer awareness of alternative cooking fuels and stoves, such as biogas and high efficiency stoves but not grid electricity, which was considered “way too expensive” [23]. Whilst the general awareness raising sentiment seems prudent, the energy consultant’s misgivings over electric cooking seem misplaced at least as far as off-grid electricity is concerned. Recent findings in the literature indicate the off-grid electric cooking sector is rapidly evolving in sub-Saharan Africa and likely to be on cost parity with conventional fuels in the next five years (Batchelor et al., 2018a).

Support for community engagement in Nairobi-based initiatives in clean cooking was also found in the literature. Noting charcoal was the main fuel in Kibera for reasons of culture and taste, Lambe & Senyagwa (2015, p.25) called for these social drivers to be incorporated into policy initiatives for fuel efficient stoves, with community participation stressed as vital “given the level of mistrust and fear of the national power utility among Kibera residents”. Adopting this approach seem to align with a more MLG2-esque form of governance; whereby the county facilitates engagement between local stakeholders, including communities cook stove producers, and awareness raising agencies to develop solutions the distrusted national government seems less likely to find. Indeed, a leading electric cooking study found uptake of electric cooking was likely to be much quicker by “leveraging Kenya’s extensive network of entrepreneurs and established institutions who are already actively rolling out energy access solutions” (Batchelor et al., 2018, p.266). This course of action, redolent of MLG2, seems applicable not only to Nairobi and Kenya but the wider Global South context as is becoming increasingly recognised within academia (Brown et al., 2017).

Yet, the governance of clean cooking in Nairobi county is complicated by the fact it has a significant impact on other counties due to the environmental impact of the capital’s demands for charcoal. A county officer representing the counties of the former Coast Province stated publicly “our lands suffer from charcoal production, charcoal going to Nairobi”, while similar claims were made in Turkana [37]. This indicates the capital’s cooking energy governance cannot be looked at discretely. In an isolated case of a county government addressing a national policy void, Kitui county government implemented a charcoal ban in 2017, partly to address the environmental degradation caused by Nairobi bound charcoal. However, this seems likely to transpose the demand and environmental impact of charcoal to other counties, thus potentially having a negligible effect on the nation’s overall environmental wellbeing. Thus, while decentralised governance initiatives seem key to promoting clean cooking technologies, more centralised governance of charcoal may be required to avoid the impacts of production being simply displaced from one county to another; ironic given regulation of charcoal and other domestic cooking fuels is one of the few regulatory functions exclusively under the county mandate in the *Energy Bill 2015*.

7.4.4 Key county issue: grid electricity cost and reliability and its impact on the community level

The unreliability and cost of grid electricity was widely seen as the most pressing energy issue within Nairobi. A county communications officer noted “most manufacturers have stand by generators because outages are very frequent” [21], while three energy consultants stressed cost and reliability were also the main concerns for domestic customers [23, 24, 25]. The consultants felt KPLC performance had slightly improved since 2013 with the development of online customer service platforms but did not view the improvement as attributable to the devolution process, which supports the findings in Chapter 5 suggesting the county government role has been limited thus far in grid electricity. The shortcomings in the capital’s grid supply also have national implications. Backup power is supplied by far more expensive diesel generators which are particularly prevalent in the capital. This exacerbates the high cost of grid electricity, a burden shared throughout the country.

Cost and reliability considerations have also deterred the private sector from grid tied renewable energy initiatives; a senior county energy officer blaming national government policy: “the problem is businesses don’t want to do it because the [feed-in] tariffs are too low, ... so the organisations with

roof solar just use all the energy themselves” [19]. The experiences of Kenya’s first grid tied solar initiative at Strathmore University support this argument; a senior representative of the solar installation company explaining that regulatory hurdles had impeded the project, “we were the first to get a PPA, we have connected, but we have yet to be paid, [we have been] trying for over two years, but the net-metering is not there” [107]. This was an issue the installer felt the university had anticipated: “Strathmore was deliberately underpowered to avoid having a surplus, they knew they would have issues getting paid, because they were the first” [107]. A Nairobi based energy consultant acknowledged the university was using all the electricity generated [76]; it thus seems the primary motivation behind the PV array was to reduce dependence on the costly and unreliable KPLC grid rather than contribute to it.

A reluctance to be grid-tied appears to be a growing trend. Sizeable PV arrays installed in two of Nairobi’s largest malls, ‘Garden City Mall’ and the ‘Two Rivers Mall’ were also deliberately undersized; a manager for the installers explaining, “The company has an IPP [license], which is critical to making this work, but it does not have a feed-in tariff, it’s just selling the energy to the shops” [55]. The manager attributed the success of the projects to the national government investor friendly policy which approved the IPP license. This suggests national government support for non-grid tied or ‘captive’ systems, despite the manager indicating KPLC had concerns:

KPLC is worried about companies, especially big factories with heavy regular loads going 100% autonomous. It’s easier for them to collect from such big companies than loads of little ones. So, with a captive system, we have to show KPLC that they save and gain money and emphasise there is less threat [55].

KPLC’s concern seems understandable as it seems unclear how the parastatal ‘gains’ from captive systems as revenue will have been lost from not supplying 100% of the malls’ electricity needs; a task well within their capacity given the admission by a senior KPLC officer that the parastatal is running a 500MW surplus (cf. Olonyi, 2019). This bypassing of KPLC suggests a lack of investor confidence in the national grid, unsurprising given the issues concerning, cost, reliability, and feed-in tariffs. Thus, captive systems seem rational from a business perspective, yet likely to detrimentally impact the affordability of electricity for the general public as they deprive the grid of anchor clients, critical for cross-subsidising the cost of electricity. The non-addition of these viable renewable energy sources to the grid also appears to help maintain a role for backup generators, adding weight to the accusations of vested elite interests in diesel generated supply (Musau, 2018).

7.4.5 Nairobi conclusion

Overall, it seems energy governance has not noticeably altered in Nairobi since the devolution process began, remaining highly centralised with only slight improvement in service delivery. The widespread availability of grid electricity from the pre-devolution era and the close proximity of the national government appears to have resulted in the county administration not prioritising the energy sector, creating an extra layer of bureaucracy without clearly discernible results. This has led to a continuation of the pre-devolution MLG1 approach, with national government grid electricity interests remaining largely unchallenged. Given the far-reaching coverage of the grid in the capital this form of governance is arguably more suitable for Nairobi than any other county, yet it has still failed to adequately contend with issues of grid electricity affordability and reliability, and access to clean cooking. Issues, a more

representative MLG2 system, prompted by a more proactive county administration, might more appropriately address.

7.5 Conclusion

Empirical findings

Overall, significant spatial variations are clearly present in the energy governance of the four county case studies, featuring many of the imbalances found in inter-scalar power relations at state level. Aligning with the state level picture, transnational actor resources have mainly been channelled via national government, leading to investment in all four counties for KPLC grid extension or grid island initiatives. Although this has increased electricity availability, equity issues persist in each county with many unable to afford access. This unaffordability has been compounded by the lack of engagement between national and county governments over off-grid electricity alternatives to the KPLC grid monopoly, with all four counties complaining of insufficient funding to develop such initiatives independently. Clean cooking initiatives have not been prioritised, with the four counties again citing funding issues, although the spectre of the highly centralised national government Mwananchi gas project has perhaps also disincentivised interventions. However, street lighting initiatives have been heavily prioritised in all four counties, indicating political expediency has been a key factor in county government decision making.

Efforts to achieve a less top-down form of governance have been facilitated by transnational actor capacity building initiatives in the four counties. In particular, the assistance provided to county energy policy development, a key component in facilitating more representative governance and highly valued by all four counties. Yet, the level of support each county has received has varied significantly, largely due to political economy issues, such as path dependency. Also critical to developing capacity have been the varying extents to which each county has prioritised energy. Turkana has allocated knowledgeable personnel in key positions, while the Migori, Nairobi and Nakuru energy departments have been critically underfunded and understaffed. These contrasting prioritisations have manifested in how counties engage other stakeholders; Turkana has been far more active in challenging national government, particularly its top-down governance of grid islands and oil extraction. In contrast, the other three counties appear impeded by policy, capacity and resource constraints, with Migori particularly affected by its lack of inter-stakeholder coordination.

The development of decentralised energy governance in Turkana therefore seems to least resemble the consolidation of MLG1 structures and prioritisation of national government interests which has been seen in the other three case study counties and, more broadly, across Kenya (see Chapters 5-6). This development has been underpinned by broader political interests. Turkana sees its petroleum resource as a key conduit to challenging national government and undoing historical marginalisation, and thus having a capable energy department is essential to these aims. However, this objective has gained far more traction through the interactions of a broad range of non-governmental stakeholders. Local non-governmental organisations such as the church and CSOs have been instrumental in sensitising communities, which has helped ensure communities are better informed and also better represented at higher levels of governance. This has strengthened the potential leverage of community protests, helping to generate significant bottom-up pressure. These various non-

governmental influences provide a far stronger counterweight to the centre than the county would alone, although it is unclear at this juncture whether this MLG2-esque approach was intended and actively mobilised by the Turkana county government.

There are also signs of a movement towards MLG2 in Nakuru, with the county highlighting three local non-government stakeholders as the organisations it communicates with most on energy issues. This appears indicative of the county beginning to adopt the facilitatory role advocated by this thesis (see Chapter 6), where counties act to coordinate networks of stakeholders in addressing community energy needs. The county as facilitator is also likely to be beneficial to the development of small scale off-grid electricity and clean cooking initiatives, which have been overlooked by the National government and been shown in the literature to most effectively develop from broad networks which connect and draw on a wide range of actors to help support learning and develop markets (see Chapter 5 cf. Byrne et al., 2014). In contrast, decentralised energy governance in Migori and Nairobi largely resembles a continuation of the pre-devolution MLG1 approach, primarily for reasons of capacity and coordination in the former and a lack of county engagement with the latter.

Brought together, the four case studies suggest broader implications for Kenyan decentralised energy governance. Based on the historical insights on development from chapters 3 and 5 and the findings on power relations in chapters 6 and 7, seven key spatially contingent factors are identified as underpinning the emergent forms of decentralised energy governance in the four counties. These are shown in Table 7.14, which orders the four case studies according to how discernible each factor is within each county. The evidence from Kenya suggests the more each factor is manifest, the greater the likelihood of decentralised energy governance resembling or moving towards MLG2 in that county. Aligning with the empirical findings of this chapter: Table 7.14 show Turkana to be most likely to move towards MLG2 followed by Nakuru, Migori and lastly Nairobi.

Table 7.14 Factors increasing the chance of a move to MLG2 and their discernibility in case study counties

	Historically marginalised	% of people lacking energy access	County access to TAC support	County energy dept. capacity	Bottom-up pressure from county non-gov actors	Bottom-up pressure from community level	Sub-nat actors coordinated	MLG2
More ↑ ↓ Less	Turkana	Migori	Turkana	Turkana	Turkana	Turkana	Nakuru	Turkana
	Migori	Turkana	Nakuru	Nakuru	Nakuru	Nakuru	Turkana	Nakuru
	Nakuru	Nakuru	Nairobi	Migori	Migori	Migori	Nairobi	Migori
	Nairobi	Nairobi	Migori	Nairobi	Nairobi	Nairobi	Migori	Nairobi

Conceptual and theoretical implications

The main argument emerging from this chapter – that decentralised energy governance and its underpinning power dynamics are subject to significant spatial variations – has several wider conceptual and theoretical implications. By revealing the marked geographical variations in decentralised energy governance, this study compliments and extends important political economy analyses which have emphasised the relational but not spatial nature of energy transitions in the Global South (Newell & Phillips 2016; Baker & Phillips, 2019). In particular, capacity building – shown by this thesis to be critical to developing effective forms of decentralised energy governance – needs to be understood as subject to a number of spatially contingent political economy factors which, if left

unchecked, are likely to result in considerable variations of governance quality at the sub-national level, exacerbating existing geographical inequities in energy access. These insights also extend debates on shifting energy paradigms (cf. Goldthau, 2012) by highlighting that various forms of energy paradigm may exist in the same country depending on localised inter-scalar dynamics between the state and sub-/supra-national stakeholders. In Nairobi, governance reflects a blurred statist/neoliberal paradigm where a profit motivated state dominates control of the energy sector. Yet, the stronger decentralised energy governance in Turkana has begun pushing the state towards the “stakeholder of public interest” role in the interventionism paradigm, enabling greater scope for the polycentric governance approaches espoused by leading energy studies scholars (Sovacool, 2014).

In addition, the spatially contingent factors outlined in Table 7.14 are likely to have broader relevance as they align with increasingly held views about the importance of stakeholder coordination and uncodified structural factors in decentralisation processes (Erk, 2014), and the need for capacity building, stakeholder engagement, and participatory processes in facilitating transitions to equitable energy access (Brown et al., 2015). Given the findings of this thesis indicate a more MLG2 system of energy governance is required to facilitate more equitable energy access and counteract the failings of centralised energy governance, the theorised causality highlighted in Table 7.14 has important implications. Principally, the table could be applied to other Global South contexts to identify specific underlying issues which hinder a movement to MLG2, enabling more targeted measures (e.g. capacity building interventions) to address these concerns. Without such interventions, it seems probable that spatial disparities in the quality of energy governance will emerge while critical sub-national authority roles such as energy planning, which could facilitate more representative MLG2-esque governance, are likely to be more slowly and less effectively realised.

Furthermore, recognising decentralised energy governance as spatially contingent has important methodological implications. Principally, this understanding supports human geography arguments that spatial variations in power dynamics are not easily unearthed by theoretical governance models – including the MLG framework used by this thesis – and that geographical empirical approaches are therefore needed (alongside theorised approaches where appropriate) if practices of decentralised energy governance on the ground are to be better understood and more effectively developed (Griffin, 2012).

Chapter 8 - Conclusion: the role of decentralised energy governance

Acknowledging the distinct lack of attention paid to energy governance in the context of decentralisation in the Global South, the principal aim of this research has been to investigate the role of decentralised governance in addressing energy access issues in Kenya since the institution of devolution in 2013. The pressing need for such research has been clearly demonstrated. Chapter 1 highlighted how lack of access to electricity and clean cooking disproportionately affects the Global South and particularly sub-Saharan Africa while emphasising that poor, highly centralised governance lies at the heart of the crisis. The urgency of this research was reinforced by the findings of Chapters 2 and 3 which revealed how the critical lack of engagement between the decentralisation and energy studies literatures in a Global South context has undermined decentralised governance as a potential means to address energy access issues.

The literature review conducted for this PhD found only two major studies combining the discourses of decentralisation and energy studies: those by the UNDP (2009) and Brown et al. (2015). These important works covered multiple countries, providing a broad scope of the extent of decentralised energy governance and its potential to address energy access issues. Yet, aside from this PhD, the author knows of no other study which has focussed in depth on the quality of energy governance emerging from a decentralisation process in a Global South nation; particularly in terms of the underlying power relations – and their geographical variations – that have been critical in shaping the forms of governance which have emerged. The thesis thus addresses a clear and pressing scholarly deficit while also highlighting through its novel application of Hooghe and Mark's (2003) Multilevel governance (MLG) to energy governance that an MLG framework has uses – albeit with key caveats – in facilitating understanding of decentralised energy governance processes.

This urgent research agenda has been addressed through three research questions which focus on the experiences, interactions, and agendas of the various stakeholders operating at multiple scales in and through decentralised energy governance. Organised into four parts, this final chapter begins by identifying the key empirical contributions in relation to the three research questions and then assess in section 8.2 the methodological implications of the study for others seeking to do research on decentralised energy governance in the Global South. Section 8.3 builds on the empirical findings by highlighting how they have shaped this study's contributions to conceptual and theoretical understandings of decentralised energy governance, particularly with regard to Hooghe and Mark's (2003) twin concepts of MLG which form the analytical framework of the study. The implications of these empirical, conceptual and theoretical contributions for policy and practice in Kenya and, more broadly, the wider Global South are then explored in section 8.4. Lastly, section 8.5 highlights the key directions for future research based on the findings and limitations of the thesis.

8.1 Empirical contributions

Developments in decentralised energy governance

This study's first research question interrogated how the processes of decentralisation and decentralised energy governance have unfolded in Kenya. Through a critical analysis of Kenyan energy sector legislation and the post-2013 developments in the electricity (grid and off-grid) and clean cooking sectors, this thesis concludes that Kenya has seen the emergence of energy governance more

akin to the hierarchical nature of MLG1 than the overlapping MLG2-esque form seemingly intended by the legislative framework – a development found to be detrimental to addressing energy access issues. The unwillingness of national government to cede effective power to devolved units was found to present the most significant barrier to a transition towards a more MG2-esque system, with evidence from this thesis asserting five key factors underpinning this situation.

Firstly, decentralised energy governance has been undermined by legislative ambiguities concerning national and county government roles and delays in the promulgation of the *Energy Bill 2015* – the key piece of legislation governing devolved energy roles. Secondly, although decentralised institutions are nominally in place, the reforms adopted by national government parastatals have resembled deconcentration. Thirdly, the continuation of top-down governance has been aided by resources (including from transnational actors) continuing to be focussed on national government priorities, particularly grid electricity and, to a lesser extent, grid islands. These energy sub-sectors have not been devolved in any meaningful way and national government retains a de facto monopoly while decentralised energy governance initiatives in smaller scale off-grid electricity have been disincentivised by excessive national government regulatory oversight. Fourthly, the county role has been constrained by capacity issues and a failure by many county authorities to prioritise the energy sector. In particular, many counties have not established energy departments while interventions have tended to focus on politically expedient streetlighting rather than, for example, small-scale off grid electricity and clean cooking: energy sub-sectors which counties are well placed to facilitate and are more beneficial from a human development perspective.

Yet, the fifth contention is that national government is primarily responsible for these county shortcomings. The Constitution charges national government with providing capacity building support to counties, but such assistance has often been lacking (particularly in terms of planning guidance) and unevenly distributed among counties due largely to political economy issues. In addition, the national government's monopolistic control of electricity, prolonged failure to promulgate the *Energy Bill 2015*, and delay in establishing a regulatory framework for off-grid electricity have understandably disincentivised county energy interventions. This failure to address capacity may be intentional given central governments have been found to consistently use capacity arguments to block the transfer of powers to sub-national authorities (Ribot, 2002). This resonates with the Kenyan case study, with the capacity rationale most notably used by the President when refusing to assent to the share of oil revenues awarded counties by the *Energy and Petroleum Policy 2015*.

The continuation of a MLG1 system has resulted in the ongoing prioritisation of national government interests in grid electricity. Aligning with a growing number of authors (e.g. Lee et al., 2016; Ndi, 2019), this thesis asserts that this emphasis has been excessive as grid electricity coverage has increased but actual access far less so due to issues of affordability. The erroneous 'build it and they will come' mentality has not resulted in the increased scale of uptake publicised by national government figures as significant numbers of the connections are largely inactive, with households unable to afford appliances or the electricity to power them. This leaves the Kenya Power and Lighting Company (KPLC) burdened with the costs of maintaining loss-making connections and running a surplus of generation. These costs are then passed on to consumers which further disincentivises uptake, creating additional surplus and costs: a vicious circle. As a result of this continuation of a MLG1 system, urgently needed small scale off-grid electricity and clean cooking initiatives have not been prioritised. This represents

a significant missed opportunity as counties seem ideally placed to facilitate such initiatives by coordinating networks of diverse local stakeholders.

Inter-stakeholder power relations

This study's second research question centred on how the interactions and agendas of various energy stakeholders have helped shape the decentralised energy governance which has emerged in Kenya. Here the primary conclusion was that the emergence of a more MLG1 form of governance has been shaped by the significant power imbalances present in stakeholder engagement within decentralised energy governance. Most notably, the national government has actively sought to exploit power differentials in its favour to restrict the development of MLG2-esque governance as it clearly suits vested national government interests in grid electricity to persist with a more top-down MLG1 form.

The thesis cites several key examples as evidence of national government efforts to dominate the power relations operating within decentralised energy governance. National government control over grid electricity has been consolidated by what seems a deliberate lack of clear engagement with counties over the feasible and desirable collaborative roles they could play such as planning, lobbying, and potentially subsidising grid electricity. National government control over policy levers has also dampened county potential for collaboration. Most notably, REA's switch from mass connectivity to the Digital Literacy Programme (DLP) side-lined counties while delivering a project which prioritised the interests of national elites rather than local needs.

In addition, national government has used its exclusive regulatory control over electricity to curtail county and private sector off-grid electricity initiatives – in some cases, disconnecting up and running systems (cf. ERC, 2018). This has resulted in most large off-grid electricity initiatives remaining centrally controlled by KPLC and subject to the same MLG1-esque governance as grid initiatives. Such schemes do not provide a competitor to the grid which might reduce prices; hence the coining of the phrase 'grid islands' to describe them. Essentially, the national government has consistently obscured the clarity of guidelines concerning where the county role ends and the national government role begins whilst maintaining national government oversight and bureaucratic checks which limit independent decision making at the sub-national level. This is seemingly what the national government wants in order to avoid off-grid initiatives challenging national elite interests in grid electricity.

Small-scale off-grid electricity and clean cooking initiatives have been subject to less dominant national government control and less contested inter-governmental relations primarily due to being underprioritised by both levels of government. This is a significant missed opportunity for county governments as their more localised scale means they are ideally placed to facilitate networks of diverse actors, which the literature highlights as key to driving development in these energy sub-sectors (Ockwell & Byrne, 2017). Developments in small-scale off-grid electricity and clean cooking were also found to be impeded by: disconnects over the role each level of government should adopt; a lack of coordination between stakeholders; and in the case of clean cooking, inadequate recognition legislatively or institutionally of the potential role counties could play.

The imbalances in power dynamics shaping the emergent MLG1-esque governance were also found to be propagated by the interactions of other key stakeholders. Transnational actors (TAC1-3) are a

case in point, primarily using national government as a conduit for county engagement which has consolidated top-down MLG1-esque governance. TAC3 actor engagement with counties has tended to be more direct although path dependency often skews power relations, resulting in support being unevenly distributed among counties. County engagement with communities has also been limited thus impeding the potential for more representative MLG2 governance to emerge. This has perhaps been encouraged by the finding that communities value service delivery more than participatory politics, suggesting a lack of appreciation between how the two are linked.

This continuation of MLG1-esque governance spurred by imbalanced power relations has resulted in the flawed national government emphasis on grid electricity extension and generation initiatives going largely unchecked. Exceptions to this status quo were found to be limited, mostly occurring where community awareness and willingness to protest over land rights affected by energy initiatives has created leverage and bottom-up pressure. This has resulted in the few isolated instances where stakeholders from all scales (transnational, national, county, and community) have been coerced into engaging in a form of consultative and cooperative MLG2-esque politics. The thesis thus concludes that cross-scalar governance arrangements have worked most effectively when one key stakeholder group is not operating at an overwhelming position of strength compared to the other(s). This inference draws on findings from other sectors which note the impact of power dynamics on MLG2-esque forms of governance; for instance, Scott (2017, p.6) highlights how “vested interests and unequal power relationships” heavily influenced stakeholder coordination in water-energy-food nexus approaches in Kenya and Indonesia.

Spatial variations

The third research question of this study focussed on how the process of decentralisation and the interactions and agendas of various energy stakeholders have helped shape the development of decentralised energy governance at the local level in Kenya. The study concludes that significant spatial variations exist in the energy governance of the four county case studies featuring many of the inter-scalar power imbalances found at state level. These variations resulted in decentralised energy governance in some counties being far more redolent of the intended MLG2 form than in others, with the research identifying seven key spatially contingent factors underlying these differences.

These factors were more manifest and MLG2-esque governance far more marked in Turkana than the other three counties. Perhaps unsurprisingly, the near universal coverage of grid electricity and proximity to central government institutions has left decentralised energy governance in Nairobi least redolent of MLG2. The clear variations among the counties reinforce the relevance of geography to theoretical governance models and support findings in the literature which emphasise that spatially contingent empirical approaches are needed to uncover the on-the-ground relationships, agendas and interactions which shape the power relations underpinning forms of governance (Griffin, 2012).

Overall conclusion: the role of decentralised energy governance

Several overarching conclusions can be drawn from the empirical findings. For the most part, decentralised energy governance in Kenya has continued to resemble a top-down MLG1-esque form, deviating from the more collaborative MLG2 form indicated by the Constitution and detrimental to addressing energy access issues. The thesis notes several key features of the Kenyan case shaping this

development, with significant cross-scalar power imbalances the most pertinent. Most notably, national government exploitation of power differentials in its favour (particularly controls over legislation, regulation and resources) has restricted the development of MLG2-esque decentralised energy governance. The Kenyan case is also marked by the sub-national level being generally unable to provide a sufficient check to top-down governance due to capacity issues, which themselves are largely a product of scalar political economy dynamics. In addition, the spatially contingent nature of power relations is another key feature of the Kenyan case, with decentralised energy governance more akin to MLG2 emerging in counties where coordinated networks of sub-national actors are more prominent and able to exert bottom up pressure on centralised governance.

The thesis argues a shift towards the intended MLG2 form of governance is clearly needed in order to facilitate more equitable access to energy in Kenya. Without this realignment, National Government has shown its intent to actively pursue a MLG1 governance form which both prioritises centralised grid electricity/grid island initiatives that only work for parts of the population and has resulted in non-sensical decision making tied to vested interests. For every so called ‘failure of decentralisation’ (such as Kinangop) there is at least one (if not more) ‘failure of centralisation’ (e.g. The Lamu Coal Power Plant, the DLP, and to a certain extent: the Last Mile Connectivity Plan (LMCP)). The scale of these ‘failures of centralisation’ makes them a far more serious issue.

These vested interests have so far not dissipated, and so robust MLG2-esque networks of local actors are needed to provide checks and balances to central government and to advocate and facilitate more locally appropriate energy access solutions. Responding to the principal aim of this thesis, the research contends that the key role of decentralised energy governance is to develop and maintain such networks, with counties deemed ideally placed to facilitate and coordinate their development. This conclusion finds support from other sectors where local authorities have played similar roles. Both Moloney & Fünfgeld (2015) and Pasquini et al. (2015) emphasise the benefits of local stakeholder networks facilitated by sub-national government in addressing climate change adaptation, while Stein et al. (2011, p.1091) highlight how local government authorities “often cut across sectoral boundaries and ... facilitate integrated approaches to land and water management”.

Actors operating at various scales have key roles to play in supporting MLG2-esque networks of local energy stakeholders. Transnational actors can provide critical capacity and resource support to these networks, with more recent treatments in the energy studies literature suggesting they may also be key to financing innovative business models which enable low income households to access energy services (Ockwell et al., 2019). NGOs and CSOs can lobby on behalf of communities and engage in awareness raising while the private sector role is also likely to be significant, particularly in delivering and maintaining locally appropriate energy solutions. Lastly, community participation is arguably the most critical component if harnessed effectively as the Kenyan experience has shown their protests have generated most bottom-up pressure vis-à-vis the national government.

Ideally, national government would also see the folly in their excessive emphasis on grid-centric policies and overly-centralised governance approaches. Should they do so, they could enhance decentralised energy governance by establishing clear sector guidelines, reducing regulatory oversight for small-scale off-grid initiatives, and developing a reliable transmission and distribution network that can accommodate more flexible and intermittent off-grid technologies. The need for the latter seems

inevitable given the introduction of net-metering in the *Energy Act 2019* and the fact that a tipping point is near, if not already here, concerning the viability of decentralised energy technologies (Hankins, 2019). In the same way as transnational actors, national government could provide capacity and resource support to develop decentralised MLG2-esque networks and facilitate the coordination and development of parallel energy governance schemes – a flexible MLG1 governed grid complimented and enhanced by MLG2 facilitated off-grid initiatives. The “cooperative and consultative” governance espoused by the Constitution.

8.2 Methodological contributions

The research approach adopted by this study has several important methodological implications for others seeking to do research on decentralised energy governance in the Global South. Most studies within the decentralisation and energy studies literatures have utilised quantitative methods. However, my research has shown they are largely irrelevant to understanding the quality of a decentralised energy governance as stakeholder interactions and power relations shaped the forms of governance which emerged and consequently the responses to addressing energy access issues. Thus, a predominantly qualitative methodology is required in order to understand the spatial variations of human interactions and power relations which underpin decentralised energy governance, aligning with a constructionist ontological position and an interpretivist epistemological stance centred on critically appraising various, subjective human constructed ‘truths’.

Furthermore, quantitative markers concerning the impact of decentralisation on the delivery of energy services were often misleading and could be used to serve certain stakeholder agendas. For instance, while the number of KPLC offices increased to cover every county, they had little autonomous decision making power. Similarly, the national government’s use of extended grid coverage to denote improved energy access concealed the fact that this represented availability of electricity rather than actual use. This study thus aligns with Batchelor et al (2014) and Brown et al. (2015) – among the small number of authors to have engaged in the decentralised energy governance field – in emphasising that qualitative approaches (with research methods and questions grounded in the aforementioned ontological and epistemological assumptions) are required to assess the critical factors underpinning the effectiveness of decentralised energy governance, principally: inter-scalar power relations; citizen participatory processes; decision making autonomy; accountability; and resource access.

The second methodological implication is that geographical approaches are critical to understanding the spatial variations of the power relations underpinning decentralised energy governance. This contrasts with traditional political approaches which have tended to view multi-scalar governance arrangements as hierarchical with the state as the main site of political power (Gallaher et al, 2009). The findings from Kenya show that significant spatial variations exist in the decentralised energy governance found in different counties resulting in some cases where the state has been successfully challenged by decentralised governance. The factors underlying these differences are not easily discerned from theoretical approaches, including by the use of MLG1 and MLG2 in this study. This study thus reinforces arguments within human geography that empirical geographical approaches are needed to uncover the spatially contingent on-the-ground relationships, agendas and interactions which shape the power relations underpinning forms of governance (Griffin, 2012).

The final implication concerns the range of methodological strategies and approaches used by this study and detailed in Chapter 4. Although not necessarily containing new insights, it is hoped that as a package they will be of use as a researcher's toolkit for future research into decentralised energy governance in the Global South. In particular, the importance of contacts was emphasised, with introductions to other stakeholders heavily reliant on prior (mostly face-to-face) engagement with these gatekeepers. In-country conferences and workshops were highlighted as an opportune means to establish such contacts. Positionality issues were also stressed, with ongoing Global South/North partnerships emphasised as a means to avoid extractive research and foster mutually beneficial collaborations that enrich research processes.

8.3 Conceptual and theoretical contributions

Many of the findings from this research have relevance beyond Kenya and contain a number of wider conceptual and theoretical implications for decentralised energy governance in the Global South. Initially, the thesis explored how varied understandings of the concepts of decentralisation, governance and energy access intersect, a critically overlooked issue in a Global South context impeding the development of an evidence base to inform policy on how decentralised energy governance might develop effectively (Brown et al., 2015). Drawing together these concepts enabled new insights into how they interrelate and whether decentralised energy governance is subject to the same recentralisation issues widely acknowledged as affecting Global South decentralisation processes more generally (D'Arcy & Cornell, 2016; Erk, 2014). In addition, this approach extended knowledge on whether and under what circumstances decentralised energy governance might help address Global South energy access issues – a missing component from ongoing debates over how the polycentric governance approaches advocated by leading energy studies scholars might work in practice (Goldthau, 2012; Sovacool, 2014).

Responding to these debates, the findings from Kenya indicate decentralisation has particular and distinct relevance to energy and its governance in the Global South. This is because grid electricity (particularly transmission and distribution) tends to be one of the few remaining state controlled natural monopolies in these country contexts in contrast to other network reliant sectors conventionally perceived as natural monopolies (Table 8.1) (Goldthau, 2012). Given the tendency for rent seeking within Global South natural monopolies and the lucrateness of the energy sector (Bigsten & Moene, 1996), it seems highly likely that central governments will be reluctant to decentralise energy – more so than most other sectors. This paints a rather negative portrayal of central government motivations in the energy sector, suggesting self-enrichment and personal power appear to be prioritised over improving the provision of affordable energy access; yet the historical and ongoing legacy of corrupt centralised energy governance in sub-Saharan Africa impeded by issues of political patronage indicates this is not unfounded (cf. Africa Progress Panel, 2015).

Table 8.1 Reasons why sectors conventionally perceived as natural monopolies are not in Kenya¹¹⁴

Sector	Reason
Gas	A gas network does not exist in Kenya. The bottled LPG market is deregulated.
Water	Water has been decentralised to service boards. Competition is provided by bottled water, direct use from rivers/streams and the informal sector (especially in slum areas).
Public transport	Train travel is a state monopoly but not widespread. Regional/local bus services are deregulated.
Communications	Fixed line telephones have been leapfrogged by my mobile phones dominated by the private sector. The mobile network is 40% state owned / 60% private sector owned.

The research also explored the concepts of scale and power, enabling new insights into the urgent but understudied area of how power relations and the complex political economy of energy issues play out across multiple scales of analysis (Bagley et al., 2018). In doing so, the thesis extends human geography debates over whether the state should be viewed relationally (Brenner, 2001; Jessop, 1990); a discussion applied in a few cases to energy in general (Van Veelen, 2018; Angel, 2017) but, as far as the author is aware, never as part of detailed analysis on a decentralised energy governance process in a Global South context.

In response to these debates, the Kenyan experience strongly suggests that concepts of scale and power underpin how decentralised energy governance processes are shaped and thus such processes in the Global South (and beyond) need to be understood relationally. Notably, Kenyan decentralised energy governance was shown to be most effective when significant cross-scalar power imbalances were not present, yet this was impeded by political economy issues common to other Global South contexts. In particular, the use of erroneous grid-centric conceptualisations of energy access by centralised governance to encourage an understanding that energy operates at scales of governance higher than the sub-national level (Brown et al., 2015). In addition, and similarly present in many Global South decentralisation contexts (Cabral, 2011), centralised control over policy, regulation, resources, and, crucially, capacity building were shown in Kenya to be key levers with which central governments can consolidate top-down MLG1-esque governance, inter-scalar power imbalances and grid-centric approaches.

While these power dynamics persist, the benefits of decentralised energy governance in facilitating more locally appropriate smaller scale off-grid and clean cooking initiatives are likely to be impeded, detrimentally impacting Global South energy access issues. However, the Kenyan experience also demonstrates how decentralised energy governance can when effectively mobilised, provide checks and balances to central government exploitation of natural monopolies. Turkana in particular showed how a network of influential non-governmental actors mobilised community awareness to ensure a far more participatory community engagement process was adopted by the National government and Tullow Oil over the petroleum resource in Turkana. Thus, given the global prevalence of highly centralised energy governance regimes, particularly in sub-Saharan Africa but also present in the wider Global South and North, the advocacy of MLG2-esque networks of local actors as a bulwark

¹¹⁴ The table highlights why Global North conventions on natural monopolies do not apply to Kenya. These are reasons often present in other Global South contexts. The sectors

against non-sensical and inappropriate top-down energy governance seems likely to be applicable to a broad range of locations.

These particularities of governance in Turkana are indicative of why the research also explored the concepts of space and spatial variation: an approach enabling a better understanding of how and the extent to which cross-scalar power relations operating in decentralised energy governance are spatially contingent. This mode of enquiry extends existing knowledge through its engagement with political economy analyses, particularly resonating with important works by Newell et al. (2014) and Newell & Phillips (2016) which highlight how significant vested interests have impeded equitable energy access in Kenya. By revealing the marked geographical variations in power relations and governance present within Kenya, this research adds an important spatial dimension to these studies which compliments and significantly strengthens their findings, emphasising that forms of energy governance need to be understood spatially as well as relationally.

These insights strongly suggest this kind of informed spatial analysis needs to be undertaken in other country contexts, supporting arguments that geographical approaches have particular relevance to governance in terms of uncovering spatially contingent power relations (Griffin, 2012). This point appears particularly pertinent to energy given social science contributions to energy studies highlight the sector poses inherent spatial challenges for governance. These issues include complex infrastructure and common pool resources spanning multiple scales, and stakeholder tensions between existing dominant national scale institutions and emerging more localised market actors (Brown et al., 2015; Goldthau, 2014).

Theoretical contributions to MLG

Given multilevel governance (MLG) approaches have rarely been used in the energy sector and, as far as the author is aware, never as a lens on decentralised energy governance, a key scholarly contribution of this PhD is the finding that MLG can be useful as an analytical framework for understanding the inherent complexity of decentralised energy governance. This is particularly evident when using Hooghe and Mark's twin concepts of MLG1 and MLG2 as the criteria of the two frameworks provides an easily comprehensible means for first deducing and then comparing the form of governance intended by a country's decentralisation legislation with that materialising on-the-ground. This process also enables comparisons of in-country spatial variations of decentralised energy governance to be made more readily. This novel application of MLG therefore serves as an actionable approach for identifying whether and where decentralised energy governance reforms have developed as intended and, in cases where they have not, features of the intended decentralisation reform that are not present. The effectiveness of this methodological approach in analysing the Kenyan context suggests it could be replicated successfully in other locations.

Yet, there were notable limitations to the application of MLG to decentralised energy governance. These align with well-established critiques of the concept's use in other sectors: namely that MLG is not predictive; does not identify power differentials or which actor will be casually most important; and does not account for meta-governance¹¹⁵ and the effect of collibration¹¹⁶. The three concerns

¹¹⁵ Meta-governance = the governance of governance (see Chapter 2 cf. Jessop, 2016).

¹¹⁶ Collibration =. the improvement of governance through self-reflection (see Chapter 2 cf. Dunsire, 1996).

were found to be factors in this study’s application of MLG to Kenyan decentralised energy governance. Hooghe and Mark’s descriptors for MLG1 and MLG2 did not by themselves readily explain the reasons behind why a particular form of decentralised energy governance emerged in a particular Kenyan county, mainly because power imbalances and capacity building issues (the latter corresponding with the notion of meta-governance and collibration) proved to be the key factors determining the form and effectiveness of the decentralised energy governance which emerged.

In response to these issues, this study endeavours to mitigate the aforementioned shortcomings of MLG by developing a model which facilitates a predictive scope. The model also partly accounts for meta-governance and power differentials, helping to address the other major critiques of MLG although the thesis acknowledges both issues still require additional theorisation and/or empirical evidence to be more accurately identified. The model is depicted in Table 8.2 and enables the likelihood of more MLG2-esque decentralised energy governance emerging in a sub-national level territory to be predicted.

Table 8.2 Model predicting the likelihood of a movement towards MLG2-esque decentralised energy governance in a sub-national territory

Key Factors	No (more likely to lead to MLG1)	Yes (more likely to lead to MLG2)
1. Clear guidelines to the limits of government roles at different scales (i.e. where the sub-national role stops, and the national government role begins)		
2. The sub-national territory has been historically marginalised by the centre		
3. A significant percentage of the population of the sub-national territory lack access to energy		
4. The sub-national government has access to transnational actor support (the more independent any access is of national government, the more likely a movement towards MLG2)		
5. The sub-national government energy department has sufficient capacity		
6. Non-government actors in the sub-national territory exert bottom up pressure		
7. The community level exerts bottom-up pressure		
8. Sub-national level actors are coordinated		

In the model eight key factors contributing to MLG2 are listed, incorporating the seven spatially contingent factors identified in Chapter 7 (see Table 7.14). These spatial factors (2-7) are joined by a legislative factor, ‘clear guidelines to the limits of government roles’ – the lack of which significantly impeded Kenyan decentralised energy governance (see Chapter 5), supporting views in the literature that emphasise such guidelines are key to avoiding excessive government oversight (Ribot, 2002). This legislative factor operates on a national scale and is therefore unlikely to differentiate between sub-national territories but is nevertheless critical in determining whether a more MLG2-esque form is likely to emerge. Where these factors exist, a movement towards MLG2 is deemed more likely, while in cases where they do not, MLG1 is seen as more likely to emerge. Factors 4 and 5 relate to capacity building issues while several concern power differentials (particularly 1, 2, 4, 6, and 7), thus helping to address criticisms that applications of MLG do not account for these issues.

The use of this model enhances the actionability of MLG in decentralised energy governance applications as it provides a means to identify and monitor locations where MLG2-esque governance is more or less likely to occur. This is useful given this research finds MLG2-esque forms of decentralised energy governance are critical to both counteracting locally inappropriate top-down policy making by central government and to building networks of local stakeholders, which are viewed by the innovations systems literature as key to developing more locally appropriate small scale off-grid electricity and clean cooking initiatives (Ockwell & Byrne, 2017). In addition, where factors in a locality are found not to be indicative of MLG2, it enables subsequent empirical investigations to be more targeted in uncovering potential issues, such as the nature of power differentials and capacity constraints. Lastly, while the model has been applied here to decentralised energy governance, it has potential to be used (with minor adaptations) to analyses of decentralised governance in other sectors or across multiple sectors in the case of nexus approaches.

However, the model has certain limitations. It does not account for the depth of any capacity deficits nor reveal the quality of capacity building support received or the readiness by which it is absorbed. These would require empirical data to verify. Several factors also allude to power differentials although not with sufficient detail to accurately ascertain the extent of the imbalance and the identities of the most causally important actors. The importance of this issue can be seen in the Migori case study, where the critical stakeholder coordination issues largely stemmed from members of the senior county executive undermining the county energy department. This vital revelation would not be deducible from the above model and would most likely require empirical data and/or an additional theory to give clarity to these differentials. The use of MLG approaches alongside political economy analyses of power relations at different scales (such as those applied by Newell and Phillips (2016) to Kenya) would appear to have particular potential to uncover these critical and spatially contingent power imbalances.

8.4 Wider applicability of research: implications for policy and practice

Implications for policy

The first clear implication for policy is that decentralisation legislation with clear guidelines demarcating where devolved roles begin and end are crucial for effective decentralised energy governance. In Kenya, legislative ambiguities have contributed significantly to the emergence of MLG1-esque decentralised energy governance which deviates from the ostensibly more MLG2 form indicated by the Constitution. Echoing Ribot's (2002) call that minimum standards are required in decentralisation reforms to avoid excessive central government oversight, this thesis argues that clear guidelines to the limits of the sub-national role (i.e. where it ends and the national government role begins) are required in decentralisation legislation affecting energy to help ensure the sub-national level is an independent centre of decision making.

A further implication for policy is that capacity building is key to developing decentralised energy governance institutions, but it needs to be preceded by the aforementioned clear guidelines and transfers of power which will motivate that capacity building. The presence of 19 counties in Kenya without energy departments is testament to the disincentivising effect of legislative ambiguity, primarily caused by the prolonged failure to promulgate the *Energy Bill 2015*. Similarly, the ongoing

delays in establishing the County Energy Planning Framework have impeded and most likely disincentivised the development of county energy plans, the key energy function charged to the county level. Critically, capacity building needs to be recognised as heavily contingent on political economy factors and measures adopted to avoid scalar and spatial imbalances in how it is delivered.

The need to increase community engagement in decentralised energy governance is another key policy implication. Somewhat contradictorily, the findings of this thesis highlight that communities value service delivery more than participatory politics community, yet the protests they engaged in were arguably the most effective means to counteract inappropriate central government energy policies. This suggests that perhaps the link between participatory politics and improved service delivery has not always been effectively made to communities. This is crucial to address as without bottom-up pressure and engagement, the likelihood of effective MLG2-esque decentralised energy governance materialising is significantly reduced.

Finally, this thesis has stressed the importance of county governments primarily adopting a role of facilitator rather than implementer of energy initiatives. Their more localised scale means county governments are ideally placed to develop, coordinate, and maintain networks of stakeholders operating within the county to undertake activities which enhance access to energy: particularly critical given such networks have been the primary drivers of initiatives to develop small-scale off-grid electricity and clean cooking. These are precisely the energy sub-sectors where initiatives are most urgently needed in Kenya to cater for the many citizens whose energy needs are not addressed by the erroneous emphasis on grid extension policies by national government. Small-scale off-grid electricity and clean cooking initiatives are also the sub-sectors in which the national government exerts least monopolistic control and where lower costs and fewer regulatory controls mean county governments have most freedom to operate. Thus, a clear path to enhance energy access through small-scale off-grid electricity and clean cooking emerges provided counties facilitate and coordinate the MLG2-esque network of stakeholder which can most effectively develop these energy sub-sectors.

Implications for practice

The findings from this PhD have direct relevance to the practices of leading multinational agencies whose main energy policies contain little focus on the role of decentralised governance (e.g. the World Bank's Last Mile Connectivity Project in Kenya and the UN's global SE4All initiative – see Chapters 2-3). Given this research finds that MLG2-esque decentralised governance is key to facilitating more equitable energy access, it seems imperative that these agencies integrate into their energy practices and policies the key lessons drawn from this thesis – namely: a facilitator role for local authorities; engagement of the community scale in participatory politics; clear guidelines demarcating where devolved roles begin and end; and sufficient capacity building to develop decentralised energy governance institutions.

These insights and advocacy of decentralised energy governance have also been conspicuously absent from major international agreements in other sectors where energy has been shown to play a critical enabling role (e.g. the SDGs and New Urban Agenda – see Chapter 2). The cross-cutting nature of these policies clearly indicates that the findings from this thesis are of significant relevance not only to practices concerning energy, but also the broad spectrum of development goals which occupy the international development arena. This research could thus have a major impact towards these

objectives by contributing a more explicit and comprehensive analysis of the roles of decentralised energy governance and how they might be integrated with other sectors. The research could also give direction to and learn from institutions such as Local Governments for Sustainability (ICLEI) and the Global Covenant of Mayors which have embraced integrated local and multilevel governance approaches to energy access issues, yet not explicitly in the context of decentralisation.

The findings from this PhD also have direct implications for the raft of ongoing projects being undertaken by the Loughborough University members of the Low Carbon Energy Development Network. For instance, the PhD has clear relevance to the DFID-funded Transforming Energy Access (TEA) programme which has had a major governance and capacity building component, including the establishment of a platform for Kenyan county energy governance. The findings from this PhD could have a significant impact on the development of this platform by highlighting where and why decentralised energy governance arrangements have worked effectively. This in turn could contribute to the development of similar platforms in other Global South locations, contributing to a body of knowledge on best practice for decentralised governance involvement in the energy sector. This process has begun to take effect as ideas from this research have already been drawn upon by CAFOD in their capacity-building activities in Kitui county (Kenya) and by the University of Strathclyde in their development of a blueprint for the proposed (decentralised) role of District Energy Officer in Malawi.

This thesis also has relevance to the Loughborough University Solar Nano Grid (SONG) project which investigated the viability of community-owned 'nano-grid systems' (1-5kW) for small off-grid communities in Kenya and Bangladesh. The findings from this thesis suggest that if the success of the project is to be replicated on a wider scale, then the involvement of decentralised energy governance is likely to be key to facilitating effective upscaling. The lessons uncovered from the Kenyan decentralised energy governance experience could provide insight into how these multilevel and multi-stakeholder arrangements might be effectively realised and the roles sub-national government might play in facilitating such initiatives both in Kenya and beyond.

8.5 Future research: where do we go from here?

The research presented in this thesis addresses a critically understudied area and there are a number of interesting and valuable directions for future research into decentralised energy governance which would build on and enhance the findings of this study and also its predecessor, the Renewable Energy and Decentralisation (READ) project (Brown et al., 2015).

8.5.1 Additional case studies

Perhaps, most urgent is the need for additional in-depth case study analyses to establish with greater confidence whether the findings from Kenya are more broadly applicable to a wider Global South context (as speculated upon in section 8.3). Outstanding questions concern to what extent is Kenya an outlier given its decentralisation process is regarded as having led to "genuine reform" unlike the decentralisation processes undertaken by most other countries in the sub-Saharan African region (Cheeseman et al., 2016, p.3). Similarly, Dickovick (2014) notes that decentralisation reforms in sub-Saharan Africa have particular regional characteristics; thus, are the lessons drawn from this study also applicable to other Global South regions?

Given this study's finding that decentralised energy governance in Kenya has been undermined by ambiguities and delays in the legislation concerning devolved energy roles, case studies of interest would be nations where this has not been the case. For instance, in Malawi, decentralised energy roles have been defined via a multi-stakeholder consultation process prior to their implementation (Buckland et al., 2017). In such cases, do more clearly defined decentralised energy roles lead to more effective decentralised energy governance or does the general tendency for uncodified structural factors to distort decentralisation reforms from their legislative blueprints also hold true for the energy sector (Erk, 2014)?

Global South states where the availability of energy services is comprehensive but not accessible (i.e. for reasons of cost and reliability) also present interesting case studies. These locations raise questions such as the role of decentralised energy governance in facilitating access to energy which is at least physically available, along with how decentralised governance forms might challenge an entrenched energy regime with more locally appropriate solutions. Global South states where rapid increases in energy access have been achieved are also of interest (Bhattacharyya (2012) cites China, the Philippines, South Africa and Vietnam as examples) as they prompt questions such as, what (if any) was the role decentralised energy governance in these swift transitions and how applicable are learnings from these contexts to other locations where access rates are currently low?

8.5.2 Interrogating recent developments

The energy sector is an incredibly dynamic field and recent developments highlight key areas for future research into decentralised energy governance. Clean cooking is belatedly moving to the forefront of development agencies' interactions with energy in the Global South. This is most clearly evidenced in the UK by the £38M DfID funded 'Modern Energy Cooking Services' project launched in 2019, which has a particular focus on the role of electric cooking technologies (Batchelor et al., 2018b). The intersection of such initiatives with decentralised energy governance is touched on by this study but questions remain. How can large scale TAC2 funded clean cooking programmes work most effectively with decentralised energy governance? Does decentralised energy governance have a particular role to play in the movement towards electric cooking advocated by MECS? For example, will it conform to the ideals of social innovation theory, which in a decentralisation context, this thesis has argued means county governments playing a facilitator role developing MLG2 networks of change. These themes seem to have clear relevance to Kenya, where electric cooking is seen as particularly promising due to the country's established track record for innovation in the energy for development sector (Batchelor et al., 2018, p.266).

Recent events within Kenya also highlight areas for future enquiry. The *Energy Act 2019* – passed in March 2019 – is a critical development in Kenyan energy governance and offers scope for longitudinal studies that compare decentralised energy governance following the Act with the 2013-2019 period (covered by this study) in which counties operated without their devolved roles confirmed. Of particular interest are the implications of confirmed devolved energy roles and of the net-metering provisions in the Act – will it lead to more counties prioritising energy, establishing energy departments, and being encouraged to develop the small-scale off-grid electricity and clean cooking initiatives they seem ideally placed to facilitate? Other key questions concern whether the Act will lead to counties forming MLG2-esque networks of diverse stakeholders – the central recommendation

of this study – or if the confirmation of devolved roles will result in counties adopting a sub-national form of MLG1-esque top-down governance.

8.5.3 Nexus approaches

The empirical findings of this PhD and the broader literature highlight how sectors other than energy have a more established tradition of being incorporated into decentralisation reforms (Brown et al., 2015). This raises a number of pertinent questions: firstly, why is it that states are seemingly more interested in decentralising other sectors and not energy despite the potential benefits highlighted by this study? Secondly, could the inertia or reluctance to decentralise energy be mitigated were the decentralisation of energy more closely intertwined with other sectors that are more commonly decentralised? For instance, the findings from this study indicate clean cooking initiatives have had greater traction when incorporated under a multi-sector approach with the health sector at the forefront rather than energy. These themes align with increasingly prominent nexus debates focussing on the potential synergies and trade-offs energy has with other sectors, indicating an urgent need for research into the role of decentralised governance within such nexus approaches (Stevens & Gallagher, 2015). Of particular interest are the multilevel governance arrangements which might facilitate these approaches in the Global South

Similar nexus questions concern the New Urban Agenda (NUA) instituted in 2016 by UN Habitat. The NUA has decentralisation at its core but only delineates very briefly what decentralised energy governance roles might entail and how they might contribute to the NUA's overall focus on SDG11: 'sustainable cities and communities'. Research is thus needed to better understand how the more detailed findings from this thesis on decentralised energy governance roles could be integrated into the broader multi-sector decentralised governance role required for delivering the vision of sustainable cities and communities articulated by the NUA. Lastly, and arguably the most critical nexus question concerns how one best facilitates Global North to Global South, South-South, and the oft overlooked North-South knowledge exchanges on the role of decentralised energy governance in addressing energy access issues. This is vital if research on decentralised energy governance (including this PhD) is to be widely disseminated and have a far-ranging impact in locations where it is most needed. The ongoing work of the TEA programme suggests platforms (both physical and virtual) are likely to be critical in this regard (Chengo, 2018).

References

- Abuom, T.O. & Bastiaanse, R. (2012). Characteristics of Swahili-English bilingual agrammatic spontaneous speech and the consequences for understanding agrammatic aphasia. *Journal of Neurolinguistics*. 25 (4). pp. 276–293.
- Africa Progress Panel (2015). Africa Progress Report 2015.
- African Development Bank Group (2014). Rural and low-income Kenyans to benefit from AfDB energy loan - African Development Bank. [Online]. 2014. Available from: <https://www.afdb.org/en/news-and-events/rural-and-low-income-kenyans-to-benefit-from-afdb-energy-loan-13772/>. [Accessed: 5 January 2016].
- Akumu, W. (2013). Tullow Oil's woes in Turkana expose the soft underbelly of EA. *The East African*. [Online]. 9 November. Available from: <https://www.theeastafrican.co.ke/business/Tullow-Oil-woes-in-Turkana-expose-the-soft-underbelly-of-EA/2560-2066904-as8hrq/index.html>. [Accessed: 7 May 2018].
- Allen, A., Levy, C., Lipietz, B., Marx, C. & Cociña, C. (2014). *Thinking Across Boundaries - part 1 - Why call it the Urban Global South?* [Online]. Available from: <https://www.ucl.ac.uk/bartlett/development/files/thinking-across-boundaries-part-1-why-call-it-urban-global-south>. [Accessed: 13 April 2020].
- Amundsen, H., Berglund, F. & Westskog, H. (2010). Overcoming barriers to climate change adaptation – a question of multilevel governance? *Environment and Planning C: Government and Policy*. 28 (2). pp. 276–289.
- Anderson, D. & Lochery, E. (2008). Violence and Exodus in Kenya's Rift Valley. *Journal of Eastern African Studies*. 2 (2). pp. 328–343.
- Anderson, D.M. (2005). 'Yours in Struggle for Majimbo'. *Nationalism and the Party Politics of Decolonization in Kenya, 1955-64*. Source: *Journal of Contemporary History*. 40 (3). pp. 547–564.
- Angel, J. (2017). Towards an Energy Politics In-Against-and-Beyond the State: Berlin's Struggle for Energy Democracy. *Antipode*. 49 (3). pp. 557–576.
- Annunziata, E., Rizzi, F. & Frey, M. (2014). Enhancing energy efficiency in public buildings: The role of local energy audit programmes. *Energy Policy*. 69. pp. 364–373.
- Anon (2010). *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others*.
- Anyanzwa, J. (2018). Kenya's cooking gas project for the poor burnt up by graft. *The East African*. [Online]. 21 October. Available from: <https://www.theeastafrican.co.ke/news/ea/Kenya-cooking-gas-project-for-the-poor-burnt-up-by-graft-/4552908-4815272-cpq40bz/index.html>. [Accessed: 29 April 2019].

Ayemba, D. (2017). Kenya commissions US\$17m electricity project in Turkana. [Online]. 2017. Construction Review Online. Available from: <https://constructionreviewonline.com/2017/07/kenya-commissions-us17m-electricity-project-in-turkana/>. [Accessed: 19 September 2018].

Azfar, O., Kahkonen, S., Lanyi, A., Meagher, P. and Rutherford, D., (1999). Decentralization, governance and public services: The impact of institutional arrangements. Centre for Institutional Reform and the Informal Sector, pp.1-37.

Bache, I. (2008). Europeanization and Multilevel Governance: Cohesion Policy in the European Union and Britain. Lanham, MD: Rowman and Littlefield.

Bache, I. & Flinders, M. (2004). Multi-Level Governance and the Study of the British State. *Public Policy and Administration*. 19 (1). pp. 31–51.

Bagley, C., Brown, E., Campbell, B., Cloke, J., Cameron, S., Collings, S., Gunning, R., Kabell, H., McDonnell, J., To, L.S. & Turner, B. (2018). Mapping the UK Research & Innovation Landscape: Energy & Development.

Baker, L. (2012). *Power shifts? The political economy of sociotechnical transitions in South Africa's electricity sector*. PhD Thesis. University of East Anglia .

Baker, L. & Phillips, J. (2019). Tensions in the transition: The politics of electricity distribution in South Africa. *Environment and Planning C: Politics and Space*. 37 (1). pp. 177–196.

Barkan, J.D. & Chege, M. (1989). Decentralising the State: District Focus and the Politics of Reallocation in Kenya. *The Journal of Modern African Studies*. 27 (3). pp. 431–453.

Batchelor, S., Brown, E., Leary, J., Scott, N., Alsop, A. & Leach, M. (2018). Solar electric cooking in Africa: Where will the transition happen first? *Energy Research & Social Science*. 40. pp. 257–272.

Batchelor, S.J., Smith, J. & Fleming, J. (2014). Decentralisation in Sub-Saharan Africa: Prevalence Scope and Challenges. [Online]. Available from: http://thereadproject.co.uk/wp-content/uploads/2014/04/Decentralisation-in-SSA_Working-Paper-2-v29072014.pdf.

Behnke, N., Broschek, J. & Sonnicksen, J. (2019). Introduction: the Relevance of Studying Multilevel Governance. In: N. Behnke, J. Broschek, & J. Sonnicksen (eds.). *Configurations, Dynamics and Mechanisms of Multilevel Governance*. Palgrave Macmillan, pp. 1–19.

Béné, C. & Neiland, A. (2004). Empowerment reform, yes ... but empowerment of whom? Fisheries decentralization reforms in developing countries: a critical assessment with specific reference to poverty reduction. *Aquatic Resources, Culture and Development*. 1 (1). pp. 1–16.

Bennett, R J, 1990, *Decentralization, local governments and markets: towards a post- welfare agenda* (Clarendon Press, Oxford)

Berkes, F. (2010). Devolution of environment and resources governance: trends and future. *Environmental Conservation*. 37 (04). pp. 489–500.

Bhatia, M. & Angelou, N. (2015). *Beyond Connections Energy Access Redefined*. World Bank.

- Bhattacharyya, S.C. (2013). Financing energy access and off-grid electrification: A review of status, options and challenges. *Renewable and Sustainable Energy Reviews*. 20. pp. 462–472.
- Bhattacharyya, S.C., (2012). Energy access programmes and sustainable development: A critical review and analysis. *Energy for sustainable development*, 16(3), pp.260-271.
- Bigsten, A. & Moene, K.O. (1996). Growth and Rent Dissipation: the Case of Kenya. *Journal of African Economies*. 5 (2). pp. 177–98.
- Biol, F. (2014). Achieving energy for all will not cost the earth. *Energy Poverty: Global Challenges and Local Solutions*, p.11.
- Blanchard, R., Brown, E., Clements, A., Cloke, J. & Mohr, A. (2017). Theory and praxis: co-design complexities of community energy projects in Kenya [poster]. [Online]. Available from: <https://www.elsevier.com/events/conferences/international-conference-on-energy-research-and-social-science>. [Accessed: 24 February 2018].
- Blom-hansen, J. (2005). Principals, agents, and the implementation of EU cohesion policy. *Journal of European Public Policy*. 12 (4). pp. 624–648.
- Boone, C. (2011). Politically Allocated Land Rights and the Geography of Electoral Violence. *Comparative Political Studies*. 44 (10). pp. 1311–1342.
- Brandt, W. (1980). North-South: a programme for survival: report of the Independent Commission on International Development Issues.
- Brenner, N. (1997). State territorial restructuring and the production of spatial scale: Urban and regional planning in the Federal Republic of Germany, 1960–1990. *Political Geography*. 16 (4). pp. 273–306.
- Brenner, N. (2001). The limits to scale? Methodological reflections on scalar structuration. *Progress in Human Geography*. 25 (4). pp. 591–614.
- Brockhaus, M., Djoudi, H. & Kambire, H. (2012). Multi-level governance and adaptive capacity in West Africa. *International Journal of the Commons*. 6 (2). pp. 200–232.
- Brown, C.J. & Purcell, M. (2005). There's nothing inherent about scale: political ecology, the local trap, and the politics of development in the Brazilian Amazon. *Geoforum*. 36 (5). pp. 607–624.
- Brown, E., Cloke, J. & Harrison, J. (2015). Governance, Decentralisation and Energy: a Critical Review of the Key Issues. Working Paper 1, Project EP/L002469/1, April 2015.
- Brown, E., Leary, J., Davies, G., Batchelor, S. & Scott, N. (2017). eCook: What behavioural challenges await this potentially transformative concept? *Sustainable Energy Technologies and Assessments*. 22. pp. 106–115.
- Bryman, A. (2001). *Social research methods*. Oxford: Oxford University Press.
- Bryman, A. (2008). *Social Research Methods*. 3rd Ed. Oxford: Oxford University Press.

Buckland, H., Eales, A., Brown, E., Cloke, J., Blanchard, R., Yona, L., Zalengera, C., Batchelor, S., Sieff, R., Nyirenda, E. & Bayani, E. (2017). Malawi District Energy Officer Blueprint: Recommendations Paper. [Online]. Glasgow. Available from: <https://pureportal.strath.ac.uk/en/publications/malawi-district-energy-officer-blueprint-recommendations-paper>.

Bulkeley, H. (2005). Reconfiguring environmental governance: Towards a politics of scales and networks. *Political Geography*. 24 (8). pp. 875–902.

Bulkeley, H. & Betsill, M.M. (2003). *Cities and Climate Change: Urban Sustainability and Global Environmental Governance*. New York: Routledge.

Bundervoet, T., Maiyo, L. & Sanghi, A. (2015). Bright Lights, Big Cities Measuring National and Subnational Economic Growth in Africa from Outer Space, with an Application to Kenya and Rwanda. [Online]. Available from: <http://econ.worldbank.org>. [Accessed: 10 October 2018].

Buregeya, A. (2007). Aspects of the Vocabulary of Kenyan English: an Overview. *Occasional Papers in Language and Linguistics*. 3. pp. 1–31.

Buregeya, A. (2006). Grammatical features of Kenyan English and the extent of their acceptability. *English World-Wide*. 27 (2). pp. 199–216.

Burgen, S. (2018). *End of 'sunshine tax' raises hopes for green energy in Spain*. [Online]. 23 October 2018. *Financial Times*. Available from: <https://www.ft.com/content/95b38ce0-c008-11e8-84cd-9e601db069b8>. [Accessed: 13 February 2020].

Business Daily (2018). Give Kenyans access to oil profit sharing details. [Online]. 10 June. Available from: <https://www.businessdailyafrica.com/analysis/editorials/Give-Kenyans-access-to-oil-profit-sharing-details/4259378-4604958-waff13z/index.html>.

Business Today (2017). Sonko nominates newspaper editor to his cabinet - Business Today Kenya. [Online]. 2017. *Business Today*. Available from: <https://businesstoday.co.ke/sonko-nominates-star-editor-join-cabinet/>. [Accessed: 22 October 2018].

Bwire, V. (2019). Kenya should use UN-Habitat meet to reposition itself in region. *The Star*. [Online]. 13 April. Available from: <https://www.the-star.co.ke/siasa/2019-04-13-kenya-should-use-un-habitat-meet-to-reposition-itself-in-region/>. [Accessed: 24 April 2019].

Byrne, R., Ockwell, D. G., Urama, K., Ozor, N., Kirumba, E., Ely, A., Becker, S. & Gollwitzer, L. 2014. Sustainable energy for whom? Governing pro-poor, low carbon pathways to development: Lessons from solar PV in Kenya, STEPS Working Paper 61. Available at <http://steps-centre.org/wp-content/uploads/Energy-Access-online.pdf> Brighton: STEPS Centre.

Cabral, L. (2011). Decentralisation in Africa: Scope, motivations and impact on service delivery and poverty. *Future Agricultures Consortium*. 20 (March). pp. 1–14.

Caldwell, L.K. (1976). Energy and the structure of social institutions. *Human Ecology*. 4 (1). pp. 31–45.

Cash, D.W., Adger, W.N., Berkes, F., Garden, P., Lebel, L., Olsson, P., Pritchard, L. & Young, O. (2006). Scale and Cross-Scale Dynamics: Governance and Information in a Multilevel World. *Ecology and Society*. 11 (2). pp. 1-8.

CDKN (2014). Market forces not the main driver of solar technology uptake in Kenya. [Online]. 2014. Climate & Development Knowledge Network. Available from: https://cdkn.org/2014/04/feature-market-forces-not-the-main-driver-of-solar-technology-uptake-in-kenya/?loclang=en_gb. [Accessed: 15 April 2017].

Cecelski, E. (2000). Enabling Equitable Access to Rural Electrification: Current Thinking and Major Activities in Energy, Poverty and Gender [Briefing paper]. [Online]. Available from: <http://siteresources.worldbank.org/EXTRENERGYTK/Resources/5138246-1237906527727/5950705-1239294026748/Enabling0Equit110Elizabeth0Cecelski.pdf>. [Accessed: 1 February 2019].

Cheeseman, N., Lynch, G. & Willis, J. (2016). Decentralisation in Kenya: the governance of governors. *Journal of Modern African Studies*. 54 (1). pp. p1-35.

Cheeseman, N., Lynch, G. & Willis, J. (2017). Voting for the Devil you Know: Kenya's 2017 election. [Online]. 2017. Review of African political Economy. Available from: <http://roape.net/2017/08/14/voting-devil-know-kenyas-2017-election/>. [Accessed: 6 May 2019].

Cheeseman, N. (2018a). I have taken the decision to keep writing and help upcoming journalists. *Daily Nation*. [Online]. 3 March. Available from: <https://www.nation.co.ke/oped/opinion/Democracy-will-lose-if-writers-independence-is-gagged/440808-4327344-vyai6az/index.html>. [Accessed: 15 September 2018].

Cheeseman, N. (2018b). To write or not to write: Columnist at a crossroads. *Daily Nation*. [Online]. 18 February. Available from: <https://www.nation.co.ke/oped/opinion/To-write-or-not-to-write--Columnist--at-a-crossroads-/440808-4309188-12v0kknz/index.html>. [Accessed: 15 September 2018].

Cheeseman, N. (2018c). We resigned not to kill the nation but to save it. *The Elephant: East African Review*. [Online]. 21 April. Available from: <https://www.theeastafricanreview.info/op-eds/2018/04/21/we-resigned-not-to-kill-the-nation-but-to-save-it/>. [Accessed: 13 December 2018].

Cheeseman, N. (2015). *Democracy in Africa: Successes, Failures, and the Struggle for Political Reform*. Cambridge University Press.

Chengo, V. (2018). Energy Development plans in the Kenyan Counties: Highlights from the Transforming Energy Access workshop. [Online]. 2018. African Centre for Technology Studies: Foresight Africa Blog. Available from: <http://blog.acts-net.org/20-victoria-chengo/33-energy-development-plans-in-the-kenyan-counties-highlights-from-tea-workshop>. [Accessed: 30 April 2019].

Chitere, P., Chweya, L., Masya, J. & Tostensen, A. (2006). Kenya Constitutional Documents: A Comparative Analysis. [Online]. Bergen. Available from: <https://www.cmi.no/publications/publication/?2367=kenya-constitutional-documents>.

- Clancy, J., Ummer, F., Shakya, I. & Kelkar, G. (2007). Appropriate gender-analysis tools for unpacking the gender-energy-poverty nexus. *Gender & Development*. 15 (2). pp. 241–257.
- Clifford, N.J. (Nicholas J., French, S. & Valentine, G. (2010). *Key methods in geography*. Sage.
- Clifford, N.J. & Valentine, G. (2003). *Key Methods in Geography*. SAGE.
- Cloke, P., Crang, P. & Goodwin, M. (1999). *Introducing Human Geographies*. 1st Ed. London: Arnold.
- Commission on Revenue Allocation (2017). *Restoring the Division of Revenue Act 2017, Process*. [Online]. 2017. Available from: <http://www.crakenya.org/restoring-the-division-of-revenue-act-2017-process/>. [Accessed: 5 August 2017].
- Conyers, D. (2007). Decentralization and Service Delivery: Lessons from Sub-Saharan Africa. *IDS Bulletin*. 38 (1). pp. 18–32.
- Conzelmann, T. (2009). Towards a new concept of multi-level governance? In: Committee of the Regions. 2009, Brussels: CoR, pp. 31–40.
- Cope, M. (2010). Coding Transcripts and Diaries. In: N. J. Clifford, S. French, & G. Valentine (eds.). *Key Methods in Geography*. London: Sage, pp. 440–452.
- Corneli, S. & Kihm, S. (2016). Will distributed energy end the utility natural monopoly? *Electricity Daily*. (2). pp. 9.
- Cornell, A. & D’Arcy, M. (2014). Plus ça change? County-level politics in Kenya after devolution. *Journal of Eastern African Studies*. 8 (1). pp. 173–191.
- Crawford, G. (2007). Foreign aid and political conditionality: Issues of effectiveness and consistency. *Democratization*. 4 (3). pp. 69–108.
- Crawford, G. & Hartmann, C. (2008). *Decentralisation in Africa: a pathway out of poverty and conflict?* Amsterdam: Amsterdam University Press.
- Crook, R.C. (2003). Decentralisation and poverty reduction in Africa: The politics of local-central relations. *Public Administration and Development*. 23 (1). pp. 77–88.
- D’Agostino, A.L., Sovacool, B.K., Trott, K., Ramos, C.R., Saleem, S. & Ong, Y. (2011). What’s the state of energy studies research?: A content analysis of three leading journals from 1999 to 2008. *Energy*. 36 (1). pp. 508–519.
- D’Arcy, M. & Cornell, A. (2016). Devolution and Corruption in Kenya: Everyone’s Turn to Eat? *African Affairs*. 115 (459). pp. 246–273.
- Daily Nation (2013). Mama Ngina listed top investor at Kenya Power with 2.2 million shares. *Daily Nation*. [Online]. 20 May. Available from: <https://www.nation.co.ke/business/Mama-Ngina-top-investor-at-Kenya-Power/996-1858336-1cagrq/index.html>. [Accessed: 1 May 2019].

Dalberg (2018). Cleaning up Cooking in Urban Kenya with LPG and Bio-ethanol. [Online]. Available from: <https://cdkn.org/wp-content/uploads/2018/05/Dalberg-Report-Summary-02052018.pdf>. [Accessed: 12 October 2018].

Dickovick, J.T. (2014). Decentralization in Africa: Sequences and Political Incentives. [Online]. Available from: <https://ecpr.eu/Filestore/PaperProposal/c52809ee-12c3-4546-b73e-f082c02a0897.pdf>.

Dickovick, J.T. & Riedl, R.B. (2014). African Decentralization in Comparative Perspective. In: J. S. Dickovick, J. Tyler Wunsch (ed.). Decentralization in Africa: The Paradox of State Strength. Boulder: Lynne Rienner, pp. 249–276.

Dickovick, J.T. & Riedl, R.B. (2010). Comparative Assessment of Decentralization in Africa: Final Report and Summary of Findings Acknowledgements. [Online]. Washington D.C. Available from: https://pdf.usaid.gov/pdf_docs/PNADX211.pdf.

Diprose, R. & Ukiwo, U. (2008). Decentralisation and Conflict Management in Indonesia and Nigeria. [Online]. Available from: <https://assets.publishing.service.gov.uk/media/57a08bc140f0b652dd000e80/wp49.pdf>. [Accessed: 6 April 2019].

Donahue J D, 1997, Disunited States (HarperCollins Publishers Inc., New York)

Dong, L. & Mori, A. (2017). Impact of the Unbundling on Renewable Electricity: Evidence from Kenya. [Online]. Available from: [https://www.iaee.org/iaee2017/submissions/OnlineProceedings/Le Dong - IAEE Paper \(FIN\).pdf](https://www.iaee.org/iaee2017/submissions/OnlineProceedings/Le%20Dong%20-%20IAEE%20Paper%20(FIN).pdf). [Accessed: 25 March 2019].

Dunsire, A. (1996). Tipping the Balance: Autopoiesis and governance. *Administration & Society*. 28 (3). pp. 299–334.

Easterly, W. (2001). The Lost Decades: Developing Countries' Stagnation in Spite of Policy Reform 1980-1998. *Journal of Economic Growth*. 6 (2). pp. 135–157.

EED Advisory (2016). Energy Access Review. [Online]. Nairobi. Available from: www.eedadvisory.com. [Accessed: 6 May 2019].

Eisenstadt, S.N. (n.d.). The Basic Characteristics of Modernization. In: *Modernization, protest and change*. [Online]. Eaglewood Cliffs, New Jersey, pp. 1–19. Available from: Prentice Hall.

Ekwe-Ekwe, H. (2012). What exactly does 'sub-Sahara Africa' mean? | Pambazuka News. [Online]. 2012. Pambazuka News. Available from: <https://www.pambazuka.org/governance/what-exactly-does-'sub-sahara-africa'-mean>. [Accessed: 7 February 2019].

Energy Siren (2018). All you need to know about Kenya's geothermal power plants. [Online]. 2018. Energy Siren. Available from: <https://energysiren.co.ke/2018/12/17/all-you-need-to-know-about-kenyas-geothermal-power-plants/>. [Accessed: 25 April 2019].

England, K.V.L. (1994). Getting personal: Reflexivity, positionality, and feminist research. *Professional Geographer*. 46 (1). pp. 80–89.

Erk, J. (2014). Federalism and Decentralization in Sub-Saharan Africa: Five Patterns of Evolution. *Regional and Federal Studies*. 24 (5). pp. 535–552.

ERC (2018). Twitter. [Online]. Available from:
https://twitter.com/EPRA_Ke/status/974351029889388544.

ESAL (2019). The Kenya Petroleum Act 2019 – Overview & Analysis. [Online]. 2019. Energy Solution Africa Limited. Available from: <https://esalafrika.com/news/the-kenya-petroleum-act-2019-overview-analysis/>. [Accessed: 13 April 2019].

ESI Africa (2017). Kenya: President Kenyatta commissions \$19m project. ESI Africa. [Online]. 12 July. Available from: <https://www.esi-africa.com/news/kenya-president-kenyatta-commissions-19m-project/>. [Accessed: 6 May 2019].

ESMAP (2017). Mini grids in Kenya: a case study of a market at a turning point. [Online]. Available from: <http://documents.worldbank.org/curated/en/792001512392701402/pdf/ESM-cKenyaMiniGridsCaseStudyConfEd-PUBLIC.pdf>.

ESMAP (2016). Upscaling Mini Grids for Least Cost and Timely Access to Electricity Services. [Online]. 2016. Available from: https://www.esmap.org/sites/esmap.org/files/DocumentLibrary/9515-ESMAP_Mini_Grids_Program_Booklet_Web.pdf. [Accessed: 19 August 2017].

EU (2019). Approved Grant Operations. [Online]. 2019. Available from: <http://www.eu-africa-infrastructure-tf.net/activities/index.htm>. [Accessed: 29 April 2019].

EU (2014). The Mini-Grid Policy Toolkit. [Online]. 2014. European Union. Available from: <http://www.minigridpolicytoolkit.euei-pdf.org/policy-toolkit>. [Accessed: 18 April 2016].

Express Communications Limited (2015). The New-Look Kenya Guide, 2nd Edition. Nairobi, Kenya. Available at <http://newlookkenya.com/flip/index.html> [Accessed: 3 March 2017]

Faguet, J.-P. (2014). Decentralization and governance. *World Development*. 53.

Falleti, T.G. (2005). A Sequential Theory of Decentralization: Latin American Cases in Comparative Perspective. [Online]. Available from: <http://www1.worldbank>.

Farrell, J. (2019). *How Market Power Gives Electric Utilities Political Power*. [Online]. 2019. Energy & Policy Institute. Available from: <https://www.energyandpolicy.org/how-market-power-gives-electric-utilities-political-power/>. [Accessed: 13 February 2020].

Farrell, J. and Pomerantz, D., 2019. *Energy Monopolies: The Dark Side of The Electricity Business*. [podcast] Building Local Power. Available at: <https://ilsr.org/energy-monopolies-blp-episode-74/> [Accessed 17 October 2019].

Fessha, Y. & Kirkby, C. (2008). A critical survey of subnational autonomy in African states. *Publius: The Journal of Federalism*. 38 (2). pp. 248-271.

- Flavin, C. & Dunn, S. (1999). A new energy paradigm for the 21st century. *Journal of International Affairs*. 53 (1). pp. 167–190.
- Foster, V., Tre, J.P. and Wodon, Q. (2000). Energy prices, energy efficiency, and fuel poverty. *Latin America and Caribbean Regional Studies Programme*. Washington, DC: World Bank.
- France 24 (2018). Columnists quit Kenyan media group over freedom crackdown. [Online]. 2018. France 24. Available from: <https://www.france24.com/en/20180327-columnists-quit-kenyan-media-group-over-freedom-crackdown>. [Accessed: 13 December 2018].
- Gallaher, C., Dahlman, C., Gilmartin, M., Mountz, A. & Shirlow, P. (2009). *Key concepts in political geography*. Sage.
- GIZ (n.d.). Basic energy supplies. [Online]. Available from: <https://www.giz.de/en/downloads/giz2014-en-basic-energy-supplies.pdf>. [Accessed: 26 March 2018].
- GIZ (2019). Energising Development (EnDev) Kenya. [Online]. 2019. Available from: <https://www.giz.de/en/worldwide/21975.html>. [Accessed: 30 April 2019].
- GIZ (2018). Promotion of solar-hybrid mini-grids. [Online]. 2018. Available from: <https://www.giz.de/en/worldwide/25332.html>. [Accessed: 27 March 2018].
- Global Taskforce of Local and Regional Governments, UNDP & UN Habitat (2016). Roadmap for localizing the SDGs: implementation and monitoring at subnational level. [Online]. Available from: https://sustainabledevelopment.un.org/content/documents/commitments/818_11195_commitment_ROADMAP_LOCALIZING_SDGS.pdf.
- GMG (2018). GMG Facility - Home. [Online]. 2018. Available from: <https://www.gmgfacilitykenya.org/index.php>. [Accessed: 19 February 2019].
- Goldthau, A. (2012). From the State to the Market and Back: Policy Implications of Changing Energy Paradigms. *Global Policy*. 3 (2). pp. 198–210.
- Goldthau, A. (2014). Rethinking the governance of energy infrastructure: Scale, decentralization and polycentrism. *Energy Research and Social Science*. 1. pp. 134–140.
- Gollwitzer, L. (2017). All Together Now: Institutional Innovation for Pro-Poor Electricity Access in Sub-Saharan Africa. [Online]. University of Sussex. Available from: <http://srodev.sussex.ac.uk/id/eprint/67333/1/Gollwitzer, Lorenz.pdf>.
- Gomez, B. & Jones, J.P. (2010). *Research methods in geography : a critical introduction*. Wiley-Blackwell.
- Goode, W. (2007) *Dictionary of Trade Policy Terms*. 5th edn. Cambridge: Cambridge University Press (WTO Internal Only). doi: 10.1017/CBO9780511910050.

- Goodwin, M., Jones, M. & Jones, R. (2005). Devolution, Constitutional Change and Economic Development: Explaining and Understanding the New Industrial Geographies of the British State. *Regional Studies*. 39 (4). pp. 421–436.
- Government of Kenya. Climate Change Act 2016. (2016). [Online]. Available from: <http://www.bmj.com/cgi/doi/10.1136/bmj.39469.569815.47>.
- Government of Kenya. County Governments Act. (2012).
- Government of Kenya. Draft National Energy and Petroleum Policy, 2015. (2015).
- Government of Kenya. Energy (Improved Biomass Cookstoves) Regulations, 2013. (2013).
- Government of Kenya. Energy Act 2006. (2006).
- Government of Kenya. National Government Co-ordination Act 2013. (2013).
- Government of Kenya (1965). Sessional Paper No. 10 of 1965: African Socialism and its Application to Planning in Kenya.
- Government of Kenya. The Constitution of Kenya. (2010).
- Government of Kenya. The Energy Bill, 2015. (2015).
- Gregersen, H., Contreras-Hermosilla, A., White, A. & Phillips, L. (2004). Forest Governance in Federal Systems: an Overview of Experiences and Implications for Decentralization Work in Progress Interlaken Workshop on Decentralization in Forestry. [Online]. Interlaken. Available from: www.cifor.cgiar.org.
- Griffin, L. (2012). Where is Power in Governance? Why Geography Matters in the Theory of Governance. *Political studies review*. 10 (2). pp. 208–220.
- Gualberti, G. (2014). Energy investments in Africa by the US, Europe, and China. [Online]. 2014. AidData. Available from: <https://www.aiddata.org/blog/energy-investments-in-africa-by-the-us-europe-and-china>. [Accessed: 1 April 2019].
- Gunningham, N. (2013). Managing the energy trilemma: The case of Indonesia. *Energy Policy*. 54. pp. 184–193.
- Güven, A.B. (2018). Whither the post-Washington Consensus? International financial institutions and development policy before and after the crisis. *Review of International Political Economy*. 25 (3). pp. 392–417.
- Harrison, J. (2012). Regional Studies Life after Regions? The Evolution of City-regionalism in England. *Regional Studies*. 46 (9). pp. 1243–1259.
- Havet, I., Chowdhury, S., Takada, M. & Cantano, A. (2009). Energy in National Decentralization Policies. United Nations Development Program.

- Hay, I. (2010). Ethical Practice in Geographical Research. In: N. J. . Clifford, S. French, & G. Valentine (eds.). *Key Methods in Geography*. London: Sage, pp. 35–48.
- Heberlein, T.A. (2012). *Navigating Environmental Attitudes*. Oxford University Press.
- Herington, M.J., van de Fliert, E., Smart, S., Greig, C. & Lant, P.A. (2017). Rural energy planning remains out-of-step with contemporary paradigms of energy access and development. *Renewable and Sustainable Energy Reviews*. 67 (3). pp. 1412–1419.
- Herstory (n.d.). Kenya-County-Map. [Online]. Available from: <http://www.herstorycentre.org/our-areas-of-operation/attachment/kenya-county-map>. [Accessed: 3 June 2019].
- Hoggart, K., Less, L. & Davies, A. (2002). *Researching Human Geography*. Oxford University Press.
- Hollington, A., Salverda, T., Schwarz, T. & Tappe, O. (2015). *Concepts of the Global South*. Global South Studies Center Cologne.
- Hooghe, E. & Marks, G. (2004). Contrasting Visions of Multi-Level Governance. In: I. Bache & M. Flinders (eds.). *Multi-Level Governance*. Oxford: Oxford University Press, pp. 15–30.
- Hooghe, L. & Marks, G. (1997). Contending models of governance in the European Union. In: A. Cafruny & C. Lankowsk (eds.). *Europe's Ambiguous Unity: conflict and consensus in the post-Maastricht era*. Boulder, CO: Lynne Rienner Publishers.
- Hooghe, L. & Marks, G. (2001). Types of Multi-Level Governance. *European Integration online Papers (EIoP)*. [Online]. 5 (11). Available from: <http://eiop.or.at/eiop/texte/2001-011a.htm>. [Accessed: 5 April 2016].
- Hooghe, L. & Marks, G. (2003). Unraveling the Central State, but How? Types of Multi-level Governance. *American Political Science Review*. 97 (2). pp. 223–243.
- Hooghe, L., Marks, G., Schakel, A. & Osterkatz, S. (2016). *Measuring regional authority: A postfunctionalist theory of governance, Vol I*. New York: Oxford University Press.
- Hoven, B. van (2010). Computer Assisted Qualitative Data Analysis. In: N. J. . Clifford, S. French, & G. Valentine (eds.). *Key Methods in Geography*. London: Sage, pp. 453–465.
- Hunold, C. (2010). Environmental Politics Canada's Low-level Radioactive Waste Disposal Problem: Voluntarism Reconsidered. *Environmental Politics*. 11 (2). pp. 49–72.
- ICT Authority (2016). Digital Literacy Programme Progress May 2016. [Online]. 2016. Available from: <http://icta.go.ke/digital-literacy-programme-progress-may-2016/>. [Accessed: 29 April 2019].
- IEA (2014). *Africa Energy Outlook: A Focus on Energy Prospects in Sub-Saharan Africa*. Paris.
- IEA (2016). *Boosting the Power Sector in Sub-Saharan Africa: China's Involvement*. [Online]. Paris. Available from: www.iea.org/t&c/.

IEA (2018a). Sustainable Development Goals: Access to clean cooking. [Online]. 2018. Available from: <https://www.iea.org/sdg/cooking/>. [Accessed: 23 January 2019].

IEA (2018b). Sustainable Development Goals: Access to electricity. [Online]. 2018. Available from: <https://www.iea.org/sdg/electricity/>. [Accessed: 23 January 2019].

IEA (2010). World Energy Outlook 2010.

Ilako, C. (2019). Kerosene prices jump 17% in 2018 on new excise levy. The Star. [Online]. 5 April. Available from: <https://www.the-star.co.ke/business/kenya/2019-04-05-kerosene-prices-jump-17-in-2018-on-new-excise-levy/>. [Accessed: 7 May 2019].

Imenda, S. (2014). Is There a Conceptual Difference between Theoretical and Conceptual Frameworks? *Journal of Social Sciences*. 38 (2). pp. 185–195.

International Energy Agency (2016). World Energy Outlook 2016.

IPCC (2014). Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. R. Pachauri & L. Meyer (eds.). [Online]. Geneva: IPCC. Available from: <https://www.ipcc.ch/report/ar5/syr/>. [Accessed: 24 January 2016].

ISO (n.d.). Sustainable Development Goals. [Online]. International Organization for Standardization. Available from: <https://www.iso.org/sdgs.html>. [Accessed: 5 April 2019].

Jacobson, A. (2007). Connective power: Solar electrification and social change in Kenya. 35 (1). pp. 144–162.

Jessop, B. (2010). Metagovernance. In: M. Bevir (ed.). *The SAGE Handbook of Governance*. Sage, pp. 106–123.

Jessop, B. (2006). State-and Regulation-theoretical Perspectives on the European Union and the Failure of the Lisbon Agenda. *Competition & Change*. 10 (2). pp. 141–161.

Jessop, B. (1990). *State theory: Putting the capitalist state in its place*. Cambridge: Polity.

Jessop, B. (2016). Territory, Politics, Governance and Multispatial Metagovernance. *Territory, Politics, Governance*. 4 (1). pp. 8–32.

Jessop, B. (1999). The Changing Governance of Welfare: Recent Trends in its Primary Functions, Scale, and Modes of Coordination. *Social Policy and Administration*. 33 (4). pp. 348–359.

Jobs in Kenya (2016). Consultancy Services to Finalise the County Energy Planning Framework in Kenya. [Online]. 2016. Available from: <http://www.jobsinkenya.co.ke/2016/06/consultancy-services-to-finalise-county/>. [Accessed: 9 August 2016].

Johnson, O., Nyambane, A., Cyoy, E. & Oito, L.G. (2016). *County Energy Planning in Kenya : Local Participation and Local Solutions in Migori County*. [Online]. Available from: <https://www.sei->

international.org/mediamanager/documents/Publications/SEI-WP-2016-01-Kenya-county-energy-planning.pdf. [Accessed: 2 June 2016].

Johnson, O., Wanjiru, H., Muhoza, C., Lambe, F., Jürisoo, M., Amatayakul, W. & Chenevoy, A. (2015). From Theory to Practice of Change: Lessons from SNV's Improved Cookstoves and Fuel Projects in Cambodia, Kenya, Nepal and Rwanda. [Online]. Stockholm. Available from: www.sei-international.org.

KAM (2018). About KAM. [Online]. 2018. Available from: <http://kam.co.ke/about-kam/>. [Accessed: 20 February 2018].

Kamau, M. (2016). Slums the biggest source of new Kenya Power customers. The Standard. [Online]. 20 December. Available from: <https://www.standardmedia.co.ke/business/article/2000227378/slums-the-biggest-source-of-new-kenya-power-customers>. [Accessed: 4 August 2017].

Kandie, K. (2019). Modernising the energy legislative framework. The Star. [Online]. 14 March. Available from: <https://www.the-star.co.ke/business/commentary/2019-03-14-modernising-the-energy-legislative-framework/>.

Kangu, J.M. (2015). Constitutional law of Kenya on devolution. Nairobi: Strathmore University Press.

Kaufmann, D., Kraay, A. & Zoido-Lobaton, P. (1999). Governance Matters. World Bank policy research working paper, (2196).

Kazungu, K. (2018). Lamu coal plant hits snag as court reinstates stop orders. Business Daily. [Online]. 3 October. Available from: <https://www.businessdailyafrica.com/news/counties/4003142-4789624-mwuaoy/index.html>. [Accessed: 3 May 2019].

KCSPOG (2018). Update on the Petroleum Bill, 2017 (August 2018) |. [Online]. 2018. Kenya Civil Society Platform on Oil and Gas. Available from: <http://kcspog.org/update-on-the-petroleum-bill-2017-august-2018/>. [Accessed: 13 April 2019].

Keating, M. (1998). The New Regionalism in Western Europe. Northampton, Massachusetts: Edward Elgar.

Kenton, W. (2019). *Legal Monopoly*. [Online]. 2019. Investopedia. Available from: <https://www.investopedia.com/terms/l/legalmonopoly.asp>. [Accessed: 13 February 2020].

Kenya Power (2017a). Kenya Off-Grid Solar Access Project (KOSAP). [Online]. 2017. Available from: <http://www.kplc.co.ke/content/item/1943>. [Accessed: 6 August 2017].

Kenya Power (2017b). Kenya Power confirms 5.9 Million customers connected to the grid. [Online]. 2017. Available from: <http://www.kplc.co.ke/content/item/1951/kenya-power-confirms-5.9-million-customers-connected-to-the-grid>. [Accessed: 17 August 2017].

Kenyatta, U. (2016). Presidential Memorandum: Refusal to Assent to the Petroleum Bill 2016.

- Kern, F., Kuzemco, C. & Mitchell, C. (2014). Measuring and explaining policy paradigm change: the case of UK energy policy. *Policy & Politics*. 42 (4). pp. 513–530.
- Kerrow, B. (2015). How skewed state policies promote marginalisation. *The Standard*. [Online]. 11 January. Available from: <https://www.standardmedia.co.ke/article/2000147455/how-skewed-state-policies-promote-marginalisation>. [Accessed: 26 March 2019].
- Kersbergen, K. Van & Waarden, F. Van (2004). ‘Governance’ as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. *European Journal of Political Research*. 43 (2). pp. 143–171.
- KETRACO (2017). The Electricity Sub-sector. [Online]. 2017. Available from: <https://www.ketraco.co.ke/learn/electricity-sub-sector.html>. [Accessed: 17 April 2019].
- Khandke, V. (2016). Member Input Sought for Grants Program. [Online]. 2016. Dining for Women. Available from: <https://diningforwomen.org/author/veenadiningforwomen-org/>. [Accessed: 30 March 2019].
- Kimanthi, K. (2018). Report shows that counties spent less on development. *Daily Nation*. [Online]. 11 August. Available from: <https://www.nation.co.ke/news/Report-shows-that-counties-spent-less-on-development/1056-4707496-format-xhtml-na1g2r/index.html>. [Accessed: 23 March 2019].
- Ki-moon, B. (2011). Sustainable Energy for all: Vision Statement. [Online]. Available from: https://www.seforall.org/sites/default/files/SG_Sustainable_Energy_for_All_vision.pdf. [Accessed: 26 February 2019].
- Kipsang, W. (2018). Keter launches second phase of Sh15bn Last Mile project. *Daily Nation*. [Online]. 27 April. Available from: <https://www.nation.co.ke/news/Second-phase-of-Sh15bn-last-mile-project-launched/1056-4533210-mpfh9jz/index.html>. [Accessed: 29 April 2019].
- KNBS & SID (2013). Exploring Kenya’s Inequality: Pulling Apart or Pooling Together? [Online]. Available from: http://inequalities.sidint.net/kenya/wp-content/uploads/sites/3/2013/10/SID_Abridged_Small_Version_Final_Download_Report.pdf. [Accessed: 10 October 2018].
- Kohler-Koch, B. & Eising, R. (1999). *The transformation of governance in the European Union*. London: Routledge.
- Kooiman, J. & Bavinck, M. (2005). The Governance Perspective. In: J. Kooiman, M. Bavinck, S. Jentoff, & R. Pullin (eds.). *Fish for Life: Interactive Governance for Fisheries*. Amsterdam University Press, p. 432.
- KPLC (2018). Kenya leads East Africa peers in access to electricity. [Online]. 2018. Available from: <https://www.kplc.co.ke/content/item/2485/kenya-leads-east-africa-peers-in-access-to-electricity>. [Accessed: 1 May 2019].
- Krueger, R.A. & Casey, M.A. (2009). *Focus Groups: A Practical Guide for Applied Research*. Sage Publications.

- Kydland, F., Stokey, N. & Schelling, T. (2015). Smart Development Goals. [Online]. Available from: <http://www.copenhagenconsensus.com/post-2015-consensus>. [Accessed: 15 November 2015].
- Lakini (2018). Projects: Renewable Energy Development. [Online]. 2018. Available from: <http://www.lakini.co.uk/projects.html>. [Accessed: 8 May 2019].
- Lambe, F. & Senyagwa, J. (2015). Identifying behavioural drivers of cookstove use: a household study in Kibera, Nairobi. [Online]. Available from: https://cleancookstoves.org/binary-data/CMP_CATALOG/file/000/000/101-1.pdf. [Accessed: 12 October 2018].
- Lee, K., Brewer, E., Christiano, C., Meyo, F., Miguel, E., Podolsky, M., Rosa, J. & Wolfram, C. (2016). Electrification for “Under Grid” households in Rural Kenya. *Development Engineering*. 1. pp. 26–35.
- Leitner, H. (1997). Reconfiguring the spatiality of power: the construction of a supranational migration framework for the European Union. *Political Geography*. 16 (2). pp. 123–143.
- Levin, T. & Thomas, V.M. (2016). Can developing countries leapfrog the centralized electrification paradigm? *Energy for Sustainable Development*. 31. pp. 97–107.
- Lewis, M.P., Fennig, C.D. & Simons, G.F. (2009). *Ethnologue: Languages of the World*, Sixteenth edition. 2009. SIL International.
- Li, H. & Yi, H. (2014). Multilevel governance and deployment of solar PV panels in U.S. cities. *Energy Policy*. 69. pp. 19–27.
- Limb, M. & Dwyer, C. (2001). *Qualitative methodologies for geographers : issues and debates*. Arnold.
- Lockwood, M., Davidson, J., Curtis, A., Stratford, E. & Griffith, R. (2010). Governance Principles for Natural Resource Management. *Society & Natural Resources*. 23 (10). pp. 986–1001.
- Ludeki, C. (2004). The State and Rural Development: Transcending the Centralization-Decentralization Debate. *Regional Development Dialogue*. 25 (1). pp. 18–32.
- Lutzenhiser, L. (1992). A cultural model of household energy consumption. *Energy*. 17 (1). pp. 47–60.
- Lutzenhiser, L. & Shove, E. (1999). Contracting knowledge: The organizational limits to interdisciplinary energy efficiency research and development in the US and the UK. *Energy Policy*.
- Maclay, H. & Osgood, C.E. (1959). Hesitation Phenomena in Spontaneous English Speech. *Word*. [Online]. 15 (1).
- Manor, J. (1999). The political economy of democratic decentralization. [Online]. Washington D.C.: The World Bank. Available from: <https://elibrary.worldbank.org/doi/abs/10.1596/0-8213-4470-6>. [Accessed: 6 April 2019].
- Maps of World (n.d.). Political Map of Kenya. [Online]. Available from: <https://www.mapsofworld.com/kenya/kenya-political-map.html>. [Accessed: 3 June 2019].

- Marks, G. (1993). Structural policy and multilevel governance in the EC. In: G. G. Cafruny, Alan. W. Rosenthal (ed.). Boulder: Lynne Rienner, pp. 390–411.
- Maxwell, S (1998) Comparisons, convergences and connections: development studies in North and South, in A de Haan & S Maxwell (eds), *Poverty and Social Exclusion in North and South*, special issue, *IDS Bulletin*, 29 (1), pp 20-31
- McDowell, L. (1992). *Doing Gender: Feminism, Feminists and Research Methods in Human Geography*. *Transactions of the Institute of British Geographers*. 17 (4). pp. 399–416.
- McFarlane, C. (2006). Crossing borders: Development, learning and the North-South divide. *Third World Quarterly*. 27 (8). pp. 1413–1437.
- MCI Maps (2017). Kenya’s Presidential Results Were Fair – But Its Ethnic Divide Is Concerning. [Online]. 2017. Available from: <http://mcimaps.com/kenyas-presidential-results-were-fair-but-its-ethnic-divide-is-concerning/>. [Accessed: 25 August 2018].
- MECS (2019). Modern Energy Cooking Services. [Online]. 2019. Available from: <https://www.mecs.org.uk/>. [Accessed: 26 April 2019].
- Mehrotra, S. (2006). Governance and Basic Social Services: Ensuring Accountability in Service Delivery through Deep Democratic Decentralization. *Journal of International Development J. Int. Dev.* 18. pp. 263–283.
- Migori County Government (n.d.). Migori County: First County Integrated Development Plan 2013-2017. [Online]. Available from: <http://pshpkenya.org/wp-content/uploads/2016/04/Migori-County-Integrated-Development-Plan.pdf>.
- Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis : an expanded sourcebook*. Sage Publications.
- Millien, A. (2017). Electricity supply reliability and households decision to connect to the grid. [Online]. Available from: <https://halshs.archives-ouvertes.fr/halshs-01551097>. [Accessed: 2 May 2019].
- Mirza, B. & Szirmai, A. (2010). Towards a New Measurement of Energy Poverty: A Cross-Community Analysis of Rural Pakistan. 024. [Online]. Maastricht. Available from: <https://cris.maastrichtuniversity.nl/portal/files/1402492/guid-873b5bcb-9513-40c3-bef0-63c5ebfa51ed-ASSET1.0>. [Accessed: 29 January 2019].
- Mkutu Agade, K. (2014). ‘Ungoverned Space’ and the Oil Find in Turkana, Kenya. Round Table.
- Modi, V. (2004). Energy services for the poor: Commissioned paper for the Millennium Project Task Force 1. [Online]. New York. Available from: www.undp.org/seed/energy/chapter2.html [Accessed: 5 April 2019].
- Mohmand, S.K. & Loureiro, M. (2017). Introduction: Interrogating Decentralisation in Africa. *IDS Bulletin*. [Online]. 48 (2).

Moloney, S. & Fünfgeld, H. (2015). Emergent processes of adaptive capacity building: Local government climate change alliances and networks in Melbourne. *Urban Climate*. 14. pp. 30–40.

Mortal, A., Aníbal, J., Monteiro, J., Sequeira, C. & Semião, J. (2018). *INCREaSE: Proceedings of the 1st International Congress on Engineering and Sustainability in the XXI Century-INCREaSE 2017*. Springer International Publishing.

Moss, T. & Newig, J. (2010). Multilevel Water Governance and Problems of Scale: Setting the Stage for a Broader Debate. *Environmental Management*. 46 (1). pp. 1–6.

Moyo, D. (2009). *Dead aid: Why aid is not working and how there is a better way for Africa*. New York: Farrar, Straus and Giroux.

Muchiri, J. (2017). Government to distribute gas cylinders to poor families in a multi-billion project : The Standard. *The Standard*. [Online]. 9 June. Available from: <https://www.standardmedia.co.ke/business/article/2001242851/government-to-distribute-gas-cylinders-to-poor-families-in-a-multi-billion-project>. [Accessed: 25 April 2018].

Mullins, D. & Wambayi, J. (2017). Testing Community Consent: Tullow Oil project in Kenya. [Online]. Available from: www.oxfam.org. [Accessed: 19 September 2018].

Munda, C. (2016). Report on richest and poorest counties out. [Online]. 2016. *Business Daily*. Available from: <https://www.businessdailyafrica.com/economy/Report-on-richest-and-poorest-counties-out/3946234-4353798-v63ft9z/index.html>. [Accessed: 20 September 2017].

Munya, P. (2016). Press statement on the Division of Revenue 2016. (2016, February 18).

Muriuku, B. (2015). Full List of the Newly Gazetted Kenya Parastatals. [Online]. 2015. *Kenya.co.ke*. Available from: <https://www.kenya.co.ke/news/full-list-newly-gazetted-kenya-parastatals-0>. [Accessed: 8 May 2018].

Musau, N. (2018). How two cabinet secretaries control electric poles tenders. *The Standard*. [Online]. 28 July. Available from: <https://www.standardmedia.co.ke/article/2001289731/revealed-the-two-cabinet-secretaries-who-control-electric-poles-tenders>. [Accessed: 1 May 2019].

Mutai, E. (2018). Ketraco on the spot over Sh38.7 billion power lines delays. *Business Daily*. [Online]. 8 July. Available from: <https://www.businessdailyafrica.com/corporate/companies/Ketraco-on-the-spot-over-Sh38-7-billion-power-lines-delays/4003102-4652784-bdogr8z/index.html>. [Accessed: 2 May 2019].

Mutai, E. (2019). What your county will get in Rotich's Sh2.7trn Budget. *Business Daily*. [Online]. 15 February. Available from: <https://www.businessdailyafrica.com/economy/What-your-county-will-get-in-Rotich-s-Sh2-7trn-Budget/3946234-4983114-awaxg/index.html>. [Accessed: 6 May 2019].

Nairobi County Government (2017). *Nairobi County: County Integrated Development Plan (CIDP) 2018-2022 (Working Draft November 2017)*. [Online]. Available from: https://roggkenya.org/wp-content/uploads/docs/CIDPs/Nairobi__CIDP_2018-2022_County-Integrated-Development-Plan.pdf. [Accessed: 8 October 2018].

Najam, A. & Cleveland, C. (2004). Sustainable Development and Energy at Global Environmental Summits. In: C. Cleveland (ed.). *Encyclopedia of Energy*. Oxford: Elsevier Publishers, pp. 539–548.

Nakuru County (2016). *Nakuru County Clean Energy Policy*.

Nakuru County (n.d.). *Nakuru County Renewable Energy Plan*.

Nakuru County Government (2013). *Nakuru County: First County Integrated Development Plan (2013-2017)*.

Nash, D.J. (2000). Doing Independent Overseas Fieldwork 1: Practicalities and pitfalls. *Journal of Geography in Higher Education*. 24 (1). pp. 139–149.

Ndegwa, S. (2002). *Decentralization in Africa: a stocktaking survey*. Washington, DC.

NDF (2015). *Off-grid Electrification Using Wind and Solar Energy in Kenya [NDF C24]* |. [Online]. 2015. Available from: <https://www.ndf.fi/project/grid-electrification-using-wind-and-solar-energy-kenya-ndf-c24>. [Accessed: 17 April 2019].

Ndii, D. (2017). Dear Mr President, the bell has tolled for coal project. *Daily Nation*. [Online]. 2 June. Available from: <https://www.nation.co.ke/oped/Opinion/david-ndii-dear-mr-president-the-bell-has-tolled-for-coal/440808-3953776-yyagfj/index.html>. [Accessed: 3 May 2019].

Ndii, D. (2018). *Twitter*. [Online]. Available from: <https://twitter.com/DavidNdii>.

Ndii, D. (2019). The Dam Has Broken. Time to Call Jubilee Plunder What It Is. *The Elephant: E Review*. [Online]. 18 March. Available from: <https://www.theeastafricanreview.info/op-eds/2019/03/18/the-dam-has-broken-time-to-call-jubilee-plunder-what-it-is/>. [Accessed: 23 April 2019].

NRECA International (2017). *Least Cost Geospatial Electrification Plan: Interim Report*.

Newell, P. & Phillips, J. (2016). Neoliberal energy transitions in the South: Kenyan experiences. *Geoforum*. 74. pp. 39–48.

Newell, P., Phillips, J., Pueyo, A., Kirumba, E., Ozor, N. & Urama, K. (2014). The political economy of low carbon energy in Kenya. *IDS Working Papers*, 2014 (445), pp.1-38.

Ngirachu, J. (2016). Uhuru rejects Bill seeking refund for power outages. *Daily Nation*. [Online]. 7 October. Available from: <https://www.nation.co.ke/news/Uhuru-rejects-Bill-seeking-refund-for-power-outages/1056-3407792-puc9acz/>. [Accessed: 18 October 2016].

Ngugi, B. (2018). Sh3bn cooking gas for the poor hit by fraud. [Online]. 2018. *Business Daily*. Available from: <https://www.businessdailyafrica.com/news/Sh3bn-cooking-gas-for-the-poor-hit-by-fraud/539546-4802542-ugs3ab/index.html>. [Accessed: 16 October 2018].

Ngũgĩ wa Thiong’o (1986). *Decolonising the mind: the politics of language in African literature*. London: Heinemann Educational.

- Nyabola, N. (2017). Siasa na Kusengenyana (aka When Kenyan politicians switch from English). African Arguments. [Online]. Available from: <https://africanarguments.org/2017/10/03/siasa-na-kusengenyana-aka-when-kenya-politicians-switch-from-english/>. [Accessed: 15 November 2017].
- Nyaundi, L. (2019). Why Uhuru's flagship laptop project crashed. The Star. [Online]. 22 March. Available from: <https://www.the-star.co.ke/news/2019-03-22-why-uhurus-flagship-laptop-project-crashed/>. [Accessed: 29 April 2019].
- Ochieng', L. (2015). Kenya's first oil export expected in October 2022. Daily Nation. [Online]. 12 August. Available from: <https://www.nation.co.ke/business/Kenya-s-first-oil-export-expected-in-October-2022/996-2829074-exbf16/index.html>.
- Ockwell, D. & Byrne, R. (2016). Improving technology transfer through national systems of innovation: climate relevant innovation-system builders (CRIBs). *Climate Policy*. 16 (7). pp. 836–854.
- Ockwell, D. & Byrne, R. (2017). *Sustainable Energy for All: Innovation, Technology and Pro-Poor Green Transformations*, Abingdon, Routledge.
- Ockwell, D., Byrne, R., Urama, K., Ozor, N., Kirumba, E., Ely, A., Becker, S. and Gollwitzer, L. (2017). Debunking free market myths: Transforming pro-poor, sustainable energy access for climate compatible development. In: Nunan, F. (ed.) *Making Climate Compatible Development Happen*. Abingdon: Routledge.
- Odhiambo, M.O. (2013). Moving beyond the rhetoric: the challenge of reform in Kenya's drylands. [Online]. Edinburgh. Available from: <http://pubs.iied.org/10043IIED.html>.
- Olonyi, L. (2019). Kenya could do without coal's poisonous legacy. Business Daily. [Online]. 21 April. Available from: <https://www.businessdailyafrica.com/analysis/ideas/Kenya-could-do-without-coals-poisonous/4259414-5081524-13cp6j0/index.html>. [Accessed: 3 May 2019].
- Olowu, B. (2001). African decentralisation policies and practices from 1980s and beyond. ISS Working Paper Series/General Series. [Online]. Available from: <https://repub.eur.nl/pub/19077/wp334.pdf>. [Accessed: 6 April 2019].
- Omanga, D. (2018). Is Jubilee's laptop project headed for a collapse?No Title. The Standard. [Online]. 24 February. Available from: <https://www.standardmedia.co.ke/article/2001270947/is-jubilee-s-laptop-project-headed-for-a-collapse>.
- Omuko, L. (2016). Review of Legal and Regulatory Framework.
- Ondraczek, J. (2013). The sun rises in the east (of Africa): A comparison of the development and status of solar energy markets in Kenya and Tanzania. *Energy Policy*. 56. pp. 407–417.
- Onyach, A. (2019a). Protecting interests of Lamu residents. The Star. [Online]. 10 April. Available from: <https://www.the-star.co.ke/opinion/columnists/2019-04-10-protecting-interests-of-lamu-residents/>. [Accessed: 3 May 2019].

- Onyach, A. (2019b). Tenderpreneurship is the Kenyan dream. *The Star*. [Online]. 30 April. Available from: <https://www.the-star.co.ke/opinion/columnists/2019-04-30-tenderpreneurship-is-the-kenyan-dream/>. [Accessed: 3 May 2019].
- Otuki, N. (2018). Turkana in big dreams as oil export kicks off. *Business Daily*. [Online]. 11 June. Available from: <https://www.businessdailyafrica.com/news/Turkana-in-big-dreams-as-oil-export-kicks-off/539546-4605734-u6v24vz/index.html>.
- Overseas Development Institute (ODI) (2012). *Sustainable energy: Informing and influencing policies and practices for renewable energy and access to modern energy services*. [Online]. 2012. Available from: <https://www.odi.org/our-work/programmes/climate-and-energy/sustainable-energy>. [Accessed: 5 April 2016].
- Pachauri, S. (2011). Reaching an international consensus on defining modern energy access. *Current Opinion in Environmental Sustainability*. 3 (4). pp. 235–240.
- Pachauri, S., Brew-Hammond, A., Barnes, D.F., Bouille, D.H., Gitonga, S., Modi, V., Prasad, G., Rath, A. and Zerrifi, H. (2012). *Energy access for development*.
- Pachauri, S. & Rao, N.D. (2013). Gender impacts and determinants of energy poverty: are we asking the right questions? *Current Opinion in Environmental Sustainability*. 5 (2). pp. 205–215.
- Painuly, J.P. (2001). Barriers to renewable energy penetration: A framework for analysis. *Renewable Energy*. 24 (1). pp. 73–89.
- Pasquini, L., Ziervogel, G., Cowling, R.M. & Shearing, C. (2015). What enables local governments to mainstream climate change adaptation? Lessons learned from two municipal case studies in the Western Cape, South Africa. *Climate and Development*. 7 (1). pp. 60–70.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Sage Publications.
- Peters, G. & Pierre, J. (2001). Developments in intergovernmental relations: towards multi-level governance. *Policy and Politics*. 29 (2). pp. 131–135.
- Peters, G. & Pierre, J. (2004). Multi-level Governance and Democracy: a Faustian Bargain. In: I. Bache & M. Flinders (eds.). *Multi-Level Governance*. Oxford: Oxford University Press, pp. 75–90.
- Piebalgs, A. (2012). *Delivering sustainable energy for all*. [Online]. Available from: https://www.oecd-ilibrary.org/development/development-co-operation-report-2012/delivering-sustainable-energy-for-all_dcr-2012-12-en.
- Pieterse, JN (2001) *Development Theory: Deconstructions/Reconstructions* (London: Sage).
- Van der Plas, R.J. & Hankins, M. (1998). Solar electricity in Africa: a reality. *Energy Policy*. 26 (4). pp. 295–305.
- Practical Action (2010). *Poor people's energy outlook 2010*. [Online]. UK: Rugby. Available from: www.practicalaction.org.uk. [Accessed: 31 January 2016].

- Pueyo, A. (2015). Pro-poor access to green electricity in Kenya (No. IDS Evidence Report; 135). IDS.
- Reddy, B.S. (2003). Overcoming the energy efficiency gap in India's household sector. *Energy Policy*. 31 (11). pp. 1117–1127.
- Ribot, J.C. (2002). *Democratic Decentralization of Natural Resources Institutionalizing Popular Participation*. Washington DC: World Resources Institute.
- Roche, O.M. & Blanchard, R.E. (2018). Design of a solar energy centre for providing lighting and income-generating activities for off-grid rural communities in Kenya. *Renewable Energy*. 118. pp. 685–694.
- Rodney, W. (1972). *How Europe Underdeveloped Africa*. London: Bogle-L'ouverture Publications.
- Rodríguez-Pose, A. & Gill, N. (2003). The global trend towards devolution and its implications. *Environment and Planning C: Government and Policy*. 21 (3). pp. 333–351.
- Rodrik, D. (2006). Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. *Journal of Economic Literature*. 44 (4). pp. 973–987.
- Rondinelli, D.A., McCullough, J.S. & Johnson, R.W. (1989). Analysing Decentralization Policies in Developing Countries: a Political-Economy Framework. *Development and Change*. 20 (1). pp. 57–87.
- Rondinelli, D.A., Nellis, J.R. & Cheema, S.G. (1983). Decentralization in developing countries. 8. [Online]. Washington D.C. Available from: <http://documents.worldbank.org/curated/en/868391468740679709/pdf/multi0page.pdf>.
- Rosenau, J. (1997). *Along the domestic-foreign frontier: Exploring governance in a turbulent world*. Cambridge: Cambridge University Press.
- Said, E.W. (1978). *Orientalism*. [Online]. New York: Pantheon Books.
- Saygie, G. (2019). SGR pay bombshell for prime land brokers on Narok-Kisumu route - Daily Nation. Daily Nation. [Online]. 28 April. Available from: <https://www.nation.co.ke/news/SGR-pay-bombshell-for-prime-land-brokers-on-Narok-Kisumu-route/1056-5091046-h9367yz/index.html>. [Accessed: 2 May 2019].
- Schmied, J.J. (1991). *English in Africa: an introduction*. Longman.
- Scott, A. & Seth, P. (2013). The political economy of electricity distribution in developing countries. [Online]. Available from: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8332.pdf>.
- Scrivener, J. (2011). *Learning Teaching: The Essential Guide to English Language Teaching*. 3rd Ed. Macmillan Education.

SE4All (2012). Sustainable Energy for All: A Framework for Action. [Online]. Available from: https://www.seforall.org/sites/default/files/SE_for_All_-_Framework_for_Action_FINAL.pdf. [Accessed: 26 February 2019].

Sen, R. & Bhattacharyya, S. (2014). Off-grid electricity generation with renewable energy technologies in India: An application of HOMER. *Renewable Energy*. 62. pp. 388–398.

Senelwa, K. (2016). Kenya's 5,000MW power target off the mark - The East African. *The East African*. [Online]. 11 October. Available from: <https://www.theeastafrican.co.ke/business/Kenya-5000MW-power-target-off-the-mark-/2560-3413186-120kjjf/index.html>. [Accessed: 14 April 2019].

Shiundu, A. (2013). Six counties fail to spend allocated funds : The Standard. *The Standard*. [Online]. 14 August. Available from: <https://webcache.googleusercontent.com/search?q=cache:J8etCfahf34J:https://www.standardmedia.co.ke/article/2000090917/six-counties-fail-to-spend-allocated-funds+&cd=1&hl=en&ct=clnk&gl=uk>. [Accessed: 19 February 2016].

Showers, K.B. (2011). Electrifying Africa: an Environmental History with Policy Implications. *Geografiska Annaler: Series B, Human Geograph*. 93 (3). pp. 193-221.

Skelton, T. (2001). Cross-cultural research: issues of power, positionality and "race". In: C. Dwyer & M. Limb (eds.). *Qualitative Methodologies for Geographers*. London: Arnold, pp. 87–100.

Slater, D. (1989). Territorial Power and the Peripheral State: The Issue of Decentralization. *Development and Change*. [Online]. 20 (3). pp. 501–531.

Smith, F.M. (1996). Problematizing language: Limitations and possibilities in 'foreign language' research. *Area*. 28 (2). pp. 160–166.

Smith, N. (1995). Remaking Scale: Competition and Cooperation in Prenational and Postnational Europe. In: H. Eskelinen & F. Snickars (eds.). *Competitive European Peripheries*. Berlin: Springer Verlag, pp. 9–74.

Snyder, J. (2004). One World, Rival Theories. *Foreign Policy*. (145). pp. 52–62.

SonySugar (2018). SonySugar: Company Background. [Online]. 2018. Available from: http://www.sonyosugar.co.ke/index.php?option=com_content&view=article&id=71&Itemid=476. [Accessed: 23 November 2018].

Sovacool, B.K. (2011). An international comparison of four polycentric approaches to climate and energy governance. *Energy Policy*. 39 (6). pp. 3832–3844.

Sovacool, B.K. (2008). *The Dirty Energy Dilemma: What's Blocking Clean Power in the United States*. Westport, CT: Praeger.

Sovacool, B.K. (2014). What are we doing here? Analyzing fifteen years of energy scholarship and proposing a social science research agenda. *Energy Research and Social Science*. 1. pp. 1–29.

- Stephenson, P. (2013). Twenty years of multi-level governance: 'Where Does It Come From? What Is It? Where Is It Going?' *Journal of European Public Policy*. 20 (6). pp. 817–837.
- Stern, P.C. (1986). Blind Spots in Policy Analysis: What Economics doesn't say about Energy Use. [Online]. Available from: <https://search.proquest.com/docview/229606988?accountid=12152>.
- Stevens, L. & Gallagher, M. (2015). The Energy-Water-Food Nexus at Decentralised Scales.
- Stein, C., Ernstson, H. & Barron, J. (2011). A social network approach to analyzing water governance: The case of the Mkindo catchment, Tanzania. *Physics and Chemistry of the Earth*. 36. pp. 1085–1092.
- Stein, M.I. (2019). *The Energy Industry's Secret Campaign to Get Us to Build More Power Plants*. [Online]. 2019. The Nation. Available from: <https://www.thenation.com/article/archive/energy-utility-entergy-astroturfing-nola/>. [Accessed: 13 February 2010].
- Stigler, G.J. (1971). The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science*. 2 (1). pp. 3–21.
- Sustainable Energy for All (2016). Kenyan Action Agenda. [Online]. Available from: http://www.se4all.org/sites/default/files/Kenya_AA_EN_Released.pdf. [Accessed: 10 November 2016].
- Sustainable Energy for All (2015). Our Vision. [Online]. 2015. Available from: <http://www.se4all.org/>. [Accessed: 25 November 2015].
- The Africa-EU Renewable Energy Cooperation Programme (RECP) (2015). Kenya - Renewable Energy Potential. [Online]. 2015. Available from: <https://www.africa-eu-renewables.org/market-information/kenya/renewable-energy-potential/>. [Accessed: 26 March 2018].
- The White House (2017). Statement by President Trump on the Paris Climate Accord | The White House. [Online]. 2017. Available from: <https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/>. [Accessed: 5 February 2019].
- Turkana County Government (2014). County Integrated Development Plan (CIDP) 2013-2017. [Online]. Available from: <https://turkana.go.ke/wp-content/uploads/2016/10/Turkana-CIDP-Final-1.pdf>. [Accessed: 19 February 2017].
- TWN (2012). Differences remain despite some common understanding on 'Green economy' approach. 2012. RIO+20 New Update 11.
- Twyman, C., Morrison, J. & Sporton, D. (1999). The Final Fifth: Autobiography, Reflexivity and Interpretation in Cross-Cultural Research. *Area*. 31 (4). pp. 313–325.
- Udeze, B. (2009). *Why Africa?: A Continent in a Dilemma of Unanswered Questions*. Xlibris, Corp.
- UK AID (2017). Kenya County Integrated Development Plans 2013-2017: Review of Climate Change Mainstreaming. [Online]. Available from: <http://www.starckplus.com/documents/ta/cidp/Kenya CIDP 2013-17 Review of Climate Change Mainstreaming.pdf>. [Accessed: 19 September 2018].

- UN (1992). Agenda 21. [Online]. Rio de Janeiro. Available from: <http://www.un.org/esa/sustdev/agenda21.htm>.
- UN Habitat (2017). New Urban Agenda. [Online]. Quito. Available from: <http://habitat3.org/wp-content/uploads/NUA-English.pdf>.
- UN Habitat (2015). Towards an African Urban Agenda. [Online]. Nairobi. Available from: www.unhabitat.org/HSNumber.
- UNDP (2016). Delivering Sustainable Energy in a Changing Climate: Strategy Note on Sustainable Energy 2017-2021. [Online]. Available from: <http://www.un-expo.org/wp-content/uploads/2017/05/UNDP-Energy-Strategy-2017-2021.pdf>. [Accessed: 24 January 2019].
- UNDP (2014). UNDP Support to Devolution. [Online]. Nairobi. Available from: [https://www.undp.org/content/dam/kenya/docs/Democratic Governance/Fast Facts Devolution.pdf](https://www.undp.org/content/dam/kenya/docs/Democratic%20Governance/Fast%20Facts%20Devolution.pdf).
- United Cities and Local Governments (2007). Decentralization and Local Democracy in the World: First Global Report 2007.
- United Nations (1998). Kyoto Protocol to the United Nations Framework Convention on Climate Change. [Online]. Available from: <https://unfccc.int/resource/docs/convkp/kpeng.pdf>.
- United Nations (2011). Report of the Conference of the Parties on its sixteenth session: Part Two: Action taken by the Conference of the Parties at its sixteenth session. [Online]. Cancun. Available from: <https://unfccc.int/sites/default/files/resource/docs/2010/cop16/eng/07a01.pdf>.
- United Nations (2002). Report of the World Summit on Sustainable Development. [Online]. Johannesburg. Available from: <http://www.un-documents.net/aconf199-20.pdf>.
- United Nations (n.d.). Sustainable Development Goals: Goal 17 Partnerships for the Goals. [Online]. Available from: <https://www.un.org/sustainabledevelopment/globalpartnerships/>. [Accessed: 5 February 2019].
- United Nations Climate Change (n.d.). Parties & Observers. [Online]. Available from: http://unfccc.int/parties_and_observers/items/2704.php. [Accessed: 19 March 2018].
- United Nations Statistics Division (UNSD) (2003). Millennium Development Indicators: World and regional groupings: Africa. [Online]. 2003. Available from: <https://unstats.un.org/unsd/mi/africa.htm>. [Accessed: 5 February 2019].
- Van Veelen, B. (2018). Negotiating energy democracy in practice: governance processes in community energy projects. *Environmental Politics*. 27 (4). pp. 644–665.
- Vertovec, S. (1999). Conceiving and researching transnationalism. *Ethnic and Racial Studies*. 22 (2). pp. 447–462.
- Victor, D.G., Akimoto, K., Kaya, Y., Yamaguchi, M., Cullenward, D. & Hepbur, C. (2017). Prove Paris was more than paper promises. *Nature*. 548 (7665). pp. 25–27.

Vincent, B. & Gathui, T. wa (2014). Rwanda Stakeholders Workshop, Kigali. [Online]. Available from: http://thearadproject.co.uk/wp-content/uploads/2014/10/READ-Workshop-Report_Rwanda_Final-15.10.14.pdf.

Vincent, B. & Wa Gathui, T. (2014). Renewable Energy and Decentralization (READ) Rwanda Stakeholders Workshop, Kigali. [Online]. Available from: http://thearadproject.co.uk/wp-content/uploads/2014/10/READ-Workshop-Report_Rwanda_Final-15.10.14.pdf.

Voisey, H., Beuermann, C., Sverdrup, L.A. & O’Riordan, T. (1996). The political significance of local agenda 21: The early stages of some European experience. *Local Environment*. 1 (1). pp. 33–50.

Wachira, G. (2016). New LPG master plan can boost cooking gas supply and demand - Business Daily. [Online]. 2016. Business Daily. Available from: <https://www.businessdailyafrica.com/analysis/New-LPG-master-plan-can-boost-cooking-gas-supply-and-demand/539548-3217368-7sa7e2z/index.html>. [Accessed: 12 October 2018].

Waddilove, H. (2017). Kenya voted for change and got it...at the local level - African Arguments. [Online]. 2017. Available from: <http://africanarguments.org/2017/08/18/kenya-voted-for-change-and-got-it-at-the-local-level-elections/>. [Accessed: 23 August 2017].

Waddilove, H. (2019). Support or subvert? Assessing devolution’s effect on central power during Kenya’s 2017 presidential rerun. *Journal of Eastern African Studies*. 13 (2). pp. 334–352.

Wafula, P. (2017). Plan to split Kenya’s energy docket generates heat among top ministry officials. *The Standard*. [Online]. 2 November. Available from: <https://www.standardmedia.co.ke/business/article/2001259099/state-mulls-plan-to-split-energy-docket>. [Accessed: 17 April 2018].

Wafula, P. & Achuka, V. (2018). Politics that plunged Kenya Power into financial mess. *Standard Digital* [online]. [Online]. 30 October. Available from: <https://www.standardmedia.co.ke/article/2001300864/dark-times-for-kenya-power>. [Accessed: 16 February 2019].

Wamukonya, N. (2003). African power sector reforms: some emerging lessons. *Energy for Sustainable Development*. 7 (1). pp. 7–15.

Wanzala, O. (2016). Keter: 95 per cent of primary schools connected to electricity. *Daily Nation*. [Online]. 6 August. Available from: <https://www.nation.co.ke/news/education/95-per-cent-of-primary-schools-connected-to-electricity-/2643604-3334540-1usd42z/index.html>. [Accessed: 4 August 2017].

Warleigh-Lack, A. (2008). The EU, ASEAN and APEC in Comparative Perspective. In: P. Murray (ed.). *Europe and Asia: Regions in Flux*. Basingstoke: Palgrave Macmillan, pp. 23–41.

Waruru, M. (2015). Gusts of opposition hit Kenyan wind farm project. [Online]. 21 May 2015. Reuters. Available from: <https://www.reuters.com/article/kenya-windpower-protests/gusts-of-opposition-hit-kenyan-wind-farm-project-idUSL5N0YB4ID20150521>. [Accessed: 26 June 2018].

Watson, J., Byrne, R., Morgan Jones, M., Tsang, F., Opazo, J., Fry, C. & Castle-Clarke, S. (2012). What are the major barriers to increased use of modern energy services among the world's poorest people and are interventions to overcome these effective? Systematic Review. Project Report. Collaboration for Environmental Evidence, Bangor.

Williamson, J. (1990). Latin American Adjustment: How Much Has It Happened? Washington, D.C.: Institute for International Economics.

Willis, K. (2006). Doing development research. In: V. Desai & R. B. Potter (eds.). SAGE, p. 324.

World Bank (2018a). Access to clean fuels and technologies for cooking (% of population). [Online]. 2018. Available from: <https://data.worldbank.org/indicator/EG.CFT.ACCS.ZS>. [Accessed: 1 May 2019].

World Bank (2018b). Access to electricity (% of population). [Online]. 2018. Available from: <https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?view=chart>. [Accessed: 1 May 2019].

World Bank (2005a). Economic growth in the 1990s: learning from a decade of reform. R. Zaghera & G. T. Nankani (eds.). Washington D.C.: World Bank.

World Bank (2005b). Economic Growth in the 1990s. Economic Growth in the 1990s. [Online]. Available from: <http://www.worldbank.icebox.ingenta.com/content/wb/2056>.

World Bank (2015). Kenya's Devolution. [Online]. 2015. Available from: <http://www.worldbank.org/en/country/kenya/brief/kenyas-devolution>. [Accessed: 11 January 2016].

World Bank (2016). Kenya Devolution Support Project | The World Bank. [Online]. 2016. Available from: <http://projects.worldbank.org/P149129?lang=en>. [Accessed: 17 January 2017].

World Bank (2019a). Projects & Operations. [Online]. 2019. Available from: <http://projects.worldbank.org/search?lang=en&searchTerm=kenya>. [Accessed: 29 April 2019].

World Bank (2019b). World Bank Country and Lending Groups. [Online]. 2019. Available from: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>. [Accessed: 2 April 2019].

World Health Organisation (2018). Household air pollution and health. [Online]. 2018. Available from: <https://www.who.int/en/news-room/fact-sheets/detail/household-air-pollution-and-health>. [Accessed: 24 January 2019].

WorldClim (2017). WorldClim Version2. [Online]. 2017. Available from: <http://worldclim.org/version2>. [Accessed: 31 August 2017].

Wunsch, J.S. (2014). Decentralization: Theoretical, Conceptual, and Analytical Issues. In: J. T. Dickovick & J. S. Wunsch (eds.). Decentralization in Africa: The Paradox of State Strength. Boulder: Lynne Rienner, pp. 1–22.

Zalengera, C., To, L.S., Sieff, R., Mohr, A., Eales, A., Cloke, J., Buckland, H., Brown, E., Blanchard, R. & Batchelor, S., Decentralization: the key to accelerating access to distributed energy services in sub-Saharan Africa?. *Journal of Environmental Studies and Sciences*, pp.1-20.

Appendix

1. Table of key stakeholder interviews

Code	Position	Organisation	Location
1	Senior officer	Ministry of Energy and Petroleum	Nairobi
2	Senior officer	Ministry of Energy and Petroleum	Nairobi
3	Senior officer	Ministry of Energy and Petroleum	Nairobi
4	Senior officer	Ministry of Devolution and Planning	Nairobi
5	Lawyer	Council of Governors	Nairobi
6	Planning manager	KPLC	Nairobi
7	Officer	KPLC	Nairobi
8	Officer	KPLC	Nairobi
9	Senior officer	KETRACO	Nairobi
10	Officer	KETRACO	Nairobi
11	Officer	ERC	Nairobi
12	Officer	ERC	Nairobi
13	Officer	REA	Nairobi
14	Senior officer	REA	Nairobi
15	Officer	GDC	Nairobi
16	Lawyer	KENGEN	Nairobi
17	Officer	KENGEN	Nairobi
18	Officer	Commission on Revenue Allocation	Nairobi
19	Senior energy officer	Nairobi county government	Nairobi
20	Electrical engineer	Nairobi county government	Nairobi
21	Communications officer	Nairobi county government	Nairobi
22	Officer	Nairobi county government	Nairobi
23	Energy consultant	Kenyan university	Nairobi
24	Energy consultant	Kenyan university	Nairobi
25	Energy consultant	Kenyan university	Nairobi
26	Environment officer	Nakuru County Government	Nakuru
27	Health officer	Nakuru County Government	Nakuru
28	Senior officer	Nakuru Community based organisation	Nakuru
29	Energy consultant	Nakuru Community based organisation	Nakuru
30	Senior officer	KPLC Turkana	Turkana
31	Senior energy officer	Turkana county government	Turkana
32	Chief Officer	Turkana county government	Turkana
33	Representative	Turkana based civil society organisation focussed on natural resource management	Turkana
34	Representative	Turkana based civil society organisation focussed on environmental issues	Turkana
35	Representative	Turkana based civil society organisation focussed on pastoralist issues	Turkana

36	Representative	Tullow oil	Turkana
37	Officer	GIZ	Turkana
38	Senior officer	KPLC Migori	Migori
39	Officer	KENGEN (Gogo falls)	Migori
40	Officer	Migori Energy Centre	Migori
41	Senior energy officer	Migori County Government	Migori
42	Sub-county administrator	Migori County Government	Migori
43	Engineer	Migori County Government	Migori
44	Electrical engineer	SONY Sugar factory	Migori
45	Senior representative	Bagasse briquettes manufacturing company	Migori
46	Senior energy officer	Kitui county government	Naivasha
47	Senior officer	KPLC Uasin Gishu	Uasin Gishu
48	Officer	Uasin Gishu Energy Centre	Uasin Gishu
49	Senior water officer	Uasin Gishu County Government	Uasin Gishu
50	Sales person	M-Kopa	Uasin Gishu
51	Senior officer	KPLC Trans Nzoia	Trans Nzoia
52	County Executive Committee member	Trans Nzoia County Government	Trans Nzoia
53	Engineer	Trans Nzoia County Government	Trans Nzoia
54	Senior energy officer	Machakos County Government	Machakos
55	Energy consultant	Kenyan renewable energy technology company	Nairobi
56	Coordinator	The Kenya Renewable Energy Association (KEREAA)	Nairobi
57	Energy consultant	Biogas technology company	Nairobi
58	Energy consultant	Solar Power company	Nairobi
59	Senior consultant	Kenyan Association of Manufacturers	Naivasha
60	Energy consultant	Kenyan energy consultancy	Nairobi
61	Energy consultant	Kenyan energy consultancy	Nairobi
62	Energy consultant	Solar power company	Nairobi
63	Energy consultant	Kenyan renewable energy technology company	Nairobi
64	Engineer	Multinational electrical engineering company	Nairobi
65	Energy consultant	Independent energy consultant	Nairobi
66	Senior representative	Global Alliance for Clean Cookstoves	Nairobi
67	Manager	GIZ	Nairobi
68	Manager	Multinational Sustainable Development Company	Nairobi
69	Manager	European Union delegation to Kenya	Nairobi
70	Energy consultant	Practical Action	Nairobi
71	Programme coordinator	World Wide Fund for Nature	Naivasha
72	Senior officer	Clean Cookstoves Association of Kenya	Nairobi
73	Senior representative	Kenyan sustainable development NGO	Nairobi
74	Research fellow	Stockholm Environment Institute	Nairobi
75	Energy consultant	Strathmore University	Nairobi
76	Energy consultant	Strathmore University	Nairobi

77	Senior law academic	Strathmore University	Nairobi
78	Law academic	Strathmore University	Nairobi
79	Research fellow	Stockholm Environment Institute	Nairobi
80	Manager	Stockholm Environment Institute	Nairobi
81	Officer	Council of Governors	Naivasha
82	Senior energy officer	Wajir County Government	Naivasha
83	Officer	Migori County Government	Naivasha
84	Officer	Siaya County Government	Naivasha
85	Officer	Mandera County Government	Naivasha
86	Officer	Baringo County Government	Naivasha
87	Officer	Kiambu County Government	Naivasha
88	Officer	United Nations Industrial Development Organisation (UNIDO)	Naivasha
89	Senior director	National Rural Electric Cooperative Association (NRECA) International	Nairobi
90	Senior officer	United Nations Environment Programme	Nairobi
91	Senior sustainability academic	Danish university	Nairobi
92	Consultant	The Humanist Institute for Cooperation with Developing Countries (Hivos)	Nairobi
93	Manager	CAFOD	UK
94	Researcher	African Centre for Technology Studies (ACTS)	Nairobi
95	Energy consultant	International Institute for Environment and Development (IIED)	UK
96	Energy officer	Kisumu County Government	Kisumu
97	Analyst	Kenyan CSO	Nairobi
98	Research analyst	Freelance	Migori
99	Chief Officer	Nakuru County Government	Naivasha
100	Community members	Suna community	Migori
101	Community members	Masaba community	Migori
102	Community members	Echariria community	Nakuru
103	Community members	Lemolo B community	Nakuru
104	Community members	Napetet community	Turkana
105	Community members	Nakwemekwi community	Turkana
106	Energy consultant	CAFOD	UK
107	Manager	Renewable energy technology company	Nairobi
108	Energy Consultant	Malawian community based organisation	Lilongwe (Malawi)
109	Energy consultant	Multinational energy technology company	Nairobi

2. Semi-structured interview guide

Introductions and general background

- i. Please introduce yourself and tell us a little about your background and your current role in energy projects/governance? (and your organization's role in energy governance?)
- ii. How would you describe what is currently going on with energy decentralisation?

Topic area 1. Experiences of devolution

1. How has devolution affected your organisation's work? Were you involved in energy governance before devolution? Differences?
2. What opportunities/challenges have there been for your organisation since devolution?
3. What would assist your organisation in carrying out its energy roles?
4. Has devolution developed the way you expected? (explore any differences)
5. What is your view of the purpose of devolution?
6. What is the current role of local governance in addressing energy access issues? What do you think it should be?

Topic area 2. Policy development

2a. Factors affecting the development of devolution (quote specific policy aims with questions)

7. Who defined the aims of devolution/decentralisation?
8. Where did the ideas for this definition come from? What other definitions were considered?
9. When did the county become an important part of this legislation? Why 47 counties?
10. Was anything on the table not included in final policy?
11. Some people say Kenya over devolved – what do you think?
12. Before devolution, there were the provincial governments – your view?

2b. How has devolved energy policy unfolded

13. What effect has the lack of Energy Bill had on your operations?
14. View on KPLC compensation/revenue sharing aspects of Energy Bill
15. To what extent is the difference between county & national government energy roles clear?
16. Do you foresee any issues with devolving energy powers to the county government?
17. Should KPLC and REA be devolved?
18. Do you see devolution playing a role in improving energy access (grid/off-grid/cook)? Why?

Topic area 3. Stakeholder interactions

3a. Stakeholders interactions in the energy sector.

19. Who do you see as the key stakeholders/people in the energy sector?
20. What do you see as the roles of these stakeholders in energy governance?
21. What dealings/relationship do you have with these stakeholders and how have they changed since devolution? What are the reasons for these changes?
22. What about (stakeholder not stated in Q19) – any dealings? If yes, ask Q20-21.
23. What have other energy stakeholders said about devolution (e.g. affected their work)?
24. What are their interests in devolution? How have they sought to pursue their interests?

25. To what extent, do other stakeholders views align with yours? If there are differences, what are they and why? Where there have been differences, what has been the outcome?

3b. Stakeholder interactions in and with county ministries

26. What have been your experiences/challenges/opportunities working in energy under a joint ministry?
27. If energy wasn't in a joint ministry, how would energy governance be different?
28. In Nakuru county, energy is combined with...? Why? Is this different in other counties? why?
29. To what extent are county governments integrating energy policy with the other sectors?
30. What could assist integrated working/working in a joint ministry?

3c. Stakeholders interactions in terms of nexus approaches

31. Do you think energy is linked to other sectors? Which other sectors? (Why?)
32. What impacts (positive/negative) could energy access have on these sectors?
33. To what extent is integrating energy with other sectors in the thinking of policy makers and in particular county governments?
34. What have other energy stakeholders (name specific one if necessary) said about how energy is linked to other sectors? To what extent do you share those opinions/interests? If there are differences, why? Where there are differences, what has been the outcome?
35. How has devolution affected the way energy is integrated with other sectors? Better/worse?
36. Regarding land rights issues affecting energy projects – who is best placed to negotiate?

Topic area 4. Overall evaluations of (decentralised) energy governance

37. Overall, do you feel energy governance has improved since devolution at both national scale and local scale? (Why(not)?/Why at one scale and not the other?)
38. Is devolution driving (these/any) changes (or something else – e.g. political will)?
39. How would the situation be different if devolution hadn't happened?
40. What is required to improve energy governance (further) at national and local scale?

Topic area 5. Future visions

41. Looking to the future, what do you see as your organisation's role in energy governance?
42. Briefly describe your aspirations for Kenya's/county's future energy governance in next 5-10 years? What do you think is needed to progress towards these aspirations?
43. What do you see as the main barriers to change (these aspirations being fulfilled), if any?
44. To what extent do you think devolution can help enable drivers/address barriers to change?
45. If I come back in 6/12 months' time, how do you think the landscape will have changed? How would you like it to have changed?

Wrapping up

- i. In terms of energy access, decentralised energy and the role of local governance, what data/research would be most useful for you?
- ii. Can you suggest anybody who it would be useful to speak to about these ideas? is there anybody else you think I should speak to?

3. Questionnaire

This questionnaire forms part of a research project entitled ***Decentralised Energy Governance in the Global South: Political Decentralisation and Energy Access in Kenya post-2010***, investigating the role of county energy governance since devolution. It is supported by the Ministry of Energy and Petroleum. Findings will be shared via the UNDP supported SE4All technical committee, whose website will provide a one-stop shop for energy, helping to match potential investors to energy projects.

This questionnaire is expected to take 20 minutes to complete

County Government questionnaire: energy governance

1. Date: __/__/____ (Day/Month/Year)
2. County administration you represent:
3. Position within county government:
4. How long have you been in this position?
5. How long have you worked in the energy sector?

County Energy Plan and Investment Needs

6. Has the county energy plan been completed? (*Please circle one answer*) Yes (Y) / No (N)
 - 6a. If no, what stage is the plan at?
7. How many people work on the county energy plan? 1-5 people / 6-10 people / 10 + people / Unsure
8. What is your budget for creating the county energy plan?
9. Have you received help from the National Government completing the county energy plan? Y / N
 - 9a. If yes, what did the help consist of?
 - 9b. If yes, how helpful did you find the assistance from the National Government?
10. Have you received help from any other organisation(s) completing the county energy plan? Y / N
 - 10a. If yes, which organisation(s) did you receive help from?
 - 10b. If yes, what did the help consist of?
 - 10c. If yes, how helpful did you find the assistance from each organisation?
11. In the energy sector in your county, what three things most require investment?
 - 1)
 - 2)
 - 3)

County Energy Roles

12. What are the three most important roles of county and national government regarding energy?

County roles

1)

2)

3)

National government roles

1)

2)

3)

13. Is there a role that county government could play that it currently isn't?

14-15. To what extent do you agree/disagree with the following statements (*Please circle one answer*)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not sure
14. The difference between the energy roles of the county and national government is clear.	1	2	3	4	5	0
15. The energy needs of the county (that the county government has identified) are well understood by the national government.	1	2	3	4	5	0

16. What two things impede the county government from carrying out its energy roles?

1)

2)

17. What two things would assist the county government in carrying out its energy roles?

1)

2)

County Ministries

18. In the county you represent, which ministry is energy contained within? (e.g. Ministry of Energy, Natural Resources and Water)

19. What are the reasons for combining energy with the other sectors found in that ministry?

20. Do individual officers in this ministry focus on just one sector or several of the sectors?

21-22. To what extent do you agree or disagree with the following statements (*Please circle one answer*)

	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree	Not sure
21. Officers working in the ministry containing energy understand energy issues well.	1	2	3	4	5	0
22. In the ministry containing energy, policy for energy is well integrated with the other sectors found in that ministry.	1	2	3	4	5	0

23. What one thing could help integrate energy with other sectors?

County Energy Data

24. Do you have data on the percentage of the county population which uses:

- a) Grid electricity Y / N b) Off-grid electricity Y / N c) Clean cooking facilities Y / N

25. If Yes to Q23: what percentage of the county population use each source of energy. Please provide the source of data and year collected.

- a) Grid electricity _____% Source: _____ Year: _____
 b) Off-grid electricity _____% Source: _____ Year: _____
 c) Clean-cooking facilities _____% Source: _____ Year: _____

26. If Yes to Q23, do you have data for each energy form at county, constituency or ward level? (*circle one*)

- a) Grid electricity: county / constituency / ward / not sure
 b) Off-grid electricity: county / constituency / ward / not sure
 c) Clean cooking facilities: county / constituency / ward / not sure

27. If **No** to Q23: What do you estimate is the percentage of the county population who use:

- a) Grid electricity _____% b) Off-grid electricity _____% c) Clean-cooking facilities _____%

28. Have you received help collecting data on the percentage of the county population with access to grid electricity, off-grid electricity and clean cooking facilities? (*Please circle one answer*) Y / N

28a. If yes, who have you received help from?

28b. If yes, what did the help consist of?

28c. If yes, how helpful did you find the assistance?

Devolution

29. How has devolution changed the way energy is governed in the county you represent?

30 -37. To what extent do you agree or disagree with the following statements (*Please circle one answer*)

	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree	Not sure
30. Since devolution in 2010, more responsibility for energy governance has been transferred from national to county government.	1	2	3	4	5	0
31. Since devolution in 2010, more resources for energy governance have been transferred from national to county government.	1	2	3	4	5	0
32. Since devolution in 2010, more power over energy governance has been transferred from national to county government.	1	2	3	4	5	0
33. Since devolution in 2010, energy governance has not improved at national level.	1	2	3	4	5	0
34. Since devolution in 2010, energy governance has not improved at local level.	1	2	3	4	5	0
35. Devolution has improved access to grid electricity in the county you represent	1	2	3	4	5	0
36. Devolution has improved access to off-grid electricity in the county you represent	1	2	3	4	5	0
37. Devolution has improved access to clean cooking facilities in the county you represent	1	2	3	4	5	0

38. Do you foresee any issues with devolving energy powers to the county government?

Contact with other stakeholders

39. At county level, who do you see as the key stakeholders/organisations/people in the energy sector?

40. Have communities in this county been consulted about their energy needs? *(Please tick one box)*

- Yes, many consultations
 Yes, some consultations
 Few consultations
 no consultations
 Not sure

40a. What was discussed?

41. How often do you discuss energy issues with the following groups? *(Please tick one box for each group)*

	daily	weekly	monthly	quarterly	yearly	never	other
a. KPLC (national level)							
b. KPLC (county level)							
c. Ministry of Energy and Petroleum							
d. Rural Electrification Authority (REA)							
e. Other government organization							
f. Other County Governments							
g. Community leaders							
h. NGOs							
i. Donors							
j. Academics							
k. Private sector							
l. Other (please state)							

42. Who are the three people outside the county you communicate with most on energy issues and which organisation do they represent? Which energy issues do you discuss most frequently with them?

Person	Organisation	Issues discussed

Thank you for taking the time to complete this questionnaire.
 Please return it by email to r.sieff@lboro.ac.uk