



Cogent Social Sciences

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/oass20

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To cite this article: Seroala Tsoeu-Ntokoane, Moeketsi Kali & Xavier Lemaire | (2022) Energy democracy in Lesotho: Prioritising the participation of rural citizens, Cogent Social Sciences, 8:1, 2012973, DOI: <u>10.1080/23311886.2021.2012973</u>

To link to this article: https://doi.org/10.1080/23311886.2021.2012973

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Published online: 10 Jan 2022.

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Received 16 August 2021 Accepted 28 November 2021

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Reviewing editor: Fares Almomani, Chemical Engineering, Qatar University, Qatar

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POLITICS & INTERNATIONAL RELATIONS | REVIEW ARTICLE Energy democracy in Lesotho: Prioritising the participation of rural citizens

Seroala Tsoeu-Ntokoane¹*, Moeketsi Kali² and Xavier Lemaire³

Abstract: When projects are exclusionary, they are bound to fail because they are void of a collective sense of belonging and ownership. The government of Lesotho has been stridently pursuing renewable energy initiatives to augment the hamstrung monopoly provider and increasing user demand in energy provision. Based on content analysis, this study revealed that the government's troubles in managing grid and off-grid energy provision in the country result from its exclusionary technical-economic strategy that subverts citizen participation in decision-making. This study contends that power without a people is not a realistic option. This calls for an energy transition from fossil fuels to renewable energy in Lesotho. It proposes that operationalising energy democracy is not only transformative but also a sustainable future. Widening civic space in the energy sector and adopting a participatory approach will likely transform the status quo by creating jobs and ensuring environmental justice.

Subjects: Environmental Politics; Politics & Technology; Regulatory Policy; Political Behavior and Participation

Keywords: energy democracy; electricity; renewable energy; participation; Lesotho

1. Introduction

Citizen participation in decision-making is becoming a pivotal route to sustainable development. According to Debaz (2016), during a national debate on energy transition in 2012, a facilitator named Laurence Tubiana argued, "...energy is nowadays perceived also as a local question, where everyone ... could be producer and consumer. [...] We must think a fundamentally renewed energy system" (p. 1). The energy sector has to be reformed to transform the current status quo where citizens are only seen participating in energy projects as mere customers and passive consumers. The restructuring of the energy sector should make citizens active, relevant stake-holders able to engage with a government. When citizens are no longer inactive clients for the

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PUBLIC INTEREST STATEMENT

This study examined how the government of Lesotho failed to design policies that encourage cooperatives and rural dwellers to own and manage electricity in the country. It informs the government, policy-makers and stakeholders in the energy sector of the problems caused by exclusionary policies. It encourages them to design policies that are participatory to ensure sustainable economic growth. It also adds to the literature on environmental sustainability.

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energy sector but are involved throughout all production, ownership and management stages, we can talk of energy democracy.

For the energy sector to be democratic, local communities have to be empowered. This will unleash their potentialand capabilities to enable them to participate in their development and determine the course of their lives (Tsiga et al., 2016, p. 237). Empowering the poor and remote communities to get involved in the energy sector implies ending the individualistic profit-oriented approach to cater for a collective and inclusive space for citizen engagement (Olivadese et al., 2021, p. 3). Unless energy ceases to be seen as a commodity to be regarded as a public good, many developing countries will not achieve a desired state of human development. Moreover, , decentralisedfinancing of the energy sector can ensure sustainable development. It is crucial to involve citizens as a group of entrepreneurs working with the public authorities to jointly invest in and participate in producing, distributing and selling renewable energy. Sebi and Vernay (2020, p. 1) observed that in 2015, France recognised, with the Energy Transition Law for Green Growth, the value of citizen participation in renewable energy financing and control due to the pressure from civil society (with the lobbying of a group of NGOs, Collectif pour l'énergie citoyenne- meaning Collective for Citizen Energy). In France, community renewable energy projects can now be set up

For citizens to meaningfully participate in decision-making and benefit from renewable energy, the energy sector need not be controlled by an individual. From 2000 to 2005, the government of Lesotho embarked on privatising the Lesotho electric company (African Development Fund, 2015, p. 1). To this end, the government engaged in consultative meetings with consultants to prepare for the process that would allow profit-motivated individuals to own and control the energy sector. Lesotho Energy Policy (2015, p. 1) characterises the Lesotho Electric Company (LEC) as ineffective and risky. Conversely, this paper builds on energy democracy to argue that the government's solution to energy challenges will result from a participatory approach and citizen-owned energy sector instead of privatisation.

This study draws from the participatory approach to explain the need for citizen involvement in decision-making, particularly the rural citizens. By rural citizens, this study refers to the population and households living outside the urban areas or in the rural areas to be specific. It breaks the ground on energy democracy in Lesotho, a country battling with inclusivity on issues of governance of the energy sector. It examines the concept of energy democracy through the participatory approach, whichadvocates for the involvement of citizens who are directly affected by projects in solving their problems (Hazard & Audouin, 2016, para. 1). It advocates for citizens to take control of the innovations and have a say in their management. Through this approach, this paper contends that the solution to energy management lies in promoting the sense of ownership, especially among the poor and remote communities. The involvement of the marginalised communities in the ownership of energy resources will help reduce fossil fuel usage to promote environmental justice. However, for this to transpire, the current energy sector management framework must be reviewed.

1.1. Methodology

This study reviews the literature to construct, deconstruct and contextualise the concept of energy democracy in Lesotho. The country has sparked interest because of its ailing electricity sector and its failing attempts to find a solution to its renewable energy sector problems, as evidenced by the failure to privatize the state-owned utility, Lesotho Electric Corporation. Our paper emphasises two synergies: first, energy democracy: highlighting the importance of a plurality of disciplines, voices and approaches in energy transitions and democracy principles and praxis; and the latter by implication: energising democracy; using energy as a means to an end, opening up authoritarian agendas and politically manoeuvred spaces to one that is closer to and governed by the people. The authors used online sources by searching for energy democracy as a keyword and related concepts such as environmental justice. The authors then searched for the same keywords in the context of Lesotho, but no studies were found both online and in libraries. The authors retrieved

journals, books and reports on solar, hydropower, and electric energy. The gathered sources of data were examined through content analysis. The data were coded and categorised to explore themes, concepts and their relationships in relation to energy democracy. The technique helped interpret texts and provide insights into complex energy policies. It facilitated the assessment of the extent to which the energy sector policies in Lesotho are participatory. This was carried out to answer the following questions: How has Lesotho's energy economy gave way to energy democracy? In what ways has the government involved the rural dwellers in the management of renewable energy? To what extent does the energy sector encourage citizen participation and ownership of renewable resources? What are the prospects for the renewable sector domain to be owned and controlled by those affected the most?

This article is divided into eight sections, including the introduction and methodology. The next section briefly sets the Lesotho context and relates this to energy democracy, and the third connects it to the participatory approach. The fourth section examines the ownership and management of the energy sector in Lesotho. The fifth section assesses the extent to which the ownership and operation of the energy sector have excluded citizens from accessing, controlling and benefiting from renewable energy. The sixth section analyses the prospects of democratising the energy sector in Lesotho, and the seventh points to areas for further research. The last section that wraps up the paper's discussion is the conclusions.

2. Lesotho context, energy democracy and lessons from global practices 2.1 Lesotho context

Lesotho is a fascinating country for a discussion on energy democracy because it is faced with specific management challenges as said earlier. The Kingdom of Lesotho is a mountainous Southern African country with distinctive geography as South Africa landlocks it. Approximately 80% of its land is roughly 1,800 m above sea level. Its estimated elevation is 2,161 m. Lesotho is classified as a lower-middle-income country with per capita gross national income (GNI) of US \$1,330.2. It is small and chiefly rural, with about 2.2 million people, of whom more than 99% are ethnic Basotho. About 60% of Basotho live in the districts of Berea, Leribe, Maseru, and Mafeteng in the arable lowlands. The rest of the population is found in six districts, including the Senqu River Valley and the foothills. Most people live in rural areas, but the share of the urban population has increased substantially, from 14% in 1990 to 27% in 2015. Since the early 1990s, population growth has slowed from 2% a year to slightly more than 1%. Lesotho diaspora living abroad totals approximately 135,000 people, mostly educated professionals and mining workers in South Africa (World Bank, 2020, p. 6).

World Bank (2020, p. 6) notes that Lesotho's economy is open and traditionally centred on trade. The country mainly exports water, textiles, and diamonds. Lesotho's economy has changed structurally in the last two decades; once based on remittances and agriculture, the country's economic growth is now driven by value-added output in the manufacturing, wholesale, retail, and service sectors, and mining. Notwithstanding a track record of economic progress, Lesotho faces a triple challenge of poverty, inequality, and unemployment. It achieved uninterrupted economic growth of 2.5% per capita over the past ten years but exhibited moderate progress in poverty reduction. It is estimated that 49.7% of the population lives below the national poverty line, down from 56.6% in 2002. Urban areas saw strong poverty reduction, while rural areas' poverty levels stagnated, adding to an already large urban-rural divide (World Bank, 2020, p. 6). Despite Lesotho being a bit better thanto its neighbours with a Gini coefficient of 44.6, it is still one of the world's 20% most unequal countries.

Focusing on the energy transition that confronts the country, Lesotho is fortunate to have an abundance of renewable energy (RE) resources such as solar, wind, and hydropower, which have the potential to surpass its relatively modest energy needs. Wind potential exceeds 1,000 W/m2 in certain pockets of the country, and global horizontal irradiation exceeds 5.3 kWh/m2 in most parts.

The World Bank, 2019a, pp. 1–24) shows that the total technical capacity of renewable resources is nearly 2,300 MW, potentially generating 5900GWh of energy annually. Lesotho Energy Policy's (2015) identifies that these resources can be transformational energy sources, especially in far-flung, hard-to-reach areas such as the highlands, and some parts of the country, particularly in Thaba-Tseka, Qacha's Nek, Mokhotlong and Quthing districts.

Realising the potential of these RE resources is a focus of several public policy initiatives. These include Vision 2020 Strategy, National Strategic Development Plan (NSDP) II 2019-2023, which are both viewed as potential catalysts for job creation and growth in private sector investment. The NSDP II calls for increased clean energy production to attain self-sufficiency and export potential, expanded electricity access, and better, more efficient domestic energy resources. Investing in renewable resources is regarded as a way of tackling some of the energy sector challenges confronted by Lesotho, as it would contribute to reducing Lesotho's dependence on electricity imports, lessening fuel imports and dependence on wood for fuel, and providing decentralised electricity for rural development and leveraging private sector investment. Hence, Lesotho set a target to escalate renewable energy resources by 200 MW by 2020. Despite its poor market penetration, the proven costeffectiveness of decentralised renewable energy technologies powered by solar photovoltaic (PV), wind, or micro-hydro could bring access to modern energy services to the Basotho who currently rely on biomass and kerosene to meet their energy needs (World Bank, 2019a, pp.1–24; World Bank, 2020, pp. 1-98). This is because access to electricity in Lesotho is low, apart from the District of Maseru where the capital city is found. The national electricity access rates are around 38%, with 60% for urban and peri-urban households and 18% for rural households. On average, the lowlands have more access to electricity than the highlands as illustrated by Figure 1.

Current access rates have been attained mainly due to the current ambition by the government to speed up electrification through an annual budget for electrification and funding from the Universal Access Fund (UAF) managed by LEWA. The UAF collects roughly M 18 million annually to promote national electrification. The government's annual electrification target for LEC is 15,000 connections, which LEC has accomplished by extending its grid. Nearly 80% and 60% of presently connected households were given access in the last decade and half a decade, respectively. Currently, LEC customer connections are around 235,000 (World Bank, 2019b).This meansthat grid electricity infrastructure is unlikely to reach rural communities in the foreseeable future necessitating alternatives that are sustainable and which address the energy needs of the country's largely rural population.

2.2 What is energy democracy?

Electrified Unelectrified Lesotho Attribute Total Households 537457 40% 60% Small shops 10750 4300 6450 Schools 1452 787 665 **Health facilities** 294 230 64 Principal Chiefs' offices 22 15 7 Local courts 33 29 4 Community council office 47 33 14 81% 77 Other government offices 16 61 Agric resource centres 22 8 14 19 **Police stations** 60 41 Post offices 47 40 7 Hostels and barracks 131 109 22 Guest houses and hotels 285 258 27 Churches 1965 504 940

Energy democracy is "a conceptual frame for political action, capable of integrating climate struggles...grounded on the basic understanding that the decisions that shape our lives should be

Figure 1. Lesotho electricity access and penetration. Source: World Bank (2020, p.10) established jointly and without regard to the principle of profit"(Szulecki, 2018, p.2). It connotes a process whereby control, ownership, production and governance of energy shift from a centralised model to a decentralised one. It denotes a situation where a community or workers can determine who owns, controls and produces their energy and for which motive (Devine-Wright,2011, p.18). It bears the following connotations: creating civic energy sector, giving power to the people and gaining societal control over energy (Szulecki, 2018, p.3). The concept emphasises the need to redistribute energy production, ownership, participation to attain fairness, justice and environmental sustainability.

The concept of energy democracy is built on political theory. Democracy in political science refers to a system in which collectively binding decisions are connected to the interests of the citizens who are regulated by those decisions they inspired (see Cohen, 2007). The central idea behind democracy is popular participation in decision-making. The essence of participation in deliberative democracy is to lend legitimacy to the decisions taken (see Dryzek, 2007). Energy democracy, therefore, is a conceptual policy guideline meant to integrate climate and energy challenges by shifting decision-making from profit-oriented motives to public involvement. In this paper, energy democracy refers to an ideal public goal attainable through the inclusion of citizens in the ownership, production, control and governance of the energy sector to better their livelihoods.

The concept of energy democracy is traceable to the scholarship and practitioners mainly based in United States, United Kingdom, Norway and Germany. There is not much specific energy democracy literature focusing on developing countries. Energy democracy is a call to shift from fossil fuels to renewable and sustainable energy (Devine-Wright, 2011, p.150; Dryzek etal., 2003, p.61). Stephens (2019, p.4) argues that as the expansion of renewable energy accelerates, the transformative potential of moving away from fossil fuel reliance is becoming increasingly evident. This means individuals, communities, organisations, cities, states, and countries recognise that renewable energy offers much more than just reliable, clean electricity, pollution reductions, and climate mitigation. The renewable energy revolution also provides the potential to transform society by redistributing jobs, wealth, health, and political power more equitably (Stephens, 2019, p.4).

This notion that calls for energy transition may not be new in Africa. The call itself endeavours to realise a complete shift from fossil fuels to 100% renewable energy sources. However, in the African context, this goal remained moderate. Only vague attempts were made to attain increased access to renewable energy and reduce fossil fuel usage, but such efforts were curtailed by privatisation in many African countries (Wamukonya, 2005, p.5302). The energy democracy movement advocates for restructuring the energy sector to make it democratic to curb the social injustices of exclusion and environmental hazards. It was inspired by the need to address climate and economic crises by resisting fossil fuel expansion (Burke & Stephens, 2017, p.37).

While organised social movements were witnessed in Europe and the United States of America clamouring for energy democracy, their call was merely inexplicit in Africa (see Dryzek etal., 2003). African civil society, only recently, made tacit gestures to advocate for environmental justice, often under the auspices of climate change. For instance, in 2006, Lesotho Environmental Justice and Advocacy Centre (LEJAC) began to form a synergy with associations. It embarked on the protection of the environment and advocated for the conservation of natural resources to benefit local communities (Mohapi, 2020).

The concept of energy democracy's roots is deep, but its contemporary expressions make it new in Africa. In the past, the gestures about energy democracy included grassroots movements that were against deforestation and demanded electrification of homes. Some grassroots movements were formed to call to the attention of the government of Lesotho the injustice felt by locals with no access to electricity, especially those living where the power grid and electrical power sources were located. Other movements raised the concern that local people can be electricity providers (World Bank, 2004, p.6). To suggest that energy democracy existed in the past in Lesotho based on such passive gestures would render this concept nebulous. The point being reinforced is that the idea of energy justice is likely to enjoy public support in Africa (Burke & Stephens, 2017, p.37).

Moreover, it is prudent to locate what the energy democracy acknowledges and how fossil-fuelbased energy systems and the associated massive corporate profits of large multinational energy companies have perpetuated inequities, exacerbated disparate vulnerabilities, and promoted widespread injustices among and within communities around the world. By highlighting the negative societal impacts of fossil-fuel-based concentration of power and wealth, the principles of energy democracy connect energy system change with an associated transformation toward a more socially just and equal society (Stephens, 2019, p.1). The energy democracy movement is proposing a possible collision course with technical, apolitical institutional and policy action presently pursued in the Lesotho electricity energy sector. The government and its partners are solely buying into RE as technological and economic instruments devoid of political and empowerment opportunities.

Energy democracy requires the restructuring of the energy sector. It advocates a transition from a monopolised profit-oriented sector to a comprehensive project entailing political democracy (Dryzek etal., 2003, p.39). In other words, the energy sector has to be publicly controlled so that people can participate in that project as citizens and not merely as consumers. Energy politics need to broaden to create avenues of participation and civic space for every citizen, especially marginalised groups and indigenous communities. Electricity should no longer be a luxury too costly for the poorest of the poor and low-income communities (Burke & Stephens, 2017, p.37).

When the energy sector is publicly owned, energy democracy demands that the voices of the community members matter. Key decisions need no longer be a prerogative for few managers of large monopoly companies. Community members that experienced forced resettlement because of the energy projects have to be prioritised to reap the benefits of the developments, be it in terms of jobs, electrification of homes or ownership opportunities. (Burke & Stephens, 2017, p.37). The use of fossil fuels tempers nature and poses risks to the ecological system (National Strategic Development Plan, 2018, p.32). Projects that expose communities to risks are worth abandoning as well as those that have environmental hazards. All forms of energy are public goods, and their misuse affects human beings in general (Burke, 2018, pp.1–5). Thus informed decisions should be made to conserve and protect materials that give energy. While electricity generation has been motivated by profit-interests in Lesotho, local communities have not realised its lucrativeness. Thus the marginalised, poor and neglected communities have the potential to be transformed into energy producers (Burke & Stephens, 2017, p.38).

Energy democracy does not necessarily discourage any business-oriented energy sector. Instead of putting lucrative interests first, energy democracy insists that the human well-being should be prioritised. The energy sector financing under energy democracy is constructed on inclusive ownership that gives way for the community to manage and control resources (Dryzek etal., 2003, p.40). The main purpose of generating energy will not be to accumulate wealth but to generate job opportunities, safeguard workers' rights and create lasting and meaningful work. Substantive work is embedded in green jobs and not work hazardous to man and the environment. Work needs to be unionised for citizens to own jobs in the renewable energy sector (Burke & Stephens, 2017, p.38).

The agenda of energy democracy in the energy sector entails tilting the balance of power through democratic public and social ownership to end privatisation and corporate control (Dryzek etal., 2003, p.74). From ownership, through production, financing, and knowledge to distribution, a shift away from the concentration of economic and political power in the energy sector has to take place. This transition does not discard diverse forms of ownership but emphasises local communities' governance, control, and ownership of renewable energy. Whatever form

of ownership a community decides, it should consider the diversity, challenges, economic requirements and social needs of its populace. When this is done, proposed energy policies are likely to engender community innovations and inspire the growth of community capacities (Burke & Stephens, 2017, p.38).

2.3 Decentralised Generation and Inclusiveness

Alam and Bhattacharyya (2016, pp.1–16) studied the sustainability of hybrid mini-grids decentralisation to promote access to electricity to off-grid remote areas. They found that Bangladesh successfully installed standalone solar home systems to widen access to electricity to 8.25 million citizens in the off-grid areas. The authors note that the World Bank and International Energy Agency recommend mini-grid to cater for at least 60% of electrification demand, but Bangladesh has not significantly adopted them. It has just a few projects like solar-diesel hybrid mini-grid, solar mini-grids and wind mini-grid. Alam and Bhattacharyya (2016, pp.1–16) argue that most of the rural areas of Bangladesh are non-electrified due to the high cost and quality of solar home systems and few hours of restricted energy usage in the evening despite the government's efforts to widen access to solar energy.

Contrary to Alam and Bhattacharyya (2016, pp.1–16), Kumar and Manoharan (2014, pp.469–476) argued that hybrid energy systems could ensure reliability because they are integrated with battery banks to provide electricity in the evenings. The authors maintained that increased use of hybrid systems provides better quality of life in the rural areas of India. Also, Kumari etal. (2017, pp.151–156) analysed the cost of hybrid energy systems for rural electrification. They established that the most economical strategy is the combination of the PV-diesel-battery hybrid systems. Consequently, the authors maintained that the combination of different renewable energy sources such as solar, wind and hydrogen fuel for electrification in remote areas of developing countries could widen access to electricity. Similarly, Adaramola etal. (2014, pp.72–82) found that the PV-generation hybrid system used in Nigeria was a more economically efficient standalone alternative for widening access to electricity. The hybrid systems could significantly reduce the emission of greenhouse gases released by generators in the country.

Chavez (2018, para 14–17) contends that public ownership of energy promotes egalitarian services delivery, as evidenced by Costa Rica. In 2017, wind, hydropower, solar, geothermal and biomass energy constituted 99.7% of the country's electricity mix, while fossil fuel represented 0.3%. Although the government generated a vast volume of energy, socially-owned power producers also contributed to the supply. The state produced 66%, while sub-national utilities and rural cooperatives generated 7%. Costa Rica has at least four cooperatives that operate the country's energy distribution without profit-driven private companies.

Greer (2012, pp. 1–346) established that cooperatives are significantly involved in the management and ownership of electricity in America. Two rural electric cooperatives based in Minnesota, known as United Power and Cooperative Power, collaborated through the rural electric administration to construct a system that generated and transmitted 1100 MW from a Coal Creek station. Greer (2012, pp. 1–346) found that there were over 900 rural electric distribution cooperatives and at least 66 generation and transmission cooperatives across the United States at the time of writing. The cooperatives in the country are owned by members and try to provide electricity in rural areas because it seems too costly when supplied by investor-owned entities. Since they are not-for-profit organisations, they enjoy certain benefits such as tax exemptions and preference when buying lower-cost federally-produced electricity.

Clancy and Mohlakoana (2020, pp.1–9) analysed the participatory level of energy policies in Nepal, Senegal and Kenya using gender lenses. The authors evaluated the effectiveness of gender audits as an approach to gender mainstreaming in the energy sector. The study found that it takes

a long time for national policy to mainstream gender, but gender audits accelerate the changes in organisational behaviour.

Contrary to the literature mentioned above, studies examining the energy sector in Lesotho do not discuss community involvement in managing and operating electricity. Thus this study would like to bridgethis gap by integrating the aspect of citizen participation in the energy sector in Lesotho.

3. Participatory approach

Mainstream approaches to energy democracy and public engagement with energy transitions tend to adopt specific, pre-given meanings of both "democracy" and "public." Different approaches impose prescriptive assumptions about the model of participation, the identity of public participants, and what it means to participate well. The rigidity of many existing approaches to energy participation is increasingly being challenged by the ever-multiplying diversity of ways in which citizens participate in energy systems, as consumers in energy markets, protesters against new infrastructures and technologies, as initiators of community energy projects, and as subjects of behaviour change interventions, amongst others (Chilvers & Pallett, 2018, p. 1).

Sustainable development depends on the inclusiveness of projects. Balanced development does not leave behind stakeholders such as beneficiaries and community members behind. Prospects for development are high where a bottom-up approach is preferred over the top-down approach when dealing with projects that directly affect the lives of community members. For community members to alter their habits and support the proposed innovations in their communities, they have to be involved in decision-making at every project stage (Julnes, 2001, p. 405; Ryan, 1998, p. 102).

It is not enough to consult community leaders to allure the community to support innovations. Projects need to promote a sense of ownership and belonging. When individuals own a project, they easily develop an eagerness to learn how to manage it and enhance their capacities. Thus promoting a sense of belonging enhances both access and individual skills. When the goal is to promote communal ownership, the country stands a high chance of benefiting from a pool of skilled citizens and thereby, the propensity for its project to fail will decline. This approach answers the question of Ferguson (1994), asking why virtually all development projects in Lesotho failed.

Participation determines commitment to a goal. Studies established that people's commitment to projects, jobs and goals depends on their ownership (Julnes, 2001, p. 403). Similar studies established a positive relationship between the development of capabilities and participation in decision-making (Scully et al., 1995, pp. 276–288). Also, Earl and Lafleur (1995, p. 53) established that participation of primary users in projects results in the positive development of participants as it generates a feeling of empowerment and increases competency. It is vital to allow the participants' voices to be heard whenever balanced development is a goal.

Stakeholders such as government officials and managers in the energy sector have to reach a certain level of agreement with community members about the type of renewable energy resource they wish to embark on. Communities must suggest the role they can play in producing the form of energy which they will be its primary users. Community members who have to be considered are those that are in a position to use renewable energy and make decisions about the implementation of the form of energy they are comfortable with (Earl & Lafleur, 1995; Julnes, 2001). According to Rabinowitz (2021, para. 4), under a participatory approach all stakeholders in the intervention have a voice, either in person or a representative. In this paper, the participatory approach means the involvement of community members, civil society and all relevant stakeholders in planning, designing, implementing and managing projects that affect their lives. Thus, the participatory approach dovetails with energy democracy to underscore the necessity for citizens to participate in the production and management of renewable energy to cease being mere consumers.

The energy democracy approach proposes a brave new way of operationalising citizen participation in the energy sector. According to Stephens (2019, p. 6), energy democracy ensures that as technological change occurs, there is simultaneous intentional consideration and commitment to three kinds of social activism: resisting, restructuring, and reclaiming energy systems. Beyond this, it means that there will be no challenges with every movement and its attendant ideas. Burke (2018, p. 1) warns that as much as energy democracy counters such ostensibly apolitical narratives by emphasising the socially transformative potential of this transition, we should also recognise that as both organising principle and social movement is itself increasingly recognised as flexible and contested. **4. Public ownership of the energy sector without citizen's voices**

Lesotho's electric energy resource is state-owned and managed by LEC. The Lesotho Highlands Development Authority generates electricity, and LEC transmits and distributes it across the country. LEC manages the off-grid stations (mini-hydro and diesel) located in Semonkong and Mantšonyane (The latter is now connected to the main grid). Lesotho Electric and Water Authority (LEWA) regulates the electric sector in the country. It theoretically envisages protecting the interests of every class in society based on the terms, conditions and price of supply. This motive is good as far as the participation of marginalised groups is concerned. The government allocates funding through the annual budget to LEWA for electrification purposes. LEWA is funded through the UAF, which generates its revenue from levies (M0.02 from households and M0.03 from industries) on electricity purchased (World Bank, 2020, p. 7–9; LEWA, 2018, p. 18). The current system of funding does not allow citizens to own power grids. Besides these aforementioned regulatory bodies, Lesotho does not have a robust legal framework and strategy to regulate renewable energy for the marginalised or rural communities to benefit from it. Hence, their participation is still limited.

Lesotho's energy sector promotes access to energy but retains control to limit the participation of citizens. The country established an electrification target of 40% access to electricity by 2020 through Vision 2020. Through its NSDP, the country managed to invigorate the 2 MW (megawatt) Mantšonyane mini-hydropower plant in 2013 and finalised the Japan-funded 280 KW MIA48 solar generation facility in 2016. In 2018, LEC signed an agreement with *Electricidade de Mozambique* to import 30 MW of electricity (National Strategic Development Plan, 2018, p. 132). Lesotho Energy Policy (2015, p. 10) aims to increase access to renewable energy to reduce reliance on fossil fuels, especially in rural areas. It plans to retain the ownership, management, and operation of energy in the hands of the government. Where shortfalls are realised, it intends to invite the cooperative associations to participate in the financing and construction of the energy sector. This is another leap in the right direction towards energy democracy (see Burke & Stephens, 2017, p. 38).

Citizens are consulted when tariffs are to be increased. In July 2018, for instance, LEC held consultative meetings with representatives from the ten districts of Lesotho, such as the *Consumer Protection Association (CPA)* and *Lesotho Textile Exporters Association (LTEA)*. The purpose of the meeting was to inform the civil society organisations that the tariffs would be increased. However, all associations disputed the intention to no avail. LTEA mentioned that factories would close down due to increased production costs and lay off workers because LEC continually increases tariffs (LEWA, 2018, pp. 15–20).

All the civil society organisations pleaded with LEC to lower the tariffs and the connection fees to increase access to electricity. This recommendation served to help LEC to benefit from economies of scale without adding levies to increase its capacity. The advocacy groups warned LEC that its current management strategy leads to the closure of businesses, increased unemployment, and exacerbated poverty. Civil society organisations warned LEC that it burdens customers and consumers. Its mismanagement compounds the problems of the poor who have to endure the continual increase of electricity charges. Despite the advocacy and resistance of civil society organisations, the tariffs were increased (LEWA, 2018, pp. 15–20). Hence, the current energy management system disregards the poor and does not value citizen participation in decision-making. The consultative meetings were conducted as a rubber stamp and a need to follow procedures and not democratise energy.

The current system of renewable energy in Lesotho is profit-oriented and not people-centred. LEC increased prices despite the civil society organisations' resistance, and they took effect from 1 August 2018 (LEWA, 2018, pp. 32–33). Its audited financial statements, which ended on 31 March 2017, revealed that LEC's gross profit from 46% of its sales was M347 million. LEC's net profit in 2016 was M56 million and increased to M87 million in 2017/18 (LEWA, 2018, p. 27). The profit-oriented provision of renewable energy undermines the participation of citizens in decision-making and discourages a sense of ownership of the projects. Hence, it disregards the role of unions and overlooks the necessity for a participatory approach.

5. The overlooked value of citizen participation in the energy sector

Advocacy for sustainable economic development and demands for environmental conservation have accelerated the adoption of renewable energy in Lesotho and the entire African continent. Electric, solar and wind energy generation is increasingly becoming cost-effective.From 2010 to 2020, the global weighted average cost of electricity from utility-scale solar photovoltaic fell by 85%, and onshore wind power costs dropped by 56% (Mastny & Brumer, 2021, p.30). The use of solar and wind energy is indispensable in many African rural and remote areas. Despite the decline in the cost of producing renewable energy, at least771 million people (10%) in the world did not have access to electricity in 2019, and 75% of them were located in Sub-Saharan Africa (Mastny & Brumer, 2021, p.30).

In Lesotho, OnePower and SustainSolar are embarking on providing containerised solar minigrids under Power Africa for electrification of clinics. Besides, the Word Bank approved USD 52.9 million to finance the Lesotho renewable energy projects for people living in remote areas to access (Mastny & Brumer, 2021, pp.171–176).

The demand for renewable energy outpaces its production in Lesotho. Mokeke (2020, p.3) and World Bank (2020, p.8) observed that from 2015 to 2016, the peak load demand reached 153 MW, from 2016 to 2017 it reached 161.91, between 2017 and 2018 it was recorded at 166.91, but the generation capacity has remained at 74.46 MW. Equally, Mpholo etal. (2021, p.43) noted that from 2001 to 2021, the demand for electricity skyrocketed by 93% and the total consumption surged by 186%. In 2001, at least 25,000 households had access to electricity, and the number soared to 235,000 in 2017 (World Bank, 2020, p.7). Muela Hydro Power Station generates 72 MW while Mantšonyane generates 2 MW from the river plant. A large chunk of the electricity is imported from Mozambique and South Africa (Mokeke, 2020, p.3; African Development Fund, 2016, p.1). Thus it is expedient for unions to push for energy democracy.

People living in rural areas are largely excluded from reaping the benefits of renewable energy to curb the hazards from biomass. This disparity is partly attributable to the fact that rural highlands poverty increased to 67.8% in 2017. It is worth noting that 66% of the 2.2 million population of Lesotho lives in rural areas (World Bank, 2019a, pp.1–5). Figure 2 illustrates this aforementioned energy distribution.

The cost of a solar PV system precludes the involvement of low-income rural communities from accessing solar energy. Hence, most people fall back to the use of wood, gas and paraffin.In addition to those high costs, particularly in a country where at least 75% of the population is either poor or vulnerable to poverty, batteries need to be replaced every 2–3 years, and the charger controller too must be changed within five years (World Bank,2019b, pp.1–5; Taele etal., 2010, p.3).

The majority of the population in Lesotho do not participate in the use of renewable energy. At least 80% of energy consumption is derived from wood and solid biomass. In the rural areas, people use wood and animal dung for cooking. There are still households that rely on biomass for heating and cooking needs in urban areas. The use of biomass has resulted in land degradation and compelled the government to embark on afforestation and reforestation campaigns since 2005. The government's efforts are being undermined by dependence on fossil fuels and the threat

of climate change that causes widespread desertification. Hence, some scholars submit to the government of Lesotho to increase the generation capacity of renewable energy sources (Taele etal., 2012, pp.10–11). In urban areas, the electric access rate is 60%, while it stands at 18% in rural areas (World Bank, 2020, p.7).

The geographical situation of Lesotho possesses some challenges that hinder rural people from accessing renewable energy. The lowlands make up just 17% of the country, but the vast area is covered by mountains (Mpholo etal., 2021, p.100). The rural areas are poorly planned because the households in such areas are widely scattered. The poor terrain and planning compound the cost of national grid electrification. This partly accounts for the disparity in the access to the power grid in the rural and urban areas. To address this hurdle, the government demanded communities to create schemes to be served by the Rural Electrification Unit (REU) created in 2004. REU extends the grid to remote communities of more than 3.5 km away from LEC's distribution lines. Notwithstanding, REU is overwhelmed by a backlog of electricity schemes. For instance, the government received a total of 680 schemes in 2016/17 but could serve just 26 of them at the cost of M109 million (World Bank, 2020; Mpholo et al., 2021, p.100).

6. Prospects for valuing citizen participation in the energy sector

The prospects of low-income rural households benefitting from the abundant renewable energy sources in Lesotho are high. Mokeke (2020, p. 3) affirms that the country has not yet exploited 70 MW from solar energy-based at Mafeteng district (Ha-Ramarothole), wind energy capacity of 758 MW, 1334 MW pumped storage from Monontša as well as the 361 MW of hydro resources. Besides, Taele et al. (2010, p. 4) sustain that the country can leverage its horizontal global radiation of 5.5–7.2 KWh/m² to erect solar power plants as its solar radiation level is amongst the highest in the world. Most parts of the country enjoy the sunshine for at least 300 days per annum and 10.2 to 13.8 hours of sunshine per day. Therefore, a vast room is open for cooperatives to finance, own, produce, distribute and sell renewable energy. Their involvement can create jobs and discourage dependence on fossil fuels.

The major challenge of citizen involvement in renewable energy resources is not accessibility but affordability. Accessibility does not spontaneously translate into control. Evidence reveals that average electric consumption per household in the country is declining despite the efforts of the LEC to expand access to electricity. While access to electricity increased from 25,000 in 2001 to 215,698 by October 2017, as indicated earlier, household consumption declined by more than 60%



Figure 2. Energy distribution in Lesotho. Source: Taele et al. (2012) within the same period (Mpholo et al., 2021, p. 98; LEWA, 2018, p. 6). From the given statistics this study proffers a hypothetical typology (Figure 5) to illustrate the unaffordability of electricity in Lesotho amid surging demand to connect to the power grid. Biomass continues to play an essential role within the households of Basotho with access to electricity. Thus economies of scale are not exploited by LEC because a significant share of households limits electricity for essential purposes such as lighting. One main factor that accounts for this disparity is the affordability of electricity. Energy democracy will curb monopolies, increase competition, lower prices and lead to improvement in service delivery. Figure 3demonstrates that energy consumers in Lesotho can be classified into four categories: First, those who are not willing and able to pay for electricity, second are those able to pay for the electricity but cannot access power grid and last are those who are willing to consume electricity bills too high and are forced to reduce their consumption (these two last groups make a significant majority of the population).

The energy sector in Lesotho has high chances to involve citizens as key actors in decisionmaking. The unexploited areas such as solar energy and wind energy present a range of choices from which the government can call cooperatives on board. Lesotho is well placed for the production of wind and solar power (Mokeke, 2020, p. 3). Therefore, the prospects for energy democracy materialising is high. Besides, the government has not yet privatised the electric company. When the production of renewable resources is decentralised and regarded as a public good, profit-motive could be checked by the need to promote environmental justice, create jobs and enhance human capital.

7. Agenda for future research

This paper informs policy by encouraging the government of Lesotho to design participatory and peoplecentred energy policies to achieve sustainable economic growth. It has demonstrated that people's voices are lacking in the energy sector; hence, any endeavour to rectify the problems leading to the energy sector's failure must consider the call of energy democracy. Equally, this paper contributes to the novel literature on energy democracy, especially in Lesotho, where this study is the first of its kind. The voluminous literature on renewable energy in the country does not address the issue of energy democracy. It revolves around energy accessibility and ownership. The literature reveals that the government of Lesotho has carried out minor efforts to promote access to renewable energy but without addressing the question of affordability for sustainable economic growth. Therefore, future research has to shift the focus to examine the interplay between access to renewable energy and affordability, emphasising



Ability to pay

Figure 3. Unaffordability of electricity in Lesotho. Source: Authors citizen involvement. Also, future research should examine the type of renewable energy sector citizens would like to participate in and how their involvement should be structured.

Secondly, as Chilvers and Pallett (2018, p. 1) observed, growing areas of scholarship seek to understand and explore these emerging energy publics and forms of energy democracy from a relational perspective. Such work, grounded in constructivist and relational ontologies, views forms of participatory democracy and the public as being co-produced, constructed, and emergent through the performance of collective practices. This research agenda pays closer attention to power relations, politics, materiality, exclusions, and effects in both understandings and intervening in the making of energy democracy. This, in turn, shifts the focus from studying discrete unitary forms of "energy democracy" to understanding interrelations between multiple diverse energy democracies in wider systems.

Thirdly, another possible area for further exploration is to unpack whether energy democracy can thrive in a non-democratic system. Fourth is the issue of gender and youth. In Lesotho, the population of the enclave is young and mostly female. Research is already proving that these are key stakeholders in consumption, and possible social movements agitate around energy democracy.

8. Conclusions

This paper has examined the concept of energy democracy to deconstruct it and contextualise it in the African context. This was done by tracing the origins of energy democracy and linking it to the context of Lesotho. The paper assessed the level of citizen participation in the energy sector by analysing the forms of ownership, production, control, consumption, regulation and motives. By reviewing available literature in Lesotho, the study established that the novel concept of energy democracy has not yet attracted the attention of local scholars. However, the norms of Basotho indicate that they are inclined to embracing energy democracy since they strive for greater say and participation in decision-making, especially in the energy sector.

The literature demonstrates that the management of the energy sector in Lesotho is problematic and requires reforms. However, its failure to privatise LEC facilitates the implementation of energy democracy. The government created REU to electrify rural areas but its successes are limited. While the poor people and remote communities do not have access to electricity, urban dwellers can hardly use the available forms of renewable energy because they are too costly. The electricity bills compel citizens to use fossil fuels, meanwhile the cost of installing solar energy facilities is unaffordable. Hence, citizens are not satisfied with the way the energy sector is managed. They want some reforms that would increase their participation, save jobs, protect the environment, and better people's lives. This paper challenges all stakeholders to move away from limiting technical-economical management of energy to a brave new social activism oriented future.

In summation, Lesotho's political economy of energy is favourable for energy democracy policies. The energy sector is not privatized and wind energy and solar power potentials are high. However, citizens' participation, ownership and control of renewable energy resources is lacking. Since the energy sector is state-owned, there is room for the government to decentralise the renewable energy sources and encourage rural communities and cooperatives to produce, distribute, own and control renewable energy sources to achieve sustainable development.

Funding

The support of the Economic and Social Research Council (ESRC) is gratefully acknowledged.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

Declarations

All data used in this can be made available on a reasonable request

Compliance with Ethical Standards

The authors have declared no conflict of interests, and all works used in this article have been referenced accordingly. All ethical standards have been adhered to, and no human participants were involved in the study.

Citation information

Cite this article as: Energy democracy in Lesotho: Prioritising the participation of rural citizens, Seroala Tsoeu-Ntokoane, Moeketsi Kali & Xavier Lemaire, *Cogent Social Sciences* (2022), 8: 2012973.

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