

The green economy challenge to IPE¹

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Abstract

Calls for a transition to a low-carbon energy system, favouring renewable energy sources, energy efficiency and conservation are now entering the mainstream of policy discourse in many sectors and parts of the world, with some measurable effects. This paper explores the transformative nature of these calls on key aspects of the global political economy. It argues that a diverse and increasingly effective discourse coalition is emerging around the concept of energy transition, and looks at how the Transition Movement wishes to reconfigure the nature, the content and the governance of the global political economy. More specifically, it asks how this movement sees the world, what makes up its ontological worldview, and how it wants to change it. This paper further suggests that these calls are accompanied by remarkable changes in global investment patterns in favour of key elements of what can be labelled “the green economy”.

Key words

Transition, international political economy, Robert Keohane, energy security, green economy, renewable energy, climate change.

Introduction

Two contemporary concerns, climate change and energy security, are now profoundly changing the way some policy-makers, academics, business and civil society representatives perceive the evolution of the global political economy. Many now share the view that the world’s energy system, based on fossil fuels supplying more than 80% of primary energy demand (IEA, 2011), is environmentally and economically unsustainable and has to be changed.

Calls for a transition to a low-carbon energy system, favouring renewable energy sources, energy efficiency and conservation are now entering the mainstream of policy discourse in many sectors and parts of the world, with some measurable effects. According to some, concerns around climate change impacts and energy security are now “unleashing a wave of policy initiatives and investments around the world that will fundamentally alter the way we manage and use energy”, one of the pillars of today’s globalized economy (Lloyd’s, 2010). These transformations may be

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the prelude to a “new industrial revolution,” one that could change global industrial structures and shape international and domestic economic policy (Lee, 2009: 1104). Until very recently, the discipline of International Political Economy (IPE) has not paid a great deal of attention to these calls for change. Given the depth and scope of the transformations called for, increased academic investigation of these issues may be in order. Doing so would be answering the call of Robert Keohane (2009), one of the most distinguished IPE scholars, to renew the field by paying attention to a broader range of issues, including energy issues, and looking beyond states to consider the growing role of civil society in the affairs of the world. Keohane also suggests the use of a plurality of investigative techniques, including an examination of how “ideas people have in their heads, and that they share collectively, affect their preferences.” Keohane’s suggestion, in effect, incites rigorous analysis from a constructivist perspective.

This paper explores the transformative nature of the calls for a fundamental energy transition in many aspects of the global political economy. It argues that a diverse and increasingly effective discourse coalition is emerging around the concept of energy transition. I refer to this discourse coalition as the Transition Movement. Actors making up this loose (and often self unaware) coalition share a critical and transformative global perspective, one that calls for massive investment flows to new or completely restructured industries. Their shared perspective also calls for increasing the pace of technology innovation and for the return of states to orchestrate this transition. This paper looks at how the Transition Movement wishes to reconfigure the nature, the content and the governance of the global political economy. More specifically, the paper asks how this movement sees the world and how it wants to change it.

This paper further suggests that while the transition perspective has yet to impose itself in the form of a robust and constraining international energy and/or climate regime, its slow integration into mainstream political discourse has nonetheless been accompanied by remarkable changes in global investment patterns in favour of key elements of what can be labelled the “green economy”. According to UNEP (2011), this transition to a green economy³ is indeed already

³ Although no consensus exists on how to define such a green economy, UNEP’s definition seen to encapsulate most of its main characteristics: *A Green Economy is characterized by substantially increased investments in economic sectors that build on and enhance the earth’s natural capital or reduce ecological scarcities and environmental risks. These sectors include renewable energy, low-carbon transport, energy- efficient buildings, clean technologies,*

underway.

The following section (Section I) introduces the concepts of discourse coalition and describes how such a coalition creates narratives and storylines – embedded inside a frame - in order to gain control over a public policy domain. I will also discuss the process of naming and framing as inherent to the creation of these storylines. Section II analyses the contours of the Transition Movement’s frame (i.e., the transition frame), focusing on its ontology and prescriptions, and presents its main storyline. Section III discusses how this frame influences the nature, content and governance of the global political economy. Section IV provides some quantitative evidence that some of these changes are already underway, most notably in the phenomenal growth of investments in renewable energy, a key component of the growing green economy.

I – The narrative construction of the world

For some, public policy formulation can be best seen as the struggle for control over how one should think about a specific policy problem. According to Hajer (1993: 47), politics is a “process in which different actors from various backgrounds form specific coalitions around specific story lines. Story lines are the medium through which actors try to impose their views of reality on others, suggest certain social positions and practices, and criticize alternative social arrangements.” Hajer states that, “[a] discourse coalition is basically a group of actors who share a social construct. Social constructs (...) can be seen as a way to give meaning to ambiguous social circumstances.” (Hajer, 1993: 45).

Discourse coalitions are not necessarily organized politically or socially (through such institutions as a political party, a church or an academic discipline), nor are they necessarily highly aware of their own existence. Some are structured (e.g., the Catholic church is organized, structured, and self-aware) and others, less so. Free-traders from around the world share a common worldview, but do not, for the most of them, belong to the World Economic Forum. Similarly, *indignés* (and Occupy sympathizers) do not all belong to ATTAC. Nevertheless, all

improved waste management, improved freshwater provision, sustainable agriculture and forest management, and sustainable fisheries. These investments are driven by or supported by national policy reforms and the development of international policy and market infrastructure. – UNEP, 2010: 3

discourse coalitions seem to share some form of idealized social construction. Such social constructions, as shared by discourse coalitions, are best described and explained through the concept of frame (or frame of reference), as defined by Rein and Schön (1993: 146). According to these authors, framing

“(…) is a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading, and acting. A frame is a perspective from which an amorphous, ill-defined, problematic situation can be made sense of and acted on.”

This concept of frame traces its roots to research in sociology and cognitive psychology and refers – at the individual level, to the “mental structures that allow human beings to understand reality, and sometimes create what we take to be reality. [T]hey structure our ideas and concepts, they shape how we reason, and they even impact how we perceive and how we act” (Lakoff, 2006: 25).

From a collective perspective, the worldview embedded within frames is distilled by social actors through derived narratives or storylines using various forms of language and delivery methods (political speeches, policy documents, advertisement, blog posts and editorials, social media, etc.). According to Fletcher (2009: 801), the purpose of frame analysis is then to focus on “how social actors use language (…) to mobilize key stakeholders, attempt to build a broad public consensus around a course of action, and focus sustained media attention on a specific issue”. Storytelling is inherent to the promotion of frames. Each storyline constructs a way that helps apprehend a given problematic situation by first describing what the problem is and then by suggesting what is to be done about it. This process of *naming and framing* thus generates both a worldview, or ontology, and a call for action or a prescriptive agenda. For Schön and Rein (1994: 26), this process:

“select[s] for attention a few salient features and relations from what would otherwise be an overwhelmingly complex reality. [It] give[s] these elements a coherent organization, and (…) describe[s] what is wrong with the present situation in such a way as to set the direction for its future transformation. Through the process of naming and framing, the stories make the ‘normative leap’ from data to recommendations, from fact to values, from “is” to “ought”.

Using recent policy documents originating from diverse sources (international organizations, governments, businesses, universities, think tanks and NGOs), the next section analyses the growing discourse calling for a transition away from fossil fuels and towards a new energy system based on renewable energy, energy efficiency and conservation. It shows how an emerging discourse coalition, the Transition Movement, frames energy-related issues as problematic and suggests ways to address them.

II - Naming and framing the energy [r]evolution

Calls for an energy transition away from fossil fuels – especially oil - are not exactly a contemporary novelty. One can justifiably argue that such calls were last heard during the first and second oil shocks of the 1970s, characterized by supply disruptions, fears around the levels of remaining oil reserves and skyrocketing prices (Lovins, 1976; Yergin, 1991). Better to reduce one's country's dependence on foreign oil through increased domestic production and reduced consumption, some said, than to remain at the mercy of political and economic conditions set by unfriendly regimes. This argument continues to be heard today – sometimes with renewed force, as energy markets and geopolitical conditions evolve (Deutch and Schlesinger. 2006; Klare, 2008; Paskal, 2010).

What makes today's calls to shed dependence on fossil fuels distinct from the discourse of the 1970s is the growing global concern over climate change, which has attained a prominent status as an issue worthy of international attention. Today, “[w]e cannot talk about energy security without also referring to environmental security, more specifically the potentially dangerous effects of global warming and climate change” (Dalgaard and Glöck, 2010: 15).

Over the last two decades, a growing scientific consensus has emerged on the question of climate change and its causes (IPCC, 2007). Because of the close links between the global energy system and emissions of greenhouse gases, it has become obvious to many that the energy system that has been taken for granted carries a very heavy environmental burden. Fossil fuels – coal, oil and natural gas – are the backbone of the energy system that supports the global economy, delivering more than 80% of global primary energy demand (IEA, 2011). At the same time, carbon

emissions from extraction, transport and combustion of fossil fuels are responsible for more than 60% of total global GHG emissions. In essence, says the International Energy Agency (IEA, 2007: 28), *“mitigating climate change cannot, therefore, be successful without a radical change in the way we produce, transform and use energy.”* This analysis is at the very core of the Transition Movement worldview.

Many people now believe that the world energy system must now supply the needs of people and economies while simultaneously providing environmental security and helping avoid the consequences of dangerous climate change. The current fossil-based energy system cannot deliver both of these needs. In fact, the continuation of the current system, on a business-as-usual basis, will likely deliver energy supply at the expense of environmental security. Therefore, a radical change of the world’s relation to energy, an “energy [r]evolution” (EREC and Greenpeace, 2010: 8-9 ; Baumert, 2005: 18 ; Huq, 2011: 61) now appears necessary in order to successfully counter climate change, seen as the most significant environmental threat of this century. A new energy system must therefore emerge to replace the current one based on fossil fuels (Lee, 2009: 1114).

The world of energy, named and framed by the Transition Movement

One can identify at least six fundamental precepts at the core of the Transition Movement’s worldview on energy. This worldview constitutes the frame of reference of this discourse coalition. As with all processes of naming and framing, a storyline is derived from this frame of reference. This storyline contains both a description of a problematic situation – in this case, the nexus of energy and climate change - as well as solutions to address it. Based on the review of dozens of recent documents, public speeches and reports from diverse sources (businesses, NGOs, think tanks, academics, government and international agencies), I would argue that the core precepts of the transition frame of reference are: (1) climate change as an fundamental threat to human existence that can only be resolved through a clean energy transition; (2) climate, energy and economy as interconnected issues that can be solved with integrated solutions; (3) renewable energy sources, energy efficiency and conservation as drivers of the transition; (4) a low-carbon future as economically, socially and environmentally beneficial for all; (5) control

and deployment of low-carbon technologies as competitive advantages in the race for pole position in the 21st century economy; and (6) the state as leader and manager of the clean energy transition.

I will succinctly review each of these precepts and then try to synthesize the main storyline of the Transition Movement.

First, addressing climate change through a clean energy transition is of an existential nature for the well-being of Humanity (Pode, 2010). A “compromise” or balance on environmental and climate security cannot be reached by trading some levels of emissions for some levels of economic growth and access to energy. The Intergovernmental Panel on Climate Change (IPCC) publishes regular assessment reports on the existence, causes and impacts of global climate change, as well as solutions to this global threat. These reports provide the scientific and intellectual foundation of the Transition discourse coalition. Transition Movement proponents thus present the rapid reduction of greenhouse gas emissions as an absolute necessity from a public policy point of view. They also advocate actions on the part of businesses, cities and local communities as well as families and individuals (Séguin and Duchaine, 2009; EREC and Greenpeace, 2010).

From the perspective of the proponents of the Transition Movement, it follows that the only responsible course of action is to move away from fossil fuels as quickly as possible:

“ It is no exaggeration to claim that the future of human prosperity depends on how successfully we tackle two central energy challenges facing us today: securing supply of reliable and affordable energy; and effecting a rapid transformation to a low-carbon, efficient and environmentally benign system of energy supply. “ (AIE, 2007: 37)

This call to action is continually reinforced by frequent and alarming scientific findings that point to increased impacts of climate change on ecosystems and communities around the world.

Second, the Transition worldview adopts an integrated perspective of energy, economic and environmental issues. In contrast to seeking a compromise by balancing three distinct policy areas, Transition Movement proponents call for the adoption of policies that aim at their very

intersection (Pode, 2010: 3015). The transition away from fossil fuels and towards renewables, energy efficiency and conservation leads to a “trifecta” of increased energy security (through increased reliance on domestic, and increasingly decentralized energy sources), economic development and job creation (through the surge of new green and clean energy jobs), and climate protection. In this regard, there is no *“inescapable trade-off between environmental sustainability and economic progress”* (UNEP, 2011: 2).

Third, the transformation of the global energy system can be made possible through the rapid deployment of renewable energy sources such as solar, wind, geothermal and biomass, as well as increased efficiency in the use of energy and energy conservation. Transition proponents call for a fundamental transformation of the ways energy is produced, transformed, distributed and used all along industrial value and supply-chains. To do so, they express a clear preference for low-emission energy sources and enhanced demand management, as well as for locally produced and distributed energy sources (Sweden, 2006; Nye et al., 2010; EREC and Greenpeace, 2010; ITPOES, 2010). Technological innovation and dissemination are also seen as key to the acceleration of the transition, as well as some of its main enablers (Foxon, Reed and Stringer, 2009).

Fourth, the Transition perspective professes a resolutely optimistic view of a low-carbon future (Rubin, 2009 ; and even, earlier on, Lovins, 1976), one that could “create opportunities for all countries” (Huq, 2011: 63) It considers the transformation of the global energy system as inherently economically beneficial, most notably through diminished dependence on imported fossil fuels, especially oil, whose cost is deemed to be ever-increasing (Lloyd’s, 2010: 5). Moreover, a switch to renewable energy sources and more efficient or even less energy consumption is perceived as capable of generating more jobs (i.e., “green jobs”) than the current fossil-based energy system. This “revolution” also presents “huge opportunities for new business partnerships” (Lloyd’s, 2010 : 5). The transition is also seen as generating diverse “cobenefits” – improved health and air quality, for example, as well as overall increase in quality of life (EREC and Greenpeace, 2010 ; Mousseau, 2008: 144). For UNEP (2011: 3):

“ [...] the greening of economies is not generally a drag on growth but rather a new engine of growth; (...) it is a net generator of decent jobs, and (...) it is also a vital strategy for the elimination of persistent poverty. “

Fifth, the control and adoption of green, low-carbon technologies, along with more energy efficient economies and firms, are deemed to create competitive advantages against rival nations and businesses (EREC and Greenpeace, 2010; ITPOES, 2010). Companies that plan ahead and take advantage of these changes will *“increase both their resilience and their competitiveness. Failure to do so could lead to expensive and potentially catastrophic consequences”* (Lloyd’s, 2010: 4). Many political speeches now adopt the notion that the world has embarked in a “race to the 21st century economy,” where no one wishes to be left behind:

“We can’t stand by as we let China race ahead to create the clean energy jobs and industries of the future (...) We should be developing those renewable energy sources, and creating those high-wage, high-skill jobs right here in the United States of America.”

– President Barack Obama, quoted in the Florida Independent, October 13 2010

Finally, one of the most interesting and potentially controversial precepts of the Transition Movement’s worldview is the call for a return of states – in all shapes and forms, and at all levels of governance – to orchestrate this transition to a low-carbon energy system.

For some, the main problem can be boiled down as a matter of *“gross misallocation of capital”*, a situation that has allowed firms to run up largely significant and largely unchecked social and environmental externalities (UNEP, 2011: 1-2). In a noted and extensive study on the economics of climate change sponsored by the British government, Lord Stern defines climate change as the greatest and widest-ranging market failure ever seen (Stern, 2006: i). If markets cannot mitigate climate change on their own, state is seen as the only power capable of stepping in and imposing proper corrective measures. The Transition Movement thus gives the state two essential roles: one of leader, showing the direction of change on behalf of society and collective good; and one of manager of the transition, setting targets and goals for businesses, society and itself, and using a whole array of public policy tools - regulation and law, procurement, investment, subsidies and fiscal policy. More specifically, the state is called upon to encourage reduction of energy consumption (Rubin, 2010: 23-24), to invest (or to encourage investments) in renewable energy

sources (Pode, 2010; EREC and Greenpeace, 2010; Lloyd's, 2010; UNEP, 2011) and to reach international agreements on future climate and energy regimes (Muller-Kraenner, 2008).

Indeed, from the perspective of the Transition Movement, without the return of the state in the driver's seat, transition to a low-carbon energy system appears impossible.

Once upon a time... – the Transition storyline

One can now derive from the frame of reference of the Transition Movement the following storyline:

Climate change is a threat to ecosystems and societies around the world. Mitigating emissions that cause climate change is a moral imperative.

The modern energy system based on fossil fuels is the main source of greenhouse gas emissions. In order to avoid dangerous climate change, the world has to rapidly switch to another low-carbon energy system.

We need to change the way we produce, transform, distribute and use energy. What is needed is rapid deployment of renewable energy sources, increased energy efficiency and energy conservation. We need to use less energy overall, and obtain the energy we do use from low-carbon sources.

Left to their own devices, markets alone will not deliver on what is needed. In order to avoid dangerous climate change, states are needed to play a lead role in the transition to a green economy.

This transition will be economically and environmentally beneficial. Green jobs will be created and quality of life for all will improve. The switch to clean energy is beneficial to the economy, to energy security and to the environment.

If we don't engage in this transition quickly and seriously enough, other countries and businesses will control the green technologies of the 21st century and gain competitive advantage.

III- Wishing for a new world – how the global political economy should change

This paper has argued that a discourse coalition – the Transition Movement – has emerged in the past fifteen years, alarmed by the growing scientific consensus surrounding the threat posed by anthropogenic climate change. Section II highlights the contours of its worldview and normative prescriptions. I have suggested a general perspective of how this Movement sees the problem and what it believes should be done about it. The question now, is how does such a worldview sees the transformation of the main structures of the global political economy, based on open markets, limited role of the state, integrated and globalized production and supply and value-chains?

Lee (2009) provides a valid start for this investigation. First, by highlighting the transformative nature of a global transition to low-carbon energy system: “[a]s states, firms and markets jostle for position in the move towards a global low-carbon economy, a new global political and economic order may be in the making” (Lee, 2009: 1114). For her, the political economy of the energy transition leads to a fundamental restructuring of economies, industries and political relations:

“These imminent changes will shape the social and political structure and dynamics in the years to come. They will play an increasing role in determining the global industrial structure, new producer–consumer relations, and ultimately the distribution of the benefits and the future of globalization.” (Lee, 2009: 1104)

Transitioning to a low-carbon energy system creates winners and losers across and within industries and nations. Some actors have much to gain from this switch – or think they do; some do not - or think they do not. This analysis of the Transition Movement’s frame of reference and storyline leads me to believe that three main changes to the current global political economy are called for: (1) a change in both domestic and global economies and industrial structures; (2) the return of the state to the driver’s seat; and (3) a rearranging of political and economic power

resulting from a clash between two types of economic structures, one fossil-fuel-based, the other low-carbon-based.

Transforming domestic and global economies and industrial structures

First, the Transition Movement prescribes the reconfiguration of domestic and international economic structures around what could be called “the green economy”. This reconfiguration is structured around two main vehicles: (1) a massive modification of the direction of national and global investment flows to the benefits of specific industries and sectors (and to the detriment of others); (2) a switch to decentralized and localized low-carbon energy production, reduction of firms’ carbon footprints, and transformation of firms’ supply and value-chains.

Table 1 – Areas of transformation within the global political economy

Transition impacts on the global political economy	
1	Transformation of domestic/global economies and industrial structures towards «green economy»
	1.1 Massive modification of investment flows to the benefit of specific industrial sectors
	1.2 Switch to decentralised and localised low-carbon energy production, reduction of firms’ carbon footprint and transformation of firms’ value and supply-chains.
2	Return of the state as key orchestrator of the transition
3	Existential clash between low-carbon and the fossil-based economies

To transform the global energy system based on fossil fuels, the Transition Movement favours the reallocation of colossal investment flows towards low-carbon energy production and

technologies to minimize energy use. Solar, wind, geothermal and biomass are now key energy subsectors prioritized by the Transition Movement, as well as mass public transit systems, green urban development and low-carbon fuels. Recent UNEP studies thus make the case for investing two per cent of annual global GDP (i.e., one-tenth of total annual global investments) in greening ten key sectors of the economy in order to shift development and unleash public and private capital flows onto a low-carbon, resource-efficient path (UNEP, 2011). Most notably, development of these economic segments mainly focuses on substitution for fossil-based energy production and conventional car-based transportation.

Generally, it can be argued that a large portion (if not most) of these investments in green technologies and related subsectors will cannibalize investments that would otherwise be made in sectors linked to fossil-fuel industries. For example, due to a limited resource pool, public investments in mass public transit could substitute for investments in new highways. Regulations that constrain the operations of coal-fired electricity plants could induce firms to develop new capacity by investing in state-of-the-art gas-fired power plants, wind farms and/or hydroelectricity. Moreover, as *“enabling conditions are heavily weighted towards, and encourage, the prevailing brown economy, which (...) depends excessively on fossil fuel energy”* (UNEP, 2011: 2), the Transition Movement’s prescriptions call for the elimination of public financial support to fossil-fuel industries. Movement proponents also suggest that some level of public support in favour of green alternatives should help level the playing field between the “green” and “brown” economies. The 2009 G8 Pittsburgh Declaration specifically calls for such fiscal rearrangements:

“ [t]o phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest. Inefficient fossil fuel subsidies encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change.”

<http://www.pittsburghsummit.gov/mediacenter/129639.htm>

Secondly, the Transition Movement also calls for fundamental modifications to national and global industrial structures. This aspect of the transition away from fossil fuels still appears under-documented. The very nature of low-carbon energy technologies seems to lead to some

form of localization and decentralization of energy production near residential, institutional and industrial consumers. In fact, some consumers are actively seeking (actively being encouraged) to become energy producers themselves in order to increase their energy savings and self-sufficiency. This is reinforced by the idea that the *“transition to a green economy will vary considerably between nations, as it depends on the specifics of each country’s natural and human capital and on its relative level of development”* (UNEP, 2011: 4 ; Lloyd’s, 2010: 5).

Driven by recent and transformative technological advances and breakthroughs, especially in relations to the improved economics of wind and solar PV energy, new business opportunities could arise and economic hubs (cities, states, nations) could be created (Clean Tech Group and WWF, 2012). One of the most obvious potential impacts of these transformations could be the breaking-down of the oligopolistic or near-oligopolistic structure of industrial energy production, still largely based on large-scale production units in many parts of the world despite decades of deregulation. Similarly, increased “mutualisation” of transportation modes through mass public transit, as well as the potential for their widespread electrification, could be seen as a direct threat to the oil industry which has enjoyed an unchallenged monopoly over the transportation sector since the end of the World War II.

In order to achieve substantial reductions in both consumers and firms’ carbon-footprints, the Transition Movement is also trying to influence the nature of firms’ supply and value-chains. As governments are asked to stop supporting fossil-fuel sectors and to start levelling the playing field for low-carbon alternatives through subsidies, incentives, favourable fiscal policy, regulation, and the implementation of carbon markets, new constraints and opportunities emerge for firms. Businesses must now address *“the impacts of energy and carbon constraints holistically, and throughout their supply-chain,”* paying attention to the *“tight profit margins”* on some products that rely on long-distance transportation, as oil prices go up and local suppliers become more competitive. Retail industries might even have to *“re-evaluate the just-in-time business model”* (Lloyd’s, 2010: 5).

The Transition Movement prescribes that firms become more energy efficient and/or to use low-carbon forms of energy. These new constraints and opportunities create other interesting areas of

change. First, they transform the nature of relations between firms and their internal or external suppliers, the latter being asked to “green” their production and reduce their carbon footprint. Second, they favour the adoption of technology innovation, potentially hastening technology turnover in many industrial sectors, especially for large emitters such as energy producers and heavy industries (mining, aluminium and steel, pulp and paper, etc.). Finally, calls for carbon footprint reduction challenge long supply chains and the transport of goods over long distances.

The state: back in the driver’s seat

The second main challenge in the global political economy suggested by the Transition Movement is a more prominent role for the state, without which the energy transition will not materialize. To assume this leadership role, states have their work cut out for them, especially in the industrialized world:

“That means [rich nations] adopting ambitious emissions reduction targets; encouraging effective market mechanisms; supporting programmes to combat deforestation; promoting rapid technological progress to mitigate the effects of climate change; and honouring their aid commitments to the developing world.”

- Lord Stern quoted in The Guardian, 29 November 2007

<http://www.guardian.co.uk/environment/2007/nov/29/climatechange.carbonemissions>

States are asked to change their fiscal policies, reform and reduce environmentally harmful subsidies, introduce new market-based instruments, target investments to key green sectors, introduce green public procurement policies, and improve and implement environmental regulations more effectively (UNEP, 2011: 2). These are Herculean tasks considering the trends in the relations between states and businesses in the last decades.

With respect to the contemporary globalization of investments, finance, production and trade, the state has made way to a much more autonomous private sector. The Transition Movement is now calling for a substantial re-empowerment of the state. This is consistent with the view that the market is inherently a social and political battleground between private economic interests seeking increased autonomy and manoeuvring room and governments whose role is to seek what it sees as the common good through institutions of regulation.

“ (...) the market is a social institution and, therefore, a political issue where the goal is not only to determine the frontier between what is public and what is private, but also the level of autonomy of the markets vis-à-vis other social institutions.” (Deblock, 2000: 5)

The Transition Movement thus challenges today's frontiers between the market and the state, the results of decades of deregulation and globalization. It wants the state to channel resources, to regulate businesses, to invest in innovation and low-carbon infrastructure, to encourage the adoption of green technologies and to influence consumer choices, using a wide range of policy instruments.

Also, the Transition Movement more or less subtly prods the state towards “new forms of mercantilism” (Rioux, 2010: 26) by emphasizing what it perceives as a global race to the green, low-carbon economy. In this race, one of the goals of the state is to gain or maintain competitive advantage over rivals by fostering low-carbon innovations and by controlling and implementing low-carbon technologies across the national economy.

These calls for a central role for the state may shake the backbone of today's globalization based on the autonomy and predominance of market forces over public controls. New equilibrium might possibly result (Lee, 2010: 1112).

What is brown is not green

The third change potentially brought by the Transition Movement concerns the rearrangement of political and economic power resulting from a clash between two types of economic structures, one fossil-fuel-based, the other low-carbon-based. It can certainly be argued that the Transition Movement's worldview is highly disruptive for large segments of the global political economy, namely the industrial structures of the fossil-fuel economy and their supportive political arrangements. As this economy is the root cause of global climate change, the end of its domination is of the essence according to the Transition Movement's worldview and prescriptions. In short, transitioning to a low-carbon energy system through a new “energy and industrial revolution” will inevitably create winners and losers:

“The problem is that effective action on climate change (...) poses a deep challenge to the existing power structures— whether at the national or international level. [...] To steer the world firmly onto a low-carbon development trajectory amounts to creating conditions for a new industrial revolution. The process is also likely to create new haves and have-nots.” (Lee, 2009: 1110)

The question of who loses what and who gains what, aims at the very core of the investigative field of IPE. Potential losers from a transition to a low-carbon energy system will likely deploy delaying tactics or oppose it outright and/or to seek protection from favourable political coalitions. Alternatively, economic interests who stand to gain from the transition should actively push for it and seek support from favourable political coalitions.

IV - Fulfilling the prophecy: is the global political economy becoming green?

The Transition Movement certainly seems to know what it wants. Its overarching goal is clearly defined and its solutions toolbox well-stocked. Arguably, its storyline seems to be compelling enough to convince major actors, including economic ones, to adopt and disseminate its worldview.

For some, indeed, the transition to a low-carbon energy system is already underway (Lloyd’s, 2010; UNEP, 2010). Can one find empirical evidence of this? Based on some limited evidence, there seems to be movement in this direction, especially in terms of change in investment flows. Bloomberg New Energy Finance has tracked global trends in renewable energy investments since 2004. Its key 2009 findings clearly indicate that movements are occurring in energy investments, where a clear momentum now seems to exist in favour of renewables, despite current economic hardship in many parts of the world. These findings are corroborated by other studies as well, such as WWF’s *Clean Economy, Living Planet 2011 Report* (WWF, 2011). Moreover, some evidence also suggests a steady restructuring of parts of the energy system towards decentralized and localized renewable energy production. Lastly, recent data seem to indicate that investments in low-carbon energy has, for the first time, surpassed those made in traditional, fossil-based energy. Again according to Bloomberg New Energy Finance, investments in clean energy,

especially wind, solar, waves and biomass, drew \$187 Billion in 2010, compared with \$157 Billion for coal, oil and natural gas⁴.

First, global investments in renewable energy have been growing steadily for the past decade, increasing 32% over 2009 to a record \$211 billion in 2010 (an annualized increase of 36% since 2004). This seems to be partly the result of the “green elements” of most countries’ economic stimulus package materializing (HSBC, 2009). The lion’s share of these record investments levels went to large-scale wind-farm development in China and small-scale solar PV on rooftops in Europe (mainly Germany). The level of investment in these small-scale energy production projects also reached a record of \$60 billion in 2010 – up 91% over 2009. Moreover, government funded research and development also jumped 121%, reaching another record of \$5.3 billion in 2010. At the same time, corporate research, development and deployment fell 12% from 2009 to 2010, and were recorded at \$3.3 billion, as companies reduced investments during the crisis.

Second, the developing countries (\$72 billion) have, for the first time in 2010, overtook developed ones (\$70 billion) in new financial investments in renewables. Not surprisingly, China led the way, with \$48.9 billion of financial new investments, while other emerging economies also showing strong growth in investments.

Third, technological improvements and innovations have substantially reduced the price per megawatt of energy in many renewable energy sectors, with the most dramatic decreases in solar PV (with price plummeting by 60% between the summer of 2008 and 2010). This significant price decrease has made solar energy competitive with the retail price of conventional electricity in a number of sunny countries. With price of wind turbines also declining sharply, the competitive position of renewable energy seems increasingly positive: “*[f]urther improvements in the levelized cost of energy for solar, wind and other technologies lie ahead, posing bigger and bigger threat to the dominance of fossil-fuel generation sources in the next few years.*” This remarkable improvement in the fortune of renewable energy technologies seems to have

⁴ <http://www.bloomberg.com/news/2011-11-25/fossil-fuels-beaten-by-renewables-for-first-time-as-climate-talks-founder.html>

remained relatively unnoticed, *“taking place at a pace that public opinion and policy-makers were simply failing to spot.”* (Bloomberg, 2011 : 12).

Based on some of the evidence presented above, it appears that parts of the Transition Movement’s prescription are materializing. Renewable energy investments are indeed on the rise, having reached record levels despite a difficult economic downturn. Substantial investments now do go to decentralized and localized renewable energy sources. Moreover, some sources suggest that investments in renewables have overtaken investments in new fossil fuel production.

The case has been made here that a new discourse coalition has emerged around the notion of energy transition. This coalition, made up of disparate organisations, individuals and governments, share a common worldview – a frame of reference – that it communicates through a coherent storyline which contains both a way of looking at the problem and ways to address it. This discourse coalition wants to see clear changes to the nature, content and governance of the global political economy. Without necessarily linking discourse with effects, some evidence suggest that some of these changes are slowly materializing, especially in terms of investment flows to renewable energy sources. Some evidence are also suggesting changes in the near-oligopolistic nature of energy production, through increased decentralized and localized energy production. Whether or not these trends will continue remains to be seen and should be the subject of further academic investigation.

This situation is obviously evolving rapidly. The Transition Movement may change form, split or gain new allies. Its worldview can also evolve. One should be particularly aware of the growing presence of the alterglobalization movement in the debate on climate change and energy. While also calling for a radical energy transition, alterglobalists are calling for a dismemberment of current states-markets relations in a far more radical way that is proposed by the Transition Movement. This could lead to a reframing of the issue, and to modified storylines.

Lastly, one of the most fascinating aspects of the worldview espoused by the Transition Movement is its inherent hostility towards the fossil-fuel industry. How this industry reacts to the

calls for a rapid and profound transition to a new energy system – and the resulting clash – will undoubtedly further shape the global political economy for the next decades.

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