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International regimes as knowledge syndicates? Energy and trends of global governance

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Abstract

Traditional state power and sovereignty are steadily being eroded, especially in terms of the provision of certain fundamental 'public goods'. States, in particular, are incapable of managing the knowledge and information which is essential to maintain competitiveness and sustainability in an interdependent economy. Reliable structures of global governance and international cooperation, however, are far from being established. Energy—a top-of-the-agenda issue for most governments, private entrepreneurs and civil societies—is a manifest example of these dynamics. The current system of energy global governance entails policy actions scattered over diverse actors. The International Energy Agency has a prominent role, but it is weakened by its limited membership, and knowledge-driven ('epistemic') rather than material or executive powers. This paper argues that neither membership size nor available means are hampering global energy governance. Rather, energy is one of a number of public goods which lie in limbo—where states cannot afford their provision, and diverse interests prevent the establishment of an international authority. After introducing international regime theory and the concept of knowledge-based epistemic communities, the paper reviews the current state of global energy governance. It then provides a comparison of this structure with national and regional governance regimes on the one hand, and with environmental and health global regimes on the other.

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Introduction

Energy has recently made it back to the forefront of the global policy and security agenda. The significance of energy—“the source of wealth and competition, the basis of political controversy and technological innovation” (Pascual and Elkind, 2010:1)—as a fundamental *public good* is clear to the politician as well as to the professional, to the scientist as well as to any laypeople who buy Saudi fuel from a national company, cook with Russian gas, plug a Chinese plug into an EU-approved socket, own a Japanese car and install German solar panels on their roof. These issues do not concern energy alone. The emergence of decentralised global systems of governance has become a *worldwide* trend in the last decades, and now covers a whole array of perceived global public or ‘common’ goods, bypassing the state as a “provider of last resort” (Attinà, 1997). The aim of this paper is, in fact, to offer an overview of emerging global governance in terms of *scope* (to what extent?) and *means* (how?), with energy as a significant case-study.

The erosion of state sovereignty and the emergence of autonomous capabilities for international institutions and organisations have been topic of growing scholarly interest in international relations (IR) theory and world politics studies for a long time, to date. The first part of this study will therefore give account of salient theoretical approaches, with a focus on regime theory and knowledge—the blend of which led to the debated concept of ‘epistemic communities’ (Ruggie, 1975; Haas, 1992; Adler and Haas, 1992). The second section will get into more detail as far as the definition of an energy international regime is concerned, focusing on the International Energy Agency (IEA) and its role in a Western-led energy epistemic community. Finally, the performance of the Agency will be assessed vis-à-vis the presence of regional and national counterparts, and also in comparison with other established international regimes.

The main research question of the paper asks whether global governance in energy—distributed across a number of diverse and relatively small actors, endowed with knowledge-based missions and feeble executive powers—is currently viable. This study ultimately suggests that energy, being a sensitive policy field which affects states’ sovereignty directly, leaves narrow opportunities to global governance regardless of the size and powers of the actors involved.

I. When cooperation prevails: a need for international regimes?

In the post-1945 organisation of the system of international relations, nation-states have pooled increasing quotas of ‘sovereign’ decision-making power to the international level. Earlier explanations of international cooperation in IR theory assumed that states rationally opted for cooperation in accordance with plain economic reasoning: whenever its costs outweigh benefits, the provision of certain goods should be delegated to interstate cooperation. Economic calculation and state behaviour were first linked together by neo-liberal institutionalist theorists. The competing paradigm of IR theory, realism, was in fact not just simplistic in its utter reliance on power balance and military strength, but also blind to the growing mesh of transnational relations that had been rapidly depleting the meaning and essence of national sovereignty altogether. By introducing a *need for cooperation* neo-liberal institutionalists added new theoretical depth to the debate insofar as the “total self-sufficiency” of the state was proved, at last, chimerical (Keohane, 1989:183) and power-based ‘A>B’ models insufficient.

The “complex interdependence” (Keohane and Nye, 1977:23) of ‘new’ global economic relations made states *unable* to ultimately manage the provision of several public goods. To a certain extent, states were forced to resort to international organisations and institutions. While some authors focused on the *means* of such cooperation—the kind of institutions involved, and their organisational features—others paid attention to its *scope*, i.e. what goods were to be publicly provided at the international level, and how¹.

In the first group, international regime theorists attempted to overcome the simplistic equation that international cooperation *had to be* formalised in the shape of international organisations, and deepened the analytical framework by assuming that “a normative element, state practice and organizational roles” form distinct international regimes (Kratochwil and Ruggie, 1986:759). Conceptually, international regimes do not properly overlap either international organisations or international institutions. Regimes include “networks of rules, norms, and procedures that regularize behavior and control its effects” (Keohane and Nye, 1977:19), which is “practices” of “collective choice” (Krasner, 1982:186). Hedley Bull (1995) also defined regimes vis-à-vis ‘plain’ international institutions whereby the latter implement norms which are accepted beforehand within the former².

As far as the *scope* of international cooperation is concerned, however, at least two insightful approaches need to be taken into consideration. One, the ‘commons’ or ‘public goods’ theory, identifies what the object of cooperation really is; the other, the epistemic community approach, gives one viable description of how this cooperation does eventually take place. ‘Public goods’ theory is crucial. It has been studied and developed within disparate fields, ranging from economics to human ecology, biology and of course IR theory (Hardin, 1968; 1998; Ostrom, 1990). It rests on the assumption that certain types of goods—essential for the functioning and welfare of society—escape the rules of market economy. Such goods cannot be provided according to market rules because no producer has incentives for doing so: all consumers have a natural right to consume them, and hence no one can be charged for their cost (Florini and Sovacool, 2009). All consumers have a *right to free-ride* these products and benefits for producers tend to zero³. Products in such category include clean air, health, physical security. Furthermore, common goods entail externalities, that is “incidental byproduct” of economic activities, like the oft-cited example of air and water pollution (Florini and Sovacool, 2009:5240). This implies that public good provision is both positive and negative. The former *produces* vital goods; the latter *confronts* their negative externalities.

¹ For a comprehensive assessment, cf. Held and McGrew (2002, 2007) for globalisation and global governance theory, Archibugi *et al.* (1998) for a pioneering perspective on the globalisation of the political community, and the key contribution from Kaul *et al.* (2003) specifically on the globalisation of public goods provision.

² Arthur Stein (1982) developed an interesting study of the difference between international regimes, institutions and organisations, by means of comparison with (salient) cooperation and (mere) coordination. Semantic nuances may even include the concept of ‘collaboration’, which entails different degrees of commitment by participating states. Stein’s is one of the contributions to an issue of International Organization (IO), which in 1982 gave a broad and brilliant overview of state-of-the-art research on international regimes. The IO issue was later collected in one of the most celebrated books on the topic, edited by Stephen Krasner (1983).

³ In his seminal article on the topic, ecologist Garrett Hardin (1968) explains how the commons, or public goods, posit a challenge of inescapability in policy making: such goods need to be produced, yet no one may rationally want to produce them. Hardin describes the commons as a lose-lose situation, a “no technical solution problem” (Hardin, 1968:1243) that forces decision makers to overturn the rules of the game—by, for instance, forgoing market rules and providing these goods publicly. Lose-lose situations, in Hardin’s (1968:1244) proverbial definition, are a “remorseless... tragedy” of modern societies.

Whether a good is recognised as a common or not is ultimately a political resolution. Defining a product as 'public' entails a responsibility of governing institutions to set up adequate means of provision. Today, the resources needed to produce such goods more and more frequently breach domestic boundaries and become transnational issues, and national governments are keener on dismissing their responsibilities. 'Public goods' theory *must*, therefore, lead to a theory of global governance of public goods.

Knowledge and shared expertise can offer an alternative to traditional agreements and treaty-based cooperation. Knowledge-based and technological complexity have become increasingly crucial to economic and social relations around the world. Consequently, scientists and practitioners have been invested with a political "responsibility" for the consequences of their actions in terms of policy outcomes (Kuhn, 1970:176). Building on this assumption, epistemic communities theory claims that closed circles of experts develop inner awareness, instruments, language, objectives, world views and ethics, whose persuasiveness and effectiveness can ultimately translate them into policy actions (Haas, 1992). States can neither manage nor interpret enough information to deal with the technical complexity of global economic and social issues, and political agreements at the international level can rarely provide a solution. Epistemic communities, however, are not just a thought experiment: they exist, either in the form of scientific conferences, professional associations, or even established institutions⁴. Peter Haas' seminal work also devised a 'test' model⁵ (1992:3) to assess the presence and effectiveness of epistemic communities in a given policy context. Epistemic communities are in fact issue-centred: they are purposely created to address specific and technical problems.

Although theoretically insightful, epistemic communities theory is here merely instrumental. It helps further define the assumptions of this paper, namely that energy is a public good, whose provision and security cannot be any longer guaranteed by traditional domestic policy actions alone; that the provision of energy as a public good has been *partially* delegated to a global system of governance, which sees the International Energy Agency (IEA) at its core, besieged by a plethora of both powerful and free-riding outsiders; that knowledge plays a significant role in this governance system, and several energy-related issues can be addressed by knowledge-sharing energy epistemic communities.

II. Providing energy as a public good: a global arrangement

Energy is a public good—it is essential to human activities and survival, it requires massive investment and resource deployment, and cannot be obtained individually—but one of a peculiar kind. Energy, in fact, features a regulated market with ruthless supply-demand games. It requires a

⁴ It has been argued (Zito, 2001) that the EU's technocratic system, especially in the form of the European Commission's bureaucratic organisation, can be regarded as an epistemic community, albeit *sui generis*. The Commission's Directorate-Generals are not politically selected or elected, are not held accountable to voters, and tightly issue-centred. These continuously integrate policy action with research, information diffusion and coordination with external actors.

⁵ Haas (1992:3) defines "epistemic" every scientific or professional community with a "shared set of normative and principled beliefs..., shared causal beliefs..., shared notions of validity..., and a common policy enterprise". Moreover, "pains-taking" techniques are available in order to identify an epistemic community, especially vis-à-vis other group examples of cooperation: they "involve identifying community membership, determining the community members' principled and causal beliefs, tracing their activities and demonstrating their influence on decision makers at various points in time, identifying alternative credible outcomes that were foreclosed as a result of their influence, and exploring alternative explanations for the action of decision makers" (Haas, 1992:34).

mechanism of global governance—first, because the state cannot control the provision of a good which is obtained transnationally, and whose negative externalities are indifferent to political borders; second, because energy has myriad applications and transformations, to a degree of technical complexity which is unavailable to domestic policy makers. This process of delegation to a ‘global’ authority is, however, entirely political. Energy is also peculiar insofar as the market and political activities related to energy regulation have always proceeded along different tracks and merged *only* in the face of severe crisis—the oil shocks of the 1970s and the Belorussian and Ukrainian gas crises in 2006 and 2009 being appropriate examples (Umbach, 2010). Overall, then, energy as a market is regulated by the short-term corporate interest of private actors, which conflicts with the medium-/long-term strategic interest of national energy politics. It is therefore crucial that the structural interdependence of the global economy has put an irresistible pressure upon governments to abide by the (volatile) interests of flexible and ‘light’ corporate governance. Ultimately the trade-off between short- and long-term strategies leans extensively in favour of market players—minimising the ‘public’ quality of energy provision.

To what extent would a global arrangement overcome such an ‘exploitative’ balance of power in energy governance worldwide? And what are the scope and means of the energy global governance *today*? What constitutes and defines such regime? It is inevitably hard to single out exactly what the components of a global energy regime might be. In their insightful attempt, Florini and Sovacool (2009:5241) distinguish a “full panoply of actors and processes” that equally contribute to such regime. The aim of this paper, however, is not to compile an index of the world’s energy ‘technocracy’, but rather to prove that part of energy global governance takes place through the management of knowledge and information. In this regard, the IEA definitely plays an essential role.

The scope of the IEA: too small a global regime, too big a regional organisation

Established in 1974, in the wake of the ‘oil shocks’ of 1973—to which the Western consumer countries had been by and large unable to respond—and the heap of meetings and conferences which followed them, since the beginning the Agency has been a highly politicised entity. It was eventually agreed that the IEA would have been a rib of the Organisation for Economic Cooperation and Development (OECD), a ‘cartel’ of Western countries which had already proved sufficiently apt to achieve some cohesion, for instance, within the United Nations⁶ (UN). It is, in fact, legally stated in the agreement establishing the Agency⁷ that accession is open to OECD members only⁸. This remains a controversial impediment to the effectiveness of the organisation.

The IEA represents a paradox of *global* energy governance, insofar as its membership is both *non-universal* and *factional* in terms of interest representation. The (almost total) coincidence with the OECD membership makes the IEA the token of the Western consumer community. Even histori-

⁶ Russett (1966), in his work on voting trends in the UN General Assembly (UNGA), speaks of a “Western Community”, which was inclusive of the ‘white’ British Commonwealth. Moreover, Newcombe, Ross and Newcombe (1970) identify a looser “Western bloc”, in plain opposition to the Soviet one. Finally, Holloway (1990) reinterpreted the UNGA roll calls data, holding firm the hypothesis of an inner consistency of the OECD bloc’s voting behaviour.

⁷ Article 71.1 of the International Energy Program Agreement, signed in Paris on November 18th, 1974, states that “[t]his Agreement shall be open for accession by any Member of the Organisation for Economic Co-operation and Development which is able and willing to meet the requirements of the Program”.

⁸ The IEA membership to date includes *all* OECD member states, with the only exception of Iceland and —most importantly—Mexico, which according to the CIA World Factbook is currently the world’s tenth largest oil exporter. With about 2.6 million barrels per day, Mexico exports more than the whole of the European Union. The latest oil production statistics is available on-line at <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2173rank.html> [accessed on September 9, 2010].

cally, the IEA has been conceived of as the political counteroffensive to the deliberate blackmails and price crises sparked by the cartel of producing countries, which had earlier joined together in the Organisation of Petroleum Exporting Countries (OPEC). Energy resources, however, have an 'expiration date'. It is known that, especially as far as crude oil is concerned, the "mirage of geological peak" (Harks, 2010:254) has been constantly lurking over long-term perspectives and strategies, and that the current fossil-fuelled economy is resting on given and limited reserves⁹. This makes the position of the OPEC rather weak vis-à-vis their actual blackmail potential on importing countries. The focus now rests on more reliable reserves of natural gas¹⁰, efficient consumption, and 'clean' or renewable energy sources.

Figure 1. Comparing memberships: the IEA (left) and the OPEC (right).



Crucial stakes of the natural gas economy are in the hands of the Russian Federation. In 2007, Russia provided 40.8% of EU's total natural gas imports (DG TREN, 2010), and it is also on the frontline as China, the world's fastest growing industrial economy, plans to steadily enlarge the gas share in its energy consumption batch¹¹. Relying on such *de facto* global monopoly, Russia's only competitors are Russian undertakings themselves. This has given rise to a disquieting blend between private and public interests¹², and an overlap between Russian geopolitical objectives and its corporations' market purposes (Finon and Locatelli, 2008). Russia, moreover, promoted the creation of the Gas Exporting Countries Forum¹³ (GECF) in 2001. The GECF offers a permanent forum to diverse gas producers¹⁴, keeping price stability at the top of the agenda. It is yet too early to assess whether the GECF is ready to work as a global gas governance institution—or, as it has been speculated, a "Gas-OPEC" (Finon and Locatelli, 2008:431). Whatever the ambitions of the IEA, however, to establish a consensual global energy governance, keeping Russia 'out of the club' is certainly undermining its potential.

⁹ The debate about 'peak oil' and, generally, the reliability of current geological reserves of fossil fuels has been controversially discussed for the last forty years, basically since the 1970s oil shocks struck. The topic is addressed also by Moran and Russell (2009:3-4) and, with specific reference to oil reserves in the Gulf countries, by Chapman (2009:86-87).

¹⁰ An impressive 53.6% of world's proven natural gas reserves are held by three countries: Russia (24%, neither a IEA nor an OPEC member), Iran (15.6%, OPEC member) and Qatar (14%, OPEC member).

¹¹ The Eastern Siberian region is still largely unexplored, yet the exploitation of the Kovytko field has already aroused the interest of Chinese counterparts (Locatelli, 2004). Recent events in Eastern Russia emphasise the peculiarity of the Russian gas market. On March 23rd, 2010, the Russian-British joint venture TBK-BP announced the sale of the Kovytko field to Rosneftegaz, a state-controlled gas giant, ending "a long-running dispute" with Gazprom—Russia's largest and most powerful gas company (Belton, 2010).

¹² Rosneftegaz's president, Igor Sechin, is also Russia's deputy prime minister.

¹³ Symbolically enough, the charter of the organisation was signed in Moscow in December 2008.

¹⁴ GECF's membership includes a variety of gas producing countries from all over the world, notably Norway, Qatar, Iran, and obviously Russia among others. The organisation manages a web portal with relevant, yet complimentary information, available on-line at <http://www.gecforum.com.qa/> [accessed on September 9, 2010].

Prospects on the side of consumption efficiency and sustainable energy development are not rozier. Energy efficiency is a complex concept¹⁵ which entails new awareness on consumption, waste, noxious emissions, ecology, design, cultural habits and sensitivity. Again, ‘size matters’: the effectiveness of the IEA in spreading new energy consumption habits will be deeply hampered by its membership constraints, as long as China and India—“the fastest-growing non-OECD economies, and [...] key world energy consumers in the future” (US Energy Information Administration, 2009)—are *legally excluded* from IEA and OECD memberships in the long run. On energy efficiency, the IEA has published more than 115 publications since its establishment; it has supervised several programmes on efficiency in construction, industry and on the economy of energy efficiency; it carries out a yearly monitoring of the energy efficiency performance of its member states. The only way the IEA can try and exert some leverage on non-members, then, is to build upon this expertise. That was the case at the G8 Summits¹⁶ in 2008 and 2009. Weaker attempts with the G20 Summits resulted in a declaration¹⁷ that included IEA—along with the International Monetary Fund (IMF) and the World Bank (WB)—in a joint effort to produce reports on current efficiency performance and potential in developing countries. This notwithstanding, the ability of the IEA to produce knowledge and perform up-to-date assessments of both consuming and producing countries is a key asset of the organisation.

IEA and its means: too formal an epistemic community, too informal a bureaucracy

Energy global governance revolves more around a number of policy cores than just one leading global policy entrepreneur. Consequently, the idea of energy as a public good has often changed in the global public perception. When an embryonic energy governance began to emerge—in the 1970s especially—energy policies were essentially concerned with security of energy supply against blackmailing by producing countries and shocks following sudden supply disruption. Today, “the world has changed since the ‘Global Struggle’ for oil” (Goldthau and Witte, 2010a:1), and energy is a multifaceted concept which includes demanding challenges such as environmental protection, development and market regulation. The evolution of the IEA has followed this route.

As IEA data confirms (Scott, 1994b:379), import dependency in OECD countries had already peaked in 1973, before the establishment of the Agency. The IEA, therefore, had to act in a largely compromised situation, in terms of oil security, with limited powers and tools. Actions included the creation of two safeguard mechanisms against supply disruption—the Emergency Sharing System (ESS, in 1974) and the Coordinated Emergency Response Measures (CERM, in 1979). It was soon clear that supply security policy actions were both insufficient and too ‘state-sensitive’ to enhance real cooperation. Richard Scott’s reconstruction of the Agency’s history identifies (1994b:38) three other “evolutionary shifts”:

¹⁵ According to the IEA’s definition, “[a] sustainable system is characterised by its ability to deliver required services without exhausting resources”, and energy efficiency entails “wise use of resources... increased use of renewable resources and controlled use of non-renewables in advanced technology” (IEA, 1998:19).

¹⁶ A useful section on the works the IEA prepared for both the G8 and G20 summits is available on-line at the IEA web portal, <http://www.iea.org/G8/index.asp> [accessed on September 9, 2010]. In particular, the IEA delivered twenty-five recommendations to the G8 leaders, in the framework of the G8’s Gleneagles Plan of Action on renewable sources, cleaner sustainable energy. The documents are accessible on-line at http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=2047 [accessed on September 9, 2010].

¹⁷ *Communiqué* of the Finance Ministers and Central Bank Governors of the G20, issued in St. Andrews, United Kingdom, on November 7th, 2009. The document is available on-line at http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=2047 [accessed on September 9, 2010].

- *Research and development.* Building on the legacy of the Committee on Energy Research and Development (CRD) in the 1970s, the Committee on Energy Research and Technology (CERT) is now the leading scientific effort of the Agency. The CERT is responsible for intensive research and monitoring activities within the IEA framework, it supports and coordinates several working groups with members' representatives, and it has produced forty-two Implementation Agreements (IAs) with the member states on the most diverse energy-related topics;
- *Environment and sustainability.* Being neither an environmental agency nor a 'lobby', the IEA developed its own approach to environmental sustainability. The main argument is that traditional energy security has been achieved for a long time through means—such as fossil and nuclear fuels—whose externalities are overwhelmingly negative for the populace in terms of health and physical security, a concern common to several other international regimes. Urged by the material constraint of resource depletion, the IEA has relied on the Working Party on Renewable Energy Technology (REWP), an advisory body to the CERT. The main objectives of its strategic plan include oversight and control actions, definition of policy proposals and recommendations, and coordinated implementation with member states, but most importantly “strengthen[ing] its role as a primary source of analysis and information on renewable energy technologies for IEA committees and offices, and non-IEA stakeholders” (IEA, 2004:13);
- *IEA relations with non-members.* The mandate of the Agency only reflects the needs of consumer countries, but the global interdependence of energy markets flows in the opposite direction. If a 'lobbyist' attitude against producing countries was the norm since the establishment of the Agency, the 40-year long expertise of the IEA in surveying natural resources and national performance has certainly had an impact on IEA's relationship with the developing world. The Standing Group on Global Energy Dialogue (SGD) keeps the floor open for discussion with relevant non-OECD counterparts, but most significantly the IEA has become a leading model for monitoring, surveying and benchmarking—to such an extent that the SGD has carried out policy reviews of non-members' domestic energy market construction or renovation.

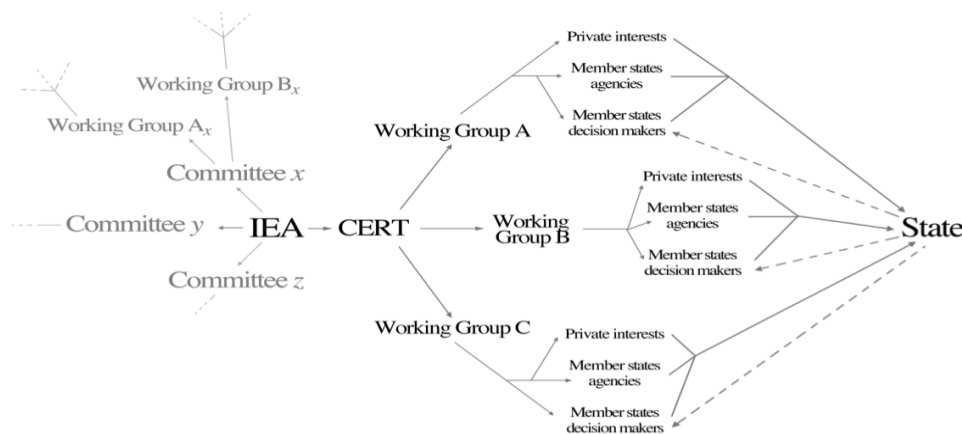
IEA's epistemic 'regime' is founded upon the definition of crucial global objectives, on the spread of awareness, best practices and policy options, dialogue with formal and informal partners, inside and outside the IEA framework. This entails a clear view of what the shortcomings (e.g., membership and policy-making capability) and the strengths (e.g., multi-level advisory resources) of the system are; a clear vision of what the short- and long-term objectives—Haas' (1992:3) “common policy enterprise”— need to be; a strategical idea of which other actors, either at the domestic or international level, may be introduced in the IEA's 'episteme' and how. The IEA seems to pass Haas' epistemic 'test'.

This process was clear already to Robert Keohane when he described IEA's ability to “provid[e] rules that are used as guidelines by governments... or more informally, through coordination on the basis of principles, but without such explicit rules” (Keohane, 1984:221). In short, the IEA produces “authoritative claims to policy-relevant knowledge” (Haas, 1992:3) by means of a *fractal distribution* of competences, engagement, and responsibilities at different national and international levels (see figure 2). A similar pattern is presented by the IEA itself, in the CERT's Strategic Action Plan 2007-

2011 (IEA, 2007:8), but it fails to emphasise the limited influence the state exerts on the outcomes of the process.

The policy opportunity the state is eventually presented with is the result of a multi-level, knowledge-driven process of information sharing and sectoral/local expertise. An international arrangement such as the IEA might, in principle, try to exploit its ability to engage other non-state, informal actors in the process, and thereby impose its policy objectives or agenda—through a more executive content of the IAs, for instance. Yet, this choice is highly political. One of the arguments held here is that the IEA cannot afford such choice because of its limited membership and, hence its limited *technocratic* weight: “We do not expect it to be an enforcer of rules” (Keohane, 1984:221).

Figure 2. A ‘fractal’ distribution of competence and coordination from the IEA to final decision-making processes in member states.



III. An appraisal of the Agency in a splintered global governance

The aim of this paper is to assess whether an intergovernmental organisation such as the IEA—endowed with a legally limited membership and mostly with knowledge-driven policy tools—is actually capable to manage effective global energy governance. Three different hypotheses are drawn:

- h₁***. *An issue of scope*. The peculiar membership of the IEA hampers the Agency’s credibility and the development of real policy competences and capabilities;
- h₂***. *An issue of means*. Management of knowledge is able to create shared beliefs, common objectives and roadmaps for their achievement, but is not enough to achieve real governance capacity;
- h₃***. *An issue of energy*. Neither limited membership nor knowledge-driven policy instruments limit the effectiveness of an international regime, *therefore* the problem lies on energy, which is still too sensitive a policy field to be managed at the global.

From these hypotheses, a single thesis is drawn: namely that energy is one of a class of sensitive policy fields which—affecting directly sovereign choices of the state—do not yield (yet) an efficient global governance, *regardless of the size of or the instruments available to the institutional arrangement set up for that purpose*.

Questioning stereotypes: do size and power really matter?

The following comparison between energy actors, with different membership range and with diverse competences, can show that neither larger/smaller size, nor more/less material tools affect global outcomes appreciably. Such a conclusion would challenge the weary materialist assumption that international organisations can only be effective if they include the most ‘powerful’ states, and have enforceable decision-making power (Gilpin, 1975; Krasner, 1976; Keohane and Nye, 1977; for a critical appraisal also see Lipson, 1984; Krasner, 1991; Snidal, 1991).

The World Energy Council (WEC), the European Commission’s Directorate General on Energy (DG Energy) and the United States’ Energy Information Administration (EIA) provide a comprehensive array of knowledge-driven bodies and agencies (see table 1 and figure 3).

Table 1. Energy international regime: various actors listed by the comprehensiveness of their membership and the duties of their mandate.

	Scope of membership	Means of action
International Energy Agency	<i>Sectoral</i>	<i>Epistemic</i>
World Energy Council	<i>Universal</i>	<i>Consultive</i>
DG Energy	<i>Regional</i>	<i>Epistemic</i>
Energy Information Administration	<i>National</i>	<i>Consultive</i>

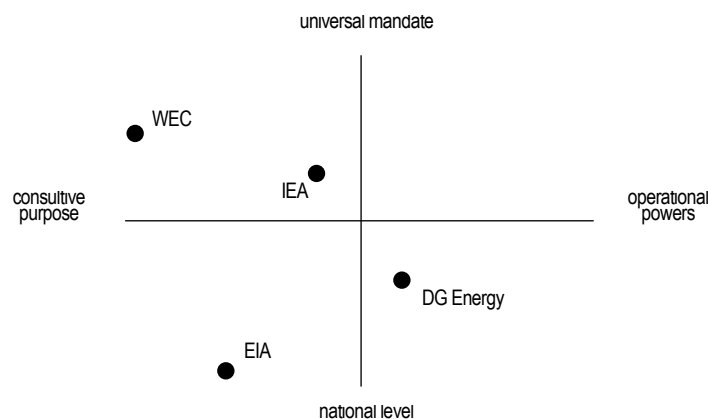
The WEC, established as early as 1923, is a global forum on energy-related issues. Extremely informal in its mission and commitments, the WEC includes all OECD (and IEA) countries, most OPEC countries and—most significantly—powerful outsiders, such as China, India and Russia. The ambition of the WEC is to embody a worldwide forum for informal dialogue, although its membership now includes only ninety-three members: far larger than the IEA, yet not properly global¹⁸. The WEC collects extensive reports and performance assessments of the energy policies of the member states, and fosters awareness on development- and poverty-related issues. This makes the WEC an interesting element of comparison with the IEA. First, the WEC is granted here a *consultive*, rather than epistemic purpose. Although the WEC has a broad competence ranging across all main energy resources and issues, what is missing is the *epistemic commitment*, that is a clear perception of what the institutional strategies and objectives should be, a vision of how the energy governance should change and why, and most importantly what the WEC’s contribution might be. The WEC structure, in fact, is weak (a charity established under British law), and no explicit objective or mission is stated out.

The European Commission’s DG Energy is, by definition, a regional body. Its ‘membership’ (EU’s twenty-seven members) roughly coincides with IEA’s, yet its mandate is clearly as much inward-looking as IEA’s is not geographically based. DG Energy’s action is epistemic, but in a particular way. Entrenched in the institutional framework of the EU, DGs only exert those powers they have

¹⁸ Important energy exporters, such as Venezuela and Kazakhstan, are not members of the forum, which has been this far unable to assert its attractiveness as a pattern of energy global governance.

been explicitly granted by the EU's Treaties¹⁹. DG Energy, in particular, was able nonetheless to build an extensive range of policies under its control. DG Energy has produced an impressive amount of policy proposals in all *adjacent* policy fields, where the Commission was actually given explicit competence: by addressing competition, environmental, developmental, common market, health and consumer protection issues—in full respect of the provisions of the Treaties—DG Energy has weaved an intricate mesh of energy legislation. DG Energy has been able, furthermore, to set up a number of programmes and projects *outside* the EU. The INOGATE programme for infrastructural development and financial assistance in Central Asian producing or transit countries, and the Energy Community for South-East Europe (EnC) in the Balkans (Renner, 2009), have spread the epistemic understandings of the Commission out across several neighbouring and partner countries. In fact, DG Energy has preserved its policy package—EU's *energy acquis*—from the influence and interests of EU's member states in the first place.

Figure 3. Scope-means matrix for various agents of global energy governance.



The EIA, finally, is the statistical and analytical agency of the United States' Energy Department. It was established in 1977, with a clear statement of both fiscal and political independence. Its budget, therefore, is subjected to external review, and *no policy recommendation* should be officially made by means of the EIA's reporting activities. Its competences, in fact, lie extensively in information collection, statistical assessment, and monitoring/reporting on the energy performance of the country. The EIA is a *liminal* case in this comparison: its membership is *per se* the least global, and its activities the most subsidiary.

This concise assessment has shown that actors of roughly the same membership size of the IEA (like EU's DG Energy) can actually exert significant sway on energy policy actions. Not just within a restricted community, but with an impact on outsiders and a tendency to homogeneity and approxi-

¹⁹ Both under the Maastricht Treaty's regime—which in 1992 established the EU—and in the framework of the 'new' Lisbon Treaty, EU institutions are not given significant competences on energy policy and security. The Lisbon Treaty has modified the existing Treaty establishing the European Communities (TEC) with the Treaty on the Functioning of the European Union, which flanks a renewed version of the Treaty establishing the European Union (TEU). Article 194 of the TFEU now clearly states energy among EU's competences (although anything concerning individual member states' energy security is excluded from the provision), and defines an ordinary procedure of qualified majority vote, yet with significant exceptions.

mation. Moreover, the model suggests that even global or universal mandates *do not necessarily* coincide with a global polity: besides the relation between larger size and more difficult coordination, global membership does not entail globally acknowledged legitimacy. Finally, there even seems *not to* be a tight relationship between the distance from the core of political authority and the possibility that such bodies be invested with significant operative power²⁰. If a small-sized, knowledge-driven technocratic body such as DG Energy is relatively more influential than both larger and smaller arrangements, and both more informal and more executive bodies, hypotheses h_1 and h_2 seem disconfirmed by empirical evidence.

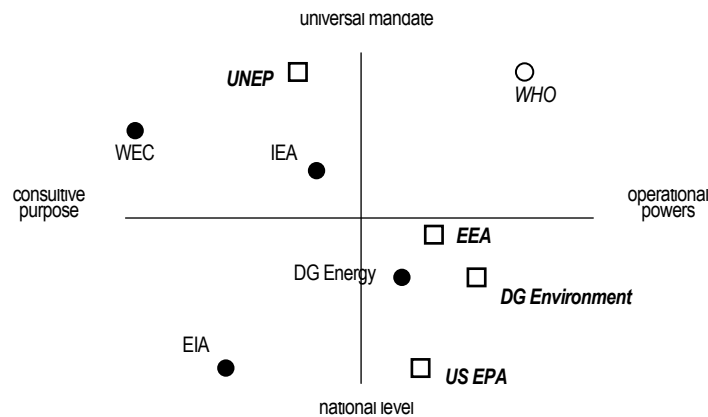
A measure of political sensitivity? Prospects for real global governance

The verification of hypothesis h_3 is methodologically hindered by the absence of an index measuring 'how strategic' a policy field is for a national government. It is deductively possible, however, to strike a balance between the energy governance system and other relevant international regimes. The case of global health governance has raised vivid interest in scholarly research (Fidler, 2007; Lee, 2003; 2004). Health governance is an apparent paradox. It is strengthened by the prominence of the World Health Organisation's (WHO) experience, within the framework of the UN, but it is also weakened by myriad programmes and activities run by the ever-present duo of financial institutions, WB and IMF, individual states and locally-based or transnational non-governmental organisations (NGOs). The WHO is a powerful UN agency. It is the core of international health and hygiene research—which affects directly health markets, e.g. with drugs and vaccines—and it also coordinates international action in the face of global threats. Moreover, it has tight connections with member states at both regional and governmental level, and coordinates constantly with other UN agencies. A profusion of smaller units at various levels contributes to the implementation of this overarching framework: this is what Fidler defines as the "unstructured plurality" of health governance, with the WHO acting as an "architecture amidst anarchy" (Fidler, 2007:3).

The environmental governance, conversely, adds another puzzle (Biermann *et al.*, 2009). No similarly powerful universal institution exists—the UN Environmental Programme (UNEP) is strongly development-focused and collects studies to assist policy making in the UNGA—and knowledge management and epistemic communities seem to play a salient role again: EU's DG Environment has contributed to the *acquis communautaire* with a wealth of provisions (ranging from pollution and emissions quota to end-user behaviour), in tight relation with the more executive European Environmental Agency (EEA). The United States' Environmental Protection Agency (EPA), finally, is a quintessential example of an independent national agency with operative duties and tight connection to governmental policies in a narrow policy sector. Re-drawing the scope-means model used above for energy governance would give a snapshot of just a small portion of the global governance system, while shedding some light on how such sensitive public goods are provided globally (see figure 4).

²⁰ A regional institution, with limited mandate, such as DG Energy seems overall more incisive and powerful than an agency—like the EIA—directly connected to a branch of a national executive. This conclusion, however, needs re-elaboration: how methodologically sound is to include a domestic agent in the appraisal of energy global governance? However powerful the state an agency is connected to, to what extent can it shape global governance—in terms of standards, monitoring, best practices, information? An index should be devised that defines relative power of each governance agent vis-à-vis the context it is entrenched in.

Figure 4. Broader scope-means matrix for energy, health (*italics*) and environmental (bold italics) protection global governance actors.



If most units placed themselves in the lower-right quadrant, one could assume that a relation between distance from a political core and policy capability exists: the state level would remain the most effective for policy actions. Conversely, if most units crowded the upper-right quadrant, one could argue that global governance is an effective means of public good provision *tout court*, a reliable alternative to state-driven policies. Neither option occurs, and pattern is even more confused. When states commit themselves to strong universal frameworks (that is the case of the UN-framed WHO), global governance has room for manoeuvre. When states are reluctant, because of a mix of private market interest and electorally sensitive sovereignty shares, they retain power at the domestic level. The regional alternative seems a powerful exception. Both at the OECD and at the EU level, limited membership, swifter decision-making procedures and a closer connection with public-good demand seem to yield better performances. It should be stated clearly, however, that the unique institutional framework of the EU, in particular, fosters the emergence of epistemic understandings and shared ‘policy missions’, making regional policies an essential (and powerful) complement of states’ domestic action (Zito, 2001).

Conclusion

Despite the claims that state sovereignty is being irreversibly eroded in favour of coordinated international action at the global level, global governance is far from being fully structured and accomplished. The case of energy, a top-of-the-agenda issue for most national governments and international institutions, shows that coordination can wind up to a stalemate according to the comprehensiveness and the powers of such international structures.

The International Energy Agency (IEA) is a salient case-study. Legally connected to the Western-based membership of the Organisation for Economic Cooperation and Development (OECD), it was established in 1970s to overtly face the strategies of the energy exporting countries (especially oil producers of the Organisation of Petroleum Exporting Countries, OPEC), and today excludes significant producers (Russia) and growing consumers (China, India, Brazil) from its membership. Moreover, the Agency has not been granted enforceable powers, but it has learnt to exert influence on member states’ policy making by means of a common view of energy global issues, scientific

and professional research, a clear strategy for the achievement of common objectives and desired outcomes—becoming, that is, an epistemic community and operating as a “global energy policy advisor” (Van der Graaf and Lesage, 2009:314).

In order to assess the hypotheses that limited membership of the actors and limited enforceable powers were preventing energy from achieving reliable and effective global governance, IEA’s performance was compared to that of other relevant players. Both ‘universal’ arrangements such as the World Energy Council and national bodies such as the US’ Energy Information Administration present weaker influence and executive capabilities than the IEA. Conversely, the European Commission’s Directorate General on Energy—featuring roughly the same limited, community-based membership—has shown a capacity to play an essential role in the construction of EU’s internal market and, also, to go beyond EU’s boundaries spreading a ‘European’ energy *episteme* out to neighbouring areas. Limited membership and epistemic means of action, therefore, do not seem to hinder globally concerted action. This study suggests that the problem lies in *energy itself*. If energy is compared to other international regimes, such as healthcare and environmental protection, some public goods appear more ‘cooperation-prone’: where values widely recognised by the international community are at stake (e.g., health), coordination at higher levels (e.g., the United Nations) and with more formal powers (e.g., the World Health Organisation) is possible; in other fields, regardless of their widespread sensitivity (e.g., environment), where more private and market interests are at stake (e.g., energy), global coordination *per se* fails, and more focused actors (e.g., the EU) can emerge, especially if relying on internal resources.

The tests run in this paper, finally, suggest a few methodological *caveats*. The comparability of regimes wherein a plethora of actors behave according to changing interests is certainly debatable, and the empirical assessment was reduced to arbitrarily selected ‘salient’ cases²¹. Nevertheless, energy governance offers an array of interesting cases for comparative analysis, holding firm either membership scope or executive powers. Suggestions for further research and policy analysis include the role of overarching international arrangements, like the United Nations—an institutional framework within which other attempts at global governance (e.g., the WHO) have gained further momentum and credibility. Such highly regarded organisations should *formally* identify what public goods can effectively be provided at a trans- or supranational level. The amount and quality of knowledge which can be collected by means of cooperation is unattainable by nation-states: global governance has the potential to solve not only economic and market dilemmas, but to significantly improve human lives as well.

²¹ The case of the Energy Charter Treaty (ECT), a 52-signatory multilateral organisation which involves a number of politically significant producers—the Russian Federation (albeit provisionally and only as far as certain parts of the Treaty are concerned), Norway, and Kazakhstan among others—and transit countries (e.g., Ukraine and Turkey), would be particularly fitting for further research. The ECT and the Energy Charter Conference (ECC) were originally conceived as early as in 1991 with a specific outlook on European consumers’ energy security and on the involvement of the emerging Eastern energy markets after the collapse of the Soviet bloc. The vantage point of the organisation has progressively expanded to include non-European significant producers such as the United States and Middle Eastern OPEC-members as observers to the ECC (on the ECT cf. Wälde, 1996; Omalu, 1999; Konoplyanik and Wälde, 2006; Haghghi, 2007:187ff).

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