

The G8 and G20 as Global Steering Committees for Energy: Opportunities and Constraints

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Abstract

This article looks at the opportunities and constraints for the G8 and G20 to act as steering committees in global energy governance. It starts from the premise that, intrinsically, informal consultation mechanisms among major powers have a large potential to act as coordinating bodies for global energy. After assessing the G8's recent energy work, the article finds that the G8 has made notable strides on the energy front, particularly in areas of low controversy such as energy efficiency, but that its scope of action is limited by internal divisions, a lack of legitimacy, the absence of several key players and the lack of mechanisms for successful implementation of collective action. While some of these problems are addressed by the recent shift to the G20, the G20's ability to act as a global energy governor remains limited. Nevertheless, by sketching the G20's recent actions to phase out fossil fuel subsidies, we show that the G20 does have a large potential to make progress in addressing specific energy dossiers. The article concludes by making some concrete policy recommendations for G20 leaders to make full use of this forum's potential.

Policy Implications

- Efforts to solve the various global energy problems are doomed to fail if they do not engage the most relevant and powerful players in this particular issue area. Only a handful of countries are responsible for the bulk of global energy consumption and CO₂ emissions.
- As long as large countries are reluctant to transfer substantial authority over energy issues to formal multilateral settings, informal and high-level forums such as the G8 and G20 fulfil a paramount function: they ensure continuous dialogue and deliberation with regard to this highly strategic and complex policy issue.
- While the G20 continues to be plagued by internal divisions on energy and a lack of mechanisms for successful implementation of collective action, compared to the G8 it scores much better in terms of representativeness and the inclusion of all key energy players on an equal footing.
- To make full use of the G20 as an energy forum the leaders should be farsighted, restrict the number of participants to a maximum of 20, treat energy issues iteratively, allow for independent monitoring of the commitments, and reach out to nonmember countries in a structured manner.

Our world is confronted by a twin climate and energy crisis. Emerging economies have followed in the footsteps of rich nations and are fuelling their rapid growth with carbon-intensive energy sources. These energy sources, and especially oil, are increasingly expensive to extract and cause our climate to warm at a destructive pace. At the same time, the homes of 1.4 billion people are still not plugged into the power grid and, in many producing countries, the energy sector continues to be

associated with corruption and even human rights abuses. Equally disturbing is the fact that, in spite of the magnitude of these pressing energy challenges, states have so far failed to muster an adequate multilateral response. Many of the world's energy governance institutions are either toothless or are struggling to remain relevant in an era of rising multipolarity and a profound crisis of multilateralism. The institutional landscape of energy provides a scattered picture of regional

organisations, clubs representing particular interests, and institutions dedicated to specific energy sources. These bodies fall short in formulating the necessary cross-cutting policies to address the energy–climate nexus.

In light of these multilateral failures, it is easy to become exasperated with the inability of international organisations to come up with quick and effective policy solutions. A more practical way out of the stalemate around climate change and other energy-related issues might therefore be to place them on to the agenda of informal governance institutions such as the G8 and the G20. The advantage of these ‘minilateral’ clubs is that they bring together the leaders of a small number of key countries in an informal setting. As long as large countries are reluctant to transfer substantial authority over energy issues to formal multilateral settings, such high-level forums seem well placed to steer the global governance efforts with regard to this highly strategic and complex policy issue. Having no fixed agenda, the G-clubs are perhaps the only global forums where countries can discuss the grand objectives of global energy governance in an integrated way. It is therefore important to understand the actual and potential role of the G-clubs in energy governance.

The G8 already has some experience with energy matters. In fact, the G8 came into being in large part because of its members’ need to respond jointly to the oil shock and economic crisis of the early 1970s. Although G8 attention to energy waned in the 1980s and 1990s with the decline in oil prices, by the turn of the millennium energy reappeared as a prime agenda item, impelled first by climate concerns and then by skyrocketing energy prices. This group of western industrialised countries plus Russia has thus repositioned itself as a candidate global governor in a policy area that is devoid of strong multilateral institutions. However, the G8’s future has been called into question by the rise of another institution: the G20 leaders’ summit. Created as a crisis committee after the eruption of the global recession in 2008, this forum was crowned as the apex forum for global economic governance barely one year later, in September 2009. The shift from the G8 to the G20 is an important indicator of the growing multipolarity and a recognition that key emerging countries need to be on board when global economic issues are discussed.

Against this background we examine the opportunities and constraints for the G8 and G20 to act as steering committees in global energy governance. Our article proceeds in three parts. It starts by arguing that summit processes have distinctive procedural features that make them particularly promising as energy deliberation forums. Then it goes on to describe the G8’s recent energy work and assess its accomplishments and failures. In the third and final part, we examine the G20’s potential effectiveness as an energy governor and illustrate our

arguments by employing its recent work on energy subsidies as a case study.

1. The concept of a global energy steering committee

The concept of a ‘steering committee’ for the world economy pops up regularly in the literature on the G20, but it is seldom explained what is meant by this. In this article we understand a global steering committee to be a group of major countries that has the capacity and the aspiration to produce public goods for the international community. In other words, a steering committee is not a small club of the self-interested, but a diplomatic device to encourage consensus between the biggest countries on major transnational issues. The purpose of such a steering committee is not to supersede the various existing multilateral institutions, but to complement them and bring more coherence to the existing institutional landscape (e.g., Huang, 2009; Lesage et al., 2010; Victor and Yueh, 2010).

The functions of a steering committee

In theory, a steering committee is able to exercise several leadership functions. First, the G-countries can provide unilateral leadership by simply deliberating or by coordinating their own domestic policies (the internal dimension). Second, in a more relational form of leadership, the group can use its power to set the international agenda, agree on global norms, steer existing multilateral institutions and create new ones (the external dimension).

As regards the internal dimension, a first important function is *the deliberative role*. Regular summitry provides a low transaction cost venue for dialogue among the world’s biggest countries. In general, those largest players are vigilant in guarding their sovereign prerogatives, especially regarding highly strategic issues such as energy. Big countries prefer to take these issues to an informal and flexible setting, in which their special status is recognised, rather than being submerged in a levelled-out multilateral process (Lesage et al., 2010). Frequent, high-level contacts can foster increased transparency, trust and even consensus among leaders, even if there are 20 of them, provided that they meet regularly and in the same constellation – that is, without variable geometry (Martin, 2008). From a constructivist perspective, regular interactions can also spur some degree of group identity within the G-clubs or at least a sense that it is incumbent upon those nations to act as a last-resort provider of global public goods. In this regard, it is highly important that the G20 for the first time brings together established and emerging powers on an equal footing.

Besides this deliberative role, the major countries could also *coordinate their national policies* and make commitments that have to be implemented domestically. Translated to energy, this kind of policy coordination could yield very important global ramifications. If only the G20 countries would radically change their policies at home, scale down their dependence on fossil fuels and start the needed energy revolution, this would make a huge difference for the planet as a whole given the sheer weight of these countries in the energy–climate conundrum. Moreover, such a move would probably have spillover effects on other countries. The G20 countries, which are also the biggest markets in the world, could act as frontrunners that spearhead investment in sustainable energy sources and technologies, energy efficiency and demand control. In other words, merely through internal policy coordination, the major powers could ‘lead by example’ and encourage other countries to move in the same way to a more sustainable energy outlook. Schneckener (2009) refers to this as the ‘pioneering’ and ‘path-finder’ functions. The ability to promote activities and to mobilise the respective resources may result in an encompassing *capacity building*.

The latter point on trying to influence the policies of other countries brings us to the external dimension of the leadership role of a steering committee. By their mere existence, the G8 and the G20 may be *agenda setters* which provide a focal point that gives more visibility and direction to the splintered global energy governance efforts. As each summit of the G8 and G20 is widely publicised, these meetings are endowed with the capacity to set the international agenda. Through regular summitry, world leaders can thus give energy as an issue area pride of place and raise international awareness of the urgency to take measures.

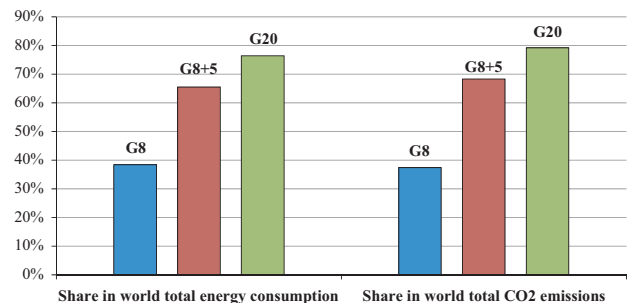
At the same time, they can also *encourage multilateral cooperation* by setting out the grand principles and norms that ought to underpin action in this field. They can normatively embed energy in a ‘dense web of causal connections with core concerns, from macroeconomic performance ... to environmental protection, nuclear proliferation, nuclear safety, and most recently terrorism’ (Kirton, 2006, p. 5). The political direction set out through such declaratory actions can trickle down on to the agenda of other institutions and (sub)national governments. The ‘Gs’ can also prod existing international institutions more directly by giving them specific tasks with the commensurate financial means. This relationship need not be unidirectional, however. The declarations that are issued at summits can also provide an important political validation of actions undertaken in other forums. Finally, the G-clubs can set up new networks or regimes to fill some gaps in global governance.

The capacity to provide public goods

What makes big-power clubs especially attractive for energy governance is that, at least on paper, they offer a way to craft deals among the smaller number of countries that matter most. The G-clubs already bring together the world’s largest consumers and polluters in an informal setting, which is said to be conducive to frank discussions and deliberations. The G8 + 5, for example, comprises a bigger share of world energy consumption than the International Energy Agency (IEA) does today with a smaller number of members. A similar picture emerges when looking at climate statistics. There, the G8 produces only 37 per cent of the world’s carbon emissions, while the addition of the G5 raises the total to 68 per cent. For the G20 these figures are of course even more elevated. An overwhelming majority of more than 75 per cent of all energy consumption and almost 80 per cent of all CO₂ emissions from fuel combustion on this planet stem from the G20 as a group (own calculations based on IEA, 2010). These few examples suffice to illustrate the pivotal position of just a small number of countries in the energy–climate conundrum. Figure 1 offers a concise picture of the global weight (in absolute terms) of the members of the G8, the G8 + 5 and the G20 in energy and climate affairs, by using two main indicators (energy consumption and CO₂ emissions).

All in all, summit processes are more agile and flexible than formal organisations because they operate without a permanent secretariat, staff or even a legal basis. As a result, they can easily accommodate new members without cumbersome procedures, as is illustrated by the growing outreach of the G8 toward the G5 countries and, above all, by the fact that the G20 has superseded the G8 in global economic governance. With no fixed agenda and with the highest political representatives of the most pivotal countries around the table, small clubs

Figure 1. Global weight of the G8, G8 + 5 and G20 in energy and climate affairs.



Source: Own calculations based on IEA, 2010. Notes: Figures are for 2008. G8 and G8 + 5 do not comprise the figures for the EU as a whole.

of great and systemically important powers have important assets to engage in horizontal and vertical coordination efforts. Energy is an issue area that is particularly suited to being addressed by such a format as the G8 or G20, because it cuts across different policy silos (rendering it difficult for functional organisations to develop a comprehensive approach) and because of the enormous strategic and economic interests at stake (making states reluctant to see their hands tied by multilateral action, let alone to transfer competences in this policy domain). By dint of their unique institutional features, the G-clubs can act with both determination and flexibility on energy, while being highly compatible with a polycentric governance system. This way, they help to create the conditions that are required to deal with the urgent and complex energy challenges (Cherp et al., 2011).

Sceptics of the G-groups would object that, even if it were possible to achieve a meaningful consensus within the G8 or G20, the resulting declarations and action plans would not be legally binding and hence ineffective. The reality is more complex, however, than this argument suggests. In the case of soft regimes, such as the G20, the effectiveness of the nonbinding commitments hinges on three main assets (Victor, 2006): high-level political engagement, institutions conducting detailed performance reviews, and a certain periodicity of meetings casting a 'shadow of the future'. If these conditions are met, nonbinding commitments can be even more effective than binding law, because governments will more easily commit to more ambitious courses of action through nonbinding instruments. As a precondition for success, leaders should take the respective club sufficiently seriously and contribute to its enduring success. The latter implies good compliance with decisions, ensuring the continuity and institutionalisation over the years and good preparation of presidencies. Iterative treatment of recurrent problems is fundamental to the summits' success (Bayne, 1999).

2. The G8 as an energy governor: past performance and assessment

The G8 has addressed energy issues from the 1970s onwards, but the G8's attention to energy has waxed and waned over time, depending on oil prices. In fact, oil prices long remained the sole energy issue addressed. As a result, the group's track record on energy is very patchy. Kirton (2006) has distinguished three phases in the G8's performance on global energy governance. In the first phase (1975–81), the G7 acted firmly and effectively in response to the dual oil shocks of the 1970s. The most remarkable achievement was the national targets to limit oil importation agreed upon at the 1979 Tokyo summit. In the second phase (1982–2001), both the oil price and the group's performance declined sig-

nificantly. During most of the 1990s, the G8 remained either silent or divided on energy. An illustrative example is the G8 Renewable Energy Task Force, which was set up at the 2000 Okinawa summit but whose report was largely ignored by the 2001 Genoa summit due to resistance by only one G8 member, the new US administration. In the third phase (2002 onwards), the G8 has turned to energy again, first still tentatively but since 2005 more vigorously and thoroughly than ever before. The latest wave of G8 energy discussions has spawned a plethora of declarations, action plans and commitments, which are summarised in Table 1.

The G8's recent track record on energy

For the G8's energy work, the Gleneagles summit of 2005 was a milestone. The most important outcome of the summit with regard to energy was the Gleneagles Plan of Action on Climate Change, Clean Energy and Sustainable Development. It contained an impressive total of 63 non-binding commitments related to climate change and energy (Kirton and Kokotsis, 2005). In addition, the Plan of Action invited two international organisations to do study work and make policy recommendations. The IEA was asked to conduct analysis with regard to energy efficiency, cleaner fossil fuels, carbon capture and storage, and renewables, whereas the World Bank was to create a framework for investment and financing on clean energy initiatives. Next to cooperating with existing organisations, the G8 also created a new institution, namely the Global Bioenergy Partnership (GBEP). The GBEP Secretariat is hosted at the headquarters of the UN Food and Agriculture Organization (FAO) in Rome. It undertakes research and raises awareness concerning the sustainable production and use of bioenergy.

For its first G8 presidency in 2006, Russia put forward energy security as one of the priority themes. In the winter of 2005–06, Russia had interrupted gas deliveries to Ukraine following unresolved disputes over prices and transit fees. Moscow used the St Petersburg summit to recover its tattered reputation and to present itself as a responsible energy partner. The summit resulted in the Global Energy Security Principles and an annexed St Petersburg Plan of Action on Global Energy Security. Together they constituted the first comprehensive high-level policy statement ever on global energy governance. The G8 members committed themselves to increase the transparency of global energy markets, improve the investment climate in the energy sector, enhance energy efficiency, diversify the energy mix, ensure the security of critical energy infrastructure, reduce energy poverty and address climate change. The most remarkable aspect of the text is its pro-market outlook, emphasising the importance of open, transparent and well-regulated markets, including openness to investors.

Table 1. Overview of G8's main energy work since the 2005 Gleneagles summit

Year	Host	Meeting	Venue	Main outcomes with regard to energy
2005	United Kingdom	Summit	Gleneagles	<ul style="list-style-type: none"> • Mandate to IEA on recommendations and energy scenarios • Mandate to World Bank on financing cleaner energy • Gleneagles Plan of Action on Climate Change, Clean Energy and Sustainable Development • Launch of Gleneagles Dialogue • Launch of Global Bioenergy Partnership (GBEP)
2006	Russia	Summit	St Petersburg	<ul style="list-style-type: none"> • St Petersburg Plan of Action on Global Energy Security • Global Energy Security Principles
2007	Germany	Summit	Heiligendamm	<ul style="list-style-type: none"> • Launch of the Heiligendamm Dialogue Process • New commitments on energy efficiency and clean energy
2008	Japan	Ministerial	Aomori	<ul style="list-style-type: none"> • Decision by G8 + 3 to establish the International Partnership on Energy Efficiency Cooperation (IPEEC)
		Summit	Hokkaido-Toyako	<ul style="list-style-type: none"> • Endorsement of a global CO₂ emission reduction target of at least 50 per cent by 2050 • Pledge to 'maximise implementation' of the IEA's 25 recommendations on energy efficiency • G8 present national self-assessment reports on their progress in meeting the St Petersburg Principles • Global target of 20 CCS demonstration projects by 2010 • International initiative on 3S-based nuclear energy infrastructure • G8 ministers propose to establish a 'low carbon energy technology global platform' • Signing ceremony and operational launch of IPEEC • Creation of a G8-led multistakeholder Expert-Level Working Group on Energy Poverty
2009	Italy	Ministerial	Rome	<ul style="list-style-type: none"> • Increase in global average temperature above pre-industrial levels should not exceed 2°C • Industrialised countries should reduce emissions by 80 per cent or more compared to 1990 or more recent years by 2050 • Incorporation of Sustainable Buildings Network (SBN) into IPEEC • Decision to continue the Heiligendamm-L'Aquila Process between G8 and G5
		Summit	L'Aquila	<ul style="list-style-type: none"> • IEA should continue its work on the Global Platform • IEA presented report on G8's progress on CCS
2010	Canada	Summit	Muskoka	<ul style="list-style-type: none"> • IEA should continue its work on the Global Platform • IEA presented report on G8's progress on CCS

Source: Compiled on the basis of data from the G8 Research Group, <http://www.g7.utoronto.ca/> [Accessed 15 October 2010].

While climate change had dominated the discussions in Gleneagles and the St Petersburg summit had shifted attention to energy security, the 2007 Heiligendamm summit took up a middle position by putting energy efficiency in the spotlight. Energy efficiency was presented as a solution to both climate change and energy security concerns. The G8 promised to develop and implement national energy efficiency programmes and the Heiligendamm communiqué also contained a number of commitments on energy efficiency in four sectors: buildings, transportation, power generation and industry. Most commitments were stated in rather vague terms and did not include numerical targets or even time frames. One significant step, though, was the G8's request to the IEA to help establish a Sustainable Buildings Network (SBN), a partnership that would promote energy efficiency in buildings and would be open for participation by the major emerging economies. Beyond

energy efficiency, the G8 pledged to prepare national reports by the next summit to evaluate their respective efforts to meet the St Petersburg Principles on Global Energy Security. Equally important, the G8 launched the so-called Heiligendamm Process, an intensified dialogue between the G8 and the G5 on four topics, one of which was energy efficiency. Although the dialogue's secretariat – or 'support unit' as it was officially called – was located at the Organisation for Economic Cooperation and Development's (OECD) headquarters in Paris, it was the IEA that logistically supported the energy working group. Four specific topics were singled out for discussion: energy security, sustainable buildings, power generation and renewable energy.

Under the 2008 Japanese presidency, the G8 tied in again with the approach of Gleneagles to put emphasis on climate change. Due to the surge in oil and food prices in early 2008, G8 leaders were also preoccupied

with energy issues, most notably the production of bio-fuels. In response, G8 countries pledged to accelerate research on second-generation biofuels, which do not require food crops as feedstock. In general, the Hokkaido/Toyako summit saw the leaders make firm commitments on energy issues. The most salient commitment was the endorsement of the goal of achieving a 50 per cent cut in global greenhouse gas emissions by 2050. On energy efficiency, the leaders went a step further than in previous summits and promised to 'maximise implementation' of the 25 recommendations on energy efficiency that the IEA had presented to the G8 summits in 2006, 2007 and 2008. As agreed upon in Heiligendamm, the G8 countries also presented their self-assessment reports in complying with the St Petersburg Principles and the IEA was allowed to comment on these. Furthermore, the G8 pledged to support the launching of 20 large-scale carbon capture and storage demonstration projects globally by 2010. Finally, and perhaps most importantly, the G8 welcomed the establishment of the International Partnership on Energy Efficiency Cooperation (IPEEC) during the G8 energy ministerial in Aomori in June 2008.

In 2009, the Italians hosted a G8 ministerial in Rome where the IPEEC was officially launched. The L'Aquila summit achieved a couple of noteworthy decisions on climate change: a recognition that the increase in global temperature above preindustrial levels should not exceed 2°C and a goal for industrialised countries to reduce greenhouse gas emissions by 80 per cent or more by the year 2050 compared to 1990 or more recent years. However, neither midterm goals for climate action nor concrete financial commitments to developing countries were agreed upon. In L'Aquila, the leaders also decided to continue the Heiligendamm Process for another two years but renamed it as the 'Heiligendamm-L'Aquila process'. Finally, the G8 indicated in L'Aquila that it was considering erecting a 'low-carbon energy technology global platform'. The IEA was tasked to work out the concrete details of such a platform.

At the 2010 Muskoka summit, energy was not a big theme. The final leaders' declaration only contained one paragraph on energy. The G8 encouraged the IEA to continue its work on the creation of an international platform for low-carbon energy technologies. The G8 leaders also restated their objective to achieve a broad deployment of carbon capture and storage technology (CCS) by 2020. The IEA, in cooperation with the Carbon Sequestration Leadership Forum and the Global Carbon Capture and Storage Institute, had prepared a progress report on the G8 leaders' commitment at the 2008 Hokkaido/Toyako summit to support demonstration and deployment of CCS. In this report, the organisations urged world leaders to intensify their efforts to realise CCS projects under development.

Assessing the G8's energy work

Using our 'steering committee' concept outlined above, we can say that, by and large, the G8 has made notable strides on the energy front. Since 2002 – and reaching an apogee in 2005, 2006 and 2007 – the G8 has taken on energy issues again as it has done before. What has been innovative about this latest cycle of attention is the framing of energy and climate security as interconnected challenges. However, the G8's attention to the energy–climate nexus faded in autumn 2008 when the financial and economic crisis absorbed most of the attention of political leaders and curbed energy demand worldwide. Thus, we may be witnessing the end of another energy policy cycle at the level of the G8, although the instability in the Arab world and the nuclear reactor catastrophe in Fukushima in early 2011 may move energy back to the top of the G8's and G20's agenda under the French presidency. These dynamics illustrate how the G8's agenda setting still largely takes place in reaction to market developments and not so much in foresight of future challenges.

Regarding internal policy coordination, the G8 produced an exceptionally high 77 energy commitments at Gleneagles in 2005 and a historic high of 132 at St Petersburg in 2006 (Kirton, 2007). Subsequent summits delivered more commitments from the G8 to change policies at home for a wide array of sectors, ranging from buildings to cleaner fossil fuels to renewables. By doing so, the G8 has put energy on the highest possible political agenda. In particular, the G8 has been a front-runner in defining energy security and climate change as two sides of the same coin. The G8 has gone beyond the traditional narrow definition of energy security and has instead adopted a broader approach that integrates energy and climate policy. Energy savings, energy efficiency and renewables have been defined as a path to solve the looming energy and climate crises. These are the areas where the G8 has performed important path-finding and capacity-building functions.

A notable accomplishment of the G8 is the Global Energy Security Principles, which were endorsed by the G8 in 2006 at the initiative of the host country, Russia. For the first time, a high-level international body has outlined a shared vision with regard to the energy sector. Importantly, the G8 submitted national self-assessment reports with regard to these so-called St Petersburg Principles, flanked by an overall IEA assessment. In Hokkaido/Toyako, the G8 also promised to maximise implementation of the IEA's energy efficiency recommendations. The problem with these commitments, however, is the lack of effective compliance monitoring by an independent third party and the lack of clear measurable benchmarks and interim targets. Although the G8's energy actions display a certain conti-

nunity and iteration, the pressure on member countries actually to implement domestic energy reforms remains low.

Regarding external leadership, the G8 has also made some progress. The G8 has stepped up the dialogue with the G5 through multiple channels such as the Gleneagles Dialogue, the Heiligendamm Process and the G8 + 5 dialogue at the summits. However, it is very difficult to measure how tangible the results of these ongoing dialogues are and whether they really influence emerging countries or whether these countries merely cherry-pick from the menu of options offered by the G8. In any case it is remarkable that, when the G8 decided to set up a new institution for energy efficiency (IPEEC), it did not do this on its own, but it involved its emerging partners from the outset. In response to a request from the G8 and IEA ministers, a similar initiative has been created in the area of clean energy technology: the International Low-Carbon Energy Technology Platform, which was inaugurated in December 2010.¹

The added value of the G8 with respect to international energy governance stems from the fact that the group has contributed to bridging institutional gaps and to adding more coherence to the fragmented institutional landscape. For example, the G8 has pushed for an enhanced dialogue between producer, consumer and transit countries to curb price volatility. This has fostered data collection and backed cooperation in the International Energy Forum (IEF) and among the IEF, IEA and OPEC. Apart from reaching out to nonmembers, erecting new institutions and enhancing cooperation along the value-added chain of energy, the G8 has mandated two existing international organisations – the IEA and the World Bank – to develop scenarios, background documents and policy proposals with regard to the energy dimension of both climate change and development. The G8 declarations have been particularly important for the IEA, since they have assigned the agency new tasks with additional funding. Especially in the areas of clean energy technologies and energy efficiency research, the G8's calls for action have been a real shot in the arm for the IEA (Van de Graaf and Lesage, 2009).

Our overall qualitative assessment of the G8's performance on energy is somewhat mixed. On the one hand, 'energy stands out as a policy area where the G8's effective performance has been most pronounced' (Kirton, 2006, p. 1) and where the G8 has produced a series of coherent declarations. On the other hand, 'energy has been the subject of some of the summit's greatest failures' and the G8 'has done little to effectively lead an environmentally stressed world into a new age of sustainable energy, through a structural shift into energy efficiency, conservation, and renewable and alternative supply' (Kirton, 2006, pp. 1–2). The G8 has not reached major breakthroughs or revolutionary accomplishments.

The fact that the G8 has only made some progress in areas of low controversy such as energy efficiency is easily explained by pointing to the cleavages around energy that exist within the group. For instance, energy security is defined differently by the European net importers of energy (which define energy security as stable and secure energy deliveries at affordable prices) and energy-exporting Russia (which defines energy security as stable demand at a significant price level). The degree of import or export dependency is but one of the divides among the G8 members. The diverging national energy mixes is another one, as is the degree of modernisation of the energy system. Besides these national differences, the G8's underperformance is also linked to the fact that the summits all too often focus on deliverables for the international and domestic press. Each host country wants to make 'its' summit a success and therefore urges the G8 partners to agree to nice-sounding commitments. As a result, the G8 easily agrees to grand and flowery declarations (e.g., the goal set in L'Aquila to limit global warming by 2°C above preindustrial levels), but falls short when it comes to effective implementation (e.g., the failure to take the necessary steps in December 2009 in Copenhagen to reach this goal). These kinds of long-term targets often serve 'the purpose of short-term political expediency without the risk of having to make unpleasant short-term decisions' (Caruso et al., 2009). The use of clear interim targets, preferably ones that must be attained within the current political cycle, might improve both the regulatory stability and the chances of the long-term policy target actually being met.

3. The G20 as an energy governor: actual and potential role

When the G20 leaders gathered in Pittsburgh in September 2009, they designated the G20 as the primary platform for global economic policy coordination. Questions do remain, however, on the wider implications of this shift for global energy governance. It is likely that the G8's purview is henceforth going to be restricted to security and political issues, while the G20 will focus on economic topics in the broadest sense – that is, including energy. However, it is still too early to speculate about how the institutional architecture or 'G-ometry' for energy will evolve as the summit configurations are still very much in flux. Therefore, it cannot be ruled out at this stage that some energy matters will still be taken up by the G8 at future summits.

In the course of 2009–11, the G20 has established four energy working groups to organise its energy work: (1) the 'fossil fuel subsidies' working group, which is chaired by the US; (2) the 'fossil fuel price volatility' working group, chaired by France and Korea; (3) the

working group that focuses on 'global marine environment protection', created in the wake of the BP oil spill in the Gulf of Mexico, and which is chaired by Russia; and (4) the 'clean energy and energy efficiency' (C3E) working group, created after the Seoul summit. Whereas the first two groups report to the G20 Finance Deputies and Finance Ministers, the last two work directly for the G20 Sherpas. With the exception perhaps of the 'C3E' working group, it seems that as energy issues move from the G8's to the G20's agenda, they are being re-framed more narrowly in relation to financial and economic stability. This has pushed issues such as (oil) price volatility and more transparent energy markets higher on the G20's priority list at the expense of climate-related concerns.

Comparison of the G8 and G20: key players, interests and institutional partners

The G8's track record on energy offers some lessons for thinking of the G20 as an actor in global energy governance. The G8 performs best when there is an external shock, for instance high world oil prices, to which multilateral organisations fail to respond, and when there is a high degree of voluntarism among individual leaders, in particular the G8 leader that serves as the summit's host (Kirton, 2006). Yet, even when these conditions are present, there are limits to what the G8 can actually accomplish on energy. Its scope of action is limited by internal divisions, the absence of several key players and the lack of mechanisms for successful implementation of collective action (Lesage et al., 2009). In addition, the G8's essential nature as a self-elected directorate for the world with no inherent legitimacy has evoked controversy and criticism. To what extent are these problems addressed or worsened by the recent shift to the G20?

One advantage the G20 clearly has over the G8 is the involvement of all key energy consumers. Besides the traditional energy consumers of the west, the G20 now includes important new energy consumers, especially China and India, which together have counted for the steepest rise in demand in the last decade. As Figure 1 shows, the G20 members have a greater aggregated weight in global energy and climate than the G8. Put bluntly, it would be more effective to have a strong deal on curbing carbon dioxide emissions among those 20 than among all the other nations in the world. Moreover, the group stretches over all five continents and integrates the key regional players. The representation of Latin America is particularly strong with the presence of Brazil and Mexico as important energy producers and Argentina one of the largest energy markets on the sub-continent. Other strong energy players are South Africa as the regional power in Africa and a large coal producer, Saudi Arabia as the most important (swing) pro-

ducer in OPEC, Turkey as an important energy hub in Eurasia and Indonesia as an important albeit diminishing energy exporter in Southeast Asia. In theory, these countries could act as promoters in their specific regions which could then help to overcome the 'representation deficit' and strengthen multilateral regional and global approaches.

With regard to the representation of energy producers, especially exporters of hydrocarbons, the G20 performs slightly better than the G8, because it not only includes Russia and Canada, but also Brazil, Mexico and Saudi Arabia as full members. Nevertheless, despite the presence of these oil and gas exporters, it is clear that the G20 still has more significance in terms of energy consumption than of energy production. This may undermine its capacities to address certain short-term issues, such as oil price volatility or domestic fuel subsidies, for which the producers need to be brought on board. In the long run, however, the traditional fossil fuel producers will not play a major political role in navigating the world toward a sustainable energy economy. It is probably not reasonable to expect that all OPEC members, whose national income largely depends on hydrocarbon export revenues, would constructively participate in a major effort to diminish the role of fossil fuels in the world's energy mix. This is not to say that the oil-exporting countries will have no role to play whatsoever. On the contrary, to the extent that the Middle East continues to grow as an energy demand centre the region will matter more and more. We only claim that, ultimately, it is the major consumer nations that need to take the lead in the transition towards a low-carbon future.

Importantly, established and emerging powers interact within the G20 on a more equal footing than within the G8 outreach process or within the US-led Major Economies Forum (MEF). The G20 summit of November 2010, for instance, was hosted by South Korea, the first Asian country to do so. Yet the integration of some major economies into the G20 also brings more interests and diversity to the table. It is likely that Saudi Arabia will advocate improvement of the Joint Oil Data Initiative (JODI), which aims to increase transparency in the oil and gas sectors by collecting and sharing data on energy production and demand. Important coal producers such as Russia, China, India, Australia and South Africa may urge the G20 to devote more attention to cleaner coal technologies. The emerging countries might demand more attention to the issues of economic development, energy poverty and the historical dimension of climate change compared to the G8.

The question remains whether it is possible to find common ground among so many participants, which all have their national priorities and interests. In principle, the heterogeneity and larger number of participants need not be an obstacle to arriving at collaborative

decision making. Carin and Mehlenbacher (2010, p. 31) argue that it is possible for a group of 20 world leaders to achieve meaningful consensus on climate and energy issues, 'provided that they are farsighted about the effects of their decisions, seek opportunities for issue linkage, and provide full disclosure about their values and interests'. Nevertheless, it will be difficult jointly to 'govern' energy issues within the framework of the G20, if only because the energy dilemmas that countries around the world must face differ substantially from one case to another, thus defying a 'one-size-fits-all' solution (Bradshaw, 2010). A very few measures, such as energy efficiency, may represent an exception to this conundrum. Even in those areas of universal interest, no more than incremental progress is likely to be achieved in the G20 because of its greater diversity and conflict of interests.

The more heterogeneous membership of the G20 is also likely to influence its interaction with formal multilateral organisations. As we have shown above, the G8 has developed a close relationship with the World Bank and the IEA for the design and implementation of its energy work. The question is whether the G20 will continue to cooperate closely with institutions in which some G20 members, particularly the emerging powers, are not integrated or not very well represented. It remains to be seen whether the IEA will remain the key official organisation assisting the G20 leaders in their energy work. The G20's membership overlap with the IEA is much thinner than the G8's. Whereas seven G8 countries are members of the IEA, less than half of the G20 countries belong to the IEA. China, India, Brazil and Russia, for example, are not members of the IEA. Compared to the G8, the G20 only comprises two extra IEA member countries, namely Turkey and Australia. In addition, the G20 comprises a prominent member of OPEC, Saudi Arabia, which may be weary of assigning too many tasks to the consumer grouping of the IEA. Instead, Saudi Arabia might prefer to delegate more work either to OPEC, working in conjunction with the IEA, or to the IEF, in which both IEA and OPEC members are represented. The latter forum may also be the preferred institutional option for a number of consumer countries not included in the IEA (such as China and India), producer countries that are not in OPEC (such as Mexico and Brazil) and developing countries that are mostly excluded from these two organisations but do have a voice in the IEF.

A case study of the G20 pledge against energy subsidies

To study the G20's potential as a governor for energy issues, it is worth looking at the one energy policy issue to which the G20 has devoted most of its attention:

energy subsidies. In September 2009, the leaders of the G20 made a potentially groundbreaking commitment to gradually end their fossil fuel subsidies, which encourage the burning of polluting fuels. More specifically, the leaders announced in Pittsburgh that they would 'rationalize and phase out over the medium term inefficient fossil-fuel subsidies that encourage wasteful consumption'.² This agreement was reaffirmed by the G20 leaders when they met in Toronto in June 2010. There, the leaders also said they would review progress toward that goal at future summits. This is a remarkable outcome as an earlier leaked draft of the G20 Toronto communiqué took a much softer stance and referred to 'voluntary, member-specific approaches' to trim fossil fuel subsidies but made no mention of a review process.³

The reason why the G20 wants to get rid of these subsidies is that they 'distort markets, impede investment in clean energy sources and undermine efforts to deal with climate change'.⁴ The G20 Pittsburgh communiqué referred to calculations by the IEA and OECD that eliminating fossil fuel subsidies would result in a 10 per cent reduction in global greenhouse gas emissions by 2050. Aside from the detrimental environmental impact, studies have been pointing out for years that energy subsidies can be an enormous drain on government finances and often miss the purposes for which they were intended. The defenders of these subsidies argue that they contribute to social policy objectives by lowering the cost of fuel and electricity for the poor. In reality, it appears that most benefits do not go to the poorest households in rural areas, but rather to those who can afford motor vehicles, are connected to the electrical grid and have high rates of ownership of electrical goods (Runnals, 2009). In any case, the abolishment of energy subsidies has always been a painful and costly domestic process. The IEA (2008) has estimated that the consumer subsidies within the 20 largest developing countries were worth \$310 billion in 2007.

The G20 pledge on eliminating subsidies cannot be taken for granted. Simply getting nations at such different levels of development to agree to abandon fossil fuel subsidies is in itself a major accomplishment. This is especially so given the fact that the largest policy adjustments to comply with this commitment will be incumbent upon the developing countries of the G20 where energy subsidies are higher than in the richer countries and take markedly different forms (Moltke et al., 2003). The majority of the subsidies in non-OECD countries are consumer subsidies aimed at keeping gasoline, diesel and electricity artificially cheap for the citizens. Among the countries that are represented in the G20, the governments that spend the most on such consumer subsidies are Saudi Arabia, Russia, India, China, Indonesia, Argentina, Mexico, South Africa and Brazil. Rich countries subsidise fossil fuels too but to a much lesser extent and

mostly in the form of production subsidies such as tax breaks for domestic oil companies. The G20 commitment to phase out fossil fuel subsidies also refers to this type of subsidy, or at least it does in the minds of many of the G20 countries, notably the United States and Saudi Arabia.⁵ Focusing not only on consumer subsidies but also on fossil fuel production subsidies, which are more common in OECD countries, certainly makes the G20 deal look more fair and equitable. But since there is no enforcement mechanism, ultimately it is up to the individual countries to decide what subsidies they phase out.

This brings us to a crucial point. Having reached agreement, the G20 nations now have the important task of devising strategies for implementation. All countries submitted national plans of action to the G20 meeting in Canada in June 2010, but the results were meagre. Seven countries claimed not to have any inefficient fossil fuel subsidies at all. India did not announce a concrete strategy but created an eminent group to develop one. The other 12 countries did offer strategies and timetables for the phasing out of inefficient fossil fuels, but only three among them included plans for consumption subsidies specifically: Argentina, Indonesia and Mexico.⁶ Even though these submissions were largely disappointing, the very fact that they had to be prepared compelled governments to go through planning exercises that they otherwise would probably not have attempted. This is where summit processes such as the G20 can have an impact as facilitators of bottom-up approaches.

In addition to these national implementation plans, the G20 leaders requested the IEA, OPEC, the OECD and the World Bank to produce a joint report aimed at providing 'analysis of the scope of energy subsidies and suggestions for the implementation'.⁷ These reports are supposed to pave the way for the G20 leaders to find a commonly agreed-upon definition and scope of the subsidies. Resolution of the debate within the G20 on what constitutes an 'inefficient' subsidy would mark an important step towards effective implementation. Yet this would only be the first step.

Even if the reform process does not get bogged down in the attempt to find a suitable definition, the biggest challenge will be the political one, notably at the domestic level. Many countries that have unilaterally eliminated fuel subsidies in recent years have experienced large-scale civil protests. For example, when the government of Indonesia raised fuel prices twice in 2005 – thereby escalating the prices of food and commodities – demonstrators took to the streets throughout the country. More recently, in December 2010, Bolivian President Morales was forced to revoke his decision to end fossil fuel subsidies after mounting unrest. The political necessity of containing price rises and buying the consent of the

population is particularly visible in the Arab world at the present moment and may have lasting consequences around the world. Especially in the current context of rising food and fuel prices, no one would expect countries with a restless population to rein in energy subsidies any time soon – quite the contrary.

Nevertheless, there remains scope for the G20 process itself to create incentives that might change the behaviour of member states. Perhaps the G20 agreement on subsidies can give reform-oriented national leaders the political cover they need to implement domestically unpopular reforms. Indonesia's reform of oil product subsidies, for example, was partly spurred by pressure from the International Monetary Fund (IMF). The new G20 commitment could give further impetus to the reform processes in Indonesia and elsewhere, especially now the G20 members have agreed in Toronto regularly to monitor progress with implementation.

Conclusions

This article has looked into the opportunities and limitations of the 'G-x' groupings as steering committees for energy. Our goal was not to demonstrate that the G8 and G20 are 'better loci' for energy governance than other organisations, coalitions of the willing or regional blocs. Rather, the purpose of our article was to investigate whether the G-clubs have a role to play in global energy governance alongside existing multilateral initiatives and, if so, what role this would be and where the added value pays off. We started from the premise that, intrinsically, such high-level and informal consultation mechanisms among major powers have a large potential to act as governing bodies for global energy. Among these groupings, the G20 process stands out as the prime candidate to assume a leadership role in managing transnational energy issues, primarily because it has a more representative membership composition than its predecessor, the G8.

So far, we have to admit, neither the G8 nor the G20 has fully lived up to its potential. To be sure, the G8 has a good record as an agenda setter and as a forum for deliberation on energy and climate issues. The Heiligendamm Dialogue process and the G20 are the very first venues where established and emerging powers have engaged in an energy dialogue on an equal footing. The G8 has also helped to spawn global norms (for example, by issuing the Petersburg Principles), to steer multilateral organisations (in particular the IEA) and to foster new, more inclusive energy bodies (e.g. IPEEC, GBEP and the Technology Platform). Yet, when it comes to hard-nosed policy coordination, the G8 has largely stuck to nonbinding commitments in areas of low controversy, such as energy efficiency and the promotion of low-carbon technologies. In sum, rather than bringing the biggest players closer

together on important points of contention, the G-clubs have mostly been an instrument to codify what these countries wanted to do anyhow.

Instead of discarding the G8, the G20 and other great power clubs altogether, we prefer to examine how they can be turned into more effective energy policy forums. Thus, we agree with Florini and Sovacool (2009, p. 5244) that 'it is too soon to give up on the G8 processes as potentially significant sources of global energy governance'. The road towards a low-carbon and sustainable energy system is long and winding and we cannot expect the G-clubs to clear away all the stumbling blocks with a snap of the fingers. Ultimately, indeed, how well can a club be supposed to 'steer' or 'govern' when many energy objectives are seemingly contradictory and when national energy contexts are so diverging? Especially within the G20, there are wide differences among members in terms of energy mixes, market structures, import dependency levels and exposure to climate change. Besides, the political will and the economic resources to move toward a sustainable energy system differ as do the preferred trade-offs between economic development, affordable energy prices, energy security and environmental protection. These diverging national interests have prohibited the G-clubs from developing into fully fledged energy steering committees.

One of the key lessons that can be drawn from our analysis is that the G8 and G20 have achieved the most when certain conditions were met. Iteration has proved helpful to spur effective implementation of the commitments. A good example is the G8's commitments in the field of energy efficiency where it took several years to achieve some (limited) success. Responding to the G8's request, the IEA presented a total of 25 energy efficiency recommendations to the G8 – four at St Petersburg (2006), 12 at Heiligendamm (2007) and 16 at Hokkaido/Toyako (2008). At this last summit, the G8 countries pledged to maximise implementation of these recommendations. In March 2009, the IEA reported that its recommendations were gradually beginning to be implemented although no G8 country had implemented more than 55 per cent of the IEA's full package of consolidated recommendations. This result would not have been realised if it had not been for the iterative treatment of the topic by the G8. A negative case is the G8's Renewable Energy Task Force created at the G8 summit in 2000 in Okinawa. Its report did not result in commitments by the G8 in 2001 due to American obstruction. Since there was no iterative treatment of the issue of renewable energy, the policy process set up in Okinawa in 2000 essentially died with no results one year later. If themes continually pop up on the G20's agenda, their iterative treatment may ensure policy continuity, stimulate long-term

thinking and allow for monitoring of the follow-through. It may also help to sustain the momentum on specific policy issues, because the G20 has many competing issues on its agenda and there are always more 'pressing' issues that demand attention.

Next to iteration it might be helpful to establish a practice of independent monitoring and reporting on G20 commitments, such as on the pledge to phase out fossil fuel subsidies. For this purpose it might be useful for the G20 countries to make use of the existing arsenal of multilateral bodies, including the IEA, the IEF, OPEC and the Energy Charter Treaty (ECT). Even though the evidence on the compliance-enhancing effects of these monitoring mechanisms can be called mixed at best (Kirton, 2011), the advantage is that these monitoring reports can give leverage to domestic and international stakeholders to hold the G8 and G20 countries accountable.

While the leaders seem to have agreed on a central role for the G20 in global financial policy coordination, a clear vision on the role of the G-clubs in global energy governance is lacking. So far, the shift of energy issues from the G8 to the G20 has resulted in a more narrow focus on energy, largely disrobed of its links to climate change. There are signs from the G20 summit in Seoul that the emphasis is on economic development rather than on sustainable and green growth. It is up to the French presidency of the G8 and G20 in 2011, especially in light of the instability in the Arab world and the nuclear catastrophe in Fukushima, to work towards a more coherent approach in the G-formats. It will be interesting to see what comes out of the four energy working groups that have been set up by the G20.

Our analysis suggests that the G-clubs have a limited record as global energy steering committees but are nevertheless well placed to take small, incremental steps that bring us closer to a sustainable, low-carbon energy system. The process is at a decisive stage at the moment. To foment trust and good interpersonal relationships between the G20 leaders it is recommended that a core group of countries remains at the nexus of the variable geometry of 'G-x' groupings. If, in addition, the G20 succeeds in carrying on the twin challenge of climate and energy security and taking into account the interests of developing countries, it has the capabilities to make a giant contribution to improve the energy situation of many countries and, indeed, the planet as a whole.

Notes

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1. For more information, see the Platform's website: <http://www.iea.org/platform.asp>
2. G20 Leaders Declaration, Pittsburgh, 24–25 September 2009.
3. Fiona Harvey, 'G20 Softens Plan on Fossil Fuel Subsidies', *Financial Times*, 24 June 2010.
4. G20 Leaders Declaration, Pittsburgh, 24–25 September 2009.
5. Personal correspondence with OECD official, 30 March 2010.
6. Annex to the Report to Leaders on the G20 Commitment to Rationalize and Phase Out Inefficient Fossil Fuel Subsidies, available from: http://www.g20.org/Documents2010/expert/Annexes_of_Report_to_Leaders_G20_Inefficient_Fossil_Fuel_Subsidies.pdf
7. G20 Leaders Declaration, Pittsburgh, 24–25 September 2009.

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