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Obsolete or resurgent? The International Energy Agency in a changing global landscape

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HIGHLIGHTS

- ▶ The IEA is challenged by the rise of new consumers, threats and organizations.
- ▶ Assessment of the agency's internal characteristics and external environment.
- ▶ The IEA needs to step up its outreach policy and fully embrace sustainable energy.

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ABSTRACT

Founded in response to the 1973 oil shock, the International Energy Agency (IEA) is arguably still the most important multilateral organization for energy-importing countries. Yet, the global geopolitical landscape has changed considerably since the IEA's creation. The rise of new energy consumers, new energy-related challenges and new international energy forums prompt a rethink of the agency's current role and institutional design. This article seeks to contribute to the recent debate on the future role of the IEA by examining specific drivers, avenues and constraints for institutional reform. The method used is SWOT analysis, which allows to summarize the key factors emanating from an assessment of an organization's internal characteristics (strengths and weaknesses) and its external environment (opportunities and threats). Building on this SWOT analysis, the article formulates a strategy for the IEA to remain the focal point in global energy governance. Key elements of this strategy include: stronger engagement with new consumers, rapprochement with OPEC, becoming a leading voice in the energy transition, and changing the agency's internal governance practices.

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In recent years, global energy governance has emerged as a major research theme in the international relations, governance, and public policy literatures (Florini and Sovacool, 2009; Goldthau and Witte, 2010; Lesage et al., 2010; Florini and Dubash, 2011). Scholars engaged in this research field commonly recognize the key importance of the International Energy Agency (IEA). Founded in response to the 1973 oil shock, the IEA serves to coordinate the energy policies of its 28 member countries, all drawn from the Organization for Economic Cooperation and Development (OECD). Most observers agree that, even despite its limited mandate and membership, the IEA remains the single most important organization for energy-importing countries (Colgan, 2009; Kohl, 2010; Leverett, 2010; Florini, 2010).

In part, the Paris-based agency occupies this position by default—that is, its importance derives from the fact that there

is no strong, global energy organization comparable to, for example, the World Trade Organization (WTO) or the International Monetary Fund (IMF). To be sure, energy questions are dealt with in a plethora of international bodies, including the United Nations and the World Bank. Yet most of these institutions do not have energy as their primary focus. The small number of international institutions that do have energy policy coordination as their core mission, such as the International Energy Forum (IEF) or the Energy Charter Treaty (ECT), generally lack the institutional capacity to weigh on their member countries' energy policies. With an annual core budget in 2012 of 26 million euros and a highly-qualified staff of around 220 – compared to the 130 or so at the Organization of Petroleum-Exporting Countries (OPEC) and the about 30 at the ECT secretariat – the IEA stands out as one of the best-equipped multilateral energy forums.

Yet, the global geopolitical landscape has changed considerably since the IEA's creation in 1974, prompting a rethink of the agency's current role and institutional design. First, new energy-consuming heavyweights have emerged outside of the OECD, most notably China and India. In addition, the nature of the 'energy

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problem' has changed. The likelihood of another politically-motivated oil embargo has waned due to the advent of a globally integrated oil market during the 1980s (Verleger, 1987; Nordhaus, 2009). Instead of worrying about oil boycotts, the IEA member countries are now far more concerned with issues such as climate change, gas cut-offs, and China's foray into the African oil business. On top of that, the IEA has in recent years also seen the rise of institutional competitors. Whereas in 1974 the IEA was virtually the only multilateral energy organization grouping together the major consumers, today it operates in an increasingly crowded institutional environment (Florini and Sovacool, 2009; Florini and Dubash, 2011; Colgan et al., 2012).

These trends – the rise of new energy consumers, new energy-related challenges and new international energy forums – threaten to render the IEA increasingly redundant. Once the multilateral energy organization par excellence, the IEA is now struggling to uphold its central position in global energy governance. Henry Kissinger, who played a key role in the creation of the IEA as the American Secretary of State under President Nixon, echoed that sentiment in his speech before the 2009 ministerial meeting of the IEA. He said that: 'the IEA now stands at a critical juncture. [The] world has changed considerably since 1973. In order to be effective in this new landscape the IEA must be prepared to evolve with it' (Kissinger, 2009).

This article seeks to contribute to the recent policy debate by examining specific drivers, avenues and constraints for institutional reform. Previous academic studies of the IEA have largely come in two waves. A first wave discussed the emergence and early development of the IEA (Lantzke, 1975; Wilrich and Conant, 1977; Keohane, 1978, 1982; Toner, 1987; Cowhey, 1985). The second, more recent wave mostly involves descriptive work on the IEA's current activities and the challenges it is facing (Martin and Harrje, 2005; Leverett, 2010; Van de Graaf and Lesage, 2009; Kohl, 2010; Florini, 2010).

The key contribution of this study to the existing body of knowledge lies in the methodological tool that is employed, which allows for a more systematic analysis of the various pressures the IEA is facing on the one hand, and the resources it has at its disposal to cope with these stresses on the other. The method used in this study is SWOT analysis, SWOT being an acronym for 'strengths, weaknesses, opportunities and threats'. The technique of SWOT analysis originates from the business management literature (Andrews, 1971). It allows to summarize the key factors emanating from an assessment of an organization's internal characteristics and its external environment. The crucial difference between the internal and external factors is that the former (strengths and weaknesses) are controllable, whereas the latter (opportunities and threats) are less controllable. If well conducted, a SWOT analysis can provide a good basis for successful strategy formulation.

This study does not aim to evaluate the IEA's performance in all of its functions, nor does it intend to assess the effectiveness of specific IEA projects and programs. Rather, it seeks to assess the IEA's actual role and future potential as a focal organization in the global energy governance architecture.¹ To that end, the article proceeds in three steps. First, it recalls the IEA's core mission and

¹ It is important to note that the yardstick employed here for evaluating the IEA is not any kind of normative standard (e.g., the extent to which the IEA contributes to global welfare), but the degree to which it can effectively discharge its core mission and remain the focal organization in the global energy governance architecture (without saying that it necessarily *has* to be the focal organization). My purpose is not to argue that the IEA is "better" than other organizations, nor to claim that it can help produce "beneficial" outcomes in the world. Instead, and to make an analogy to SWOT analysis as used by business companies (and their aim to make as much money as possible), I evaluate the IEA as if it was a company and search for ways to improve its market position.

argues that a reform of the IEA is long overdue in light of five structural trends in global energy markets. Then, the article conducts a systematic analysis of the IEA's strengths, weaknesses, opportunities and threats. In a third and final section, it explores different pathways for the agency to adapt to the changing global landscape and formulates some policy recommendations. Empirically, this study is largely based on semi-structured elite interviews with key officials closely involved in the IEA, as well as on a number of undisclosed documents from the IEA secretariat and its member governments.

1. Introduction

1.1. The IEA's evolving mission

Strategy management must always begin with an assessment of the organization's mission, which defines its purpose and what it aims to do for its members and stakeholders. At the outset, it is therefore useful to recall that the IEA was created in 1974 by the industrialized countries in response to the Arab oil embargo. The agency's primary mission, as stipulated in its founding treaty, was to coordinate emergency measures in times of oil crises (International Energy Programme [IEP] Treaty, 1974, preamble). The cornerstone of this insurance system is oil stockpiling. Each IEA member country is obliged to hold supplies of crude oil and oil products equivalent to at least 90 days of net oil imports. If a severe oil shortage occurs, these stocks can be tapped into and even shared with other member countries (International Energy Programme [IEP] Treaty, 1974, articles 2, 8 and 9).

Since the IEA was created at the height of an oil shock, the founding fathers wanted it to take up its role as soon as possible. For this reason, they located the new agency within the orbit of the OECD. The OECD offered an existing institutional machinery which ensured that the new agency could almost immediately become operational (Scott, 1994, pp. 41–42; Lantzke, 1975). As a result, the IEA's membership was, and is, explicitly limited to OECD member countries.

Yet, over its lifetime, the IEA has not confined its scope of work to oil emergency cooperation. Quite the contrary, it has proven itself capable of adapting to changing circumstances by gradually expanding its work beyond energy security to focus on environmental protection and economic development (Van de Graaf and Lesage, 2009). These three goals – known informally as the 'three E's' and formally as the 'shared goals' – have even become the official policy line in 1993, when they were endorsed by the Governing Board, the IEA's highest decision-making organ in which all the member governments are represented (Scott, 1994). On its website the IEA also refers to engagement worldwide as the fourth main area of focus.²

1.2. The new global context

The IEA member countries are facing a different set of energy challenges now than in the 1970s. Five structural developments are of particular importance: the rise of new powers, climate change, peak oil, the concentration of oil and gas reserves, and the growing importance of new energy sources.³

First, there is the rise of new heavyweight energy consumers. The center of gravity of world energy demand is steadfastly shifting away from the OECD region toward the emerging

² <<http://www.iea.org/about/index.asp>> (last accessed: February 9, 2012).

³ See the special issue of Global Policy on global energy governance, issued in September 2011, for more detailed accounts of these structural transformations in world energy (Florini and Dubash, 2011).

economies, particularly to China and India. In 1974, IEA member countries accounted for some 63 percent of global oil consumption. Now their share has diminished to little more than half and by 2030 it will shrink to about 38 percent according to the IEA's business-as-usual projections. The new class of energy consumers will not only account for the lion's share of additional energy demand in the coming decades, but also for the bulk of new energy-related CO₂ emissions. The IEA's contribution to such emissions has fallen from 65 percent in 1974 to 44 percent today. Moreover, all of the additional energy-related CO₂ emissions between now and 2030 are expected to come from countries outside of the IEA (Biol, 2010). These trends should worry IEA member countries because it will diminish their ability to influence global energy markets.

Second, the IEA will increasingly have to cope with the issue of global warming. Climate change is essentially an energy problem. No less than two-thirds of today's CO₂ emissions stem from our fossil fuel use. Since the energy sector is at the heart of the climate change problem, it must also be part of the solution. The threat of climate change necessitates a transformation of the energy sector to increase the use of low-carbon sources and technologies. Two sectors in particular need to be urgently decarbonized because they contribute the most to the climate problem: the transportation sector (which is heavily dependent on oil) and the power generation sector (in which the burning of coal is especially problematic). When the IEA was founded, there was no awareness of the danger of climate change, and the IEA's founding treaty consequently did not mention it. Given that the IEA member states have become increasingly preoccupied by the problem of global warming, the agency cannot afford to remain on the sidelines of the climate debate.

Third, there is the controversial issue of peak oil, the date at which global oil production reaches a ceiling and enters a terminal decline. Among scholars there is no discussion on the finite nature of oil reserves. There is also pretty much consensus that the current pace of extraction is not sustainable in the longer run. More disagreement can be found with regard to the actual date at which we will arrive at this point of maximum global oil production. According to some observers, we have already passed the peak or will be passing it soon. Others claim that peak demand will outpace peak production. Fact is that the IEA thinks that conventional crude oil production has already peaked in 2006 at 70 million barrels per day (International Energy Agency [IEA], 2010). Unconventional oil reserves and natural gas liquids (NGLs) might postpone the overall global peak, but it is imperative for IEA member countries to start preparing for a society less based on oil.⁴

Fourth, the remaining hydrocarbon reserves are increasingly concentrated in only a handful of countries, many of which are considered as politically unstable by western governments. The world will become far more dependent for its energy supplies on a wide area stretching from the Middle East to the former Soviet Union that hosts about 70 percent of the global oil and gas reserves. International energy companies may find it increasingly difficult to access these upstream reserves. Many resource-rich countries in this oil and gas heartland restrict foreign access to their energy reserves, for example by erecting very strict licensing, regulatory and fiscal regimes. Others are unattractive for investors because they are prone to civil unrest or geopolitical tensions.

Fifth, new energy sources (such as wind energy and solar power) and energy carriers (such as electricity and hydrogen) are set to gain in importance. In contrast to the 1970s, when western industrialized countries mostly relied on oil to fuel their economies, nowadays there is a shift away from oil. Natural gas has increased in importance, particularly with the latest evolutions on liquefied natural gas (LNG) and shale gas. Electricity demand has risen as well, and renewable energy sources are accounting for an ever-larger share therein.

This changing environment means that the IEA must adapt in order to remain effective, legitimate and relevant. To be sure, the agency's core mission of ensuring energy security, economic growth and sustainability has not become less important. Indeed, the agency would do well to uphold its shared goals in the years ahead. For the IEA to effectively perform its core mission in this new context, however, the organization should adopt additional functional priorities.

2. SWOT analysis

2.1. Strengths

The IEA has successfully discharged its core mission of building up oil stocks and coordinating emergency measures in times of oil market crises. By the end of 2010, IEA member countries had accumulated some 4.2 billion barrels of petroleum stocks that could be used to address market disruptions (International Energy Agency [IEA], 2011). Most member countries exceed the minimum legal obligation to hold emergency oil reserves equivalent to at least 90 days of net imports. Currently, total oil stocks in IEA member countries cover no less than 177 days of net imports.⁵ On three occasions in the past, the IEA intervened to calm the oil market: in 1991 on the eve of the first Gulf War, in 2005 in the wake of hurricanes Katrina and Rita, and in the context of the 2011 Libya conflict. The IEA prides itself on having fruitfully offset oil supply disruptions in each of those cases by coordinating stock releases from the member states' strategic oil deposits.

The IEA derives further standing from its renowned expertise. Almost four decades of peer-evaluations among IEA members have given the agency a wealth of policy wisdom. Outreach partners are very interested in what policies have or have not worked in particular contexts and why.⁶ In some core areas such as crisis management, the IEA's depth of expertise and experience is unrivalled by any other institution. The IEA maintains energy databases that are among the most accurate in the world, and increasingly include data from non-OECD countries. Rather than to confine its scope to a single energy source, the IEA excels in integrated market analysis across the full spectrum of energy sources. The high quality of the IEA's data-gathering and analysis is made possible by the agency's ability to attract a highly qualified and diversified work force, which has been lauded as 'vigorous' and 'highly professional' (Cowhey, 1985, p. 246). The agency also coordinates over 40 multilateral technology initiatives, known as the 'Implementing Agreements', that keep the IEA at the cutting edge of technologies.

The IEA's flagship publication, the *World Energy Outlook* (WEO), is widely regarded as an authoritative source of energy data and policy scenarios. Each year, the WEO forecasts how the future energy system will look like if current energy trends are continued, and formulates recommendations to governments to put them on track to a more sustainable energy economy. It is fair

⁴ Note that other fossil fuels such as natural gas and coal are also exhaustible, but here the depletion is less pressing as with oil, because reserves are relatively larger and there are more substitutes available. The same can be said with regard to uranium.

⁵ Figure is for October 2011. For more recent data, see: <<http://www.iea.org/netimports.asp>>.

⁶ Personal interview with national official involved in IEA, March 24, 2010.

to say that, through these publications, the agency has become the standard international point of reference for data and analysis in world energy markets.

These publications, and the wide press coverage they receive, endow the agency with significant agenda-setting powers. Since the WEO is published under the authority of the IEA's Executive Director and does not have to be approved by the member states, the agency's secretariat enjoys some freedom in choosing the topics addressed. The WEO frequently homes in on a number of key topics. For example, in 2009, it looked into the 'post-2012 climate policy framework', the 'prospects for natural gas', and 'energy prospects in South-East Asia' (International Energy Agency [IEA], 2009). The WEO is attracting more attention, and the IEA has gradually built up a strong media presence.⁷

2.2. Weaknesses

Over the years, the IEA seems to have somewhat lost its original identity. A child of the oil agitation of the 1970s, the IEA finds itself in a quest for justifying its continued existence in an era where the threat of a repetition of political oil embargoes has waned. In that sense, the IEA is one of those organizations that has outlived its original purposes and faces an identity crisis of some sorts—just like the North Atlantic Treaty Organization (NATO) after the end of the Cold War. Certainly, the member states continue to value the relevance of its original objectives and do not question the very existence of the IEA. Yet, with oil itself declining in the energy mix, gas consumption growing steeply and the new push towards renewable energy sources, the agency's primary focus on oil markets risks obsolescence.

Another indication of the out-dated nature of the IEA is the fact that the agency manages an oil emergency program that has never even been formally activated, and probably never will. In other words, the IEA's oil emergency provisions have remained dead letter even though they constitute the agency's *raison d'être* and take up the larger part of its constitutional treaty (International Energy Programme [IEP] Treaty, 1974). To be sure, the IEA members have jointly released oil from their deposits in the past, but the agency's coordination efforts in 1991, 2005 and 2011 have been conducted in an informal manner, outside the IEP treaty, under the so-called CERM procedure. This acronym, which stands for 'coordinated emergency response measures', refers to a consultation process on oil emergency response that has been designed by the IEA's Governing Board in 1984. The shift to the CERM reflects an erosion of the IEA's authority because, compared with the original treaty rules of 1974, the CERM cannot be activated by majority voting, has no real enforcement mechanisms, and lacks a clear doctrine for utilization (Van de Graaf and Lesage, 2009).

The lack of a clear doctrine was illustrated with the IEA's release, announced on June 23, 2011, of 60 million barrels of oil to reduce the slow-burning effect of shortage of Libya's sweet crude on the international oil market. For the first time, the IEA did not release oil stocks in response to a sudden supply shortfall but in a preventive manner, in anticipation of an *expected* shortfall. While some observers lauded the IEA's flexible approach (Glick, 2011),

others have interpreted the agency's move as a policy shift with the IEA assuming the role of a market manipulator that is not seeking to mitigate volumetric but price risks on the global oil market (Morse, 2011). Whatever the underlying motive, the absence of a clear doctrine could hand the IEA's emergency response policy over to political bickering.

The oil emergency program is not the only passage in the IEP treaty that requires updating. Another issue that could be modified is the voting weight allocation system in the IEA's governing board. At present, each country is assigned a voting share that is based on two components: one 'general voting weight' that is equal for every member state and an 'oil consumption voting weight' that is based on their 1973 oil consumption data (see Table 1). Needless to say, this is an arcane system that does not well reflect current realities. If one would update the reference year, the voting structure would look totally different (Colgan, 2009). Clearly, the countries that stand to lose significantly in updating the reference year are the staunchest opponents of institutional reform.

A final weakness concerns the IEA's constrained budget, which imposes on the IEA some practical limitations. Since the IEA's budget forms a part of the OECD's budget, there are demands on the IEA's budget that are out of its control, such as overheads and other OECD charges (e.g., costs incurred by the OECD for managing staff contracts). Furthermore, over the past two decades, the agency has suffered frequent budget cuts. Between 1995 and 2004, for example, the IEA has had to deal with a declining real budget (Bamberger, 2004). The budget constraints were not peculiar to the IEA. All international organizations in which United States membership was important suffered the same constraints, because of congressional hostility to international organizations generically (Florini, 2010). Even so, it is fair to say that the IEA's budget has not grown in line with demands as the list of countries and topics requiring data collection and analysis continue to grow.

2.3. Opportunities

As a result of its successful oil emergency and data gathering activities, the IEA still occupies a pivotal place in the global energy architecture. When the G8 leaders started to address energy issues at their recent summits, and particularly since the 2005 Gleneagles summit, they naturally turned to the IEA for assistance. The IEA's engagement with the G8, which has now also extended to the G20 leaders' summits, has gone so deep that the agency is sometimes portrayed as the *de facto* energy secretariat of the G8 (Lesage et al., 2009). The close interaction process with the G8 and G20, which figures prominently on the IEA's website, has certainly boosted the IEA's profile. While, a few years ago, the IEA was still a very low-key and inconspicuous organization, it has today become a leading voice in the energy-climate debate.

As the IEA transforms itself from an insurance regime for oil consumers into a key global institution for sustainable energy policies, there is an opportunity to develop constructive relations with other international organizations beyond the G8 and G20 that are engaged in particular aspects of energy policy. One good example is the Joint Oil Data Initiative (JODI), which brings together the IEA and five other international organizations to collect monthly energy data through standardized questionnaires. The JODI database is hosted by the International Energy Forum (IEF), but its creation was heavily pushed for by the IEA.⁸ The IEA can expand its existing institutional connections to the World Bank and the United Nations (UN) to jointly tackle the pressing

⁷ One metric to measure this is to look at how many times the IEA's chief economist Fatih Birol has been cited in a leading international newspaper, the New York Times, since he took office in 1995. During his first five years (1995–1999), Birol is not mentioned or quoted even once. During the next five years (2000–2004), he is quoted seven times. This number increases to 24 in the next five-year period (2005–2010). The trend seems to continue as, for the year 2011 alone, Birol was cited nine times, the highest-ever mark for a single year. Source: own calculations based on the New York Times archive, accessed at: <http://www.nytimes.com/ref/membercenter/nytarchive.html>.

⁸ Personal interview with William C. Ramsay, Deputy Executive Director of the IEA from 1999 to 2008, Brussels, March 24, 2009.

Table 1
Distribution of voting weights in the IEA's governing board.

	General voting weight	Oil consumption voting weight	Combined voting weights
EU	51 (65%)	35 (35%)	86 (48%)
US+Can	6 (8%)	47 (47%)	53 (30%)
Japan	3 (4%)	14 (14%)	17 (10%)
Rest	18 (23%)	4 (4%)	22 (12%)
Totals	78	100	178

Note: EU comprises the EU-15 plus Hungary and the Czech Republic. Poland has joined the IEA in 2008 but, to date, publicly available figures for its assigned voting weights are lacking. Source: author's calculations based on Bamberger, 2004.

issue of energy deprivation in the Global South. It can build closer ties to the international climate change regime to feed into the UN deliberations on a post-Kyoto agreement, and to inform other climate mitigation initiatives. And it could establish close collaborative links with the European Commission and the secretariats of the Energy Charter Treaty and the Energy Community on the issue of pan-European energy market integration in general, and the security of natural gas supplies in particular.

In a similar vein, the advent of a multipolar world offers possibilities for the IEA to partner with new global powers. Closer engagement with countries like China, India, Russia and Brazil enables the IEA to expand its reach and share the fruits of its skills with the rest of the world, so that knowledge on the best energy policy practices can travel beyond the OECD. It also allows the IEA to collect data and conduct analysis for a much larger and fast-growing segment of world energy markets, consolidating the agency's position as the world's chief knowledge center on sound energy policies. In drawing national officials from these emerging powers closer into the IEA's workings, the agency may build up trust between the OECD and non-OECD countries, and try to convey its messages on what constitutes sound energy policy. For example, direct outreach offers the IEA another channel to repeat its message that inefficient fossil-fuel subsidies are wasteful and should be abolished, a message that has been confirmed by the G20 and the Asia-Pacific Economic Cooperation (APEC).

Finally, but no less importantly, continuous advances in technology and geopolitical events lay bare new challenges for energy policy. This, in turn, opens up windows of opportunity for the IEA to expand or reorient its work and develop new expertise to share with governments worldwide. Energy markets have historically undergone dramatic changes, some of which were sudden and unexpected. Whether it is the Russian–Ukrainian gas crises of 2006 and 2009, the shale gas boom in the United States, the Deepwater Horizon oil spill in the Gulf, the Fukushima nuclear accident, the Arab Spring, or the European and American oil sanctions against Iran, the tectonic plates of the global energy landscape are constantly shifting. These new developments and technologies can have significant repercussions for energy policies and require data gathering, expert convening, and policy analysis—in short, functions that the IEA is able to deliver.

2.4. Threats

In recent years, there has been a proliferation of international initiatives in the IEA's task environment. This carries the risk that these new initiatives will duplicate the IEA's work and, worse, compete with the IEA for work assignments, funding, highly qualified staff, and high-level attention from shared sets of member governments. The most stunning example of such institutional overlap is the creation of the International Renewable Energy Agency (IRENA) in January 2009. Several member states of the IEA—Germany, Denmark and Spain—have played a

major role in setting up this new international organization. The creation of IRENA presented a serious blow to the IEA, which had been working on renewable energy for more than two decades. In the eyes of IRENA's founding fathers, the IEA did not have the credibility to promote renewables. Hermann Scheer, who pioneered the idea to create IRENA, believed that the IEA 'leaves no stone unturned when it comes to emphasizing the long-term indispensability of nuclear and fossil energy' (Scheer, 2007, p. 174). Therefore, the proponents of IRENA have taken the more costly route of institutional creation instead of reforming the IEA and strengthening its capabilities. The simple fact that IRENA has been established, despite strong resistance by the IEA secretariat and some of its member states (most notably the United States), points to a loss in the IEA's legitimacy.

In addition, it is becoming ever more clear that the IEA can no longer aspire the global role its name implies if it does not find appropriate ways to accommodate rising powers such as China and India. While the IEA may do much to 'seduce' these rising powers to work together, there remain external obstacles for closer engagement that are beyond the IEA's control. First, only OECD member countries are eligible to join the IEA and the OECD applies very strict membership criteria. To join the OECD, applicant countries have to demonstrate that they are democratic, have market-based economies, and respect the rule of law and human rights. Some of these criteria may hinder the accession of, say, China and Russia to the OECD. Second, emerging powers may have little incentive to join the OECD. Their reluctance could be motivated by many reasons, but one reason may be that they regard it as the club of rich, Western countries. Another reason may be that countries like China, Brazil and India have little to gain by joining the IEA beyond what they already get. Third, the current voting structure of the IEA, which is based on oil consumption figures of the 1970s and thus disadvantages emerging economies, will also be of little help in convincing them to join the agency. Finally, some member countries may fear a dilution of the homogeneity in the IEA's membership if non-OECD countries were allowed to join.

At the same time, the agency's reputation as an authority on energy markets has recently come under ferocious attack from different angles. In 2008, the IEA was accused by a non-governmental organization, the Energy Watch Group, of obstructing a global switch to renewable energy. In their report the group said that the IEA publishes misleading data on renewables, and that the IEA's reports systematically underestimate the potential for power generation from renewables (Adam, 2009). A few months later, a press article stated that the IEA was pressured by the American government to deliberately underplay a looming oil shortage (Macalister, 2009). These allegations, which reportedly came from 'senior sources' within the organization, casted a dark shadow over the launch of the IEA's yearly WEO in 2009. In March 2010, a scientific article was published in which the IEA's analysis on oil depletion was challenged. A team headed by Swedish Professor Kjell Aleklett claimed that oil production is more likely to be 75 million barrels a day by 2030 than the 105 million barrels a day projected by the IEA in the 2008 edition of its WEO (Aleklett et al., 2010).

Table 2 summarizes the key element of the SWOT analysis.

3. Pathways to reform the IEA

Carrying out a SWOT analysis is, by itself, no substitute for drawing up a strategy. The analysis merely allows to identify the major factors that help or hinder the organization in discharging its core mission. The problem with many SWOT analyses is that they end just here, and do not follow through by drawing up an

Table 2
Summary of the SWOT analysis of the IEA.

<p>Strengths</p> <ul style="list-style-type: none"> ● Oil stocks exceed 90-day obligation and have been used successfully in the past ● IEA maintains accurate databases and conducts authoritative analyses that increasingly cover non-member countries ● Renowned center of expertise that has the power to convene experts and attract high-quality staff ● IEA is not confined to one type of energy but covers all forms of energy from a wide array of perspectives (markets, technologies, policies) ● Growing media presence <p>Opportunities</p> <ul style="list-style-type: none"> ● Perform tasks for the G8/G20 and other global bodies ● Work in conjunction with other international organizations to fulfill its mandate ● Expanding outreach to emerging powers ● Advances in technology and geopolitical events continually open up new challenges for energy policy 	<p>Weaknesses</p> <ul style="list-style-type: none"> ● Formal treaty provisions on emergency oil sharing are obsolete. The CERM procedure represents a weakening of the IEA's authority ● The core budget has not grown in line with demands placed upon the IEA ● Institutional link to the OECD may negatively affect the IEA's budget, autonomy, and image ● States that benefit from existing arrangements have little incentive to embrace institutional reform <p>Threats</p> <ul style="list-style-type: none"> ● Institutional fragmentation in global energy governance may lead to duplication and turf wars ● Outside perception that IEA's restricted membership base is increasingly anachronistic ● Criticism that the IEA is a peak oil denier that acts at behest of fossil-fuel industry ● Dilution of homogeneity and like-mindedness in membership if IEA is enlarged
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implementation plan that includes some key priority actions (Hill and Westbrook, 1997). This part therefore aims to translate the elements of the SWOT analysis into concrete action for the IEA. The benchmark that is used is the core mission of the IEA, as set forth in Section 1.1. In other words, the proposed reforms are intended to enhance the IEA's capacity to deliver on its core functions.

3.1. Engaging with the new consumers

In light of the above mentioned energy trends, it is clear that the major future energy consuming nations need to be involved more closely in the agency's work, possibly leading up to full membership of at least the most pivotal among them. Even more than a moral impediment, engaging with emerging countries beyond the OECD sphere is a functional necessity for the IEA. Without the large energy-consumers on board, it will be impossible for the IEA to deliver on at least three of its core missions:

1. On emergency response, the global impact of an IEA stock draw is muted as the IEA's share in global oil consumption falls. Getting countries such as China, India and Brazil into the IEA is therefore a prerequisite for the IEA's emergency procedures to actually work in the future.
2. With regard to climate change mitigation, a similar argument can be made. The adoption of clean energy technologies, greater energy efficiency and conservation amongst IEA member countries will not suffice to stop global warming unless all major economies pursue similar policies.
3. Even for the IEA's data-gathering function, outreach is crucial. After all, the quality of advice and analysis that the IEA is able to offer increasingly depends on access to good quality data from major developing countries.

By and large, the IEA has already made notable strides on the outreach front, but it has taken the agency a long time to arrive at this point. Even though the 1974 IEP treaty called on the IEA to promote consultation and dialogue with non-members, it took the agency nearly 20 years to establish a Committee on Non-Member Countries. This Committee was eventually created in 1990. It replaced the Standing Group on Relations with Producer and other Consumer Countries, which was instituted by the IEP treaty (articles 44–48 and 58) but had not met since 1977 despite these formal provisions (Scott, 1994). From the mid-1990s on, the agency began to take its relationship with other energy-consuming countries more seriously. In part, the collapse of the Soviet

Union and the prospect of the successor states coming closer to the OECD prompted the IEA to intensify its cooperation with Central and Eastern European countries. Yet there was also a much deeper reason underlying the IEA's heightened engagement with other consumers: a gradual realization of the *global* nature of energy developments and related environmental challenges. For example, in 1993, IEA ministers recognized 'the significance of increasing global interdependence in energy' (Scott, 1995, p. 349).

The IEA's outreach to Asian, Latin-American and African countries has accelerated ever since and has developed along different tracks. The agency has, for example, hosted or contributed to workshops on specific topics such as energy efficiency and regulatory issues with non-member countries. It has also started to review the energy policies of non-member countries such as Ukraine (2006), Indonesia (2008) and Chile (2009). Three major non-member countries have been singled out as priority countries for the outreach policy: China, India and Russia. The IEA has concluded bilateral agreements with each of these three countries during the latter half of the 1990s. The growing engagement has extended even to the biannual ministerial meetings of the IEA's governing board. The Chinese, Indian and Russian energy ministers have attended several ministerial meetings of the IEA. At the 2009 ministerial meeting of the governing board, the IEA concluded joint statements with these three partners outlining concrete steps to enhance and deepen the cooperation. At the 2011 ministerial, nine partner countries participated.⁹

Notwithstanding the value of these multiple contacts, both at the technical and official level, the IEA needs to think through its outreach strategy. In the Spring of 2010, the secretariat evaluated the current outreach activities for six core strengths of the IEA (International Energy Agency [IEA] Secretariat, 2010). Those strengths are: data analyses, policy analyses, crisis management, technology collaboration, market analyses, and promoting sustainability. The results of this exercise clearly showed that China, India and Russia are the partner countries with which the IEA has developed the strongest ties across the six core areas. Aside from these three, the agency has kept medium to strong relations in individual areas with a diverse group of countries, notably Indonesia (data, crisis management and sustainability), Brazil (technology collaboration), Chile (policy analysis), Mexico (data)

⁹ The partner countries are Brazil, China, India, Indonesia, Mexico, Russia, and the Republic of South Africa, and Chile and Estonia as candidate countries for accession.

and Thailand (crisis management). There is no real logic underpinning the composition of this group. Indonesia, Brazil and Mexico belong to the G20, the others do not. Other prominent G20 members do not figure in this list. Brazil and Mexico are part of the G5 (formerly known as the Plus Five countries), as do China and India, but the fifth member (South Africa) is missing because the IEA secretariat lacks the financial means to hire a program manager covering Sub-Saharan Africa. Two countries in the list are members of the OECD (Mexico and Chile), while the others are not.

The diverse or even random composition of this group of countries suggests that an overall strategic vision on the choice of priority partners is lacking. Leaving China, India and Russia aside, the choice for the priority outreach countries has been determined by the availability of resources (human or financial), the interest and resources of the partner countries, and the entrepreneurship of individual IEA staff members. Put differently, the outreach activities have hitherto been conducted in an ad-hoc fashion and would benefit from a clear policy blueprint, which outlines the functional priorities and chooses priority outreach countries in accordance with a strategic vision. For efficiency reasons, it might be useful to concentrate on the world's major energy consumers and greenhouse gas emitters. It might be an option to look at the membership of the G20 or the Major Economies Forum (MEF) as a guide to prioritize partner countries. The composition of the G20 and MEF is mainly based on a logic of economic and demographic size. Such an approach would imply intensifying cooperation with Argentina, Brazil, Indonesia, Mexico, Saudi Arabia and South Africa.

In the long run, full membership of major emerging economies such as China, India, Brazil, Russia, Mexico and South Africa should be considered if the IEA intends to claim a leading global role. The legal and technical hurdles for such membership could be tackled provided that there is enough political will on the side of the IEA member governments. The requirement of prior accession to the OECD could be dropped, for example.¹⁰ The oil-stocks obligations could be relaxed for an interim period. Therefore, a formal enlargement will probably require a treaty change, which cannot be realized overnight. In the short run, an incremental, step-by-step approach is the only feasible path to closer engagement. Those emerging economies that are interested should be granted the status of regular observer. The IEA should speed up and intensify the outreach initiatives it has already launched toward China, India and Russia.

3.2. *Rapprochement with OPEC*

The IEP treaty of 1974 calls on the IEA to promote consultation and dialogue with producers. Yet, here too, progress in the early years was disappointing. On his retirement in 1984, the IEA's outgoing Executive Director, Ulf Lantze, stated that 'the one area where the IEA has made little progress during the last ten years is in its relations with the Organization of Petroleum Exporting Countries (OPEC)' (Scott, 1995, p. 341). The relations between the two organizations continued to remain adversarial throughout the 1980s.

Nonetheless, some OECD members already favored an approach of consultation with OPEC in the 1970s. France even took the initiative to set up the Conference on International Economic Co-operation (the CIEC or North-South Conference) held in Paris in 1976–1977, in which the IEA participated as an observer. At that time, however, the divide between consumers

and producers was still very deep. Most OECD countries preferred to limit the agenda to oil issues, while OPEC insisted that the conference should encompass all relevant North–South economic issues, fearing that a narrow focus on oil would drive a wedge between oil producers and the rest of the third world. In the end, the Conference produced little results and its failure for a long time killed the idea of formal multilateral contacts between producers and consumers. Ultimately, it was the Gulf crisis of 1990–1991, combined with the personal engagement of two leaders (Mitterand of France and Perez of Venezuela), that led to the creation of the a genuine producer–consumer dialogue in 1991 (Mabro, 1991). This dialogue is now known as the International Energy Forum (IEF).

The thaw between OPEC and the IEA followed suit. In 1994, Robert Priddle became the new executive director of the IEA. One of the first orders he gave to his staff was to arrange a meeting with OPEC's secretary-general, Nigerian Oil Minister Rilwani Lukman. He encountered surprised reactions from within his own entourage. The mutual suspicion between the two organizations was so deep that it took months before the two could actually meet in Vienna. It is interesting to note that both directors held the contacts hidden from the member governments of their respective organizations. Confidence and trust has gradually build up, also through the IEF process, and by the turn of the millennium the heads of the IEA and OPEC could meet openly and even stage joint press conferences. In addition, a remarkable gentlemen's agreement has been struck between the two organizations. In case of an acute oil supply shortfall, such as in 2003 (with the oil-sector strike in Venezuela, unrest in Nigeria and the Iraq War), the IEA lets OPEC move first to pump additional barrels of oil before it taps its own oil emergency stocks (Van de Graaf and Lesage, 2009).

The challenge now lies in building on these growing ties with the producer countries in order to cement the rapprochement. As the IEF is being strengthened, it emerges more and more as the forum where the gap between oil producers and consumers can be bridged. Since 2003, the IEF dialogue is supported by a small secretariat, hosted in Riyadh. At an extraordinary IEF ministerial meeting in February 2011, held in Riyadh, the ministers adopted a charter for the IEF, intended to strengthen the funding, staffing and authority of the secretariat (International Energy Forum [IEF], 2010).

3.3. *A leading voice in the energy transition*

It is imperative for the IEA to take on a higher profile in the promotion of the transition to a post-fossil future and a sustainable global energy system. This implies that the work on energy efficiency and clean energy should become a priority on a par with its regular work on traditional energy markets. It is recommendable that the IEA continues its work on renewable energy, provided that overlap with IRENA is avoided and collaborative links between the two institutions are established. In this context it is important to note that both organizations signed a partnership agreement in January 2012 aimed at enhanced collaboration. One of the concrete steps taken was to make the IEA's renewable energy policies and measures database a joint IRENA–IEA database. In general, there are signs that IRENA's creation served as a salutary shock that has made the IEA much more upbeat about the prospects of renewable energy. In May 2010, the agency published two new landmark reports, prepared at the request of the G8, in which it says that solar power could supply up to a quarter of global power production in 2050. The roadmaps are projecting approximately four times as much solar power as the 'climate scenarios' of the *World Energy Outlook* of October 2009. According to one observer these revised projections demonstrate that the IEA 'has undergone a radical transformation in its way of thinking' (Nicola, 2010).

¹⁰ This is also the current practice in other organizations in the OECD family, such as the International Transport Forum and the Nuclear Energy Agency, both of which have member countries that are not in the OECD.

In a similar vein, the IEA should also work more aggressively on demand control and fully engage in the debate on sustainable lifestyles in a similar fashion as other international organizations such as the United Nations Environment Program (UNEP) or the European Environment Agency (EEA). This move includes an exercise in getting priorities right from a sustainability perspective, both in terms of actual work and external communication, rather than a mere juxtaposition of solutions within a certain policy mix.

The fact that the IEA still struggles with the image of being an institution mainly concerned with fossil fuels, hampers the IEA to be recognized as the leading international energy institution. Therefore, the recommended substantial shift to a higher profile on sustainability should also be underpinned by communication efforts. One can think of a new mission statement plus a strong and catching baseline, and to communicate more explicitly about it. The restyling of the International Labor Organization (ILO) around the concept of 'decent work' can serve as an instructive example in this regard. The IEA had begun to move in this direction after the outbreak of the financial crisis of 2008 with its slogan on a 'clean energy new deal'. Another step in the right direction is the trend, which is evident from recent public statements of senior IEA officials, whereby the agency is trying hard to shed its image of being a 'peak-oil denier'.

The IEA can also become the driving force behind a better integration between the international climate and energy regimes. Both spheres are still largely disconnected, which is harmful to the fight against global warming. The IEA should promote more intensive energy technology collaboration as a part of the post-Kyoto climate regime and play a central role in its implementation. In the same vein, a close link could be established between the (new) institutions governing the future regime of climate finance (for mitigation) on the one hand and the IEA on the other, with the latter taking up a crucial advisory role to the financing institutions. In the existing United Nations Framework Convention on Climate Change (UNFCCC) regime as well as in the post-Kyoto talks both aspects have been poorly addressed thus far; this vacuum provides the IEA an opportunity to get fully engaged at an early stage.

3.4. *The IEA's internal structures and functioning*

One recent account of the IEA's role noted that 'the organization's basic structure and procedures have remained frozen in time since its creation' (Colgan, 2009, p. 3). If one would construct an organizational timeline of the IEA, stasis would be the rule. The five principal divisions of the IEA today are essentially the same as 35 years ago, some slight name changes notwithstanding. Only recently, under Tanaka's leadership, a small organizational reshuffling has taken place. If the IEA is to reform itself to accommodate non-OECD countries, to strengthen ties with producers, and to engage seriously in the sustainable energy debate, it needs to reorganize internally so that its structures reflect its policy priorities.

Besides the internal governance structure, it is important to consider the budgetary implications in any discussion of the future of the agency. As a general rule, the funding of the IEA should be commensurate to the outlined priorities and should enable the organization to effectively discharge its program of work. In other words, the IEA secretariat cannot be expected to take on additional tasks and responsibilities without being granted additional financial means. The debate on the IEA's future role therefore needs to be flanked by considerations on how intensified activity will be resourced from the start.

In the long run, a formal amendment of the IEP treaty is needed with a view to enlargement. As said, the 90 day-rule for

oil stocks could be relaxed in a transition phase for new members. In addition, the obligation to be an OECD member could be deleted. A more independent status for the IEA as a rather functional, technocratic institution has the advantage that the political threshold for certain non-OECD countries to cooperate with or join the IEA would be lowered. The IEA's relationship with the OECD is unique and stems from the historical context in which the IEA was created. Back in 1974, the OECD offered an existing organization with a staff, expertise on oil matters, physical facilities and legal status in which the IEA could be expected to function immediately. Therefore, the founding fathers chose to locate the new agency within the OECD family. From a historical viewpoint the link the OECD is perfectly understandable; yet, it need not be inevitable. The official wording of the IEA an 'autonomous agency within the OECD framework' has never been very clear and there is a real tension between the OECD and the IEA on the matter.

On the one hand, it is important that the IEA continues to keep sufficient distance from the OECD for the following reasons. First, the OECD places high demands on the IEA's budget (e.g., overheads and other OECD charges) that are outside of the control of the IEA's governing board. Second, the prerequisite of OECD membership renders a rapid accession to the IEA more difficult for some countries, most notably China and Russia. Third, the affiliation with the OECD might give the IEA the image of being a rich man's club in the eyes of non-members and thus hamper its outreach policy. On the other hand, it is not desirable to completely break the institutional link between the IEA and the OECD. There exist a lot of domains where the IEA and OECD have a complementary expertise that can best be employed collaboratively. One example is to study public investment in green energy, including stimulus packages. The ongoing analytical work on energy subsidies for the G20 is another good example of the benefits that could be reaped when the IEA and the OECD work in tandem. There is also a sentiment among some IEA governments and staff members that the IEA should not become a loose, UN-type organization with too much heterogeneity to be able to function effectively. Dr. Henry Kissinger has evoked that sentiment in his speech before last year's ministerial meeting when he said that 'one of the strengths of the IEA is that its members are bound by common interests and similar values and goals' (Kissinger, 2009).

Changing the treaty requires new negotiations and ratifications, which will probably make it a protracted process. Moreover, removing the OECD membership requirement may create pressures to change other parts of the treaty as well, most notably the voting weight allocation system. The voting weight allocation is an arcane system that does not reflect the diminished role of oil, the global drive to a low-carbon and efficient energy economy, and the new geopolitical realities. Therefore, it should be updated and it is worth considering to use a new indicator, reflecting good energy practices, on which to base the voting weights, rather than the amount of oil consumed. Perhaps, as an alternative to amending the treaty, the member states should consider to draft a completely new treaty, rather than to modify and amend the dated IEP.

4. Concluding remarks

Until recently, the IEA was not well known beyond a small circle of energy specialists in governments and businesses. Now, it stands at the center of attention and evokes both strong positive and negative views. The prime reason for this increased attention and controversy is the changed nature of the global energy order, where rising powers and new energy challenges are transforming

the old ‘rules of the game’ (Goldthau and Witte, 2010). These trends explain the curious situation the IEA finds itself in today, having acquired a profile of the highest standing while at the same time facing ever-louder calls for reform.

The most compelling argument for a reform of the IEA can be found through counterfactual reasoning. Suppose the IEA had not been created during the oil shock of 1973–1974 and it would have to be designed from scratch anno 2010. Chances are great that it would look totally different from how it currently is. Still, obstacles to a *formal* reform of the IEA have proven high and, on the face of it, the agency has been characterized by a large degree of institutional sclerosis and inertia. In its actual practice and day-to-day workings, though, the IEA has already adapted itself to a great extent to the energy landscape of the 21st century.

This article has highlighted that the most pressing areas where the agency needs to adapt are in its relations with non-member countries, both consumers and producers, and in the global drive to more sustainable forms of energy consumption. Partnering up with the G8 and G20, as the IEA has done in recent years, could help to move its reform agenda forward at the same time as boosting its profile. Ultimately, however, it will depend on the political leaders of the IEA member states to decide whether the ongoing reform efforts will carry through and will result in strengthening the organization’s capacities to deal with the plethora of energy challenges our world is confronted with.

There is still plenty of scope for future research on the IEA. It might be useful to put the IEA in a comparative, institutional perspective to see what institutional assets it brings to the table compared to, say, the WTO or the World Bank in managing particular energy-related issues. It could also be interesting to see whether there are external misperceptions of what the IEA is doing, and how marketing could remedy this situation. A content analysis of the IEA’s evolving discourse on sustainable energy might help to shed light on the degree to which the IEA has adjusted its messages over time. A study of the views and interests of non-OECD countries toward the IEA would significantly help to understand the barriers and opportunities for greater engagement and even enlargement of the IEA. The relationship between the IEA and neighboring regimes (e.g., ECT, IRENA and the IEF) offers a fertile ground to test some assertions from the emerging literature on “interplay management” (Oberthür and Stokke, 2011). And, finally, it would be good to devote more attention to the potential role of the IEA in a post-Kyoto international climate architecture.

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