

DISCUSSION DOCUMENT

Next Steps of Modernisation of the International Energy Agency (IEA)

Neil Hirst, Senior Policy Fellow of the Grantham Institute for Climate Change and the Environment, Imperial College London

Yufeng Yang¹, Research Professor of Energy Research Institute, the National Development and Reform Commission of P. R. China.

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Introduction

A rapid increase in affordable and secure energy services is needed to support rising living standards around the world. We also have to protect the local and global environment from the consequences of energy related pollution. This requires big improvements in energy efficiency and the adoption of advanced technologies. At the same time we have to achieve the traditional objectives of secure affordable supply. To facilitate this transformation we need a truly global organisation with a cross cutting energy remit.

The International Energy Agency has the potential to fulfil this role and it has made impressive progress towards this end in recent years. It was founded, in 1974, to coordinate oil emergency planning amongst the developed nations and to protect the economies of member countries from threats to energy security. Its membership was, and remains, restricted to the OECD. But since then the IEA has broadened its range to cover the energy challenges of today and has entered into an Association with major emerging economies.

This discussion paper considers today's needs for international energy cooperation and the contributions that various existing international organisations can make. It focuses on the potential for the IEA to become a genuinely global institution that can provide the focus for global energy transformation. The paper reviews the next steps towards achieving this. Annex

¹ Prof. Yufeng Yang is the Research Fellow in Grantham Institute of Imperial College London in 2017

1 examines the options for widening its membership beyond the OECD to include major emerging economies.

Objectives of the IEA

The main objectives of the IEA fall into three main categories. The first is energy security which includes promoting the diversity, efficiency, flexibility and reliability of fuels and energy sources. The second is economic development, including support for free markets to foster economic growth and efforts to eliminate energy poverty. The third is environmental protection, which involves analysing policy options to offset the impact of energy production and use on the environment, especially climate change and air pollution.

In recent years, it has become an important objective for the IEA to work closely with partner countries, especially major emerging economies such as China and India, to find solutions to shared energy and environmental concerns. This is a reflection of the growing importance of these economies in the world energy economy and in energy trade. It also reflects the global nature of today's energy challenges and the way that they have evolved in recent years. The participation of a number of major developing countries in the IEA's Association is an important step forward. This discussion document argues that, eventually, the IEA will need to open its doors for full membership by major developing nations if it is to reach its full potential.

More generally, the growth of developing nations such as China and India, and the fact that the OECD countries who belong to the IEA now account for less than 40% of world energy consumption underlines the need for a more inclusive body.

The Needs of Today's Energy Governance

Sustainable Development

The UN's sustainable development goal no 7, "to ensure access to affordable, reliable, sustainable and modern energy for all" is basic. Affordable energy supply is still a core energy policy objective for all nations. However the question of how developing nations can achieve a low carbon energy transition consistent with their development ambitions is rising on the agenda. This is not only a humanitarian objective in itself, but it is also closely connected to the energy related UN sustainable development goal, no 13, "Take urgent action to combat

climate change and its impacts”. Because all of the increase in greenhouse gas emissions is expected to come from developing countries, these two objectives are intimately connected.

So how to encourage nations at different levels of development to make carbon reductions while also pursuing their national economic goals is a key issue. Also, the climate challenge is now closely associated with local pollution, and especially urban air pollution that is now recognised as a grave threat to health in developing and developed nations alike. Most of this pollution arises from energy and the IEA could be well placed to lead international efforts to address this problem.

Oil Security

Oil security, which the IEA was founded to address, remains high on the list of priorities of oil importing nations. From the supply side, although the situation today is not as acute as at the time of the Arab oil embargo that the US and Europe faced in 1974, instability in the Middle East is still a major concern. The good news is that North America is approaching net self-sufficiency, but it remains uncertain how long can this situation can be sustained. There are uncertainties, especially on future investment, cost, and the risks of more rapid decline of unconventional oil production.

From the demand side, the rapid growth of the oil demand and oil imports of major developing nations such as China and India means that oil security is now a major challenge in the Asia Pacific region. So, the world oil market has more major players, like China and India, with a stake in keeping the future world oil market stable, affordable, and diversified.

The common interest between IEA and OPEC

Since the IEA was created the relationship between oil consuming countries and the OPEC producers has also changed somewhat. They still have differing perspectives on the price of oil but there is a common interest in avoiding very sharp price fluctuations, and consultation between the IEA and OPEC has become the norm in dealing with sharp price peaks. OPEC countries are taking an increasing interest in renewables and in improving energy efficiency, and Saudi Arabia, in particular, is starting to face the longer term need to diversify away from oil. Major developing countries such as China and India do not share the West’s history of confrontation with OPEC. So it is possible that an

enlarged IEA would acknowledge a somewhat more positive relationship with OPEC.

Deployment of Renewable Energy

As the costs of solar and wind power fall, renewable energy is growing rapidly, around the world, as a source of electricity. But there are two big challenges. The first is system integration. In other words how to create sufficient flexibility and storage capacity in power systems as a whole to enable variable renewables to contribute a really large share of supply. The second is to spread the contribution of renewables beyond electricity generation to the other main source of energy supply. That is to say, heat, transport, and industry. These are technical, policy, and economic challenges that can definitely benefit from international cooperation.

Energy Efficiency

Enhanced energy efficiency is widely recognised as the most important single issue for solving climate, pollution, and economic energy challenges. Recent years have seen a significant, and welcome, improvement in global energy efficiency trends. This is the result of major industrial efficiency drives amongst IEA members, including the US, and also in big energy consuming countries such as China and India, as well as China's industrial transition. The rapid growth of cities in the developing world provides a never to be repeated opportunity to embed higher efficiency standards. This also is an area where international cooperation, including the benchmarking of efficiency standards, can make a major contribution.

Better Energy Data

Good quality and timely energy data and statistics are the foundation for evidence based policy making and the basis of much of the IEA's work. Collaboration on improved energy data and statistics are a foundation tool for what developing countries, as well as OECD countries, wish to do in their energy policies.

For instance, China is now moving towards the introduction of a nationwide carbon trading scheme. High quality data will be essential to make this work properly. Other major developing countries might also benefit from international cooperation to strengthen the quality of the energy data available to their governments and industries. The IEA already plays an

important role in training energy statisticians from around the world and this kind of cooperation can be developed further.

The Increasing Contribution of LNG

The development of LNG as a major component of international gas trade means that security of LNG supply is becoming an issue. In the short term, as supplies of LNG on world markets appear plentiful, this may not be on the front burner. However, there is widespread agreement on the need for national emergency planning for an interruption in LNG, and that this might include some international aspects. Again the greatest challenge is in the Asia Pacific region. The LNG security challenge is becoming increasingly similar to that of oil. Distinctly, the IEA, with wider membership, could be best placed to contribute. So, LNG security is another reason why the IEA needs to expand its membership or at least, to have closer relations with non-member countries, especially major LNG importing countries, like China and many South East Asia Pacific countries.

Technology Innovation and R & D

The IEA is also the leading body for coordinating international R&D on advanced energy technology, drawing on its extensive network of some 40 collaboration agreements. This network already includes developing countries that do not belong to the IEA itself, or to the OECD. Greater energy efficiency and the incorporation of advanced low carbon technologies are amongst the most important topics. IEA can also become a knowledge sharing hub to encourage clean and low carbon technology innovation.

Cyber Security

The cyber security of energy systems is now of major concern, with international cyber attacks constantly in the news. In recent years, these domestic cyber security challenges are more and more complicated by cross border issues, including inconsistent laws and perspectives regarding, in particular, privacy norms and restrictions, data transferability, and divergent political interests in combatting cyber threats². Energy information and control

² Germano, J.H. *Cybersecurity Partnerships: A new Era of Public-Private Collaboration*, NYU School of Law, The Center on Law and Security, October 2014

systems, for instance for smart grids, power generation, or oil and gas production and supply, are likely to become the targets of terrorism. This is already happening occasionally. Clearly this requires greater collaboration amongst a wide range of parties, including government, business, and other organizations. This also is a topic of growing interest at the IEA. However there are huge international sensitivities around this topic and the extent to which discussion around the table at the IEA could contribute is an open question.

The Membership Question

The IEA already contributes on many of these issues through its expert analysis, publications, and policy guidelines, as well as its network of technology collaboration. But today, with the rise of major emerging economies, especially in the Asia Pacific region, the IEA's membership is no longer representative of the global energy economy. To pay a full part in addressing these questions the IEA will need to get the major players together, round the table, as equals. That ultimately requires an expansion of the IEA's membership beyond the OECD.

Conclusion

These requirements of today's energy governance illustrate the multiple needs for genuinely global cooperation between governments, and especially those who are committed to transparent energy markets and unobstructed energy trade. In spite of the success of the IEA's Association, the restriction of IEA membership to OECD countries means that it is not fully adapted to meet these global challenges. Conversely, countries such as India and China could significantly enhance their oil security, and other energy objectives, through membership of the IEA, if that became an option. However, as discussed in depth below, a lot a diplomatic vision and hard work will be required to make that possible.

Other Major Bodies that Contribute to Energy Governance

The United Nations Framework Convention on Climate Change

There are a number of UN bodies with an interest in energy policy and technology, but the UNFCCC is the most important of all. It is the only legitimate international body for climate negotiations. Following the 2015 Paris Climate Summit, the delivery and ratcheting up of national contributions to the UNFCCC

process is central to the global effort to mitigate climate change. The UNFCCC's Green Climate Fund has an important role in supporting developing countries financially and its Technology Mechanism is intended to help them to find appropriate technical solutions.

However, now that the global climate effort is based on "bottom up" voluntary national contributions, it is increasingly clear that collaboration at the level of energy policy and technology, such as the IEA aims to provide, will be an essential element. So the UNFCCC needs to collaborate closely with other organizations, particularly IEA, for the purpose of achieving best results.

US withdrawal from the Paris agreement of the UNFCCC would represent a significant setback for its objectives (if indeed the US makes good on President Trump's declared intention, which cannot materialise until 2020 at the earliest) notwithstanding the firm commitment of the other members to its success. However the US will continue to be a world leader in the research, development and deployment of advanced energy technologies and in the promotion of energy efficiency. Collaboration on these topics at the IEA has become all the more important.

The G20

The G20 already provides a forum on which developing as well as developed consuming countries are represented, as well as oil producers. The G20, and its Energy Sustainability Working Group (ESWG) is taking an increasing interest in energy and has pursued initiatives in renewables, energy access, and energy efficiency, as well as ending fossil fuel subsidies and promoting green finance.

However the G20 has a very distinct role from that of the IEA. The G20 provides visible political leadership at the highest level and it calls for action by other international energy bodies. But it does not itself function as an energy institution because it lacks an energy secretariat and its agenda changes with each annual presidency. In fact, there is strong resistance from the West to the idea of the G20 acquiring its own secretariats on energy or, indeed, other topics. The potential to function as an energy secretariat to the G20, as it has done in the past for the G8, represents an important opportunity for a modernised IEA.

The G20's 2014 Principles on Energy Collaboration, annexed, are important as a modern statement of the objectives of international energy cooperation that commands widespread support amongst major nations.

International Energy Forum

The International Energy Forum is the most inclusive of the international energy bodies, with a very wide membership amongst developing and developed countries, oil producers (including OPEC producers), and consumers. Its biennial meetings are important occasions for high level government announcements and networking. There is potential for enhancing the role of the Forum and of its secretariat. But, perhaps because of its wide membership, and the difficulty of finding sufficient common ground between oil consumers and OPEC producers, there is very little sentiment for trying to build it into the sort of substantial international institution that might offer an alternative route to a global international energy body.

Business Focused Energy Bodies

This Discussion Paper is concerned with international organisations through which governments collaborate on energy policy. There are also several international organisations, which may include government representatives amongst their members, with a major focus on business.

The World Energy Council describes itself as “the principal impartial network of leaders and practitioners promoting an affordable, stable and environmentally sensitive energy system for the greatest benefit of all.” It has an immense international network of more than 3000 member organizations located in over 90 countries and drawn from governments, private and state corporations, academia, NGOs and energy-related stakeholders.

The World Business Council for Sustainable Development is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world.

The IEA also has its own Energy Business Council (EBC), which brings together some of the world's largest companies involved in energy exploration, production and consumption, ranging from oil, natural gas and coal companies to automobile and appliance manufacturers, wind and solar producers and financial institutions. The aim of EBC is to promote dialogue among the IEA, the

business community and policymakers across a broad range of cross-cutting issues with important implications for the global energy system.

While these bodies do not offer an alternative to cooperation at government level, plainly, close cooperation between government and business organisations is important to enable governments to create the best framework for business to deliver the desired objectives of energy policy.

The Energy Charter Treaty

The Energy Charter Organisation was originally formed, following the break-up of the Soviet Union, to provide a stable legal framework for international investment in the energy sectors of the newly independent states. Its objectives are consistent with those of the IEA and it has the advantage of providing a legally binding framework to ensure fair treatment for international energy investments and energy transit in the countries that belong. However membership is largely restricted to Europe, including Eastern Europe, and Central Asia.

The Challenge for the Energy Charter Organisation is to update its Treaty to reflect modern conditions and to broaden its membership, especially in the Asia/Pacific region.

The Clean Energy Ministerial

The Clean Energy Ministerial provides high level leadership for efforts to accelerate the deployment of advanced, clean, energy technology. The CEM has forged a close link with the IEA, by agreeing that its secretariat should be hosted at the Agency. In the longer term, if the IEA succeeds in widening its membership sufficiently, there is a possibility that the two organisations could merge.

Technology Specific Organisations

Other technology specific organisations, such as the International Renewable Energy Agency, undoubtedly make important contributions to international energy cooperation and, in many cases, have worked closely with the IEA. But energy systems are highly integrated and they cannot substitute for an organisation, such as the IEA able to look at energy technologies and policies across the board.

Recent Progress in IEA Modernisation

The IEA has an impressive record of adaptation to meet the changing needs of international energy policy, and this has accelerated in recent years.

A first step, more than a decade ago, was to open up the IEA's network of technology collaboration agreements to non-members of the IEA. Now there is extensive participation in the agreements by major developing countries. For instance, China belongs to 18 Agreements, and India and South Africa to 7 each. There are a total of 86 memberships of countries that are not members of the IEA. China and India also participate in the IEA's senior technology committee, the Committee on Energy Research and Technology (CERT).

Much more recently the IEA entered into an Association with a number of developing countries. China, India, Morocco, Indonesia, Singapore, and Thailand have become Association Countries of the IEA successively since the end of 2015. The Association has facilitated joint projects between the IEA and its members and opens up the potential for Association members to participate in a wide range of the IEA's own activities. Other non-member countries are expected to join in due course. China has created an office in Beijing for IEA/China projects and has seconded senior staff from China's National Energy Administration (NEA) to the IEA.

Another sign of the IEA's opening up, already mentioned, has been the agreement of the membership of the Clean Energy Ministerial, which includes a range of major developing nations, that the IEA should host its secretariat.

The IEA has become increasingly engaged with the G20 energy working group of senior officials, the Energy Sustainability Working Group (ESWG). The G20 Hamburg Climate and Energy Action Plan for Growth³ invited the IEA (with IRENA and "others where appropriate") "to support our efforts in providing a regular update report with relation to the global transformation of the energy sector and further investment needs".

The Action Plan also contained a significant initiative on energy efficiency. "We seek to strengthen collaboration on energy efficiency, avoid duplication of work streams among international organisations working on energy efficiency,

³ The United States has reserved its position on this Action Plan

and create opportunities for more efficient use of resources with greater impact of the collaboration”. The G20 are setting up a Task Force for the development of an Energy Efficiency Hub. Although the Action Plan does not say this explicitly, the logic seems to point to a body with a structure rather similar to the new arrangement for the Clean Energy Ministerial. That is to say that the Hub would have its own board with wide membership including developing and developed nations and its secretariat would be hosted at the IEA and integrated into the IEA’s own energy efficiency division.

Attitudes to IEA Modernisation: China and the US

How realistic is it to propose further steps in IEA modernisation? The attitudes of the Chinese and American governments will be crucial.

The US

There are no clear indications, as yet, as to the attitude of President Trump’s administration. However two recent reports indicate a significant body of opinion that IEA modernisation, and specifically opening the IEA up to wider membership, could be in the interests of the US.

The first of these, dated April 2017, is an Atlantic Council report by a task force drawn mainly from senior US administrators and academics⁴. It recommended “further expanding IEA Association members with the possibility of introducing a path to membership” and “conducting a formal legal assessment by the Department of State of how to remove OECD membership as a prerequisite for IEA membership.”

The second is by Jonathan Elkind, former US Assistant Secretary for International Affairs at the US Department of Energy. His report of June 2017⁵ concludes that “The best path forward – though no easy path – is for the United States to sustain IEA by ensuring that it stays focused on today’s top-most energy challenges and that it provides a path to membership for those countries wishing to become members”.

⁴ D. Goldwyn, P. Cornell, *Reform of the Global Energy Architecture*. Atlantic Council Global Energy Center, April 2017

⁵ J. Elkind, *Modernizing the International Energy Agency: A Task Worthy of US Leadership*. Center for Global Energy Policy, Columbia University School of International and Public Affairs.

China

Chinese authorities have, in the past favoured energy coordination, “within the framework of the G20”. However China’s decision, in 2015, to join the IEA’s Association was a clear indication of willingness to more closely collaborate with the IEA.

Chinese senior officials remain cautious on the question of IEA membership, citing the OECD restriction, the strict oil stock requirements and, furthermore, recognising that China will need to improve its statistical capabilities (see below) and prepare themselves for policy debate before they will be ready for full IEA membership.

Since joining the Association China has engaged in joint energy research programmes with the IEA, providing an office in Beijing, and has posted senior staff to work at the Secretariat. However China has made only limited use of opportunities to discuss current energy topics at senior IEA committees. The message sometimes given is that China is willing to work with the IEA, and respects the analytical capabilities of the secretariat, but needs to understand the clear benefits of closer engagement.

The statistical issues is so important for China’s relations with the IEA that we offer the following more detailed comments.

In recent years, China’s energy data and statistics system has been improved a lot. For example, the Energy Division in the National Statistics Bureau (NSB) has been expanded from a Division into a full Energy Department. The number of formal staff has increased 3-4 times, an Energy Information Centre has been set up in National Energy Administration (NEA), and the Division of Energy Statistics Information has been moved into the Strategy and Planning Department of NEA. Every month, NEA now releases basic monthly electricity information.

However, overall, there are still many issues that need to be solved. There is still no complete energy data and information system like the Energy Information Administration (EIA) of United States. For example, coal data sources are not consistent, and there is a shortage of monthly coal production data. There is no periodical and systematic data release plan by an authoritative body. Some existing data statistics systems and methodology are not consistent with those of OECD countries or the International Energy Agency(IEA). Some analysis indicators are not fine and detailed enough,

especially on the energy demand side. In the history of China's energy statistics, data has been edited and revised several times. So there is still a long way to go for capability building on China's energy statistics system.

We believe that it is not on purpose that China does not release complete energy data (that is, the problem of data transparency), but it is because the whole energy data and statistics system is still not mature. Even the basic China Energy Statistics Yearbook always needs to be corrected and edited periodically. If immature data was released, there would be worries that clients might be misled.

However, the energy data and statistics for China are more and more urgently important. We strongly suggest that China should improve its data and statistics system and closer international collaboration should be developed on this area, both for methodology and the data. Accurate data is vital, both for tracking the changes in the energy market and for energy policy analysis and decision making.

Some Key Issues

The IEA is a successful organisation. The emergency oil mechanisms which were its original *raison d'être* are still the bedrock of energy security for its members. The IEA's energy analysis is highly regarded and its flagship publication, the World Energy Outlook is the point of reference for policy makers in government and business around the world. Whatever problems there may be with the IEA's membership and structure, the analysis carried out by its secretariat is, generally speaking, well focused on today's energy challenges. The IEA is a vital source of international energy statistics. It runs an extensive technology network in which thousands of energy experts from developing as well as developed economies cooperate on almost all major aspects of modern energy technology. For the developed nations who are members, and to a lesser extent for Association Countries, it provides the forum for international energy debate and peer review of policies.

One could say that the relative success of the IEA is a barrier to modernisation. Others might say, "if it ain't broke don't mend it". But this ignores the need for a modernised IEA with wider membership to play a bigger role in meeting today's needs for energy security and affordability, as well as environmental protection and extended access.

It also ignores the risk that the IEA's standing will decline in the future, along with its members' share of world energy investment, consumption, and trade. Governments around the world are looking for ways to cut back on their contributions to international organisations and if the IEA cannot convince them that it is at the forefront their international energy agendas there is a risk of gradual erosion through financial strangulation. New membership will mean additional sources of finance.

While membership is perhaps the biggest issue, it cannot be considered in isolation from questions of structure and agenda, because these are related aspects of the task of modernisation to give the IEA a genuinely global role.

Ultimately the success of a genuinely global IEA will depend on whether there is sufficient shared interest amongst major energy economies in pursuing common objectives for international energy policy. The G20's agreed "principles", and the willingness of China, India, Indonesia, Morocco, Singapore, and Thailand to enter into association with the IEA are encouraging signs. The logic of the global energy challenges, discussed above, points in the same direction. However, this cannot really be tested until the IEA creates the possibility of wider membership.

IEA's legal framework, dating back to 1974, links the IEA to the OECD and restricts membership to countries that are already members of the OECD. The technical options available for widening membership beyond the OECD, not all of which require treaty amendment, are reviewed in Annex 1. The Annex also reviews the wider issues related to the criteria for membership and the rights and obligation of new members which are at the heart of the enlargement question.

The Next Steps

The Association is the focus of IEA modernisation today, and that is where the momentum lies. The Association is the proving ground of the potential for developed and developing nations to cooperate more closely at the IEA. It is difficult to see the Governing Board agreeing to further major steps towards opening up and modernising the IEA unless they see the benefits of wider international engagement through the Association. Similarly, developing countries will also judge the potential benefits of eventual membership of the IEA through their experience with the Association.

There is, however, some risk of circularity here, because the engagement of developing countries with an organisation, such as the IEA, which explicitly excludes them from full membership may be less than wholehearted.

The IEA secretariat is already engaged in a number of worthwhile joint analytical projects with Association members, particularly India and China. As already mentioned China's National Energy Administration (NEA) has posted senior staff to the IEA secretariat and provided an office in Beijing for joint projects. At this level the Association is already a success, although it is not clear that the Association structure adds a great deal to previous arrangements for bilateral programmes of work with major developing countries.

The Association has hitherto been less successful at promoting strategic energy policy debate at the level of the Governing Board and its senior committees. Although these committees have been opened up to Association members, participation levels have, generally speaking, been poor. This means that members of the Governing Board have had limited personal experience of the benefits of the Association and may have concluded that the appetite of major developing nations for closer engagement with the IEA is fairly limited.

However the most recent meeting of the IEA governing board with Association countries has represented a major step forward. The meeting was well attended and there was a lively debate of current energy issues and of the future of the Association.

Now there is an opportunity for the Association to identify the areas of energy governance, such as those listed earlier in this paper, where it can make a real difference and start to obtain the practical benefits of a genuinely global energy organisation.

The outcome of the Paris climate summit has left a significant gap in world energy cooperation. The "top down" nature of the agreement means that progress depends on the ability of participating nations to find energy policy options that deliver, and eventually ratchet up, their "contributions" consistent with their other energy policy objections. Most developing countries specified that they can only do this with support, including financial assistance, from the developed world. The IEA secretariat is the body best able to help developing nations to frame realistic energy strategies in a form that also makes sense to international financial institutions and other finance organisations.

There is potential for the IEA Association to play a leading role in this work. This would require the IEA to develop a closer relationship with financing bodies such as the World Bank, the ADB, the Green Climate Fund, and the AIIB. Relations with individual developing countries would vary, since not all will require this kind of assistance. As with other energy policy work that it conducts, the IEA could develop guidelines of best practice that would have wider application.

The US, of course, has announced its intention to withdraw from the Paris agreement. However there seems no reason why the US would not wish to participate in arrangements for supporting developing countries in efforts to meet their own national objectives including enhanced energy efficiency and deployment of advanced technology.

There are two other ways in which the IEA could modernise.

The first would be to prepare an updated mission statement. The last formal statement of the IEA's objectives was the Shared Goals agreed by the governing board in 1993. Although this was certainly an advance on the objectives of the treaty of 1974 it falls well short of describing today's energy priorities. A new mission statement would draw on these documents but also on the Principles on Energy Collaboration that the G20 agreed in 2014, as well as the energy related UN Sustainability Development Goals. Consultation on the draft of such a mission statement could be an important role of the Association.

The second option would be to re-visit the structure of the IEA's senior committees. To a large extent the IEA still operates under the committee structure that was enshrined in the original 1974 treaty. Some of the titles are rather unclear (*Emergency Questions, Long-Term Cooperation*) and they reflect the original focus on oil security. No doubt this committee structure does not in practice prevent existing IEA members from discussing topics that are important to them. But it is confusing for outsiders and tends to reinforce the outdated idea that the IEA is solely concerned with oil security. A new structure would, of course, still give weight to oil security but it would also cover gas security and today's other major energy policy objectives including climate change, local pollution, and energy for development. There would be more clarity as to the forums in which Association members can discuss these topics.

Opening Up to Full IEA Membership

However the increasing success of the Association inevitable raises the question of IEA membership. The experience of working together in the Association will, hopefully, give both the members of the IEA and the other members of the Association greater confidence that an enlarged IEA could be made to work effectively. The success of the Association also creates greater urgency in the need to address the membership question. Full membership of the IEA may be some time off for Association members. But the continuing momentum and credibility of the Association process depends on the opening up of an eventual route to membership for those Association countries that wish for it.

Opening the IEA up to wider membership raises difficult questions for existing IEA members, but the time has come when they need to be addressed.

Annex 1 reviews the membership issue in some depth. The original IEA treaty of 1974 specifies that only OECD members can belong to the IEA. However the Annex concludes that there are ways opening the IEA to wider membership that do not necessarily involved treaty amendment, provided that the political will is there. The real challenges are about the criteria, terms and conditions for membership. These include practical issues such as voting rights, finance, transparency and quality of data, and commitment to the IEA's emergency mechanisms. These are the key issues that the Governing Board will need to consider, with the help of the secretariat.

Conclusion

The development of the International Energy Agency into a genuinely global energy institution is vital for the future of world energy. The success of the Association is bringing this vision closer to realisation. This paper has suggested a range of options for the next steps including (as reviewed in the Annex) the opening of the IEA to wider membership. Although this development is long overdue it nevertheless represents a difficult challenge both for the existing members of the IEA and for the major developing countries who may aspire to membership in the future. The most important step that the forthcoming Ministerial can take will be to give the secretariat a mandate to work on these issues, including the question of membership, under the guidance of the Governing Board, and to come forward with recommendations for action at the next Ministerial in 2019.

ANNEX 1

OPTIONS FOR OPENING UP FULL MEMBERSHIP OF THE IEA BEYOND THE OECD

Introduction

This Annex begins with the technical options for opening membership beyond the OECD before going on to discuss the wider issues of membership criteria and the rights and obligations of new members.

The Treaty Framework

The adaptation of any international organisation is difficult, but the IEA faces special challenges as a result of its historic legal framework, dating back to 1974, which restricts membership to the OECD.

The IEA was founded in 1974 by a decision of the Council of the OECD, as “an autonomous body within the framework of the [OECD]” and by a formal agreement or treaty between members called the International Energy Programme (IEP).

The IEP was a defensive pact to enable Europe and the US to cope with an Arab oil embargo.

The IEP contains the constitution of the IEA and its secretariat. Most of the rest consists of detailed legally binding rules for holding stocks and the sharing of available oil in emergencies.

There is a section in the Treaty on “long term co-operation”. This meant the promotion of energy efficiency and other energy sources in order to reduce oil dependency in the future. The Treaty also specifically requires the IEA to promote cooperation with non-member countries.

The Treaty belongs to a different world. Since it was signed, the IEA has shown remarkable flexibility and has evolved beyond its original remit so that it is

now, undoubtedly, the leading international organisation covering all aspects of energy policy and technology.

But that is not to say that the Treaty is unimportant. It still contains the IEA's constitution. IEA members are still required to hold stocks in accordance with the IEP.

The rules for triggering stock release and sharing available oil, which occupy a large part of the Treaty, proved unworkable and have never been used. The Governing Board has since agreed much simpler procedures which have been used successfully on several occasions. This is an important example of flexibility under the Treaty.

There are important flexible elements in these founding documents that have enabled the IEA to develop as it has. For instance the OECD Decision says that, "The Governing Board may adopt other measures of cooperation in the energy field which it may deem necessary ". There is also a provision, not used to date, that at the IEA'S request, the OECD may "confer additional responsibilities on the Agency".

The IEP contains very wide powers for the IEA to "cooperate within a broader framework", which might be regarded as legitimising the recently created Association.

Options for Opening up Membership Beyond the OECD

There are four broad options for opening the IEA up to wider membership, presented here in descending order of comprehensiveness.

A New Organisation with a New Legal Basis

The most comprehensive option would be to create a new legal basis, and probably a new name, for the IEA. Probably the new legal agreement would be much simpler than the existing Treaty (the International Energy Programme). It would set out some basic aims of energy policy, most probably based around the G20 Principles and the UN's energy related Sustainable Development Goals. There would be rules for the constitution of a Governing Board. Most other matters would be left for the Governing Board to decide. The existing secretariat would continue (most staff serve for a maximum of five years) but it would be re-balanced, over time, or perhaps enlarged, to reflect the wider membership.

This is the only option that would get rid of the outdated provisions of the IEP and fully separate the IEA from the OECD. In theory, it is the best option, because it would create an organisation wholly attuned to modern circumstances.

In practice, in the near term, it is almost certainly unachievable. The text of a new legal agreement might be relatively simple, but the process of approval could not be assumed to be simple. There would be many contentious issues, especially the status of the existing emergency response and oil sharing arrangements. It would be a long time before effective new arrangements were in place. There is no appetite, in the countries concerned, for the major diplomatic effort that would be required to set up such an organisation.

Working around the existing Treaty seems the more practical course, but new non-OECD members will have to be convinced that they are not disadvantaged. Current IEA members will, anyway, have to be convinced that their interests are served by being relatively smaller players in a relatively larger and more inclusive IEA.

Minimal Amendment to the Treaty (IEP)

The existing treaty, and also the decision of the OECD, would be amended simply to remove the short phrases that restrict membership to the OECD. This would give a very clear signal that the IEA was committed to opening up its membership. It is difficult for major developing countries to take the idea of membership seriously while they see that this very specific prohibition in the treaty. It would make it possible for non-OECD countries to join the IEA by signing the Treaty. Removing the specific prohibition on non-OECD membership might also reduce legal concerns about possible routes to effective membership, discussed under option 3, that do not involve signing the treaty.

However there are also difficulties. The first is that all 29 existing IEA members would have to agree the change and that different countries have different national procedures for agreeing changes to formal international agreements of this kind. For instance, it is unclear whether Congressional approval would be required in the US, although the original IEP and OECD Council Decision were treated as an executive agreement.

The second problem is that the IEP is so out of date that once any change was proposed the political pressure to change other parts might be irresistible. The agreement was written in 1974 and was primarily concerned with oil security including the longer term objective of promoting other forms of energy. There is nothing about climate change, little about the environment, nothing about renewables, nothing about extending energy access, and nothing about gas security. A limited surgical change that was just related to membership might be hard to manage.

Possibly it would be easier to hold the line if there was a new IEA Mission Statement, prepared at the same time, which committed the IEA to work on current policy issues that are conspicuously absent from the treaty.

As already mentioned, the original decision of the OECD which (along with the IEP) founded the IEA contained a provision for the OECD to confer “additional responsibilities” on the IEA at the request of the IEA governing board. One way of giving the new mission statement additional legitimacy would be to promulgate it under this provision.

This option for widening membership, like the remaining options below, would not alter the fact that the IEA was technically an agency of the OECD. However the reality is that the IEA is its own master with its own separate secretariat, its own governing board, and its own Ministerial leadership. The OECD runs the “back office” dealing with pay and conditions of staff and does the accounts. This is a convenience and it would be expensive for the IEA to set up its own separate back office especially as, without a new treaty, IEA staff would lose their tax exemptions if they ceased to be employees of the OECD. That may not be of great concern to taxpayers in member countries, but without these exemptions the IEA would be considerably more expensive to run.

In addition to making it possible for non-OECD countries to become members, the IEA would need to ensure that it could employ nationals of non-OECD countries on the same terms as those from OECD countries, including senior positions. (This should also be considered for the Association Countries, starting with a rather limited number of employees). There would then be no practical reason why non-OECD members of the IEA should regard themselves as disadvantaged by the IEA’s link to the OECD.

Membership Without Signing the Treaty

Soon after the IEA was founded, its members were keen that Norway should participate, as a sympathetic nation with rapidly growing oil production. However, Norway, as an oil exporter was not willing to commit to the mandatory oil emergency plan and, therefore, could not sign the treaty. The outcome was that Norway signed an agreement with the IEA which conferred all the rights and obligations of membership on Norway except for those directly related to emergency action, on which Norway made a voluntary statement of intention to cooperate. There was no amendment to the treaty itself and no need for member governments to address the need for formal agreement to treaty change. The agreement was made between the Governing Board of the IEA and the Norwegian government. The Governing Board said that this was not to be regarded as a precedent. Norway behaves in every way as a full member of the IEA and is listed as a member in IEA publications.

The example of Norway illustrates that IEA membership is really a political question more than a legal question. If the intention of the IEA's governing board is sufficiently clear and united it is very likely that ways can be found of implementing them. As already mentioned, any legal doubts about pursuing this approach with a country that was not a member of the OECD would be somewhat reduced if the specific prohibition on non-OECD membership had been removed from the treaty.

A statement of willingness in principle to enter into discussions on membership with non-OECD countries would not send such a clear signal as a treaty amendment. The IEA would need to be specific about the conditions of these discussions or, alternatively, to enter into such discussions with a major country.

The Norway mechanism could also be employed to generate a the first step for Association countries wanting a closer collaboration with the IEA that still falls short of membership.

The Association as the Main IEA Institution

Yet another option would be to build on the success of the Association and to establish it, with the exception of the specific provisions relating to oil emergency planning, as the main institution. The International Energy Association and not the International Energy Agency would be declared as the

main forum for energy policy and technology debate and analysis. This would be a decision of the governing board without any new treaty. The intention would be to work towards a situation in which all functions were transferred.

This option has the great advantage that it enables change to occur step by step at the pace at which IEA and Association member countries are comfortable. It is probably consistent with the treaty, which gives very wide scope for the IEA to enter into new relations with non-member countries. To some extent it represents a continuation of recent IEA policy.

We can also consider a model in which Association Countries will become increasingly involved in different departments of IEA's work to a greater or lesser extent. As this model matures Association countries may become ready for formal IEA membership.

But there are also serious drawbacks. From the perspective of existing IEA members this option carries the risk of free riding on the part of Association members who might increasingly have the benefits of IEA membership before they were committed to the associated financial or emergency planning obligations. There would need to be very clear rules on the obligations of Association members and it is doubtful whether they would all be willing to accept these at the same time. It is an interesting question whether the Association would be able to negotiate its own oil and gas emergency plans to complement, and perhaps even eventually replace, the plans in the IEA treaty.

Under this option the secretariat, which was increasingly supporting the Association rather than the Agency, would still belong to the Agency. The situation would be analogous to the arrangement recently agreed with the Clean Energy Ministerial, where the IEA hosts the secretariat in support of another body with wider membership. It would of course be essential that the secretariat be able to hire non-OECD national on the same terms as OECD nationals.

Would such an arrangement be acceptable to Association countries if they were expected to make full contributions? It seems questionable. However if arrangements can be developed in which benefits and contributions are well balanced this, could be a high-efficiency model.

Conclusions on Technical Membership Options

Options 2, 3 and 4 are all possible as the most realistic. Option 1 can be considered as a more long term model, however, it can be reached by other options too finally. In either case there is a question of whether the IEA should insist that all new members comply with the full terms of the treaty or whether they are willing in principle to negotiate specific arrangements. That depends on the specific rights and obligations to be conferred on new members, which is the next subject of discussion.

Wider Issues of Expanded Membership

Membership Criteria

The opening up of the IEA to membership beyond the OECD inevitably means the prospect of a more heterogeneous organisation. And since the IEA, unlike the G20 or the G7, has never limited its membership to larger countries, there is also the possibility of a large increase in membership.

The IEA needs to widen its membership base if it is to have the legitimacy to take a leading role in tackling global energy challenges. This will inevitably change the organisation, as new participants will have their own priorities. However the IEA also needs to maintain its character as a relatively non-political body with a strong tradition of evidence based analysis. And a shared vision amongst members of the fundamental objectives of energy policy will be essential for the organisation to be effective.

Getting the criteria for new membership right, when this is no longer restricted to the OECD, will be critical for achieving these objectives.

One essential criterion is that new members will need to subscribe to the new mission statement. Applicants who are already members of the Association will already have been consulted on this. The mission statement will embody core values of the IEA such as support for open and transparent markets, and environmental and social principles of energy policy.

Other criteria will relate to the rights and obligations of new members that are discussed below.

Obviously, IEA will need to update and further clarify the criteria as more new members join.

Voting rights

In practice almost all of the functions of the IEA are conducted through consensus. In recent years formal voting has only occurred on the appointment of the executive director and the chair of the governing board.

Nevertheless, a fair apportionment of voting rights will be essential for new members, both as a demonstration of good faith and because underlying voting rights may influence even consensual debate.

IEA members have two kinds of votes. These are the “weighted” votes, which are proportional to national oil consumption and, unweighted votes, of which each nation has the same number.

The IEA has not updated the weighted voting rights since its foundation in 1974, even though the original treaty envisaged regular updating. This means that, today, voting rights at the IEA (and also contributions to the core budget – discussed below) are still based on oil consumption figures that are long out of date.

It seems very unlikely that major developing countries whose economies have grown rapidly in recent decades will be willing to accept voting shares based on out of date figures that fail to reflect the significance of their energy economies today. So the updating of voting rights based on more recent levels of oil consumption will be a necessary step to enable major developing countries to become IEA members.

This will mean that major developing countries, once they become members, will have large numbers of weighted votes. China, in particular, based on today’s oil consumption, will have a voting strength that is second only to the US.

However the IEA voting system has always maintained a balance between larger and smaller countries. Generally speaking, decisions that are voted on require not only a majority of the weighted votes, based on national oil consumption as already described, but also a majority of unweighted votes, in other words a majority of member countries. There is no reason to change this arrangement as the IEA opens its doors to major developing nations.

There are 29 existing members of the IEA, many of them relatively small countries. This means that until a similar number of developing nations have

joined, the developed nations will continue to constitute a majority of member countries. So, presently in fact, we can give the association countries voting rights according to their oil consumption.

Finance

The situation with regard to the financial contributions of members is similar to that of voting rights. Major developing nations who joined would become some of the largest contributors to IEA funds. This is a natural process with voting rights.

Emergency Planning Obligations and Rights

While most of the IEA's decisions are conducted through consensus and do not lead to any legal obligation on members, the oil emergency planning mechanisms, which were the main purpose of the original treaty, have much more specific and binding rules. Member governments are required to hold strategic oil stocks equivalent to 90 days of net oil imports. They are also required to comply with decisions of the Agency that trigger the release of specified quantities of these stocks in emergency, combined with oil demand reduction measures. The association countries should wholly have the responsibility to keep consistent pace with IEA member countries.

These may be the most difficult requirements for major developing nations, including China. They are also amongst the most important because enhanced oil security is one of the most tangible and valuable benefits that membership of the IEA confers.

The circumstances in which oil emergencies arise may be technical, for instance if they arise from extreme weather or the failure of strategically important facilities, but they may also be highly political. Some developing nations may be willing to commit to the IEA mechanism. But China, and perhaps other major developing countries may find it difficult to place the control of their strategic oil stock in the hands of an international body. To some extent this might depend on a mutually agreed proportionality between and among voting weights, financial contributions, and decision-making.

Probably for China to become a member of the IEA in the foreseeable future there would have to be a negotiation on this point. China might commit to hold 90 days of stocks, perhaps after a build-up period. China might also agree to the principles of cooperative response to oil emergencies and to a general

policy of acting in accordance with the scheme. But China would need an opt-out for circumstances where compliance was politically unacceptable. By the same token, the other members of the scheme would need to retain the right, if necessary, to operate the scheme without China.

How much do existing members of the IEA have to lose from such an arrangement? Some might say that it creates a precedent that could eventually unravel the scheme altogether. However Norway already has a privileged status under the scheme. It is difficult to see that the existing scheme would be weakened but there would be the very large benefit of a presumption, though not a certainty, that China, and perhaps other major developing nations, particularly those high oil import countries must participate in emergency action when necessary.

There is another aspect of IEA emergency planning that may be controversial. The IEA adheres to the rule that emergency stocks should only be released to deal with an actual shortage in international markets (or indeed in the market of a member country). There is another school of thought that strategic stocks should be available to moderate price peaks even if a specific shortage is hard to identify. This is a complex issue. Some would say that, in modern conditions, a price peak is evidence enough of a shortage. However this is a debate that already exists amongst existing members of the IEA and is not necessarily an issue just for new members.

Data and Statistics

The IEA is a major source of international energy statistics. Its members contribute to a highly developed statistical system which provides the data on which the Agency's analytical studies and reports are based. The need for energy markets to be transparent is one of the core values of the IEA. It is understandable that new developing country members may not start with full compliance with this system of transparency and provision of high quality data, but there would need to be agreement on a timetable for reaching full compliance, with the assistance, as necessary, of IEA statistical experts. So data transparency should be a fundamental requiring factor for Association countries.

The Process

It is clear from the above that full membership of the IEA on the part of a major developing nation such as China would be a gradual process, likely to take a number of years. This process cannot begin until the IEA indicates its willingness to take this process forward.

As the paper notes, there are a number of technical avenues for pursuing wider membership and there are difficult practical issues that will need to be negotiated with new members. It is understandable that existing members view this process with some caution and will expect a careful internal process.

However this process cannot begin until the secretariat of the IEA is given a mandate to develop and present the various options available. We hope that this may be an outcome of the forthcoming IEA Ministerial in November 2017.

ANNEX 2

G20 Principles on Energy Collaboration

16 NOVEMBER 2014

Sharing a common understanding that the international energy architecture needs to reflect better the changing realities of the world energy landscape, we, the leaders of the G20 countries, agree to work together to:

1. Ensure access to affordable and reliable energy for all.
2. Make international energy institutions more representative and inclusive of emerging and developing economies.
3. Encourage and facilitate well-functioning, open, competitive, efficient, stable and transparent energy markets that promote energy trade and investment.
4. Encourage and facilitate the collection and dissemination of high quality energy data and analysis.
5. Enhance energy security through dialogue and cooperation on issues such as emergency response measures.
6. Rationalise and phase out inefficient fossil fuel subsidies that encourage wasteful consumption, over the medium term, while being conscious of the necessity to provide targeted support for the poor.
7. Support sustainable growth and development, consistent with our climate activities and commitments, including by promoting cost-effective energy efficiency, renewables and clean energy.
8. Encourage and facilitate the design, development, demonstration and widespread deployment of innovative energy technologies, including clean energy technologies.
9. Enhance coordination between international energy institutions and minimise duplication where appropriate.