

**ENERGY CHARTER
SECRETARIAT**

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Brussels, 26 November 2014

Related documents: CC 504

DECISION OF THE ENERGY CHARTER CONFERENCE

Subject: Report by the Chairman of the Industry Advisory Panel

The Energy Charter Conference at its 25th Meeting held on 26th November 2014

took note of the Report by the Chairman of the Industry Advisory Panel as contained in document CC 504 (attached hereto),

supported the ongoing contribution of the IAP to the work of the Energy Charter, and

requested the Secretariat to incorporate the findings of the IAP in relevant Energy Charter activities.

Keywords: Report, Chairman, Industry Advisory Panel

**COMMUNICATION FROM THE INDUSTRY ADVISORY PANEL (IAP)
TO THE ENERGY CHARTER CONFERENCE**

3 November 2014

Introduction

Mandate and Membership

1. During 2014 the IAP has partnered with GO15 (major power grid operators), Dii (desert energy industry) and the USCC (US Chamber of Commerce), to jointly conduct three meetings in Belgium, Spain and the United States. In the course of this year, the IAP provided substantive response to the Energy Charter Review questionnaire, submitted a formal response to consultation by the European Commission on investor-state dispute resolution under the proposed transatlantic trade agreement (TTIP) and discussed a number of energy policy issues presented below.
2. Also in 2014 the IAP celebrated the 10th anniversary of establishment by the Energy Charter Conference. The IAP seeks to advise the Energy Charter Conference on the basis of expert input from commercial companies covering the full range of energy supply activities (exploration, production, generation, transmission, distribution, finance, equipment, services and technology) and with representation from across the Charter constituency. Currently the IAP has members from 43 energy companies, international associations and institutions from 23 countries and covers the full scope of energy supply, distribution and financing activities.
3. In 2014 the IAP accepted new members from GO15, MoldovaGaz, Abengoa SA and China National Petroleum Corporation (CNPC). The IAP also received a request for membership from the Iranian Research Institute of Petroleum Industry. The expanded membership of the IAP represents a comprehensive source of knowledge and expertise on energy matters that continues to serve the entire Energy Charter constituency.

Information About New Members

4. GO15 is a voluntary initiative of the world's 16 largest Power Grid Operators (PGOs), representing together more than 70% of the world's electricity demand, providing electricity to 3.4 billion consumers on 6 continents and responsible for integration of 2518 GW of generation capacity into the grid, of which 21% is from renewable energy sources.
5. MoldovaGaz offers gas transmission, transit and distribution services. The company is one of the leading energy enterprises of Moldova, which imports about 1,000 million cubic meters and provides transit of 20,000 million cubic meters per year of natural gas to European customers. MoldovaGaz operates as a subsidiary of Open Joint Stock Company "Gazprom".

6. Abengoa SA applies innovative technology solutions for sustainability in the energy and environment sectors, generating electricity from renewable resources and converting biomass into biofuels. Abengoa operates in more than 80 countries and addresses the challenges that arise from its presence in the international and global market for sustainable development.

Number and Scope of Meetings

7. Since its inception in late 2004, the IAP has in total held 32 meetings in Brussels at the premises of the Secretariat and in different countries upon the invitation of members and other interested parties.
8. The IAP held three meetings in 2014. The first meeting was held on 1 April in Brussels to discuss the importance to the industry of the Energy Charter Review and negotiations on International Energy Charter Declaration. The Panel also continued its tradition of listening to and discussing a presentation of the BP Energy Outlook 2035 and debated the growing importance of international cooperation on the safety of offshore oil and gas activities.
9. The second meeting was organised in partnership with Dii and GO15 and held on 23 June upon the invitation of the ACS Company in Ciudad Real, Spain. The Energy Charter Secretariat consulted and received input from the IAP as part of ongoing consultations over the multilateral early warning mechanism. The meeting also addressed the challenges of the global electricity sector, with a focus on adaptation of power systems and issues of long-term transmission rights, from both an EU energy policy and investor perspective. The IAP also finalised its common response to the consultation questionnaire under the Energy Charter Review.
10. The third meeting was organised in partnership with US Chamber of Commerce on 21 October in Washington, the USA. The meeting brought together senior representatives of US, EU and Asian companies, to debate with the US Chamber of Commerce and US Administration officials several topics including international energy security, international regulatory cooperation, and fostering innovation and technology transfer.

Working Method

11. The IAP continues to work on the basis of:
 - case studies provided by its members with subsequent comment and discussion on the issues raised;
 - review of expert work presented by the Secretariat or other invited authorities; and
 - invited guest speakers addressing specific topic of interest for the IAP and the Energy Charter.
12. The IAP members also provide speakers and participants who play an active part in the training sessions of the Energy Charter Knowledge Centre. Among active supports is the Italian energy company Eni S.p.A. which has been a strong contributor to the growth of the Knowledge Centre. For its backing of the development of such a knowledge-sharing platform, designed for future energy

decision-makers, Eni was nominated as a candidate for the Energy Charter Award in 2014.

13. The IAP continues to strengthen dialogue with regional and international organisations on the main directions of the Energy Charter Process. The Chairman and Panel members regularly speak about the benefits of the Energy Charter at high profile events and the Chairman submitted a formal response to the European Commission consultation on investor to state dispute resolution on behalf of IAP members. The activities of the IAP are reported via an annual publication “IAP Insights”, which is supported and published on the web site of the Secretariat and distributed in hard and electronic copies to interested stakeholders.

Main Issues Considered and Observations for 2014

Changing landscape of global energy markets

14. The IAP believes it is important to bring to the attention of policy makers the conclusions of the BP Energy Outlook 2035. It is estimated that global energy consumption will rise by 41% between 2012 and 2035 and 95% of that growth will come from emerging economies. Forms of energy such as shale gas, tight oil, and renewables, will account for a significant share of the growth in global supply. Energy efficiency will be significantly improved in many countries, driven by globalisation and competition.
15. As a result of massive investment in shale and other ‘tight’ hydrocarbon formations, the US saw the world’s largest increase in oil production in the year 2013, offsetting the numerous supply disruptions and uncertainties seen elsewhere. In many parts of the world, energy production continued to be impacted by geopolitical events.
16. Shares of the major fossil fuels in the global energy mix are converging, with oil, natural gas and coal each expected to make up around 27% of the total by 2035, with the remaining share coming from nuclear, hydroelectricity and renewables. Among fossil fuels, gas is growing fastest, and is increasingly being used as a cleaner alternative to coal for power generation as well as in other sectors. The global energy system is adapting to a changing world and demonstrates how the world’s demand for energy can be met through competitive industries and smart government policies.
- 17. The IAP calls on the member countries of the Energy Charter to maintain the predictability and stability of energy markets and the necessary competitive and policy conditions to support large scale investment and technological progress.**

Strengthening international cooperation on the safety of offshore oil and gas activities

18. Due to growing demand for energy and supported by technological innovation, offshore exploration and production activities have developed considerably in recent decades. Today almost a third of all oil and a quarter of all natural gas consumed in the world originates from underwater areas.
19. The IAP fully recognises the tremendous efforts put into the safety of offshore oil and gas activities. The energy industry aims to develop and produce oil and gas resources in harsh environments, such as the Far North and the Arctic, with minimal

negative impact on the natural surroundings. Ecological balance and prevention of accidents is a main focus of the energy industry. In the coming decade, the Arctic region is likely to become an important source of energy to meet future demand. The IAP notes that a stepwise approach is the key to developing resources in a sustainable manner and international collaboration in deep water and remote offshore regions will be indispensable for safe and environmentally and economically sustainable development.

- 20. The IAP invites the member countries of the Energy Charter to promote and cooperate in the research and development of environmentally sound offshore technologies. The member countries are invited to consider developing common safety principles and guidelines as appropriate and/or agree to the mutual recognition of their safety principles and guidelines.**

Energy Transition and Adaptation of Power Systems

21. In many power systems the level of renewable generation connected to the grid system has been low. The primary generation technology powering the transmission system has traditionally been thermal, based on oil, coal, gas and nuclear. Experience and innovation has led to the development of tools and techniques for the planning and operation of transmission systems. With low levels of renewable generation connected, these tools and techniques for the planning and operation of the transmission system have continued to deliver efficient, economic and reliable power systems.
22. However, the situation is now changing rapidly. Renewable generation is becoming a major contributor to power systems and its contribution is likely to become even bigger. Some systems are predicting that by 2020, up to 50% of installed capacity could be renewable based generation. This will be primarily onshore and offshore wind based generation. Under these scenarios, the existing tools and techniques are unlikely to be sufficient to deliver efficient, economic and reliable power systems. The IAP notes the important work of GO15 in this respect, which has established working groups to study issues related to the management and integration of major power grids with substantial wind power generation capacity integration.
- 23. The IAP recommends to countries with high penetration of renewable energies to address five priority areas: 1) timely reinforcement of transmission and distribution grids to accommodate new distributed generation capacity and changing flow patterns in a financially sustainable way; 2) support of competent authorities to reduce the observed gap in construction times between generation plants (2 to 3 years) and transmission lines (7 to 12 years); 3) deployment of new cyber-secure information and automation technology systems to manage smart grids; 4) smart regulation and market designs that promote and incentivise the deployment of low carbon generation, energy storage, and load response to support grid reliability; and 5) acceleration of the development of worldwide guidelines that promote interoperability between smart grid technologies and solutions.**

Long-term transmission rights: the EU policy and investors perspectives

24. In many countries, the goals of meeting local demand, diversifying supply and building a local industry which generates revenues and employment, represent policy goals to be considered together with the benefits that could be obtained from electricity exports or transit. The IAP addressed the key question on how to integrate electricity from renewable energy sources into the large grid systems and make electrical power available for cross-border trade. One of the central issues in this respect is long-term transmission rights (LTRs), which by guaranteeing access to cross-border transmission capacity can facilitate the necessary cross-border supply contracts.
25. If transmission lines are regulated in a way that allows for a more efficient sharing of balancing energy and reserves across countries, this could reduce both the required total generation capacity and consumer costs and thus increase the attractiveness of further interconnections for governments.
- 26. The IAP underlines the importance of LTRs for independent transmission organisations and proposes that the role of LTRs in promoting power trade between the EU and MENA region should be further assessed. Clear guidelines on LTRs may increase predictability of transmission prices in the electricity markets and support new investments in long-term power supply.**

International Energy Security

27. The IAP discussed the International Index of Energy Security Risk, prepared by the US Energy Institute 21st Century, that provides a comparative analysis of energy security across 25 countries with different levels of economic attainment.
28. The International Index of Energy Security Risk shows that a large energy resource base does not guarantee energy security. The comprehensive assessment of energy security includes four types of factors: 1) global factors that affect all countries and which are largely immune to policy responses; 2) country-specific factors such as resource base, stage of economic development, population density, climate and others; 3) technology innovation and adoption; and 4) energy policies.
29. It was concluded that energy security is complicated because key energy resources are geopolitically concentrated. Most of the world's oil and gas reserves are found in a handful of countries carrying a range of political, security and other investment risks. Further, there is relatively limited overlap between those countries that have the most resources and those that consume the most energy.
30. Changes in the global energy security landscape have been significant. Technological advances such as horizontal drilling, better seismic imaging and hydraulic fracturing, are providing plentiful and affordable energy, especially in the U.S. As China, India, Brazil and the Middle East emerge as major and growing oil consuming countries, the increasing production of unconventional oil and energy sources in the U.S. takes on added significance. It is expected that more energy will be developed and traded across international borders in the coming decades.
- 31. The IAP calls the attention of the Energy Charter to the changing landscape of energy security around the world. Reliance on international energy trade is**

large, growing, and vulnerable to disruptions. The Energy Charter should continue activities to promote energy stability and security by developing new cooperation instruments, including a multilateral early warning mechanism, to help prevent energy supply disruptions.

International Regulatory Cooperation

32. The IAP discussed the importance of modern, balanced, transparent regulatory systems that can give businesses the confidence they need to hire, invest and innovate. In many large scale energy projects, there is a need to align the operation of national regulations in order to mitigate obstacles to investment and trade. It is underlined that international regulatory cooperation of this type imposes no limits on sovereignty. The responsibilities of domestic regulatory agencies are not altered or delegated. Rather, cooperation with overseas counterparts helps regulators examine the way in which other systems address similar issues, in order to reach the most effective solution.
33. A more intertwined, global world of international cooperation is fundamentally desirable. International codes, agreements or regulations are basic tools to diminish uncertainties, create a favourable atmosphere to attract financial and human resources and to help in mitigating risks of all related parties.
34. Investment payback periods in the energy sector often stretch for 25 or 30 years or more. The supply, demand and technological context of such investments can change considerably over the project life. In many cases regulations by contrast do not respond as promptly to market forces and this lack of flexibility can create significant medium term regulatory risks.
35. **In many countries the energy sector suffers from extensive regulations and lengthy lead times that can delay new energy projects. The industry calls on the national governments to streamline siting, permitting, and other regulatory requirements, so that necessary energy infrastructure can move forward with greater predictability.**

Fostering innovation and technology transfer

36. The IAP shared experiences and discussed some case studies of the potential for technology transfer in the energy sector. It was concluded that many technologies already exist to limit greenhouse gas emissions and these should be encouraged. Existing and in some cases new energy technologies to capture CO₂ will have to be adapted or invented and adopted commercially. All technology options should be considered. National and international policies should support wider commercial use of existing technologies to improve demand and supply efficiency and support more sustainable energy supply.
37. Technological cooperation, public-private partnerships, innovative financing, and capacity building, are all needed to facilitate technology transfer and promote energy efficiency in emerging and developing economies. Business innovation would be supported by a greater financial commitment from governments worldwide to reducing the financial risks and incentivising the performance of new technologies.

38. The development of climate-friendly technologies can best be progressed under free market policies that promote competition and respect intellectual property rights. Weakening of the protection of intellectual property rights by any means, including compulsory licensing, undermines the incentive for businesses to invest in creating and bringing new technologies to market. Political, legal or regulatory barriers to technology transfer observed by the business sector include an inadequate trade framework (e.g. high tariffs); discriminatory investment conditions, and lack of adequate IPR protection and general law enforcement.
- 39. The IAP recalls the commitment of the ECT contracting parties to eliminate existing and create no new obstacles to the transfer of technology in the field of energy. Governments are invited to continue efforts aimed at creating an environment conducive to technology transfer. It is noted that the Energy Charter model agreements with IPR standard clause provide a strong reference point for industry on this subject.**

Work Programme for 2015

40. It is proposed that the IAP will meet on three occasions in 2015, with the first meeting scheduled for the first quarter of 2015 in Egypt at the invitation of the Ministry of Petroleum and Mineral Resources of Egypt. The meeting will address the needs of Foreign Direct Investors in developing the energy sector of Egypt and consider the challenges of planned international energy networks, including natural gas transportation between Egypt and the EU via the Arab gas pipeline. The second meeting of 2015 may be held in the month of May or June 2015 in China. The purpose would be to raise awareness about the ECT in the business sector in China and, in particular, the value added by the ECT in promoting cross-border energy infrastructure. The third IAP meeting is proposed for October - November 2015, hosted by the Energy Charter Secretariat to discuss developments in the Energy Charter process and to address issues of cooperation between the business sector and the ECT constituency.
41. Subject to the interest from the Energy Charter constituency, other items for consideration by the IAP during 2015 may include: global energy sector challenges; transit through large scale cross-border infrastructure; investment barriers to energy projects; role of Investment Ombudsman under the Energy Charter; and mediation and conciliation of investment disputes.
42. The IAP remains committed to strengthening interaction with the different subsidiary bodies of the Energy Charter, to promoting the principles of the Energy Charter at relevant international fora, to extending industry advice to the modernisation process of the Energy Charter and to providing expertise and sharing industry experience at Energy Charter events. The IAP is also committed support the Energy Charter Conference and its subsidiary bodies in providing continued policy advice in the course of 2015.