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G20 Research Group
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at the National Research University Higher School of Economics, Moscow
present the

2014 Brisbane G20 Summit Interim Compliance Report

17 November 2014 to 1 March 2015

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“The University of Toronto ... produced a detailed analysis to the extent of which each G20 country has met its commitments since the last summit ... I think this is important; we come to these summits, we make these commitments, we say we are going to do these things and it is important that there is an organisation that checks up on who has done what.”

— *David Cameron, Prime Minister, United Kingdom, at the 2012 Los Cabos Summit*

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9. Energy: Clean Technology

“G20 countries agree to work together to ... Encourage and facilitate the design, development, demonstration ... of innovative energy technologies, including clean energy technologies.”

G20 Principles on Energy Collaboration

Assessment

Country	Lack of Compliance	Work in Progress	Full Compliance
Argentina			+1
Australia			+1
Brazil			+1
Canada			+1
China			+1
France			+1
Germany			+1
India			+1
Indonesia			+1
Italy		0	
Japan			+1
Korea			+1
Mexico			+1
Russia			+1
Saudi Arabia			+1
South Africa	-1		
Turkey			+1
United Kingdom			+1
United States			+1
European Union			+1
Average		+0.85	

Background

The G20 leaders made their first commitment to develop energy efficiency and clean energy technologies at the 2009 London Summit.⁹⁷¹ At the Pittsburgh Summit also in 2009, the G20 leaders reiterated their commitment to stimulate investment in clean energy, renewables and energy efficiency, as well as to provide financial and technical support for such projects in developing countries.⁹⁷² This commitment was reiterated at the 2010 Seoul Summit.⁹⁷³ At the 2011 Cannes Summit, leaders developed the commitment further by referencing the United Nations Secretary General’s Sustainable Energy for All initiative.⁹⁷⁴ At the 2013 St. Petersburg Summit, the leaders once again reaffirmed their commitment to cleaner and more efficient technologies, but also highlighted

⁹⁷¹ Global Plan for Recovery and Reform, G20 Information Center 2 April 2009. Date of Access: 20 January 2015. <http://www.g20.utoronto.ca/2009/2009communiqué0402.html>.

⁹⁷² G20 Leaders Statement: The Pittsburgh Summit, G20 Information Center 25 September 2009. Date of Access: 20 January 2015. <http://www.g20.utoronto.ca/2009/2009communiqué0925.html>.

⁹⁷³ The G20 Seoul Summit Leaders’ Declaration, G20 Information Center 12 November 2010. Date of Access: 20 January 2015. <http://www.g20.utoronto.ca/2010/g20seoul.html>.

⁹⁷⁴ Cannes Summit Final Declaration: Building Our Common Future, G20 Information Center (Toronto) 4 November 2011. Date of Access: 20 January 2014. <http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html>.

the importance of enhancing the efficiency of markets and shifting towards a more sustainable energy future.⁹⁷⁵

Commitment Features

The commitment requires the G20 members to facilitate the design, development, demonstration of innovative energy technologies, focusing particularly on clean energy technologies.

Examples of policy actions that might facilitate the development of new energy technologies include incentives for the private sector to adopt and develop such technologies (implementation of credits and tax credits for private investment in clean energy technology research and development; the establishment of privileged loans for clean technology research and development; and setting up a certification system for companies that invest in clean energy technology research and development, establishment of an emission trading mechanism that would enable private companies to sell carbon credits they gained from investing in clean energy technology research and development), funding existing or launching new public scientific institutions occupied in energy technology research.

According to the International Energy Agency (IEA) clean energy comprises such spheres as renewable energy, electric vehicles, nuclear power and biofuels.⁹⁷⁶ The IEA uses the definition of renewable energy as “energy derived from natural processes (e.g., sunlight and wind) that are replenished at a faster rate than they are consumed. Solar, wind, geothermal, hydro, and some forms of biomass are common sources of renewable energy.”⁹⁷⁷

To achieve full compliance a member should take actions aimed at promotion of new clean energy technologies, while the promotion of new energy technologies which can not be described as “clean” or environmentally friendly constitutes partial compliance.

Scoring Guidelines

-1	Member fails to take actions to promote innovative energy technologies.
0	Member takes actions to promote innovative energy technologies BUT does not take actions to promote clean energy technologies.
+1	Member takes actions to promote innovative including clean energy technologies.

Argentina: +1

Argentina has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative energy technologies.

On 10 December 2014, Miguel Galuccio, President of YPF (Argentinian energy company, in which the government owns 51% of capital), closed a deal with Shamsul Azhar bin Abbas, Vice-President of PETRONAS Logistics and Maritime Business, Malaysia’s oil company, to invest USD550 million in Vaca Muerta, a major deposit of tight oil (shale oil) and shale gas.⁹⁷⁸ Thus, this action might be considered as a step of Argentinean government to promote innovative energy technologies that would be needed for the extraction unconventional energy resources.

⁹⁷⁵ St.Petersburg Summit Leaders’ Declaration, G20 Information Center 6 September 2013. Date of Access: 20 January 2015. <http://www.g20.utoronto.ca/2013/2013-0906-declaration.html>.

⁹⁷⁶ Clean energy technologies, IEA. Date of access 20 January 2015. <http://www.iea.org/topics/cleanenergytechnologies/>.

⁹⁷⁷ FAQ Renewable energy, IEA. Date of access 21 January 2015. <http://www.iea.org/aboutus/faqs/renewableenergy/>.

⁹⁷⁸ YPF cerró un acuerdo de inversión en Vaca Muerta, Fortuna. 10 December 2014. Date of Access 7 April 2015. <http://fortunaweb.com.ar/2014-12-10-153789-yfp-cierra-acuerdo-de-inversion-en-vaca-muerta/>.

On 28 January 2015, YPF and Chinese oil company Sinopec reached a memorandum of understanding with the aim to jointly develop projects to produce oil and gas extraction, both conventional and unconventional (one of the targets for investment will be the Vaca Muerta deposit).⁹⁷⁹

On 19 February, the recently constructed Atucha II nuclear power plant reached its maximum energy production. Argentina's President Cristina Fernandez de Kirchner took part in the ceremony of the plant's inauguration.⁹⁸⁰

Argentina has taken actions to promote innovative clean energy technologies.

On 29 January 2015, the Cristinaapura contratos por obras millonarias con Rusia (a project organized by the National Atomic Energy Commission, the National University of San Martín and five private companies) constructed a pilot solar plant to produce photovoltaic energy at Marambio Base, Argentinean Air Force scientific and military station located on the Antarctic continent.⁹⁸¹

On 21 March 2015, the first meeting of the Argentinean Association of Renewable Energy Installers took place under the aegis of the IRESUD project in order to promote the use of clean energy technologies.⁹⁸²

On 27 March 2015, it was reported that IRESUD and the National Technological University (NTU) had carried out a pilot installation of photovoltaic panels in the Mendoza Regional Faculty of the NTU. At the moment the facility is already producing electric power.⁹⁸³

On 3 April 2015, the Ministry of Federal Planning, Public Investment and Services reported significant progress in the implementation of one of its projects, the construction and commissioning of thermal plant Guillermo. This project (together with the expansion of the port of Bahía Blanca and expanding pipeline capacity in the province) requires USD685 million of investment and will start producing energy in the second quarter of 2015.⁹⁸⁴

⁹⁷⁹ YPF firmó un acuerdo de inversión con la petrolera china Sinopec. *Télam Economía*. 28 January 2015. Date of Access: 7 April 2015. <http://www.telam.com.ar/notas/201501/93274-yfp-petrolera-china-sinopec-acuerdo-inversion-vaca-muerta.html>.

⁹⁸⁰ Atucha 2 Reaches 100% Rated Power, *World Nuclear News*. 19 February 2015. Date of Access: 7 April 2015. <http://www.world-nuclear-news.org/NN-Atucha-2-reaches-100-percent-rated-power-19021502.html>.

⁹⁸¹ Electricidad con paneles solares en la Base Marambio, Proyecto de Interconexión a Red de Energía Solar Urbana Distribuida (IRESUD). 29 January 2015. Date of Access: 7 April 2015. <http://iresud.com.ar/electricidad-con-paneles-solares-en-la-base-marambio/>.

⁹⁸² 1º Encuentro de la Asociación Argentina de Instaladores de Energías Renovables. Electricidad con paneles solares en la Base Marambio, Proyecto de Interconexión a Red de Energía Solar Urbana Distribuida (IRESUD). 10 March 2015. Date of Access: 7 April 2015. <http://iresud.com.ar/1o-encuentro-de-la-asociacion-argentina-de-instaladores-de-energias-renovables/>.

⁹⁸³ La instalación piloto de IRESUD en UTN-Mendoza ya se encuentra inyectando, Proyecto de Interconexión a Red de Energía Solar Urbana Distribuida (IRESUD). 29 January 2015. Date of Access: 1 May 2015. <http://iresud.com.ar/la-instalacion-piloto-de-iresud-en-utn-mendoza-ya-se-encuentra-inyectando/>

⁹⁸⁴ Avanza la construcción de la Central Térmica Guillermo Brown, Ministerio de Planificación Federal, Inversión Pública y Servicios. 3 April 2015. Date of Access: 1 May 2015. <http://www.minplan.gob.ar/noticia/19713/avanza-la-construccion-de-la-central-termica-guillermo-brown.html>

In addition, the construction of two hydroelectric dams in the province of Santa Cruz started in the middle of 2013 is underway, aimed at producing as much as 10% of Argentinean total energy demand in 2008.^{985,986}

During the compliance period Argentina has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Anton Markov

Australia: +1

Australia has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 1 December 2014, the Australian Renewable Energy Agency announced a AUD2 million funding to support the development of a solution for collecting renewable biomass from fast-growing trees.⁹⁸⁷

On 18 February 2015, the Carnegie Perth Wave Energy Project's onshore power station was opened. "This is the first array of wave power generators to be connected to an electricity grid in Australia and worldwide," said the Australian Renewable Energy Agency CEO Ivor Frischknecht. The AUD32 million project was supported by AUD13 million funding from the Australian Renewable Energy Agency.⁹⁸⁸

On 23 March 2015, the first section of the Nyngan Solar Plant in western New South Wales, Australia, was opened and began feeding energy to the National Electricity Market. The plant's current power capacity is 25 megawatts and is expected to reach 102 megawatts on completion. The plant is a part of the AGL solar project, supported by the Australian Renewable Energy Agency with AUD166.7 million.⁹⁸⁹

On 27 March 2015, a new concentrated solar photovoltaic power tower was unveiled in Newbridge, Victoria. This unique facility, which will supply 200 kilowatts to a local agriculture business, was a result of the AUD3.6 million pilot project, supported by AUD1.7 million funding from the Australian Renewable Energy Agency.⁹⁹⁰

On 13 April 2015, the Australian Renewable Energy Agency announced the second round of its Research and Development Programme worth AUD20 million. The program is aimed at supporting "industry-partnered projects that seek to develop and commercialize renewable energy

⁹⁸⁵ China will build and finance two dams in Patagonia equivalent to 10% of Argentine power demand, MercoPress. 22 August 2013. Date of Access: 7 April 2015. <http://en.mercopress.com/2013/08/22/china-will-build-and-finance-two-dams-in-patagonia-equivalent-to-10-of-argentine-power-demand>.

⁹⁸⁶ Las represas y un proyecto distinto, A la Arena. 2 February 2015. Date of Access: 7 April 2015. http://www.laarena.com.ar/opinion-las_represas_y_un_proyecto_distinto-132095-111.html

⁹⁸⁷ Renewable biomass from fast growing trees, Australian Renewable Energy Agency 1 December 2014. Date of access: 14 May 2015. <http://arena.gov.au/media/renewable-biomass-from-fast-growing-trees/>.

⁹⁸⁸ Australia's first renewable energy from a wave power array, Australian Renewable Energy Agency 18 February 2015. Date of access: 14 May 2015. <http://arena.gov.au/media/australias-first-renewable-energy-from-a-wave-power-array/>.

⁹⁸⁹ Australia's largest solar plant fires up, Australian Renewable Energy Agency 23 March 2015. Date of access: 14 May 2015. <http://arena.gov.au/news/australias-largest-solar-plant-fires-up/>.

⁹⁹⁰ First of a kind concentrated solar PV power tower, Australian Renewable Energy Agency 27 March 2015. Date of access: 14 May 2015. <http://arena.gov.au/media/first-of-a-kind-concentrated-solar-pv-power-tower/>.

technologies.”⁹⁹¹ While the first round of the program was devoted to developing solar energy research and development, the second one is to promote collaboration between researchers and industry.⁹⁹²

On 5 May 2015, the Australian Renewable Energy Agency CEO Ivor Frischknecht announced that the first of around 650,000 panels had been installed at AGL Energy Limited’s (AGL) Broken Hill solar photovoltaic plant. The Broken Hill plant is also a part of the AGL solar project, supported by the Australian Renewable Energy Agency funding.⁹⁹³

During the compliance period Australia has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrei Sakharov

Brazil: +1

Brazil has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative energy technologies

On 5 February 2015, a working group from Brazil and the United Kingdom held a meeting in Brasilia that is a part of a project on innovation in the energy sector, in partnership with the Ministry of Science, Technology and Innovation, the National Electric Energy Agency and the Embassy of the United Kingdom, with the performers the CGEE and the Carbon Trust — a European organization that operates in various parts of the world with a mission to accelerate the transition to a sustainable low-carbon economy.⁹⁹⁴

Brazil has taken actions to promote innovative clean energy technologies.

On 5 December 2014, at the Centro de Energias Renováveis da Universidade Federal de Pernambuco it was mentioned that Brazil would become capable of generating about 3.5 gigawatts of solar power. Also, there was emphasized the impact of the call No. 13/2011 and Normative Resolution 482/2012, which promote incorporation of solar power into the whole electricity distribution systems.⁹⁹⁵

On 8 December 2014, the state organization Energy Research Company registered 570 projects to the Alternative Sources Auction (LFA) 2015, scheduled for 27 April 2015. Among them there are

⁹⁹¹ ARENA opens \$20 m R&D round for industry-partnered projects, Australian Renewable Energy Agency 13 April 2015. Date of access: 14 May 2015. <http://arena.gov.au/media/arena-opens-20-m-rd-round-for-industry-partnered-projects/>.

⁹⁹² Research and Development Programme, Australian Renewable Energy Agency. Date of access: 14 May 2015. <http://arena.gov.au/initiatives-and-programmes/research-and-development-programme/>.

⁹⁹³ Solar plant taking shape at iconic Broken Hill. Australian Renewable Energy Agency 5 May 2015. Date of access: 14 May 2015. <http://arena.gov.au/media/solar-plant-taking-shape-at-iconic-broken-hill/>.

⁹⁹⁴ Brasil e Reino Unido Concluem Workshop na Área de Energia, Brazilian Ministério da Ciência, Tecnologia e Inovação 6 February 2015. Date of Access: 1 April 2015.

http://www.mcti.gov.br/noticias/-/asset_publisher/lqV53KMvD5rY/content/brasil-e-reino-unido-concluem-workshop-na-area-de-energia;jsessionid=A958B7B8B38AC90743A04E1F8DFD14E1

⁹⁹⁵ Sudene e UFPE Debatem Utilização de Energia Solar no Nordeste, Portal Brasil 5 December 2014. Date of Access: 1 April 2015.

<http://www.brasil.gov.br/infraestrutura/2014/12/sudene-e-ufpe-debatem-utilizacao-de-energia-solar-no-nordeste>

530 wind farms, totalling 12,865 megawatts of installed capacity, and 40 thermal power plants biomass, totalling 2,067 megawatts.⁹⁹⁶

On 26 December 2014, the National Institute of Technology (INT/MCTI) developed the technology to convert the greenhouse gas, biogas into hydrogen in power by a fuel cell. The study was conducted by a team led by technologist Fábio Bellot Noronha.⁹⁹⁷

On 30 December 2014, the National Institute of Technology of Brazil received about USD2.9 million from the government budget for development of innovation technologies for production and use of biodiesels oils derived from microalgae.⁹⁹⁸

On 31 December 2014, professor of the Federal University of Santa Catarina Roberto Bianchini Derner stated that the institution received about USD 600,000 of the budget funds from the Department of Technological Development and Innovation (Setec) of MCTI to study the potential of microalgae to produce biodiesel.⁹⁹⁹

On 26 January 2015, the Union of Sugar Cane Industry Association (UNICA) and the Trade Chamber (CCEE), Brazilian official body, launched the Green Seal Energy certificate, which is a part of the Bioelectricity Certification Program. It will allow the exchange of information between UNICA and CCEE for confirmation on the contractual origin of the electricity sold by plants powered by sugar cane biomass in the free energy market.¹⁰⁰⁰

On 27 January 2015, in Brasilia, MCTI managers and representatives of the German Agency for International Cooperation held the first meeting of the year for planning actions under the Project Support Heliothermic Energy Development in Brazil (DKTI-CSP). They discussed details of bilateral cooperation in building the first solar thermal plant in Brazil. It is expected to be constructed by the end of 2016. The project has accumulated about USD8.8 million.¹⁰⁰¹

⁹⁹⁶ Leilão Terá 530 Usinas Eólicas e 40 de biomassa, Portal Brasil 8 December 2014. Date of Access: 1 April 2015.

<http://www.brasil.gov.br/infraestrutura/2014/12/leilao-tera-530-usinas-eolicas-e-40-de-biomassa>

⁹⁹⁷ Gás de Lixo Vira Hidrogênio para Produção Limpa de Energia, Instituto Nacional de Tecnologia de Brasil 26 December 2014. Date of Access: 1 April 2015.

<http://www.int.gov.br/sala-de-imprensa/noticias/item/8036-gas-de-lixo-vira-hidrogenio-para-producao-limpa-de-energia>

⁹⁹⁸ INT Ampliará Capacidade de Pesquisa do Biodiesel a Partir de Microalgas, Brazilian Ministério da Ciência, Tecnologia e Inovação 30 Decembre 2014. Date of Access: 1 April 2015.

http://www.mcti.gov.br/visualizar?p_p_auth=Sj5CYUYA&p_p_id=101&p_p_lifecycle=0&p_p_state=maximized&p_p_col_id=column-

[2&p_p_col_count=1&_101_struts_action=%2Fasset_publisher%2Fview_content&_101_assetEntryId=185710&_101_type=content&_101_urlTitle=int-ampliar-capacidade-de-pesquisa-do-biodiesel-a-partir-de-microalgas](http://www.mcti.gov.br/visualizar?p_p_auth=Sj5CYUYA&p_p_id=101&p_p_lifecycle=0&p_p_state=maximized&p_p_col_id=column-2&p_p_col_count=1&_101_struts_action=%2Fasset_publisher%2Fview_content&_101_assetEntryId=185710&_101_type=content&_101_urlTitle=int-ampliar-capacidade-de-pesquisa-do-biodiesel-a-partir-de-microalgas)

⁹⁹⁹ Potencial das Microalgas Estimula Pesquisa com Biodiesel em Santa Catarina, Brazilian Ministério da Ciência, Tecnologia e Inovação 31 Decembre 2014, Date of Access: 1 April 2015.

http://www.mcti.gov.br/visualizar?p_p_id=101&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&_101_urlTitle=potencial-das-microalgas-estimula-pesquisa-com-biodiesel-em-santa-catarina&_101_struts_action=%2Fasset_publisher%2Fview_content&_101_type=content&_101_assetEntryId=188111

¹⁰⁰⁰ UNICA e CCEE Emitem Primeiras Certificações do Selo Energia Verde, Portal Brasil 27 January 2015. Date of Access: 1 April 2015.

<http://www.brasil.gov.br/infraestrutura/2015/01/unica-e-ccee-emitem-primeiras-certificacoes-do-selo-energia-verde>

¹⁰⁰¹ Brasil e Alemanha se Reúnem para Discutir Planejamento de Projeto de Energia Helio térmica, Brazilian Fundação de Desenvolvimento de Pesquisa 27 January 2015. Date of Access: 1 April 2015.

<http://www.fundep.ufmg.br/pagina/3289/brasil-e-alemanha-se-ree-250-nem-para-discutir-planejamento-de-projeto-de-energia-heliotermica-233-rmica.aspx>

On 27 February 2015, the wind farm Geribatu opened in Santa Vitória do Palmar. It is one of the points of expansion, diversification and energy sustainability program in Brazil. The resources of the Growth Acceleration Program (PAC) will enable the country to have 218 Wind Power Plants (UEEs) by 2017 and 130 (60%) of them have already been completed.¹⁰⁰²

On 5 March 2015, Minister of Mines and Energy Eduardo Braga said the government will reduce taxes on distributed energy generation. The measure aims to increase competitiveness of renewable energy sources, especially solar power.¹⁰⁰³

On 13 March 2015, Brazil and the US launched a program in nanotechnology for renewable energy. The collaboration between Brazil and the United States aims to accelerate the development of technologies for renewable and sustainable energy through investments in nanotechnology. In the context of the program there was created the Consortium for Innovation in Nanotechnology, Energy and Materials.¹⁰⁰⁴

During the compliance period Brazil has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Sergey Burok

Canada: +1

Canada has fully complied with the commitment on energy. It has taken actions to promote innovative clean energy technologies.

On 19 December 2014, Canada announced changes to the Aboriginal Renewable Energy Fund to make interim funding available to First Nations and Métis communities for due diligence work required to assess and develop opportunities for participation in the Large Renewable Procurement program. A community energy plan is a comprehensive long-term plan to improve energy efficiency, reduce electricity consumption and assess opportunities for clean energy solutions.¹⁰⁰⁵

On 1 April 2015, Clean Energy Vehicle Program starts for the next three years to invest in charging infrastructure and hydrogen fuelling infrastructure, commercialize fleet purchases of clean energy vehicles, and research and outreach on clean energy transportation technology.¹⁰⁰⁶

During the compliance period Canada has taken actions to promote innovative including clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

¹⁰⁰² Brasil Terá 218 Usinas Eólicas Financiadas Pelo PAC até 2017, Portal Brasil 5 March 2015. Date of Access: 1 April 2015. <http://www.brasil.gov.br/infraestrutura/2015/03/brasil-tera-218-usinas-eolicas-financiadas-pelo-pac-ate-2017>

¹⁰⁰³ Governo Busca Formas de Recompensar Quem Fornecer Excedente de Energia, Portal Brasil 5 March 2015. Date of Access: 1 April 2015. <http://www.brasil.gov.br/infraestrutura/2015/03/governo-busca-formas-de-recompensar-quem-fornecer-excedente-de-energia>

¹⁰⁰⁴ Brasil e EUA Lançam Programa em Nanotecnologia para Energia Renovável, Brazilian Ministério da Ciência, Tecnologia e Inovação 13 March 2015. Date of Access: 1 April 2015. http://www.mcti.gov.br/noticias/-/asset_publisher/lqV53KMvD5rY/content/brasil-e-eua-lancam-programa-em-nanotecnologia-para-energia-renovavel

¹⁰⁰⁵ Aboriginal Energy Partnerships Program. Date of Access: 21 April 2015. <http://www.aboriginalenergy.ca/>

¹⁰⁰⁶ Clean Energy Vehicle for BC (CEVforBC™). Date of Access: 21 April 2015. <https://www.cevforbc.ca/clean-energy-vehicle-program>

China: +1

China has fully complied with the commitment on energy. It has taken actions to promote innovative including clean energy technologies.

On 4 December 2014, the National Development and Reform Commission of China announced plans to develop offshore nuclear power projects, that all will comply with the highest international security standards.¹⁰⁰⁷

On 16 December 2014, Guangxi's first nuclear power send-out electric transmission line, a 500 KV line with two circuits from Fangchenggang Nuclear Power Plant to Haigang Transformer Substation in Qinhuangdao, was put into operation. The transmission line will greatly enhance the current capacity and strengthen the power grid structure to provide a continuous power supply.¹⁰⁰⁸

On 26 December 2014, Zhebei-Fuzhou 1000 KV Ultra-High Voltage AC Power Transmission Project was officially brought into operation. Zhebei-Fuzhou project is the third ultra-high voltage AC power transmission project invested and constructed by State Grid Corporation. It is an important component of the main grid of ultra-high voltage AC power transmission in East China.¹⁰⁰⁹

On 12 January 2015, the Chinese-built 338-megawatt Russei Chrum Krom River hydropower dam in Cambodia Koh Kong province started operation after Cambodian Prime Minister Hun Sen cut the ribbon to inaugurate it.¹⁰¹⁰

On 21 January 2015, the state-owned Assets Supervision and Administration Commission of the State Council announced that HydroChina Corporation will provide the engineering, procurement and construction services for a 104-megawatt wind scheme in Argentina's La Rioja province.¹⁰¹¹

On 5 February 2015, China's National Development and Reform Commission said that ministers of China and Argentina signed a deal to build a pressurized water reactor nuclear power plant in Argentina.¹⁰¹²

On 4 March 2015, China authorities said that China will encourage clean industrial production in 2015 by promoting green technology and more economic use of resources to protect the environment. The central government will launch a program that aims to reduce pollution, cleanse

¹⁰⁰⁷ China plans to develop offshore nuclear power projects, the State Council of the People's Republic of China 4 December 2014. Date of Access: 21 April 2015.

http://english.gov.cn/state_council/ministries/2014/12/05/content_281475019751054.htm

¹⁰⁰⁸ Guangxi's first nuclear power send-out transmission line put into operation, Department of Climate Change in China 16 December 2014. Date of Access: 21 April 2015. <http://en.ccchina.gov.cn/Detail.aspx?newsId=50415&Tid=96>

¹⁰⁰⁹ Big Clean Energy Channel Opened between Zhejiang and Fujian, Zhejiang Provincial Government 26 December 2014. Date of Access: 21 April 2015. http://english.zj.gov.cn/art/2014/12/30/art_5798_1470211.html

¹⁰¹⁰ Chinese-built 338 MW hydropower dam in Cambodia starts operation, the State Council of the People's Republic of China 12 January 2015. Date of Access: 21 April 2015.

http://english.gov.cn/news/international_exchanges/2015/01/13/content_281475038640893.htm

¹⁰¹¹ China to take on wind energy project in Argentina, the Beijing Government 21 January 2015. Date of Access: 21 April 2015. <http://www.ebeijing.gov.cn/BeijingInformation/BeijingNewsUpdate/t1380188.htm>

¹⁰¹² China, Argentina to jointly build nuclear power plant in Argentina, Department of Climate Change in China 5 February 2015. Date of Access: 21 April 2015. <http://en.ccchina.gov.cn/Detail.aspx?newsId=50952&Tid=103>

industries and prompt sustainable development this year. Companies will destroy four million fewer tonnes of coal by the end of 2015 after the ministry helps them with technological upgrades.¹⁰¹³

On 4 March 2015, members of the China National Committee from Hunan signed a proposal to restart Taohuajiang Nuclear Power Plant. According to the proposal a nuclear power plant with the capacity of one million kilowatts can reduce carbon dioxide emissions by over six million tons, and cut the emission of sulphur dioxide and nitrogen oxide and discharge of mercury and other heavy metal pollutants. Nuclear power development is a way to solve Hunan energy problems for its economic and social advance.¹⁰¹⁴

On 18 March 2015, China Ministry of Industry and Information Technology stated in the guideline: “China will create a favorable environment to foster quicker growth in the new energy vehicle sector through intense government-led promotion.” To encourage the production and purchase of new energy vehicles, the guideline set the target of 200,000 units of new energy buses and 100,000 new energy taxis and city logistics delivery vehicles by 2020. China will continue to promote the construction of charging facilities for new energy vehicles in cities and implement tax exemptions and subsidies for car purchases.¹⁰¹⁵

On 19 March 2015, Charge d’Affaires at the Chinese Embassy Zhou Youbin announced that the Chinese Hanergy Group invested USD1 billion to construct a 400-megawatt solar power plant to help boost Ghana’s energy needs.¹⁰¹⁶

During the compliance period China has taken actions to promote innovative including clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Svetlana Nikitina

France: +1

France has fully complied with the commitment on energy. It has taken actions to promote innovative clean energy technologies.

On 15 January 2015, the French government adopted two agreements for future investments. They cover five strategic themes of action: renewable energy, energy and energy efficiency, sustainable building, circular economy, water and biodiversity.¹⁰¹⁷

On April 2015, Ségolène Royal, Minister for Ecology, Sustainable Development and Energy, and Emmanuel Macron, Minister of Economy, Industry and Digital Affairs, adopted the agreement on

¹⁰¹³ China promotes greener industry, Department of Climate Change in China 4 March 2015. Date of Access: 21 April 2015.

<http://en.ccchina.gov.cn/Detail.aspx?newsId=51236&TId=96%22%20title=%22China%20promotes%20greener%20industry>

¹⁰¹⁴ Restart Building of Taohuajiang Nuclear Power Plant Proposed, Hunan Provincial People's Government 4 March 2015. Date of Access: 21 April 2015. http://www.enghunan.gov.cn/wwwHome/201503/t20150305_1217367.htm

¹⁰¹⁵ China to boost new energy vehicles, Department of Climate Change in China 18 March 2015. Date of Access: 21 April 2015. <http://en.ccchina.gov.cn/Detail.aspx?newsId=51535&TId=96>

¹⁰¹⁶ China to help Ghana construct \$1b solar plant, Department of Climate Change in China 19 March 2015. Date of Access: 21 April 2015.

[http://en.ccchina.gov.cn/Detail.aspx?newsId=51585&TId=103%22%20title=%22China%20to%20help%20Ghana%20construct%20\\$1b%20solar%20plant](http://en.ccchina.gov.cn/Detail.aspx?newsId=51585&TId=103%22%20title=%22China%20to%20help%20Ghana%20construct%20$1b%20solar%20plant)

¹⁰¹⁷ Deux conventions pour soutenir les programmes d’investissements d’avenir. Date of Access: 22 May 2015.

<http://www.developpement-durable.gouv.fr/Deux-conventions-pour-soutenir-les.html>

energy efficiency. Companies and governments are committed to promote energy transition to green growth.¹⁰¹⁸ The objectives of the contract are to enhance innovation, competitiveness and new skills.

On 1 April 2015, Royal established new environmental bonus of EUR10,000 for electric vehicles. This action will boost innovations in this area.¹⁰¹⁹

During the compliance period France has taken actions to promote innovative including clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Vitaly Nagornov

Germany: +1

Germany has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative energy technologies.

On 3 December 2014, the Ministry for Economic Affairs and the Ministry for the Environment, Nature Conservation, Building and Nuclear Safety signed an agreement with business associations on the nationwide introduction of energy-efficiency networks.¹⁰²⁰ The core idea of the Energy Efficiency concept lies in increasing production rates whereas reducing energy consumption. Results from a network project had shown that the participating companies make significantly better improvements in their energy efficiency after three to four years than the average for their sector. They cut their greenhouse gas emissions by an average of 1,000 tonnes of carbon dioxide, and they boost their energy productivity twice as quickly as the average for the sector.

On 16 January 2015, the Energy Efficiency Export Initiative support module targeted at innovative technology solutions for energy-efficient buildings established by the German government under the overall control of the Ministry for Economic Affairs and Energy with the slogan “Energy Efficiency — Made in Germany” took effect.¹⁰²¹ Since then the ministry has supported the presentation of innovative German flagship projects for energy-efficient solutions in building abroad.

Germany has taken actions to promote innovative clean energy technologies.

On 20 November 2014, the German government hosted the international Pledging Conference of the Green Climate Fund (GCF) in Berlin. The outcome was the agreement on the initial financing of USD9.3 billion, a substantial contribution to climate action in developing countries.¹⁰²² The goal of the GCF is to support developing countries — in particular the poor and vulnerable — on their road to low-emission, climate-resilient development. At the Petersburg Climate Dialogue in July,

¹⁰¹⁸ Ségolène Royal et Emmanuel Macron réunissent le comité stratégique de filière éco-industries et valident le contrat de filière sur l'efficacité énergétique. Date of Access: 22 May 2015. http://www.developpement-durable.gouv.fr/Segolene-Royal-et-Emmanuel-Macron,43006.html?var_mode=calcul

¹⁰¹⁹ Voitures électriques : des ventes en forte hausse grâce au nouveau bonus écologique de 10 000 € Date of Access: 22 May 2015. <http://www.developpement-durable.gouv.fr/Voitures-electriques-des-ventes-en,43350.html>

¹⁰²⁰ Bundesregierung Und Verbände Der Wirtschaft Bringen Initiative Energieeffizienz-Netzwerke Auf Den Weg, Bundesministerium für Wirtschaft und Energie 3 December 2014. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=672894.html>.

¹⁰²¹ Neues Fördermodul Gestartet: Exportinitiative Präsentiert Deutsche Leuchtturmprojekte Für Energieeffizienz Im Ausland, Bundesministerium für Wirtschaft und Energie 16 January 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=679694.html>.

¹⁰²² Grüner Klimafonds Macht Mut Für Weltweites Klimaabkommen, Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung 20 November 2014. Date of Access: 9 April 2015. <http://www.bmz.de/20141120-2>.

Chancellor Angela Merkel already announced a German contribution of 750 million euros making Germany the first donor country to the GCF.

On 28 January 2015, an ordinance was adopted that creates the legal basis for pilot auctions of ground-mounted photovoltaic installations — energy equipment based on solar power.¹⁰²³ The expansion targets for renewable energies are reached in a predictable and cost-efficient way based on a competition-based procedure of auctions. The first auction was launched on 24 February.¹⁰²⁴

On 3 February 2015, the Ministry for Economic Affairs and Energy announced a new funding program for grid operating power systems.¹⁰²⁵ The program is aimed at supporting the development and piloting of grid systems and initiating them in a number of pilot regions. The ministry planned to provide up to EUR80 million for at least two large showcase regions. The term “smart grid” describes the communicative connection of actors in the energy supply system to the power supply grid.¹⁰²⁶ Smart grids provide system integrity to feed-in electricity from up to 100% renewable energy.

On 9 February 2015, the Ministry for Economic Affairs and Energy published “Key Principles for the Package of Ordinances Governing Smart Grids.” In line with the Coalition Agreement, this document set out binding rules for the future use of smart meters.¹⁰²⁷ Smart measurement systems involve meters that can communicate, measure and visualize power consumption and have other functions for energy management by integration with power consumers and generators.¹⁰²⁸ Their primary function is to enable more renewable energy to be integrated into the market.

On 10 February 2015, the final investment decision for the NordLink submarine cable between Norway and Germany was taken. It will enable the exchange of electricity generated from renewable energy sources. “This is an important step towards efficient trade and more security of supply for Norway and for Germany,” said Rainer Baake, State Secretary at Federal Ministry for Economic Affairs and Energy.¹⁰²⁹

During the compliance period Germany has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Sergei Titov

¹⁰²³ Gabriel: Erste Ausschreibungsrunde Photovoltaik-Freiflächenanlagen Kann Im Februar 2015 Starten, Bundesministerium für Wirtschaft und Energie 28 January 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/EN/Press/press-releases,did=688792.html>.

¹⁰²⁴ Wettbewerb Statt Feste Fördersätze: Bundesnetzagentur Startet Photovoltaik-Freiflächenausschreibungen, Bundesministerium für Wirtschaft und Energie 24 February 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Themen/energie,did=692236.html>.

¹⁰²⁵ Gabriel Startet Wettbewerb Für Schaufenster Zur Intelligenten Energieversorgung Der Zukunft, Bundesministerium für Wirtschaft und Energie 3 Februar 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=688488.html>.

¹⁰²⁶ Intelligente Netze Und Intelligente Zähler, Bundesministerium für Wirtschaft und Energie. Date of Access: 9 April 2015. <http://www.bmwi.de/EN/Topics/Energy/Grids-and-grid-expansion/smart-grids,did=667688.html>.

¹⁰²⁷ Staatssekretär Baake: Smart Meter Wesentlicher Baustein Für Energiewende Und Energieeffizienz, Bundesministerium für Wirtschaft und Energie 9 Februar 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=688488.html>.

¹⁰²⁸ Intelligente Netze Und Intelligente Zähler, Bundesministerium für Wirtschaft und Energie. Date of Access: 9 April 2015. <http://www.bmwi.de/EN/Topics/Energy/Grids-and-grid-expansion/smart-grids,did=667690.html>.

¹⁰²⁹ Staatssekretär Baake Reist Zu Energiepolitischen Gesprächen nach Oslo, Bundesministerium für Wirtschaft und Energie 19 February 2015. Date of Access: 9 April 2015. <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=690986.html>.

India: +1

India has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 8 January 2015, Arun K. Tripathy, Energy Director at the Ministry of New and Renewable Energy, presented the financial problems of solar rooftop projects to the a meeting of officials from nationalized public sector and private sector banks, international financial institutions and other government agencies and invited them to take part in the New Solar Entrepreneurship scheme. It was decided to create a workgroup on the issue of financing this project, the main target of which is 40,000 megawatt peak grid-connected rooftop solar photovoltaic (PV) systems.¹⁰³⁰

On 26 January 2015, the Ministry of New and Renewable Energy invited entrepreneurs to take part in “Grid Connected Rooftop and Small Solar Power Plants Programme.” The invitation lists the incentives for entrepreneurs to adopt these technologies, such as 15% subsidy on the capital cost of the system and the bank interest subsidy.¹⁰³¹

In March 2015, the Ministry of New and Renewable Energy published guidelines for the selection of 3,000 megawatt grid — “Connected Solar PV Power Projects under Batch-II ‘State Specific Bundling Scheme’.” The document explains what the national solar mission is — declaring that India has a goal of being a global leader in solar energy by 2022, gradually increasing its solar power capacity.¹⁰³²

On 5 March 2015, Tripathi expressing the sanctions of the President of India for implementing a project to set up of 15,000 megawatts of grid-connected solar PV power plants through NTPC Ltd. noticed that developers will be from both public and private sectors.¹⁰³³

On 30 March 2015, the Ministry of New and Renewable Energy published physical progress in 2014-2015, where the targets of use of renewable energy sources are compared with achievements and cumulative achievements are calculated. India has implemented the plan for neither of sectors. However, progress is observed for all the types of energy except biomass power and gasification. Wind, small hydro and solar power have the largest capacity.¹⁰³⁴

During the compliance period India has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Anastasiia Matiukhina

¹⁰³⁰ Ministry of New and Renewable Energy (Grid Connected Rooftop Solar Power Division) Office Memorandum, Ministry of New and Renewable Energy Government of India 9 February 2015. Date of Access: 7 April 2015. <http://mnre.gov.in/file-manager/UserFiles/MoM-grid-connected-solar-rooftop-09022015.pdf>.

¹⁰³¹ Invitation of Application for Empanelment of Channel Partners/New Entrepreneurs, Ministry of New and Renewable Energy Government of India 26 January 2015. Date of Access: 7 April 2015 <http://mnre.gov.in/file-manager/UserFiles/Notification-Regarding-Extension-of-date-for-Guidelines-for-Empanelment-of-Channel-Partner-for-GCRTE.pdf>.

¹⁰³² Guidelines for Selection of 3000 MW Grid – Connected Solar PV Power Projects under Batch-II “State Specific Bundling Scheme”, Ministry of New and Renewable Energy Government of India March 2015. Date of Access: 7 April 2015 <http://mnre.gov.in/file-manager/UserFiles/Final-draft-3000-MW-Tranche-1-Draft-Guidelines-State-Specific-Bundling-Scheme.pdf>.

¹⁰³³ Implementation of Project for Setting up of 15,000 MW of Grid-Connected Solar PV Power Plants through NTPC Ltd., Ministry of New and Renewable Energy Government of India 5 March 2015. Date of Access: 7 April 2015 <http://mnre.gov.in/file-manager/UserFiles/Scheme-for-15000-MW-through-NTPC-NVVN.pdf>.

¹⁰³⁴ Programme/ Scheme wise Physical Progress in 2014-15, Ministry of New and Renewable Energy Government of India 30 March 2015. Date of Access: 7 April 2015 <http://mnre.gov.in/mission-and-vision-2/achievements/>.

Indonesia: +1

Indonesia has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 27 November 2014, the Indonesian state-owned electricity company PLN and the government announced their plans to build hydro power plants with a capacity of 6,300 megawatts within the next ten years.¹⁰³⁵

On 16 March 2015, the Indonesian government increased the amount of mandatory biofuel for 2015 to 15%. This measure will help reduce dependency on imported diesel fuel. It is also in line with the National Energy Policy, which sets the target of increasing the share of renewable energy in national energy mix to 23% by 2025.¹⁰³⁶

On 9 April 2015, Sudirman Said, Minister of Energy and Mineral Resources, announced the allocation of IDR115 billion for renewable energy infrastructure development in Sumba Island. This island is to become an example of efficient renewable energy utilization and a source of experience to be further used in other regions of the country.¹⁰³⁷

During the compliance period Indonesia has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrey Shelepon

Italy: 0

Italy has partially complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative energy technologies.

On 24-25 November 2015, the Italian Ministry of Environment organized a workshop in Naples devoted to promoting renewable sources of energy. Among the issues discussed were policy mechanisms and goals of renewable sources development, burden sharing, and synergies between renewables and regional economies.¹⁰³⁸

On 24 April 2015, Federica Guidi, Italian Minister of Economic Development, signed a decree allocating EUR120 million for the needs of the *Energie Rinnovabili e Risparmio Energetico* program.

¹⁰³⁵ 6.300 MW PLTA in the Next Ten Years, Ministry of Energy and Mineral Resources of Indonesia 27 November 2014. Access date: 17 April 2015. <http://www.esdm.go.id/index-en/83-energy/7016-6300-mw-plta-in-the-next-ten-years.html>.

¹⁰³⁶ Government Increases Biofuel Mandatory, Ministry of Energy and Mineral Resources of Indonesia 16 March 2015. Access date: 17 April 2015. <http://www.esdm.go.id/index-en/83-energy/7182-government-increases-biofuel-mandatory.html>.

¹⁰³⁷ Sumba Island is the Sample for Renewable Energy Utilization, Ministry of Energy and Mineral Resources of Indonesia 8 April 2015. Access date: 17 April 2015. <http://www.esdm.go.id/index-en/83-energy/7211-sumba-island-is-the-sample-for-renewable-energy-utilization.html>.

¹⁰³⁸ Fonti Rinnovabili: accesso ai fondi e opportunità per imprese, professionisti e amministrazioni pubbliche, Italian Ministry of the Environment 25 November 2014. Date of access: 17 May 2015. <http://www.minambiente.it/notizie/fonti-rinnovabili-accesso-ai-fondi-e-opportunita-imprese-professionisti-e-amministrazioni>.

These funds will help the companies with productive facilities in the regions of Calabria, Campania, Apulia and Sicily which want to invest in energy effective projects.¹⁰³⁹

During the compliance period Italy has acted to promote innovative energy technologies. However, no actions were taken to promote clean energy technologies. Thus, it is awarded a score of 0.

Analyst: Andrei Sakharov

Japan: +1

Japan has fully complied with the commitment on energy.

On 22 January 2015, the Agency for Natural Resources and Energy partially revised the ordinance for enforcing the act on special measures concerning procurement of electricity from renewable energy sources by electricity utilities, including development of an innovative system to assess a new output-control scheme.¹⁰⁴⁰

On 18 December 2014, the Agency for Natural Resources and Energy announced that a report titled “Revision of the Current Operation System for the Feed-in Tariff Scheme toward the Maximum Introduction of Renewable Energy” has been compiled.¹⁰⁴¹ The report concerns the shift from the current system to a system with a new output-control scheme and revision of the current operation system.

On 24 March 2015, the cabinet decided to approve the Bill for the Act for the Improvement of the energy saving performance of buildings.¹⁰⁴² It stipulates innovative measures to establish new system for authorizing a plan submitted by businesses to improve energy saving performance.

During the compliance period Japan has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Vitaly Nagornov

Korea: +1

Korea has fully complied with the commitment to promote innovative clean energy technologies.

On 25 November 2015, a program to build environmentally friendly “zero energy housing” test beds was launched in Seoul. The project worth KRW 44.2 billion aims to build 121 housing units in three seven-storied apartment buildings and a number of townhouses. The test bed will employ

¹⁰³⁹ Efficienza Energetica 2015: 120 milioni per sostenibilità ed efficienza, Italian ministry of Economic Development 24 April 2015. Date of access: 17 May 2015. <http://www.sviluppoeconomico.gov.it/index.php/it/incentivi/energia/bando-efficienza-energetica>.

¹⁰⁴⁰ Promulgation of the Ministerial Ordinance and the Related Public Notices for Partially Revising the Ordinance for Enforcement of the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities. Date of Access: 22 April 2015. http://www.meti.go.jp/english/press/2015/0122_02.html

¹⁰⁴¹ ANRE Compiled a Report Titled “Revision of the Current Operation System of the Feed-in Tariff Scheme toward the Maximum Introduction of Renewable Energy”. Date of Access: 22 April 2015. http://www.meti.go.jp/english/press/2014/1218_01.html

¹⁰⁴² Cabinet Decision on the Bill for the Act for the Improvement of the Energy Saving Performance of Buildings. Date of Access: 22 April 2015. http://www.meti.go.jp/english/press/2015/0324_03.html

technologies that avoid using fossil fuels for heating, air conditioning, warm water, lighting, and ventilation.¹⁰⁴³

On 19 March 2015, the Korea International Cooperation Agency launched a three-week program on Sustainable Energy Development and Policy involving 15 government officials responsible for energy management and policy from Jordan. The program's objectives include assistance in understanding various activities and policies on sustainable energy including renewable energy and green energy; learning of recent technological developments and policy directions in energy; exchanging views on urgent energy issues in Korea and Jordan; and strengthening future cooperation in sustainable energy development between the two countries.¹⁰⁴⁴

During the compliance period Korea has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrei Sakharov

Mexico: +1

Mexico has fully complied with the commitment on clean energy technologies.

In December 2014, the Mexican Secretariat of Energy (SENER), Electric Power Saving Trust Fund (Fideicomiso para el Ahorro de Energía Eléctrica [FIDEI]) and DICONSA (a state-owned company) distributed 38.9 million of energy-efficient lamps in the rural communities. The rural citizens could exchange their lamps for energy-efficient lamps in 30 stores, 274 rural stores and more than 27,000 benches benefiting 7.7 million families.¹⁰⁴⁵

Starting from 1 January 2015, 40 watt light bulbs are not sold in Mexico. This measure intends to decrease energy consumption in the country as well as to reduce greenhouse gas emissions equivalent to 500,000 tons of carbon dioxide per year. In addition SENER, FIDEI and DICONSA will launch a program for fluorescent lamps distribution in four Mexican states.¹⁰⁴⁶

In January 2015, the Mexican National Commission for the Efficient Use of Energy (Conuee) in cooperation with Super-efficient Equipment and Appliance Deployment (SEAD) Initiative launched software to evaluate street lightings. The program helps to estimate quality of light and energy consumption of street lightings by use of photometric analysis.¹⁰⁴⁷

On 20 January 2015, Juan José Guerra Abud, Mexican Minister for Environment and Natural Resources, met with Duncan Taylor, United Kingdom Ambassador to Mexico, to discuss

¹⁰⁴³ Zero energy housing eliminating any need for a heating bill will be built in the Nowon district, South Korean Ministry of Land, Infrastructure and Transport 28 May 2015. Date of Access: 25 November 2014. <http://goo.gl/Q2sEzQ>.

¹⁰⁴⁴ Sustainable Energy Development and Policy (Jordan). Korea International Cooperation Agency 17 March 2015. Date of Access: 3 June 2015. http://www.koica.go.kr/english/board/whats_new/1319418_3545.html.

¹⁰⁴⁵ Apoya Diconsa el Programa de Ahorro de Energía. 31 December 2014. Date of assess: 23 February 2015. http://www.sedesol.gob.mx/es/SEDESOL/Comunicados/_rid/57/2732/apoya-diconsa-el-programa-de-ahorro-de-energia.

¹⁰⁴⁶ Ya no se venderán lámparas incandescentes de 40 watts o más. 20 January 2015. Date of assess: 23 February 2015. <http://www.presidencia.gob.mx/ya-no-se-venderan-lamparas-incandescentes-de-40-watts-o-mas/>.

¹⁰⁴⁷ Conuee promueve software para evaluación de luminarias de alumbrado public. 16 January 2015. Date of assess: 23 February 2015. <http://www.iluminet.com/software-alumbrado-conuee-iluminacion/>.

strengthening bilateral cooperation in environment and clean energy spheres. The meeting was also attended by senior Mexican and UK energy and climate officials.¹⁰⁴⁸

During the compliance period Mexico has taken actions to promote innovative clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Elizaveta Safonkina

Russia: +1

Russia has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 9 December 2014, the government of the Russian Federation approved the plan of the implementation of the “Energy Efficiency and Energy Development” program prepared by the Ministry of Energy. It provides an increase in government spending by 6,844 billion rubles in 2014-2016. Implementation of the program, according to the government, will result in reduction of energy intensity of the Russian economy by 12.7% by 2020 (compared to 2007). The program is also aimed at upgrading of the Russian electric energy production capacities through the implementation of both domestic and foreign innovative energy technologies.¹⁰⁴⁹ The sub-program 6 of the plan approved by the government provides for the development of renewable sources of energy, including through direct government subsidies on renewable energy sources’ connection to power grids.¹⁰⁵⁰

On 23 January 2015, the government approved a decree on stimulating renewable energy sources in retail electricity markets. This document will allow to improve the mechanisms supporting generating companies employing renewable energy technologies, through enhanced modalities of long-term tariff regulation of such companies. These mechanisms apply to green energy facilities, utilizing biogas, biomass, landfill gas and other renewable energy sources.¹⁰⁵¹

During the compliance period Russia has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrei Sakbarov

Saudi Arabia: +1

Saudi Arabia has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 5 May 2015, a memorandum of joint cooperation was signed between King Abdullah City for Atomic and Renewable Energy (K.A.CARE) and Al Mediana Al Munawara Municipality. K.A.CARE is a state entity established by royal decree in 2010 to build “a sustainable future for Saudi Arabia by developing a substantial alternative energy capacity fully supported by world-class local

¹⁰⁴⁸ México y Reino Unido refrendan compromiso de colaboración ambiental. 20 January 2015. Date of access: 23 February 2015. <http://saladeprensa.semarnat.gob.mx/index.php/noticias/2006-mexico-y-reino-unido-refrendan-compromiso-de-colaboracion-ambiental>,

¹⁰⁴⁹ On approval of the new version of the “Energy efficiency and energy development” state program, Government of Russia 15 April 2014. Date of access: 11 June 2015. <http://government.ru/docs/11951>.

¹⁰⁵⁰ Government of Russia Decree No. 2445-p, Government of Russia 3 December 2014. Date of access: 11 June 2015.. <http://government.ru/media/files/aRtaG8E5Rys.pdf>.

¹⁰⁵¹ On stimulating renewable energy sources in retail electricity markets, Government of Russia 23 January 2015. Date of access: 11 June 2015. <http://government.ru/docs/16633/>.

industries.”¹⁰⁵² The memorandum signed by the two parties provides for carrying out a joint study to develop renewable energy system in Al Madinah Al Monawara area, measuring renewable energy resources potential, developing solutions and renewable energy stations, promoting education and technical training, as well as developing industries and services relevant to renewable energy in the area. The parties will focus on cooperation in developing solar and wind sources of energy.¹⁰⁵³

During the compliance period Saudi Arabia has taken actions to promote innovative clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrei Sakharov

South Africa: -1

South Africa has failed to comply with the commitment on energy.

No evidence of actions taken by South Africa to promote innovative energy technologies was registered during the compliance period. Thus it has been awarded a score of -1.

Analyst: Lyudmila Tarasenko

Turkey: +1

Turkey has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 30 January 2015, Turkish President Recep Tayyip Erdoğan attended to the opening ceremony of Geycek Wind Power Plant. The President highlighted Turkey’s commitment to the renewable energy and informed that the government will introduce more encouraging incentives for investments in renewable energy.¹⁰⁵⁴ Currently implemented initiatives of this kind include interest-free loans for renewable energy production and for projects to improve energy efficiency and reduce environmental impact.¹⁰⁵⁵

On 30 March 2015, a Letter of Intent on Cooperation in the Sphere of Energy between the Ministry of Infrastructure of the Republic of Slovenia and the Ministry of Energy and Natural Resources of the Republic of Turkey was signed. The document provides for stronger cooperation between Turkey and Slovenia in the energy sphere, including natural gas and renewable energy.¹⁰⁵⁶

In 2014, the Turkish ministry of energy and natural resources informed that photovoltaic plant licenses will be given to 600 megawatts of installed capacity as a result of the technical evaluations of

¹⁰⁵² The Establishing Order, K.A.CARE. Date of Access: 21 May 2015. http://www.kacare.gov.sa/en/?page_id=71.

¹⁰⁵³ King Abdullah City for Atomic and Renewable Energy and Al Mediana Al Munawara Municipality sign a memorandum of joint cooperation, K.A.CARE 6 May 2015. Date of Access: 21 May 2015. <http://www.kacare.gov.sa/en/?p=1695>.

¹⁰⁵⁴ We are determined to carry Turkey to its 2023 goals with an understanding of balanced and sustainable development, Presidency of the Republic of Turkey 30 January 2015. Date of Access: 28 April 2015. <https://www.tccb.gov.tr/news/397/92129/we-are-determined-to-carry-turkey-to-its-2023-goals-with-an-understanding-of-balanced-and-sustainabl.html>.

¹⁰⁵⁵ World Investment Report 2014, UNCTAD 30 April 2014. Date of Access: 28 April 2015. http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf.

¹⁰⁵⁶ The relations between Turkey and Slovenia will grow stronger in all spheres, Presidency of the Republic of Turkey 30 March 2015. Date of Access: 28 April 2015. <http://www.tccb.gov.tr/content.asp?caid=397&cid=92754&categoryName=news&header=the-relations-between-turkey-and-slovenia-will-grow-stronger-in-all-spheres>.

the applications to the Energy Market Regulatory Authority. This capacity will be increased in the coming years to reach a target of 3,000 megawatts (MW) installed capacity of licensed photovoltaic plants by 2023.¹⁰⁵⁷ The ministry also plans to double the capacity of geothermal power plants and develop other innovative energy facilities.¹⁰⁵⁸ According to the World Bank, “Turkey is aiming for a share of electricity generated from renewable sources of at least 30% of total installed capacity by 2023, mainly through utilizing technically and economically viable hydro potential and 20,000 MW of wind-installed capacity.” Ministry of energy and natural resources of Turkey currently works in partnership with the European Bank for Reconstruction and Development and other institutions to implement a project worth USD475 million aimed at strengthening the transmission system and facilitating large-scale renewable energy generation, including the installation of 600 MW of wind power plants.¹⁰⁵⁹

During the compliance period Turkey has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Nadezhda Sporysheva

United Kingdom: +1

The United Kingdom has fully complied with the commitment to promote innovative energy technologies. It has taken actions to promote innovative clean energy technologies.

On 25 February 2015, 40 new technologies in the energy sector funded through the first round of Innovate UK’s Energy Catalyst program were announced. The program is designed to help reduce carbon emissions, increase security of energy supply and cut its cost. The government will provide GBP24.5 million of funding for the winning projects.¹⁰⁶⁰

The Department for International Development is currently engaged in the project in Bangladesh aimed at climate change mitigation and providing access to clean energy for the rural poor in off-grid areas of the country. The total project financing by end of March 2017 will amount to GBP20 million.¹⁰⁶¹

During the compliance period the UK has taken actions to promote innovative energy technologies, including clean energy technologies. Thus, it is awarded a score of +1.

Analyst: Andrey Shelepov

United States: +1

The United States has fully complied with the commitment on energy. It has implemented policies to encourage the development of innovative energy technologies, including clean energy technologies.

¹⁰⁵⁷ Solar, Ministry of Energy and Natural Resources of Turkey 2014. Date of Access: 28 April 2015. <http://www.enerji.gov.tr/en-US/Pages/Solar>.

¹⁰⁵⁸ Geothermal, Ministry of Energy and Natural Resources of Turkey 2014. Date of Access: 28 April 2015. <http://www.enerji.gov.tr/en-US/Pages/Geothermal>.

¹⁰⁵⁹ World Bank Group – Turkey Partnership: Country Program Snapshot, World Bank April 2015. Date of Access: 28 April 2015. <http://www.worldbank.org/content/dam/Worldbank/document/eca/Turkey-Snapshot.pdf>.

¹⁰⁶⁰ Government invests £25 million in game-changing green technologies, UK Government 25 February 2015. Access date: 17 April 2015. <https://www.gov.uk/government/news/government-invests-25-million-in-game-changing-green-technologies>.

¹⁰⁶¹ Providing Clean Energy to the Rural Poor of Bangladesh, Development Tracker 27 March 2015. Access date: 17 April 2015. <http://devtracker.dfid.gov.uk/projects/GB-1-202976/>.

On 10 December 2014, the US Department of Energy provided USD12.5 billion in loan guarantees to promote innovative nuclear energy projects. The whole loan guarantee package to support innovative energy projects has reached USD40 billion, including projects in such areas as fossil energy, renewable energy, advanced technology vehicle manufacturing.¹⁰⁶²

On 16 December 2014, the Department of Energy's Advanced Research Projects Agency — Energy (ARPA-E) awarded USD60 million for 22 innovative projects aimed at detecting and measuring methane emissions and developing thermal management systems that reduce the energy needed to heat and cool buildings.¹⁰⁶³

On 31 December 2014, the Department of Energy finalized the new standards for general service fluorescent lamps and automatic commercial ice makers, which will contribute to the reduction of carbon dioxide emissions and reduce electricity bills for American households.¹⁰⁶⁴

On 7 January 2015, ARPA-E made its third USD125 million open funding opportunity announcement to promote disruptive new energy technologies which are beyond the focus of existing ARPA-E programs.¹⁰⁶⁵

On 22 January 2015, the Department of Energy awarded more than USD55 million to support clean vehicle technologies, which will improve energy efficiency and reduce petroleum consumption. The department has also announced up to USD35 million to support hydrogen and fuel cell technologies.¹⁰⁶⁶

On 29 January 2015, the Department of Energy pledged more than USD59 million to promote solar innovation. USD45 million will be spent on solar technologies commercialization and more than USD14 million will be awarded to help communities create solar deployment plans.¹⁰⁶⁷

On 30 January 2015, the Department of Energy promised to renew funding for the Consortium for the Advanced Simulation of Light Water Reactors (CASL), which is engaged with virtual nuclear reactor analyzing. CASL will be awarded up to USD121.5 million in the next five years, subject to

¹⁰⁶² Department of Energy Issues Final \$12.5 Billion Advanced Nuclear Energy Loan Guarantee Solicitation, U.S. Department of Energy 10 December 2014. Date of Access: 16 April 2015. <http://energy.gov/articles/department-energy-issues-final-125-billion-advanced-nuclear-energy-loan-guarantee>.

¹⁰⁶³ Department of Energy Announces 22 New Projects to Enable Emissions Reductions and Improve Energy Efficiency, U.S. Department of Energy 16 December 2014. Date of Access: 16 April 2015. <http://energy.gov/articles/department-energy-announces-22-new-projects-enable-emissions-reductions-and-improve-energy>.

¹⁰⁶⁴ New Energy Efficiency Standards to Help Americans Save Money by Saving Energy, Cut Carbon Pollution, U.S. Department of Energy 31 December 2014. Date of Access: 16 April 2015. <http://energy.gov/articles/new-energy-efficiency-standards-help-americans-save-money-saving-energy-cut-carbon>.

¹⁰⁶⁵ Secretary Moniz Announces \$125 Million OPEN Solicitation for Transformational Energy Projects, U.S. Department of Energy 7 January 2015. Date of Access: 16 April 2015. <http://energy.gov/articles/secretary-moniz-announces-125-million-open-solicitation-transformational-energy-projects>.

¹⁰⁶⁶ U.S. Department of Transportation Announces \$55 Million in Grants To Put More Zero-Emission Buses Into Service Across America, U.S. Department of Transportation 5 February 2015. Date of Access: 19 April 2015. <http://www.dot.gov/briefing-room/us-department-transportation-announces-55-million-grants-put-more-zero-emission-buses>.

¹⁰⁶⁷ Energy Department Announces More Than \$59 Million Investment in Solar, U.S. Department of Energy 29 January 2015. Date of Access: 16 April 2015. <http://energy.gov/articles/energy-department-announces-more-59-million-investment-solar>.

congressional appropriations, to extend its modeling and simulation tools to include new nuclear reactor designs.¹⁰⁶⁸

On 2 February 2015, US Secretary of Energy Ernest Moniz presented the Department of Energy's USD30 billion fiscal year 2016 budget request, which is 9% higher than fiscal year 2015 budget. The proposed budget comprises USD4.8 million to support energy innovation and USD5.34 billion to promote discovery research across the sciences.¹⁰⁶⁹

On 5 February 2015, the US Department of Transportation's Federal Transit Administration awarded USD55 million to 10 projects to put innovative, energy-efficient buses on the road. This will help to improve energy efficiency.¹⁰⁷⁰

On 11 February 2015, the Department of Energy launched the Office of Technology Transitions (OTT) to facilitate the commercialization of department's research. OTT will manage the nearly USD20 million Energy Technology Commercialization Fund and closely cooperate with national laboratories and companies to promote the transition of new technologies to the market.¹⁰⁷¹

On 9 April 2015, the Department of Energy pledged USD200 million for a next-generation supercomputer Aurora to the Argonne Leadership Computing Facility and USD10 million for a high-performance computing research and development program DesignForward to the department's Office of Science and National Nuclear Security Administration. The delivery of Aurora is planned for 2018; Aurora will be open to all scientific users. These investments will promote new low-carbon energy technologies.¹⁰⁷²

The United States has also taken steps to encourage the development of innovative energy technologies in cooperation with other countries.

On 4 March 2015, the Department of Energy announced USD12.5 million for a new technical track under the US-China Clean Energy Research Center (CERC) over the next five years. This funding will be matched by USD12.5 million by the CERC partners and by USD25 million by Chinese counterparts for a total of USD50 million. CERC initiatives comprise research, development and deployment of clean vehicles, building energy efficiency, and promoting advanced coal technologies including carbon capture and storage by teams of scientists and engineers from the US and China.¹⁰⁷³

¹⁰⁶⁸ Energy Department Announces Five Year Renewal of Funding for First Energy Innovation Hub, U.S. Department of Energy 30 January 2015. Date of Access: 16 April 2015. <http://energy.gov/articles/energy-department-announces-five-year-renewal-funding-first-energy-innovation-hub>.

¹⁰⁶⁹ Energy Department Presents FY16 Budget Request, U.S. Department of Energy 2 February 2015. <http://energy.gov/articles/energy-department-presents-fy16-budget-request>.

¹⁰⁷⁰ U.S. Department of Transportation Announces \$55 Million in Grants To Put More Zero-Emission Buses Into Service Across America, the U.S. Department of Transportation 5 February 2015. Date of Access: 30 April 2015. <http://www.dot.gov/briefing-room/us-department-transportation-announces-55-million-grants-put-more-zero-emission-buses>.

¹⁰⁷¹ Energy Department Announces New Office of Technology Transitions, U.S. Department of Energy 11 February 2015. Date of Access: 16 April 2015. <http://energy.gov/articles/energy-department-announces-new-office-technology-transitions>.

¹⁰⁷² U.S. Department of Energy Awards \$200 Million for Next- Generation Supercomputer at Argonne National Laboratory, U.S. Department of Energy 9 April 2015. Date of Access: 16 April 2015. <http://energy.gov/articles/us-department-energy-awards-200-million-next-generation-supercomputer-argonne-national>.

¹⁰⁷³ U.S.-China Clean Energy Research Center Issues Solicitation to Address the Energy-Water Nexus, U.S. Department of Energy 4 March 2015. Date of Access: 17 April 2015. <http://energy.gov/articles/us-china-clean-energy-research-center-issues-solicitation-address-energy-water-nexus>.

The United States has taken actions to promote the development of innovative energy technologies, including clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Tatiana Lanshina

European Union: +1

The European Union has fully complied with the commitment on energy. The EU takes actions to promote innovative including clean energy technologies.

On 26 November 2014, the European Commission announced an investment plan to stimulate economic growth and employment in the EU. The plan includes the creation of a new European Fund for Strategic Investments to mobilize at least USD394 billion of additional investment over the next three years (2015-2017) with the focus on renewable energy among other tasks.¹⁰⁷⁴

On 25 February 2015, the European Commission set out Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy. The strategy has to provide transition to a low-carbon society ensuring that locally produced energy — including from renewables — can be absorbed easily and efficiently into the grid; promoting EU technological leadership, through developing the next generation of renewables technology.¹⁰⁷⁵

On 5 March 2015, the European Commission opened the call for proposals under the Connecting Europe Facility to increase investments into key trans-European energy infrastructure projects. USD110 million will be made available for energy projects including innovative energy projects. This money will also attract additional financing by private and public investors.¹⁰⁷⁶

On 30 March 2015, the European Commission has approved the creation of a joint venture by Global Infrastructure Management of the US and ACS, Servicios, Comunicaciones y Energía of Spain that will develop, build and operate renewable energy assets.¹⁰⁷⁷

During the compliance period European Union has taken actions to promote innovative including clean energy technologies. Thus, it has been awarded a score of +1.

Analyst: Andrei Sakharov

¹⁰⁷⁴ EU launches Investment Offensive to boost jobs and growth, European Commission 26 November 2014. Date of Access: 18 April 2015. http://europa.eu/rapid/press-release_IP-14-2128_en.htm

¹⁰⁷⁵ Energy Union: secure, sustainable, competitive, affordable energy for every European, European Commission 25 February 2015. Date of Access: 18 April 2015. http://europa.eu/rapid/press-release_IP-15-4497_en.htm

¹⁰⁷⁶ Completing the internal energy market: €100 million released to connect European energy networks, European Commission 5 March 2015. Date of Access: 18 April 2015. http://europa.eu/rapid/press-release_IP-15-4560_en.htm

¹⁰⁷⁷ Mergers: Commission clears joint venture between Global infrastructure Management and ACS in renewable energy sector, European Commission 30 MArch 2015. Date of Access: 18 April 2015. http://europa.eu/rapid/press-release_MEX-15-4728_en.htm