



The G20 Research Group at Trinity College at the Munk School of Global Affairs and Public Policy in the University of Toronto presents the

2018 G20 Buenos Aires Summit Final Compliance Report

2 December 2018 to 10 May 2019

Prepared by

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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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14. Energy: Energy Security

"We will promote energy security, sustainability, resilience, efficiency, affordability and stability, acknowledging that there are varied sources of energy and technological advances to achieve a low emissions future."

Buenos Aires Leaders' Declaration

Assessment

Country	No Compliance	Partial Compliance	Full Compliance
Argentina			+1
Australia			+1
Brazil			+1
Canada			+1
China			+1
France			+1
Germany			+1
India			+1
Indonesia		0	
Italy			+1
Japan			+1
Korea			+1
Mexico			+1
Russia			+1
Saudi Arabia		0	
South Africa		0	
Turkey		0	
United Kingdom			+1
United States			+1
European Union			+1
Average Score		+0.80	

Background

The G20 leaders made their first commitment to develop energy efficiency and clean energy technologies at the 2009 London Summit.³²⁹⁰ Since then it has been a constant element of every subsequent summit's agenda.

At the Pittsburgh Summit, 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.³²⁹¹ This commitment was reiterated at the 2010 Seoul Summit.³²⁹² At the 2011 Cannes Summit, leaders developed the commitment further by referencing the United Nations Secretary General's Sustainable Energy for All initiative.³²⁹³ At the 2013 St.

³²⁹⁰ Global Plan for Recovery and Reform, G20 Information Center 2 April 2009. Date of Access: 14 December 2018. http://www.g20.utoronto.ca/2009/2009communique0402.html.

G20 Leaders Statement: The Pittsburgh Summit, G20 Information Center 25 September 2009. Date of Access: 14 December 2018. http://www.g20.utoronto.ca/2009/2009communique0925.html.

The G20 Seoul Summit Leaders' Declaration, G20 Information Center 12 November 2010. Date of Access: 14 December 2018. http://www.g20.utoronto.ca/2010/g20seoul.html.

³²⁹³ Cannes Summit Final Declaration: Building Our Common Future, G20 Information Center (Toronto) 4 November 2011. Date of Access: 14 December 2018. http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html.

Petersburg Summit, the leaders once again reaffirmed their commitment to cleaner and more efficient technologies, but also highlighted the importance of enhancing the efficiency of markets and shifting towards a more sustainable energy future.³²⁹⁴

In Brisbane leaders adopted an Action Plan for Voluntary Collaboration on Energy Efficiency, which encompassed such issues as "vehicles performance, networked devices; buildings; industrial processes; and electricity generation; as well as work on financing for energy efficiency."³²⁹⁵ At the Antalya Summit in 2015 the G20 committed to increase investments in clean energy technologies and support research in this field.³²⁹⁶ Under the Chinese presidency in 2016 the leaders adopted an Action Plan on the 2030 Agenda for Sustainable development expressing their "vision of a world of sustainable energy for all" and pledging to ensure universal access to affordable, reliable, sustainable and modern energy services while promoting "investment in innovative energy technologies including clean energy technologies."³²⁹⁷

Commitment Features

The commitment requires the G20 countries to promote energy security, sustainability, resilience, efficiency, affordability and stability, with the ultimate goal to "achieve a low emissions future." In effect, the G20 leaders committed to facilitate the achievement of the Sustainable Development Goal 7 (SDG 7) "Affordable and Clean Energy." The SDG 7 contains five specific targets corresponding to the aspects the G20 committed to:

- 7.1 Ensure universal access to affordable, reliable and modern energy services; (affordability, stability)
- 7.2 Increase substantially the share of renewable energy in the global energy mix (sustainability, efficiency, resilience);
- 7.3 Double the global rate of improvement in energy efficiency (efficiency, sustainability);
- 7.A Enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology (sustainability, stability, security);
- 7.B Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support (security, affordability, resilience).³²⁹⁸

In order to fully comply with the commitment, the G20 members must take action on at least three of the issue areas designated by the SDG7.

³²⁹⁴ St.Petersburg Summit Leaders' Declaration, G20 Information Center 6 September 2013. Date of Access: 14 December 2018. http://www.g20.utoronto.ca/2013/2013-0906-declaration.html.

³²⁹⁵ G20 Leaders' Communiqué Brisbane, G20 Information Center (Brisbane) 16 November 2014. Access date: 14 December 2018. http://www.g20.utoronto.ca/2014/2014-1116-communique.html.

³²⁹⁶ G20 Leaders' Communiqué Antalya, G20 Information Center (Antalya) 16 November 2015. Access date: 14 December 2018. http://www.g20.utoronto.ca/2015/151116-communique.html.

³²⁹⁷ G20 Action Plan on the 2030 Agenda for Sustainable Development, G20 Information Center (Hangzhou) 8 September 2016. Access date: 14 December 2018. http://www.g20.utoronto.ca/2016/g20-action-plan-on-2030-agenda.pdf.

agenda.pdf.

3298 Sustainable Development knowledge Platform, United Nations (New York). Access date: 14 December 2018 https://sustainabledevelopment.un.org/sdg7.

Scoring Guidelines

-1	Member does not take action to promote the achievement of any targets of the SDG7.
0	Member takes action on one to two targets of the SDG7.
+1	Member takes action to promote the achievement of three or more targets of the SDG7.

Argentina: +1

Argentina has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability

On 5 December 2018, the Saujil Solar Park with an installed capacity of 22.5 MW started operating in the Argentinian province of Catamarca. It will generate electricity for more than 15,000 houses. A total investment to the project was USD29 million. The park has more than 77,000 Jinko Solar brand panels distributed over a total area of almost 70 hectares.

On 11 December 2018, Argentinian Undersecretary of Renewable Energy and Energy Efficiency Sebastián Kind inaugurated the Puerto Madryn I wind farm (PEM I), located in the province of Chubut.³³⁰¹ A total investment to the project was USD122 million. The wind farm will have an installed capacity of 70 MW. It has 20 Vestas wind turbines of 3.6 / 3.3 MW and will generate electricity to supply 100,000 houses.³³⁰²

On 14 December 2018, the Energy Secretariat of the Ministry of Finance of Argentina announced that eight contracts under the Phase 2 of the RenovAr Program were signed with the selected Argentinian companies operating two solar and six biogas technology projects located in seven Argentine provinces, namely La Pampa, Córdoba, Santiago del Estero, Santa Fe, Buenos Aires, Catamarca and Mendoza.³³⁰³ The projects will supply renewable electric power with a total capacity of 99.5 MW for more than 90,000 Argentinian houses.

On 20 December 2018, three renewable energy parks started operating in Argentina.³³⁰⁴ In total, they will add 100 MW to the National Interconnected System. The parks include the Ullum I and II solar parks, located in San Juan province, and the Villalonga I wind farm, located in Bahía Blanca of Buenos Aires province. The two solar parks have an installed capacity of 25 MW each. In total, they generate electricity for more than 30,000 houses.³³⁰⁵ Each park has 79,000 solar panels and required an investment of USD32,5 million respectively. The wind farm Villalonga I which belongs to the company GENNEIA S.A has an installed power of 50 MW and generates electricity for more than

³³⁰⁰ Comenzó a operar el Parque Solar Saujil en la provincia de Catamarca, Ministerio de Hacienda: Energía (Buenos Aires) 5 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/comenzo-operar-el-parque-solar-saujil-en-la-provincia-de-catamarca.

Aires)14 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/se-firmaron-8-contratos-de-la-fase-2-de-la-ronda-2-del-programa-renovar.

Comenzaron a operar tres parques de energías renovables, Ministerio de Hacienda: Energía (Buenos Aires) 20 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/comenzaron-operar-tresparques-de-energias-renovables.

Comenzaron a operar tres parques de energías renovables, Ministerio de Hacienda: Energía (Buenos Aires)20 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/comenzaron-operar-tres-parques-de-energias-renovables.

³²⁹⁹ Comenzó a operar el Parque Solar Saujil en la provincia de Catamarca, Ministerio de Hacienda: Energía (Buenos Aires) 5 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/comenzo-operar-el-parque-solar-saujil-en-la-provincia-de-catamarca.

Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/se-inauguro-el-parque-eolico-puerto-madryn-i.

3302 Se inauguró el Parque Eólico Puerto Madryn I, Ministerio de HaciendaEnergía (Buenos Aires)11 December 2018.

Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/se-inauguro-el-parque-eolico-puerto-madryn-i.

Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/se-inauguro-el-parque-eolico-puerto-madryn-i.

3303 Se firmaron 8 contratos de la Fase 2 de la Ronda 2 del Programa RenovAr, Ministerio de Hacienda: Energía (Buenos Aires)14 December 2018.

50,000 homes. It has 15 VESTAS wind turbines of 3.45 MW unit power and required an investment of USD80 million.³³⁰⁶

On 1 March 2019, the Energy Secretariat of Argentina launched an online platform permitting households and companies register as users of electricity generation, both for self-consumption and supplying energy into the distribution network.³³⁰⁷ Córdoba, Mendoza, Tucumán, Tierra del Fuego, Catamarca and San Juan provinces joined the initiative. Due to the platform, commercial and industrial users, SME and ordinary citizens will be able to generate their own electric energy from renewable sources, reducing their electricity supply costs, in addition to contributing to the reduction of emissions and mitigation of climate change.³³⁰⁸ The Argentinian authorities also work on lowering the costs of installing the equipment for registered energy producers.³³⁰⁹

On 11 March 2019, the first Provincial Index of Renewable Attractiveness was published in Argentina with the purpose of providing a comprehensive information on the degree of development of renewable energy in every province of the country and its attractiveness for investment.³³¹⁰

On 15 March 2019, Argentina's tax authorities issued General Resolution No. 4,437, which establishes the requirements for renewable energy companies benefiting from the renewable energy promotional regime to request the application of the accelerated tax depreciation benefit.³³¹¹

On 25 March 2019, the Energy Secretariat of Ministry of Finance of Argentina announced that three new contracts for the supply of renewable electric power were signed between Electricity Wholesale Market Administrator Body and the Argentinian companies awarded the Round 2 of RenovAr.³³¹² The contracts include to two solar technology projects and one biogas project for a total of 38 MW of power that will be located in the province of Córdoba and that will supply more than 22,000 homes.

On 6 April 2019, the La Banderita wind farm entered in commercial operation.³³¹³ It is located 20 km southwest of the town of General Acha, Ultracán and is the first wind project in La Pampa province. It had an investment of USD58.8 million and was awarded in Round 1.5 of RenovAr. It has 36.75

Hogares y empresas podrán generar energía y venderla a la red 1, Argentine Government (Buenos Aires) March 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/hogares-y-empresas-podran-generar-energia-y-venderla-la-red.

³³⁰⁸ Hogares y empresas podrán generar energía y venderla a la red 1, Argentine Government (Buenos Aires) March 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/hogares-y-empresas-podran-generar-energia-y-venderla-la-red.

³³⁰⁹ Hogares y empresas podrán generar energía y venderla a la red 1, Argentine Government (Buenos Aires) March 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/hogares-y-empresas-podran-generar-energia-y-venderla-la-red.

³³¹⁰ Ya está publicado el primer Índice Provincial de Atractivo Renovable, Argentine Government (Buenos Aires) 11 March 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/ya-esta-publicado-el-primer-indice-provincial-de-atractivo-renovable.

³³¹¹ Argentina issues procedure for renewable energy companies to request accelerated tax depreciation benefit, Ernt&Young (Buenos Aures) 22 March 2019. Access Date: 25 April 2019. https://taxinsights.ey.com/search/search-results.aspx?searchValue=argentina.

Se firmaron tres nuevos contratos de la Ronda 2 de Renovar, Argentine Government (Buenos Aires) 26 March 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/se-firmaron-tres-nuevos-contratos-de-laronda-2-de-renovar.

³³¹³ Ya hay más de 1.000 MW nuevos de energías renovables en operación commercial, Argentine Government (Buenos Aires) 8 April 2019. Access Date: 25 April 2019. https://www.argentina.gob.ar/noticias/ya-hay-mas-de-1000-mw-nuevos-de-energias-renovables-en-operacion-comercial.

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³³⁰⁶ Comenzaron a operar tres parques de energías renovables, Ministerio de Hacienda: Energía (Buenos Aires)20 December 2018. Access Date: 30 January 2019. https://www.argentina.gob.ar/noticias/comenzaron-operar-tres-parques-de-energias-renovables.

MW of installed power that generates electricity for more than 40,000 homes. The wind farm is equipped with 11 Vestas V136-3.6 wind turbines with 3.6 MW of unit power.

Argentina has taken actions to promote the achievement in three targets of the Sustainable Development Goal 7. Thus, it has been awarded a score of +1.

Analyst: Elizaveta Safonkina

Australia: +1

Australia has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 20 December 2018, national Minister for Energy Angus Taylor urged Australian state governments to "consider the potential risks" of rapid solar industry growth. His assertion that people's lives may be at risk is based on interpretation of the national audit of the Renewable Energy Target released by the Australian National Audit Office on December 17.3314 The audit itself reported that "Between 21.7 and 25.7 per cent of inspected installations were rated as 'unsafe' or 'substandard' each year." Taylor said "T've written to every state and territory minister highlighting the severity of the issue ... we want to make sure safety comes first ... This is a rapidly growing industry and we can't risk people's lives."3315

On 1 February 2019, Energy Ministers agreed the Trajectory for Low Energy Buildings, a national plan that sets a trajectory towards zero energy (and carbon) ready buildings for Australia. The Trajectory identifies opportunities for the building sector in the context of a broader trajectory for the sector, and in summary proposes:

- Setting a trajectory towards zero energy (and carbon) ready buildings
- Implementing cost effective increases to the energy efficiency provisions in the National Construction Code for residential and commercial buildings from 2022
- Considering options for improving existing buildings in late 2019.3316

On 28 February 2019, the Australian government announced a round of measures to assist businesses, communities and householders to improve their energy-efficiency and reduce power bills. 3317 One of them is The Energy Efficient Communities Program that will deliver AUD50 million of grants to assist businesses and community organizations improve practices and technologies and to better manage their energy consumption. Furthermore, an investment of AUD6.5 million will be made to commence the process to introduce an energy rating label to space heating appliances, which will deliver up to 15 million tonnes in emissions reductions to 2030. 3318 An additional AUD10.5

Australia: Federal Energy Minister sends rooftop PV safety warning, Pv Magazine Australia (Canberra) 20 December 2018. date: 31 March 2019. https://www.pv-magazine.com/2018/12/20/australia-federal-energy-minister-sends-rooftop-pv-safety-warning/.

Trajectory for Low Energy Buildings, Australia's Energy Council (Canberra) 4 February 2019. Access date: 27 May 2019. http://coagenergycouncil.gov.au/publications/trajectory-low-energy-buildings.

New energy measures to assist businesses, communities and householders, Department of the Environment and Energy (Canberra) 28 February 2019. Access date: 31 March 2019. https://www.energy.gov.au/news-media/news/new-energy-measures-assist-businesses-communities-and-householders.

New energy measures to assist businesses, communities and householders, Department of the Environment and Energy (Canberra) 28 February 2019. Access Date: 31 March 2019. https://www.energy.gov.au/news-media/news/new-energy-measures-assist-businesses-communities-and-householders

Australia: Federal Energy Minister sends rooftop PV safety warning, Pv Magazine Australia (Canberra) 20 December 2018. date: 31 March 2019. https://www.pv-magazine.com/2018/12/20/australia-federal-energy-minister-sends-rooftop-pv-safety-warning/.

million will be delivered in 2019–20 to improve the energy efficiency of Australian buildings. The funding includes AUD3.4 million to improve the energy efficiency of both new and existing homes, and AUD7.1 million to improve the energy efficiency of commercial buildings.³³¹⁹

In March 2019, Australian Renewable Energy Agency launched its "Advancing Renewables Program" to support a broad range of development, demonstration and pre-commercial deployment projects that can deliver affordable and reliable renewable energy for Australian families and businesses.³³²⁰

On 26 March 2019, on behalf of the Australian government, the Australian Renewable Energy Agency announced AUD490,000 in funding to mining and metals company Element 25 Limited (E25) to examine the viability of using renewable energy in their metal production process. In a first-of-a-kind project, E25 will test the extent to which renewable energy solutions such as wind and solar could be used to power the electrowinning processes in the production of electrolytic manganese metal without reducing the quality of the product.³³²¹

On 29 March 2019, the Australian government announced the launch of the Underwriting New Generation Investments program, which is a key part of the Australian Government's plan to deliver affordable and reliable power.³³²² It is aimed at creating an ongoing mechanism to support targeted investment that will lower prices, increase competition and increase reliability in the system.³³²³ The program will provide financial support to firm generation capacity as part of the Australian Government's commitment to lowering electricity prices and increasing reliability in the system.³³²⁴

On 3 April 2019, the federal government introduced new regulations which intend to make it easier for consumers to choose the air conditioner that best suits their needs and help them reduce their energy bills. A new determination under the Greenhouse and Energy Minimum Standards Act 2012 will change the regulatory requirements for air conditioners.³³²⁵ The regulations have increased the minimum energy performance standards to prevent less efficient air conditioners to be supplied in Australia, reducing both energy consumption and costs. Suppliers seeking to register air conditioners from 1 April 2020 must comply with the new determination.³³²⁶

Australia has taken actions to promote the achievement in three targets of the Sustainable Development Goal 7.

New energy measures to assist businesses, communities and householders, Department of the Environment and Energy (Canberra) 28 February 2019. Access Date: 31 March 2019. https://www.energy.gov.au/news-media/news/new-energy-measures-assist-businesses-communities-and-householders

Advancing renewables, Australian Renewable Energy Agency (Canberra) March 2019. Access date: 27 May 2019. https://arena.gov.au/funding/programs/advancing-renewables-program/

³³²¹ Element 25 to trial making metal using renewable energy, Australian Renewable Energy Agency (Canberra) 26 March 2019. Access Date: 27 May 2019. https://arena.gov.au/news/element-25-to-trial-making-metal-using-renewable-energy/

Underwriting New Generation Investments program, Department of the Environment and Energy (Canberra) 29 March 2019. Access Date: 31 March 2019. https://www.energy.gov.au/government-priorities/energy-supply/underwriting-new-generation-investments-program

Underwriting New Generation Investments program, Department of the Environment and Energy (Canberra) 29 March 2019. Access Date: 31 March 2019. https://www.energy.gov.au/government-priorities/energy-supply/underwriting-new-generation-investments-program

Underwriting New Generation Investments program, Department of the Environment and Energy (Canberra) 29 March 2019. Access Date: 31 March 2019. https://www.energy.gov.au/government-priorities/energy-supply/underwriting-new-generation-investments-program

supply/underwriting-new-generation-investments-program

3325 New regulations to increase energy efficiency, Energy Magazine (Canberra) 3 April 2019. Access Date: 1 May 2019. https://www.energymagazine.com.au/new-regulations-to-increase-energy-efficiency/

New regulations to increase energy efficiency, Energy Magazine (Canberra) 3 April 2019. Access date: 1 May 2019. https://www.energymagazine.com.au/new-regulations-to-increase-energy-efficiency/

Thus, it receives a score of +1.

Analyst: Anna Kotlyarova

Brazil: +1

Brazil has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 19 February 2019, the Brazilian Electricity Regulatory Agency approved the result of the auction for the contracting of power transmission projects, carried out in December last year. As the auction was closed with the average discount of 46 per cent on the annual revenue, this reduction in the value of the income of the entrepreneurs to exploit the investments contributed to a lower energy tariff to the users.³³²⁷

On 5 March 2019, Brazil and Peru signed a Declaration of Cooperation in Energy. The document provided the promotion of exchanges on energy issues and reaffirmed the interest in deepening bilateral cooperation in areas of energy planning, small-scale mining, renewable energy, radioactive materials, and internships and training.³³²⁸

On 6 March 2019, the Government set electric energy auction schedule until 2021. The dates were officialized through the 151/2019 and 152/2019 regulations. Auctions created an environment of competitiveness among the agents that generate electricity. The strategy complies with principles of security of supply and low tariffs.³³²⁹

On 25-26 February 2019, the Ministry of Mines and Energy (MME) hosted the workshop "Long-Term Scenarios for the Transition to Clean Energy in Latin America." The goal of the campaign is to promote the best use and wider adoption of clean energy. During the workshop, there were covered the best practices for the planning of long-term energy scenarios.³³³⁰

On 21 March 2019, the MME launched the Brazilian Energy Information System, the SIE Brazil: a computer platform that will structure and systematize all Brazilian energy statistics at national level. It also aims to provide support to the management of the MME in studies of energy expansion and investor decisions.³³³¹

On 25 March 2019, the Minister of Mines and Energy Bento Albuquerque was present at the signing ceremony of the concession contracts for the construction of new power transmission lines from

Aneel oficializa resultado de leilão de transmissão de energia, Governo do Brasil (Brasilia) 19 February 2019. Access Date: 14 March 2019. http://www.brasil.gov.br/noticias/infraestrutura/2019/02/aneel-oficializa-resultado-de-leilao-de-transmissao-de-energia

Brasil e Peru assinam declaração de cooperação em energia, Governo do Brasil (Brasilia) 6 March 2019. Access Date: 14 March 2019. http://www.brasil.gov.br/noticias/infraestrutura/2019/03/brasil-e-peru-assinam-declaracao-de-cooperacao-em-energia.

Governo define cronograma de leilões de energia elétrica até 2021, Governo do Brasil (Brasilia) 6 March 2019. Access Date: 14 March 2019. http://www.brasil.gov.br/noticias/infraestrutura/2019/03/governo-define-cronograma-de-leiloes-de-energia-eletrica-ate-2021.

³³³⁰ IRENA: MME sedia workshop sobre cenários de longo prazo, Ministério de Minas e Energia (Brasilia) 11 March 2019. Access Date: 15 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/irena-mme-sedia-workshop-sobre-cenarios-de-longo-prazo?redirect=http%3A%2F%2Fwww.mme.gov.br%2Fweb%2Fguest%2Fpagina-inicial%2Foutras-noticas%3Fp_p_id%3D101_INSTANCE_32hLrOzMKwWb%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mod e%3Dview%26p_p_col_id%3Dcolumn-1%26p_p_col_count%3D3.

MME lança oficialmente o Sistema de Informações Energéticas (SIE), Ministério de Minas e Energia (Brasilia) 21 March 2019. Access Date: 30 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/mme-lanca-oficialmente-o-sistema-de-informacoes-energeticas-sie-

North to South of Brazil. It will generate 28,000 direct jobs, will allow the construction of 55 transmission lines, with 7,152 km of extension, and about 14,500 MVA of substation power.³³³²

On 28 December 2018, the MME published a dispatch approving the Concession Plan for Transmission of Electric Energy 2018 – Basic Network and Other Transmission Facilities. The document consolidates the results of transmission planning studies, defining transmission equipment and facilities necessary for the National Interconnected System (SIN) in the period 2019-2023.³³³³

There are 239 new reinforcements and 65 extensions to the transmission systems, which should be implemented along with a set of 307 extensions and reinforcements defined in previous planning cycles. In addition, 53 facilities defined in previous editions of the Concession Plan were reanalysed, implying 35 withdrawals and 18 scope changes.³³³⁴

On 28 December 2018, the Minister of Mines and Energy approved the Development Plan for Energy Expansion 2027. The document consolidates the sectoral planning studies carried out by the technical teams of the MME and of the Energy Research Company. The approved Plan indicates that the Internal Energy Supply (energy needed to move the economy) will grow, on average, 2.3 per cent per year, reaching 367.4 million toe (Mtoe) in 2027. Of this amount, with a 47 per cent share of renewable sources.³³³⁵

Brazil has taken actions to promote the achievement in four targets of the SDG7.

Thus, it receives a score of +1.

Analyst: Polina Petrova

Canada: +1

Canada has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 28 January 2019, Parliamentary Secretary to Canada's Minister of Natural Resources Paul Lefebvre announced a combined CAD4.2-million investment for two TUGLIQ Energy Corporation projects in Nunavut and Quebec. An investment of CAD283,000 will enable TUGLIQ to complete a front-end engineering and design study to integrate compressed air energy storage with its operations, enabling increased use of wind energy at a Nunavut mine. This project will demonstrate that such a system can achieve significant reductions in diesel consumption.³³³⁶

energia-2027.

MME dá a largada para a construção de mais de 7 mil km de linhas de transmissão de energia, Ministério de Minas e Energia (Brasilia) 25 March 2019. Access Date: 30 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/mme-da-a-largada-para-a-construcao-de-mais-de-7-mil-km-de-linhas-de-transmissao-de-energia

³³³³ MME publica Plano de Outorgas de Transmissão de Energia Elétrica 2018, Ministério de Minas e Energia (Brasilia) 28 December 2018. Access Date: 28 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/mme-publica-plano-de-outorgas-de-transmissao-de-energia-eletrica-2018. 3334 MME publica Plano de Outorgas de Transmissão de Energia Elétrica 2018, Ministério de Minas e Energia (Brasilia) 28 December 2018. Access Date: 28 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/mme-publica-plano-de-outorgas-de-transmissao-de-energia-eletrica-2018. 3335 Ministro Moreira Franco aprova Plano Decenal de Expansão de Energia 2027, Ministério de Minas e Energia (Brasilia) 28 December 2018. Access Date: 28 March 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticas/-/asset_publisher/32hLrOzMKwWb/content/ministro-moreira-franco-aprova-plano-decenal-de-expansao-de-

Government of Canada Promotes Renewable Energy Innovation in Mining, Cision Canada (Vancouver) 26 January 2019. Access Date: 27 May 2019. https://www.newswire.ca/news-releases/government-of-canada-promotes-renewable-energy-innovation-in-mining-818042004.html

On 1 February 2019, Minister of Small Business and Export Promotion Mary F.Y. Ng, on behalf of Canada's Minister of Natural Resource announced a CAD40,000 investment for Miller Paving Limited for an ISO 50001 Energy Management Systems Standard that reduced its energy consumption and improved environmental performance.³³³⁷ With funding from Natural Resources Canada and facilitated by the Canadian Industry Partnership for Energy Conservation, the project enabled Miller Paving Limited to improve its energy performance, lower energy and carbon emissions and reduce operating costs.³³³⁸

On 8 February 2019, Member of Parliament Pamela Goldsmith-Jones announced a CAD300,000 investment to build six electric vehicle fast chargers in Vancouver. These latest fast chargers, built by the City of Vancouver, were partially funded through the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative. The Government of British Columbia also contributed CAD150,000 through its Clean Energy Vehicle Public Fast Charging Program. 3340

On 11 February 2019, Minister of Environment and Climate Change Canada Catherine McKenna announced a CAD1.15-million investment to build 23 electric vehicle fast chargers across British Columbia. The stations are being deployed by British Columbia Hydro and Power Authority, with partial funding from Natural Resources Canada's Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative.³³⁴¹

On 12 February 2019, Parliamentary Secretary to the Minister of Intergovernmental and Northern Affairs and Internal Trade Yvonne Jones announced a CAD40,000 investment for the Iron Ore Company of Canada for a process integration study. With funding from Natural Resources Canada and facilitated by the Canadian Industry Partnership for Energy Conservation, the project identified measures to reduce Iron Ore's total thermal energy consumption, ultimately reducing its energy costs and improving energy performance.³³⁴²

On 13 March 2019, Member of Parliament Kim Rudd, on behalf of Canada's Minister of Natural Resources announced a CAD164,000 investment to strengthen the reliability of Ontario's electricity grid and cut pollution. Led by Lakefront Utilities, the project involves the installation of a Digital Utility Platform to run the electricity grid more strategically. This tool will automatically identify

³³³⁸ Canada Invests in Energy Efficiency Improvements in Markham, Natural Resources Canada (Ottawa) 1 February 2019 . Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-markham.html

³³⁴⁰ Canada Invests in Vancouver's Electric Vehicle Network, Natural Resources Canada (Ottawa) 8 February 2019. Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-vancouvers-electric-vehicle-network.html

3341 Canada Announces Expanded Public EV Network in British Columbia, Natural Resources Canada (Ottawa) 11
 February 2019. Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-announces-expanded-public-ev-network-in-british-columbia.html
 3342 Canada Invests in Energy Efficiency Improvements in Labrador City, Natural Resources Canada (Ottawa) 12

February 2019. Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-labrador-city.html.

³³³⁷ Canada Invests in Energy Efficiency Improvements in Markham, Natural Resources Canada (Ottawa) 1 February 2019. Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-markham.html.

Canada Invests in Vancouver's Electric Vehicle Network, Natural Resources Canada (Ottawa) 8 February 2019. Access Date: 18 February 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-vancouvers-electric-vehicle-network.html

outages, manage increased demand due to the growing use of electric vehicles and better integrate more renewable energy into the grid.³³⁴³

On 14 March 2019, Canada's Minister of Natural Resources Amarjeet Sohi announced CAD72.3 million to Alberta companies, Canadian Natural Resources Limited (Canadian Natural) and Titanium Corporation Inc., to fund three clean technology projects in Alberta's oil and gas sector. This funding will leverage more than CAD415 million in investments.³³⁴⁴

On 5 April 2019, Minister of Environment and Climate Change Catherine McKenna announced support of more than CAD392,000 for three energy efficiency and climate change projects. The Canadian Electricity Association received CAD206,000 through Natural Resources Canada's Climate Change Adaptation Program to help community and utility leaders gain the expertise needed for the development, adoption and implementation of climate change adaptation plans for electrical systems across Canada. 3345

On 12 April 2019, Member of Parliament for Yukon Larry Bagnell on behalf of Canada's Minister of Natural Resources announced a CAD650,000 investment for Yukon Energy Corporation to cut energy costs, reduce the use of fuel to generate electricity during high-demand peaks and lower greenhouse gas emissions. The Residential Demand Response Program will make the territory's electrical grid more efficient by equipping up to 400 homes with smart devices.³³⁴⁶

On 24 April 2019, Parliamentary Secretary to the Minister of National Revenue Deb Schulte announced an investment of over CAD340,000 to Windfall Ecology Centre to help with the measurement and sharing of energy and water consumption information. With funding from Natural Resources Canada, the Centre will assist York Region's building owners and property managers in reporting energy and water consumption using the free ENERGY STAR® Portfolio Manager Benchmarking tool. The project will enable building landlords and managers in York Region to better track and report their annual energy and water consumption and to measure their performance against comparable buildings.³³⁴⁷

Canada has taken actions to promote the achievement in three targets of the Sustainable Development Goal 7. Thus, it receives a score of +1.

Analyst: Uliana Koptyukh

China +1

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China has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

³³⁴³ Canada Invests in Next-Generation Electrical Upgrades in Southern Ontario, Natural Resources Canada (Ottawa) 13 march 2019. Access Date: 4 April 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/03/canada-invests-in-next-generation-electrical-upgrades-in-southern-ontario.html

Alberta Oil and Gas Sector to Benefit From Over \$72 Million Federal Investment in Clean Technology To Help Reduce Pollution and Create Jobs in Alberta, Natural Resources Canada (Ottawa) 14 March 2019. Access Date: 4 April 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/03/alberta-oil-and-gas-sector-to-benefit-from-over-72-million-federal-investment-in-clean-technology-to-help-reduce-pollution-and-create-jobs-in-alberta.html Canada Invests in Energy Efficiency and Climate Change Adaptation, Natural Resources Canada (Ottawa) 5 April 2019. Access Date: 1 May 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/04/canada-invests-in-energy-efficiency-and-climate-change-adaptation.html

Canada Invests in Smart Grid Technology to Reduce Energy Costs in Yukon, Natural Resources Canada (Ottawa) 12 April 2019. Access Date: 1 May 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/04/canada-invests-in-smart-grid-technology-to-reduce-energy-costs-in-yukon.html

³³⁴⁷ Canada Improves Energy Efficiency for York Region Buildings, Natural Resources Canada (Ottawa) 24 April 2019. Access Date: 1 May 2019. https://www.canada.ca/en/natural-resources-canada/news/2019/04/canada-improves-energy-efficiency-for-york-region-buildings.html

On 17 March 2019, a group of U.S. and Chinese scholars, experts and entrepreneurs met to discuss opportunities and challenges on developing smart energy cooperation, artificial intelligent technology in power development at a seminar launched by the U.S.-China Green Energy Council in San Jose, California.³³⁴⁸

On 22 March 2019, Chinese-built Isimba Hydropower Plant on the Victoria Nile in Uganda was put into power. The 85 per cent of the cost of 183 MW power plant was covered by a concessional loan from the Export-Import Bank of China. The power plant is intended to address a power shortage affecting Uganda's economic development.³³⁴⁹

On 10 April 2019, Guizhou Province's provincial energy administration set plans to develop a clean and efficient electricity industry. The administration aims to improve the efficiency of existing coal power facilities, speed up energy conservation and emission reduction, and accelerate the development of both coal and power industries.³³⁵⁰ The province is also planning to speed up the development of hydropower projects and increase the province's hydropower capacity as well as to develop renewable energy sources, including wind and solar power. The province aims to add more than 500,000 kW of power in 2019 produced by non-hydro renewable energy.³³⁵¹

China has taken actions to promote the achievement in three targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Yekaterina Litvintseva

France: +1

France has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 25 January 2019, the Government published the draft Multiannual Energy Program in its entirety. The Multiannual Energy Program brings the project to a successful transition to a more efficient and sober energy system, more diversified and therefore more resilient.³³⁵²

On 25 February 2019, it was announced that Agence Française de Développement continues to support responsible funding in Mauritius as it launches the third phase of its SUNREF programme, in partnership with two local banks continuing to encourage "green" investments (photovoltaic power stations, energy recovery from sugar cane residue biomass, improvement of hotel and shopping centre energy performance, solar roofs on private homes, etc.). 3353

Ugandan president inaugurates Chinese-built hydropower plant, Xinhua News Agency (Beijing) 22 March 2019. Access Date: 1 May 2019. http://www.xinhuanet.com/english/2019-03/22/c 137915117 2.htm

³³⁴⁸ Expert says China, U.S. have plenty to gain from cooperation in smart energy, Xinhua News Agency (Beijing) 17 March 2019. Access Date: 30 April 2019. http://www.xinhuanet.com/english/2019-03/17/c_137902517.htm

Guizhou strives to develop clean, efficient electricity industry, Xinhua News Agency (Beijing) 10 April 2019. Access Date: 1 May 2019. http://www.xinhuanet.com/english/2019-04/10/c_137966266.htm.

Guizhou strives to develop clean, efficient electricity industry, Xinhua News Agency (Beijing) 10 April 2019. Access Date: 1 May 2019. http://www.xinhuanet.com/english/2019-04/10/c 137966266.htm

Le Gouvernement publie le projet de Programmation pluriannuelle de l'énergie (PPE) dans son intégralité, Ministère de la Transition écologique et solidaire (Paris) 25 January 2019. Access Date: 1 April 2019. https://www.ecologique-solidaire.gouv.fr/gouvernement-publie-projet-programmation-pluriannuelle-lenergie-ppedans-integralite.

Mauritius: From Green Finance To Gender Equality, Le groupe Agence française de développement (AFD) (Paris) 25 February 2019. Access Date: 1 April 2019. https://www.afd.fr/en/mauritius-green-finance-gender-equality

On 24 April 2019, Minister of Transport Elisabeth Borne announced the winners of the Autonomous Road Vehicle Experiment call for projects under the Future Investment Program. Two consortia were retained by the State, representing 16 experiments for a total amount of aid of approximately EUR42 million. This call for projects aims to support experimental projects for the use of autonomous vehicles in the field of individual, shared or collective mobility, freight and logistics.³³⁵⁴

On 25 April 2019, a draft new "energy transition law" presented to cabinet pledges to reduce carbon emissions by a factor of more than six by 2050 compared to 1990.³³⁵⁵

France has taken actions to promote the achievement in three targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Dariya Myasnikova

Germany: +1

Germany has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 12 December 2018, the German Government adopted the draft act to accelerate the power grid expansion (NABEG revision). The aim of the draft Act is to accelerate the authorization procedures for power grids and, in particular, better link various planning stages, shorten deadlines, delete unnecessary procedural steps and strengthen simplified procedures.³³⁵⁶

On 12 December 2018, the German Federal Ministry for Economic Cooperation and Development and the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety announced at the Climate Change Conference in Katowice that Germany will provide EUR68 million to the global Partnership for implementing nationally determined contributions (NDCs). The NDC Partnership was established in 2016 by Morocco and Germany and currently includes almost 90 countries and 20 international organizations. The funds will be spent, inter alia, on improving energy efficiency and strengthening renewable energy sectors in developing countries.³³⁵⁷

On 21 January 2019, the German Federal Network Agency completed the Federal Sectoral Planning for the first section of the "Ultranet" power line. The goal of the project is to transport wind power produced in northern Germany to southern Germany.

3355 New French energy law puts off difficult climate decisions, Reuters (Paris) 30 April 2019. Access date: 30 April 2019. https://www.reuters.com/article/us-france-energy/new-french-energy-law-puts-off-difficult-climate-decisions-idUSKCN1S61X1

Développement des véhicules autonomes : Elisabeth Borne annonce le soutien de l'Etat à 16 nouvelles expérimentations dans les territoires, Ministère de la Transition écologique et solidaire (Paris) 24 April 2019. Access date: 29 April 2019. https://www.ecologique-solidaire.gouv.fr/developpement-des-vehicules-autonomes-elisabeth-borne-annonce-soutien-letat-16-nouvelles

Federal Cabinet endorses Act to accelerate the power grid expansion, German Federal Ministry for Economic Affairs and Energy (Berlin) 12 December 2018. Access Date: 15 April 2019.

https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2018/20181212-federal-cabinet-endorses-act-to-acce-erate-the-power-grid-expansion.html.

Germany helps developing countries and emerging economies implement climate targets, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bonn) 12 December 2018. Access Date: 15 April 2019. https://www.bmu.de/en/pressrelease/deutschland-hilft-entwicklungs-und-schwellenlaendern-bei-umsetzung-ihrer-klimaziele/.

On 29 January 2019, the German Federal Ministry for Economic Affairs and Energy and the Federal Office for Information Security published a Standardization Strategy for Cross-sector Digitalization of the Energy Transition. The Strategy contains a working plan for making energy grids 'smart'. The aim of the document is to "connect up all of the actors involved in supplying electricity within a smart energy grid of the future."3358

On 30 January 2019, the World Bank Group and the German Ministry for Economic Cooperation and Development announced a deeper partnership for economic development in six countries in Africa. The Ministry will provide significant additional financial support through this partnership for several sectors including renewable energy and power grid modernization.³³⁵⁹

On 12 March 2019, the German Government announced funding for the Energy and Climate Fund for 2019 totaling EUR4.5 billion. The Fund was established in 2011 with a view to implementing the energy shift and putting the country's energy supply on a more sustainable footing. Areas financed through the Fund include: renewable energy; investments in energy efficiency including building modernization; national and international climate change mitigation; environmental projects and research; electric mobility; electricity price compensation for electricity-intensive businesses and expanding the National Action Plan on Energy Efficiency. 3361

In 2019, Germany continued the implementation of several initiatives on clean and affordable energy in developing countries. Energizing Development project worth EUR332 million will be implemented up to 2021 in 25 developing countries. The project is aimed at improving access of poor households, social institutions and small and medium enterprises to modern energy products and services. The project "Climate resilient and sustainable energy supply in the Caribbean" worth EUR15 million will be implemented up to 2021 in 9 developing countries and is aimed at effectively implement measures for a sustainable and climate-resilient energy supply. Another example is "Reform of the Electricity Sector to support Climate Policy in Grenada" project worth EUR1.4 million scheduled to be finished by end-April 2019. Salada

Germany has taken action to promote the achievement of four relevant targets of the Sustainable Development Goal 7. Thus, it receives a score of +1.

Analyst: Andrey Shelepov

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Roadmap for smart energy grids of the future, German Federal Ministry for Economic Affairs and Energy (Berlin) 29 January 2019. Access Date: 15 April 2019. https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20190129-roadmap-for-smart-energy-grids-of-the-future.html.

World Bank Group and Germany announce enhanced collaboration on Africa development projects, German Federal Ministry for Economic Cooperation and Development (Bonn) 30 January 2019. Access Date: 15 April 2019. https://www.bmz.de/en/press/aktuelleMeldungen/2019/januar/190130_pm_World-Bank-Group-and-Germany-Announce-Enhanced-Collaboration-on-Africa-Development-Projects/index.html.

³³⁶⁰ More money for the energy shift, German Federal Government (Berlin) 12 March 2019. Access Date: 15 April 2019. https://www.bundesregierung.de/breg-en/search/more-money-for-the-energy-shift-1589036.

More money for the energy shift, German Federal Government (Berlin) 12 March 2019. Access Date: 15 April 2019. https://www.bundesregierung.de/breg-en/search/more-money-for-the-energy-shift-1589036.

Energising Development, German Agency for International Cooperation (Berlin). Access Date: 15 April 2019. https://www.giz.de/projektdaten/exportDetail.action?documentId=201422757&infotypeSource=projects.

Climate resilient and sustainable energy supply in the Caribbean, German Agency for International Cooperation (Berlin). Access Date: 15 April 2019.

https://www.giz.de/projekt daten/export Detail.action? document Id=201720663 & info type Source=projects.

Reform of the Electricity Sector to support Climate Policy in Grenada, German Agency for International Cooperation (Berlin). Access Date: 15 April 2019.

https://www.giz.de/projektdaten/exportDetail.action?documentId=201390491&infotypeSource=projects.

India: +1

India has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 10 January 2019, the Union Cabinet chaired by Prime Minister Shri Narendra Modi approved the Memorandum of Understanding between India and France on technical bilateral cooperation in the field of new and renewable energy. The MoU was signed on 3 October 2018.³³⁶⁵

On 10 January 2019, the Bureau of Energy Efficiency (BEE) and the Central Public Works Department (CPWD) signed a memorandum of understanding, kick starting cooperation in building energy efficiency. BEE and CPWD will cooperate on promoting designs and construction of Energy Conservation Building Code (ECBC) compliant new buildings, star rating of CPWD managed buildings across the country with no registration or renewal fee, awareness on energy efficiency in building sector and support for capacity building of CPWD officials in ECBC.³³⁶⁶

On 15 April 2019, the Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, gave its approval for a Cooperation Agreement between Ministry of New and Renewable Energy of India and Ministry for Energy, Utilities and Climate of the Kingdom of Denmark on strategic sector cooperation in the field of renewable energy with a focus on offshore wind energy and a letter of intent to establish an Indo-Danish Centre of Excellence for renewable energy in India. The Agreement was signed in March 2019 in New Delhi. 3367

India has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7. Thus, it receives a score of +1.

Analyst: Polina Shtanko

Indonesia: 0

Indonesia has partially complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 20 February 2019, the governments of Indonesia and the United Kingdom signed a memorandum of understanding on a USD 19.5 million worth grant for low carbon energy development in Indonesia, to finance four programs, namely matchmaking between the private sector and the government, capacity building for stakeholders, policy making assistance and pilot projects in rural or remote regions.³³⁶⁸

Indonesia has taken action to promote the achievement of one relevant target of the Sustainable Development Goal 7.

Cabinet approves MoU between India and France on technical bilateral cooperation in the field of new and renewable energy, Public Information Bureau (Delhi) 10 January 2019. Access date: 10 January 2019. http://www.pib.nic.in/PressReleseDetail.aspx?PRID=1559477.

Bureau of Energy Efficiency and CPWD sign MoU on promoting energy efficiency in buildings, Public Information Bureau (Delhi) 10 January 2019. Access Date: 10 January 2019. http://www.pib.nic.in/PressReleseDetail.aspx?PRID=1559343

³³⁶⁷Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Public Information Bureau (Delhi) 15 April 2019. Access date: 15 April 2019. http://www.pib.nic.in/PressReleseDetail.aspx?PRID=1570599

³³⁶⁸ UK pledges \$19.5m in grant for clean energy in Indonesia, The Jakarta Post (Jakarta) 20 February 2019. Access Date: 15 April 2019. https://www.thejakartapost.com/news/2019/02/20/uk-pledges-19-5m-in-grant-for-clean-energy-in-indonesia.html

Thus, it receives a score of 0.

Analyst: Pavel Doronin

Italy: +1

Italy has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 19 December 2018, the Ministry of Economic Development, in collaboration with the Italian Energy Economists Association, organized a Conference dedicated to Power Purchase Agreements (PPAs). The objective of the conference was to analyze criticalities and barriers in the use of PPAs, present some good practices of international level and start a comparison between the main players in the sector to build a useful path to the implementation of PPAs, both in the public and in the public sector private. 3369

On 20 December 2018, the Unified Conference was held in the presence of Undersecretary for Economic Development Davide Crippa. Among the topics on the agenda there were the Plan for sustainable mobility and the opinion on the draft decree of the Ministry of Economic Development for encouraging the production of energy from renewable sources. The new Sustainable Mobility Plan provides 80 per cent incentives for the purchase of new zero-emission buses and urban electric buses with the possibility for the regions to carry out studies for the transformation of transport into electricity.3370

On 8 January 2019, Italian government sent to Brussels the national energy climate 2030 proposal that aims to achieve a percentage of energy from renewable energy sources in gross final consumption of energy equal to 30 per cent, in line with the objectives set for our country by the EU; a share of energy from renewable energy sources in gross final energy consumption in transport of 21.6 per cent compared to 14 per cent foreseen by the European Union; a reduction in primary energy consumption compared to the PRIMES 2007 scenario of 43 per cent compared to an EU target of 32.5 per cent, the reduction of "greenhouse gases" compared to 2005, for all non-Emission Trading Scheme sectors of 33 per cent, target 3 per cent higher than that provided by the European Union.3371

On 28 February 2019, the first technical meeting between the Ministry of Economic Development and the Ministry of the Environment, the Protection of the Territory and the Sea took place in order to prepare the Plan for Sustainable Energy Transition of the Eligible Areas (PiTESAI), envisaged by the Law 11 February 2019, No. 12 for the conversion of the Decree-Law 14 December 2018, n. 35, which will be approved within 18 months. The Plan intends to enhance the environmental and socio-

3370 Crippa a conferenza unificata pieno accordo sul nuovo piano mobilità sostenibile, Ministero dello sviluppo economico (Rome) 20 December 2018. Access date: 30 January 2019. https://www.mise.gov.it/index.php/it/per-imedia/notizie/2039006-crippa-a-conferenza-unificato-pieno-%20for%20agreement-on-the-new-piano%20-%20mobilita%20-

³³⁶⁹ Energia rinnovabile: mercoledì 19 dicembre conferenza su utilizzo dei PPA, Ministero dello sviluppo economico (Rome) 17 December 2018. Access date: 30 January 2019. https://www.mise.gov.it/index.php/it/198-notiziestampa/2038960-energia-rinnovabile-mercoledi-19-dicembre-conferenza-su-utilizzo-dei-ppa.

³³⁷¹ La programmazione energetica nel Clean energy package: i Piani nazionali per l'energia ed il clima, Camera dei deputati (Rome) 17 January 2019. Access date: 30 February 2019.

economic sustainability of the various areas, cancel the impacts deriving from upstream activities and accompany the decarburization process.³³⁷²

On 20 March 2019, the Ministry of the Environment and the Economic Development Department presented the Integrated National Plan for Energy and Climate 2030. The plan aims to implement a vision of wide transformation of the economy, in which decarbonisation, the circular economy, efficiency and the rational and equitable use of natural resources together represent objectives and tools for an economy that is more respectful of people and the environment.³³⁷³

On 17 April 2019, the first round-table aimed to plan the activities necessary to guarantee the country the exit from the production of electricity from coal was held at the Ministry of Economic Development. The Ministry of Environment, Terna and the plant operators took part in the meeting, chaired by Undersecretary Davide Crippa, with the participation of Ministry technicians.³³⁷⁴

On 18 April 2019, the Decree of the President of the Council, proposed by the Minister of Infrastructure and Transport Danilo Toninelli, was signed at Palazzo Chigi, adopting the EUR3.7 billion National Strategic Plan for Sustainable Mobility. The Plan, in particular, aims at the renewal of the bus fleet used for local public transport with less polluting (electric, methane or hydrogen) and more modern vehicles.³³⁷⁵

Italy has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Svetlana Kochetkova

Japan: +1

Japan has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 14 February 2019, Japan's Ministry of Economy, Trade and Industry announced the launch of a new subcommittee named the "Subcommittee on Electricity Resilience toward Decarbonized Society" under the Electricity and Gas Industry Committee of the Advisory Committee for Natural Resources and Energy, with the goal to study approaches to enhancing the resilience of electricity infrastructures and establishing sustainable, steady electricity supply systems in which new technologies are incorporated so as to realize a decarbonized society in the future.³³⁷⁶

Piano energia e clima 2030, l'Italia verso la decarbonizzazione, Biblus-net (Rome) 28 March 2019. Access date: 30 April 2019. http://biblus.acca.it/piano-energia-e-clima-2030/

³³⁷² Al MiSE il primo tavolo tecnico per la predisposizione del Piano per la Transizione Energetica Sostenibile delle Aree Idonee (PiTESAI), Ministero dello sviluppo economico (Rome) 5 March 2019. Access date: 30 March 2019. https://www.mise.gov.it/index.php/it/198-notizie-stampa/2039369-al-mise-il-primo-tavolo-tecnico-per-la-predisposizione-del-piano-per-la-transizione-energetica-sostenibile-delle-aree-idonee-pitesai

³³⁷⁴ Energia: Crippa presiede il primo tavolo su chiusura delle centrali a carbone, Ministero dello sviluppo economico (Rome) 18 Aprile 2019. Access date: 30 April 2019. https://www.mise.gov.it/index.php/it/198-notizie-stampa/2039618-energia-crippa-presiede-il-primo-tavolo-su-chiusura-delle-centrali-a-carbone

Tpl, governo adotta Piano Nazionale Mobilità Sostenibile, Ministero delle Infrastrutture e dei Trasporti (Rome) 18 April 2019. Access date: 24 April 2019. http://mit.gov.it/comunicazione/news/tpl/tpl-governo-adotta-piano-nazionale-mobilita-sostenibile

METI to Launch Subcommittee on Electricity Resilience towards a Decarbonized Society, Japan's Ministry of Economy, Trade and Industry (Tokyo) 14 February 2019. Access date: 15 April 2019. http://www.meti.go.jp/english/press/2019/0214 002.html

On 15 February 2019, Japan's Ministry of Economy, Trade and Industry within the framework of the Japan-Viet Nam Energy Working Group announced plans to hold a Japan-Viet Nam Government-Private Workshop on Clean Energy Technology in Hanoi to showcase Japan's good practices in the field of clean energy, energy conservation and renewable energy technologies.³³⁷⁷

On 22 February 2019, it was reported Japan's government planned to set up unmanned hydrogen charging stations for fuel-cell vehicles before the 2020 Tokyo Olympics and Paralympic, to showcase Japan's technologies; by 2026 the government hopes to have around 200 000 hydrogen-fueled cars across Japan.3378

Japan has taken action to promote the achievement of two relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Pavel Doronin

Korea: +1

Korea has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 24 December 2018, the Ministry of Environment of Korea presented the national plan of Korea on implementation of the United Nations Sustainable Development Goals (SDGs). The Plan contains a set of specified targets to ensure sustainability of Korea, including sustainable use of energy resources and increase the share of renewable energy.³³⁷⁹

On 17 January 2019, the Government of Korea presented a roadmap aimed at increase in usage of hydrogen-powered cars. The Government plans to increase domestic production of eco-friendly types of cars, fuel-cells production and total number of charging stations. The ambition is driven by ecological concerns as well as economic calculations: expecting revenue from increase in hydrogenpowered vehicles production would reach KRW 40 trillion by 2040 with more than 420,000 created jobs.3380

On 11 March 2019, the Ministry of Trade, Industry and Energy (MOTIE) announced formation of a new company named HyNet to facilitate hydrogen charging stations production. The company is a joint venture of 13 companies with total amount of investments about USD 120 million. The company is responsible to build 100 new-type charging stations across the country by 2022.³³⁸¹

On 19 March 2019, MOTIE adopted a revision of the enforcement decree of the Petroleum and Alternative Fuel Business Act. According to the revision, the import fees on electricity-generating liquefied natural gas (LNG) will be reduced from 24.2 won to 3.8 won per kilogram; at the same

³³⁷⁷ Japan-Vietnam Government-Private Workshop on Clean Energy Technology to be Held, Japan's Ministry of Economy, Trade and Industry (Tokyo) 15 February 2019. Access date: 15 April 2019.

http://www.meti.go.jp/english/press/2019/0215 002.html

³³⁷⁸ Japan aims to build unmanned hydrogen charging stations by 2020, The Mainichi (Tokyo) 22 February 2019. Access date: 15 April 2019. https://mainichi.jp/english/articles/20190222/p2g/00m/0bu/006000c

A milestone for the sustainable future, establishing K-SDGs, Ministry of Environment of South Korea 24 December 2018. Access date: 2 April 2019.

http://eng.me.go.kr/eng/web/board/read.do?pagerOffset=0&maxPageItems=10&maxIndexPages=10&searchKey=&se archValue=&menuId=21&orgCd=&boardId=934470&boardMasterId=522&boardCategoryId=&decorator= 3380 Gov't unveils roadmap for hydrogen-powered economy, Korea Times (Seoul) 17 January 2019. Access date: 2 April

^{2019.} https://www.koreatimes.co.kr/www/tech/2019/01/419 262238.html

³³⁸¹ South Korea forms HyNet for hydrogen charging, Electrive (Berlin) 11 March 2019. Access date: 2 April 2019. https://www.electrive.com/2019/03/11/south-korea-forms-hynet-for-hydrogen-charging-infrastructure/

time, the import fees on bituminous coal will be lifted from 36 won to 46 won. The revision will come into force on 1 April 2019. The Government of Korea seeks to fix distortion in tax regime that had been given full advantage to coal fuel and thus make LNG-powered station more cost efficient and reduce environmental impact generated by power facilities.³³⁸²

Korea has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7. Thus it receives a score of +1.

Analyst: Alexander Ignatov

Mexico: +1

Mexico has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 30 January 2019, Security, Energy and Environment Agency issued provisions to mitigate the risk to facilities and operations associated with the transfer of hydrocarbons and/or petroleum products. This measure contributes to ensuring energy security and avoiding damage to the environment.³³⁸³

On 11 February 2019, Security, Energy and Environment Agency announced the new Official Mexican Standard NOM-009-ASEA-2017, referring to specifications and technical criteria for the administration of the integrity of hydrocarbon collection, transport and distribution pipelines, petroleum and petrochemicals, with which it is sought to ensure that the country has adequate facilities in terms of industrial safety, energy security operational safety and protection of the environment.³³⁸⁴

On 1 February 2019, the governing body of the Energy Regulatory Commission approved modifications to its Internal Regulations that restructure its organization and operation, in order to continue to effectively perform its functions, which allows to provide better energy control and development of the sphere.³³⁸⁵

On 19 December 2019, President López Obrador announced the forthcoming signing of the Mexico-Canada agreement for the modernization of the country's 60 hydroelectric plants. The agreement will lead to acquiring technology to generate clean energy, which in the medium term will reduce electricity costs.³³⁸⁶

Mexico has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7.

https://www.gob.mx/asea/prensa/asea-emite-disposiciones-para-mitigar-el-riesgo-inherente-a-instalaciones-y-operaciones-asociadas-al-trasvase-de-hidrocarburos-y-o-petroliferos.

³³⁸² South Korean government to increase tax on bituminous coal to reduce fine dust pollution, Hankyoreh (Seoul) 19 march 2019. Access date: 2 April 2019. http://english.hani.co.kr/arti/english_edition/e_business/886687.html
3383 ASEA emite disposiciones para mitigar el riesgo a instalaciones y operaciones asociadas al trasvase de hidrocarburos y/o petrolíferos, Mexican Government (Mexico) 30 January 2019. Access date: 21 March 2019.

³³⁸⁴ ASEA presenta NOM para la administración de la integridad de ductos de recolección, transporte y distribución, Mexican Government (Mexico) 11 February 2019. Access Date: 21 March 2019.

https://www.gob.mx/asea/prensa/asea-presenta-nom-para-la-administracion-de-la-integridad-de-ductos-de-recoleccion-transporte-y-distribucion

La CRE informa sobre la reestructura a su organización interna, Mexican Government (Mexico) 1 February 2019. Access Date: 21 March 2019. https://www.gob.mx/cre/prensa/la-cre-informa-sobre-la-reestructura-a-su-organizacion-interna?idiom=es

³³⁸⁶ Presidente López Obrador anuncia próxima firma de acuerdo México-Canadá para modernización de las 60 hidroeléctricas del país, Mexican Government (Mexico) 19 December 2018. Access date: 21 March 2019. https://www.gob.mx/presidencia/prensa/presidente-lopez-obrador-anuncia-proxima-firma-de-acuerdo-mexico-canada-para-modernizacion-de-las-60-hidroelectricas-del-pais?idiom=es

Thus, it receives a score of +1.

Analyst: Nadezhda Kamenkovich

Russia: +1

Russia has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 11 December 2018, Prime Minister Dmitry Medvedev signed a decree that aims to increase the investment attractiveness of alternative energy projects. The document eliminates requirements for the design, construction and operation of generating facilities operating on the basis of renewable energy sources.³³⁸⁷

On 27 December 2018, the President of Russia V.V. Putin signed the Federal Law No. 522, developed by the Government, aimed at developing electricity metering systems. The federal law was aimed at regulating the issues of introducing electric energy metering smart systems. The guaranteeing suppliers and network organizations were obliged to provide consumers with electrical energy and electric power industry entities with a minimum set of functions of intelligent electrical energy accounting systems.³³⁸⁸

On 5 March 2019, Russian Prime Minister Dmitry Medvedev announced that Russia is preparing a legislative framework for the development of alternative energy. He also said that only in the last year, the amount of energy that has been generated by installations of alternative energy has increased 2.5 times. A full cooperation chain has already been created in the Russian solar power industry (solar energy) – from research laboratories and production of solar modules to the construction and operation of solar power plants.³³⁸⁹

Russia has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Anna Piekalnits

Saudi Arabia: 0

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Saudi Arabia has partially complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 15 January 2019, Saudi Arabia announced its intention to deploy 40 GW of solar power capacity and 20 GW of wind and other renewable sources of energy by 2030 in line Saudi Arabia's KSA Vision 2030 and the National Transformation 2020 Programme.³³⁹⁰

³³⁸⁷ Renewable energy received additional support from the government, Rossiyskaya Gazeta (Moscow) 11 December 2018. Access date: 11 May 2019. https://rg.ru/2018/12/11/vozobnovliaemaia-energetika-poluchila-doppodderzhku-pravitelstva.html

³³⁸⁸ The President of Russia signed the Federal Law developed by the Government, aimed at the development of electric energy accounting systems, Russian Government (Moscow) 28 December 2019. Access date: 30 March 2019. http://government.ru/activities/selection/525/35385/

Russia is preparing a legislative framework for the development of alternative energy, RIA (Moscow) 5 March 2019. Access date: 11 May 2019. https://ria.ru/20190305/1551547986.html

³³⁹⁰ Saudi Arabia targets 60 GW of renewables by 2030 – report, Renewables Now (London) 15 January 2019. Access date: 6 May 2019. https://renewablesnow.com/news/saudi-arabia-targets-60-gw-of-renewables-by-2030-report-639430/

On 2 April 2019, the Saudi Energy Efficiency Center launched the awareness campaign aimed at promotion of energy-efficient habits and consumption patterns. The five-week campaign presents energy and consumption changes over the past decades, and how to maintain them to achieve many of the current and future positive impacts to keep energy available for future generations.³³⁹¹

Saudi Arabia takes actions aimed at fulfilment of one target of the Sustainable Development Goal 7. Thus, Saudi Arabia receives 0.

Analyst: Alexander Ignatov

South Africa: 0

South Africa has partially complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 18 February 2019, Minister of Water and Sanitation Gugile Nkwinti launched the Mzimvubu Water Project's advanced infrastructure at Esiqhungqwini Village in the Tsolo Magisterial District. This infrastructure would allow easy access to the dam site and water treatment works. The Minister used the launch to introduce the construction unit and plant hire to the community. The construction of the advance infrastructure would take about nine months to complete. The project would cost ZAR113 million³³⁹².

South Africa takes actions aimed at fulfilment of one target of the Sustainable Development Goal 7. Thus, South Africa receives 0.

Analyst: Arseniy Zakharov

Turkey: 0

Turkey has partially complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 13 February 2019, Turkey invested in total USD 650 million in 2018 in wind power plants, having increase wind power installed capacity by 497 megawatts (or 7.2 per cent) to 7369 megawatts.³³⁹³

On 5 March 2019, it was reported that Turkey's highest administrative court had blocked construction of 1,320-megawatt coal power plant in Bartin province, noting that its environmental assessment was inadequate.³³⁹⁴

Turkey takes actions aimed at fulfilment of one target of the Sustainable Development Goal 7. Thus, Turkey receives 0.

Analyst: Pavel Doronin

³³⁹¹ Saudi Energy Efficiency Center Launches His Largest Awareness Campaign of Energy Saving, Saudi Energy Efficiency Center (Riyadh) 2 April 2019. Access date: 06 May 2019.https://www.seec.gov.sa/en/blog/today-under-hash-tag-%D9%84%D8%AA%D8%A8%D9%82%D9%89-saudi-energy-efficiency-center-launches-his-largest-awareness.

Minister Gugile Nkwinti launches Mzimvubu Water Project's advanced infrastructure South African Government (Cape Town) 21 February 2019, Access date: 25 March 2019. https://www.gov.za/speeches/minister-nkwinti-launches-mzimvubu-water-project's-advanced-infrastructure-21-feb-2019-0000

³³⁹³ Turkey invested \$650M in wind power plants last year, Daily Sabah (Istanbul) 13 February 2019. Access date: 15 April 2019. https://www.dailysabah.com/energy/2019/02/13/turkey-invested-650m-in-wind-power-plants-last-year ³³⁹⁴ Turkish supreme court blocks coal plant, as wave of new projects stalls, Climate Home News (London) 5 March 2019. Access date: 15 April 2019. https://www.climatechangenews.com/2019/03/05/turkish-supreme-court-blocks-coal-plant-wave-new-projects-stalls/

United Kingdom: +1

The United Kingdom has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 7 December 2019, UK Research and Innovation through the Industrial Strategy Challenge Fund for clean energy funded a GBP102.5 million investment in UK industry and researched to develop systems that support the global move to renewables.³³⁹⁵

On 5 February 2019, the British government awarded more than GBP6 million to support ultra-low emission taxis right across the country, furthering its ambition for a zero-emission future. Over 300 chargepoints for ultra-low emission taxis to be created. Ultra-low emission taxis will improve air quality in towns and city centres.³³⁹⁶

On 7 March 2019, Energy and Clean Growth Minister Claire Perry announced the launch of the new joint government-industry Offshore Wind Sector Deal. This deal will mean for the first time in UK history there will be more electricity from renewables than fossil fuels, with 70 per cent of British electricity predicted to be from low carbon sources by 2030 and over GBP40 billion of infrastructure investment in the UK.³³⁹⁷

On 15 March 2019, it was announced that the UK government is investing USD 2.2 million in the development of 2 solar plants in Kenya to give more people access to affordable, clean energy.³³⁹⁸

United Kingdom has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Mariya Kalugina

United States: +1

United States has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 7 February 2019, the U.S. Department of Energy (DOE) announced USD35 million in awards for 12 projects that find new ways to harness medium-voltage electricity for applications in industry, transportation, on the grid and beyond. The selected projects are part of ARPA-E's Building Reliable Electronics to Achieve Kilovolt Effective Ratings Safely (BREAKERS) program, as well as the latest OPEN+ cohort, Kilovolt Devices.³³⁹⁹

³³⁹⁵ Energy systems of the future: local communities to benefit sooner, UK Government (London) 7 December 2018. Access date: 20 March 2019. https://www.gov.uk/government/news/energy-systems-of-the-future-local-communities-to-benefit-sooner

Thousands of green taxis to benefit from new chargepoints, UK Government (London) 5 February 2019. Access date: 20 March 2019. https://www.gov.uk/government/news/thousands-of-green-taxis-to-benefit-from-new-chargepoints

Offshore wind energy revolution to provide a third of all UK electricity by 2030, UK Government (London) 7 March 2019. Access date: 6 May 2019. https://www.gov.uk/government/news/offshore-wind-energy-revolution-to-provide-a-third-of-all-uk-electricity-by-2030

UK aid to give clean energy boost to Kenya, UK Government (London) 15 March 2019. Access date: 6 May 2019. https://www.gov.uk/government/news/uk-aid-to-give-clean-energy-boost-to-kenya

³³⁹⁹ USDA announces \$35 million awards for projects to support medium-voltage devices for grid, industry and transportation, U.S. Department of Energy (Washington) 7 February 2019. Access Date: 1 April 2019. https://www.energy.gov/articles/department-energy-announces-35-million-ultra-efficient-power-management

On 6 February 2019, the DOE's Office of Energy Efficiency and Renewable Energy (EERE) announced their intent to issue a Funding Opportunity Announcement (FOA) entitled "Clean Energy Manufacturing Innovation Institute: Cybersecurity in Energy Efficient Manufacturing." ³⁴⁰⁰

On 13 December 2018, the DOE announced USD100 million to establish an Energy-Water Desalination Hu to address water security issues in the United States. The Hub will focus on early-stage research and development (R&D) for energy-efficient and cost-competitive desalination technologies including manufacturing challenges, and for treating non-traditional water sources for multiple end-use applications.³⁴⁰¹

On 1 April 2019, the DOE ergy Assistant Secretary for Energy Efficiency and Renewable Energy Daniel Simmons announced up to USD26.1 million in funding to drive innovative industry-led technology solutions to advance the marine and hydrokinetics industry and increase hydropower's ability to serve as a flexible grid resource. The Water Power Technologies Office will select projects that aim to increase affordability of hydropower and marine energy.³⁴⁰²

On 23 April 2019, the DOE announced the Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) 2019 Funding Opportunity (FOA) for up to USD47 million for innovative technologies to make energy more affordable.³⁴⁰³

On 30 April 2019, the DOE, Israel's Ministry of Energy, and the Israel Innovation Authority have announced a USD16 million Call for Proposals of the U.S.-Israel Center of Excellence in Energy, Engineering and Water Technology.³⁴⁰⁴

On 1 March 2019, the DOE announced up to USD51.5 million for new and innovative research of technologies for trucks, off-road vehicles, and the fuels that power them. Funded through the EERE, this FOA addresses priorities in gaseous fuels research, including natural gas, biopower, and hydrogen; heavy-duty freight electrification; hydrogen infrastructure and fuel cell technologies for heavy-duty applications; and energy efficient off-road vehicles.³⁴⁰⁵

³⁴⁰¹ Department of Energy Announces \$100 Million Energy-Water Desalination Hub to Provide Secure and Affordable Water, U.S. Department of Energy (Washington) 13 December 2018. Access Date 1 April 2019.

https://www.energy.gov/articles/department-energy-announces-100-million-energy-water-desalination-hub-provide-secure-and

³⁴⁰² DOE Announces Up to \$26.1 Million to Advance Hydropower and Marine Energy, U.S. Department of Energy (Washington) 1 April 2019. Access Date: 30 April 2019. https://www.energy.gov/articles/doe-announces-261-million-advance-hydropower-and-marine-energy.

DOE Announces \$47 Million for Flexible Building Technologies, Heating, Ventilation and Air Conditioning (HVAC), and Solid-State Lighting, U.S. Department of Energy (Washington) 23 April 2019. Access Date: 30 April 2019.https://www.energy.gov/articles/doe-announces-47-million-flexible-building-technologies-heating-ventilation-and-air

³⁴⁰⁴ DOE, Israel's Ministry of Energy, and Israel Innovation Authority Announce Call for Proposals for the U.S.-Israel Energy Center, U.S. Department of Energy (Washington) 30 April 2019. Access Date: 30 April 2019. https://www.energy.gov/articles/doe-israel-s-ministry-energy-and-israel-innovation-authority-announce-call-proposals-us

proposals-us ³⁴⁰⁵ Department of Energy Announces \$50 Million for Commercial Truck, Off-road Vehicle, and Gaseous Fuels Research, U.S. Department of Energy (Washington) 1 March 2019. Access Date 1 May 2019.

https://www.energy.gov/articles/department-energy-announces-50-million-commercial-truck-road-vehicle-and-gaseous-fuels

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³⁴⁰⁰ DOE announces notice of intent to issue a funding opportunity establishing a cybersecurity institute for energy efficient manufacturing, U.S. Department of Energy (Washington) 6 February 2019. Access Date 1 April 2019. https://www.energy.gov/articles/doe-announces-notice-intent-issue-funding-opportunity-establishing-cybersecurity-institute

On 28 March 2019, the DOE announced up to USD28.1 million in funding aimed at advancing wind energy nationwide across the land-based, offshore, and distributed wind sectors.³⁴⁰⁶

On 26 March 2019, the DOE announced up to USD130 million for new research to advance early-stage solar technologies. These projects will help to achieve affordable and reliable energy to enhance America's economic growth and energy security.³⁴⁰⁷

On 25 March 2019, the DOE selected up to USD36 million in research projects that will advance solar energy's role in strengthening the resilience of the Nation's electricity grid.³⁴⁰⁸

United States has taken action to promote the achievement of three relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

Analyst: Dmitriy Lukanin

European Union: +1

The European Union has fully complied with the commitment to promote energy security, sustainability, resilience, efficiency, affordability and stability.

On 4 December 2018, the revised Energy Efficiency Directive, the revised Renewable Energy Directive and the new Governance Regulation were formally adopted at the Transport, Telecommunications and Energy Council, following on from the strong support that all three dossiers got from members of the European Parliament at previous month's plenary session.³⁴⁰⁹ The new regulatory framework, in particular via the introduction of the first national energy and climate plans, brought regulatory certainty and enabling conditions for essential investments to take place in this important sector. It empowered European consumers to become fully active players in the energy transition and fixes two new targets for the EU in 2030, among which is an energy efficiency target of at least 32.5 per cent, which would stimulate Europe's industrial competitiveness, boost growth and jobs, reduce energy bills, help tackle energy poverty and improve air quality.³⁴¹⁰

On 18 December 2018, the European Commission welcomed a new political agreement on conclusion of the Clean Energy for All Europeans package. Negotiators were able to reach political

Department of Energy Announces \$130 Million for Early-Stage Solar Research Project, U.S. Department of Energy (Washington) 26 March 2019. Access Date: 1 Mat 2019 https://www.energy.gov/articles/department-energy-announces-130-million-early-stage-solar-research-project

 $https://ec.europa.eu/info/news/commission-welcomes-council-adoption-new-rules-renewable-energy-energy-efficiency-and-governance-2018-dec-04_en.\\$

³⁴⁰⁶ Department of Energy Announces \$28 Million in Funding for Wind Energy Research, U.S. Department of Energy (Washington) 28 March 2019. Access Date: 1 May 2019.https://www.energy.gov/eere/wind/articles/department-energy-announces-28-million-funding-wind-energy-research

Department of Energy Selects \$36 Million to Advance Solar Energy Integration, U.S. Department of Energy (Washington) 25 March 2019. Access Date: 1 April 2019. https://www.energy.gov/articles/department-energy-selects-36-million-advance-solar-energy-integration

Commission welcomes Council adoption of new rules on Renewable Energy, Energy Efficiency and Governance, European Commission (Brussels) 4 December 2018. Access date: 15 February 2019.

https://ec.europa.eu/info/news/commission-welcomes-council-adoption-new-rules-renewable-energy-ene

Commission welcomes Council adoption of new rules on Renewable Energy, Energy Efficiency and Governance, European Commission (Brussels) 4 December 2018. Access date: 15 February 2019.

agreement on the new Electricity Regulation and Electricity Directive.³⁴¹¹ This agreement followed previous agreements on the Governance proposal, the revised Energy Efficiency Directive, the revised Renewable Energy Directive, the Energy Performance in Buildings Directive and the Regulations on Risk Preparedness and the Agency for the Cooperation of Energy Regulators (ACER).³⁴¹² The new electricity market design proposals, a Directive and a Regulation, aimed to adapt the current market rules to new market realities. They introduced a new limit for powerplants eligible to receive subsidies as capacity mechanisms. Subsidies to generation capacity emitting 550gr CO2/kWh or more would be phased out under the new rules.³⁴¹³ Furthermore, the consumer was put at the centre of the clean energy transition. Cross-border trade and competition would drive the investments necessary to provide security of supply, whilst decarbonizing the European energy system.³⁴¹⁴

On 11 December 2018, the 6th EU Energy Day took place in Katowice, Poland, as part of the EU side events programme at the 24th Conference of the Parties to United Nations Framework Convention on Climate Change. As part of the programme, a Joint Declaration between the EU and the International Solar Alliance (ISA) for cooperation on solar energy was signed.³⁴¹⁵ The ISA was launched on 30 November 2015 by India and France to implement the Paris Agreement. It aimed to provide a dedicated platform for cooperation among solar resource-rich countries where the global community, including bilateral and multilateral organizations, corporates, industry, and other stakeholders, could make a positive contribution to assist and help achieve the common goals of increasing the use of solar energy in a safe, convenient, affordable, equitable and sustainable manner. To date, 71 countries signed the ISA framework.³⁴¹⁶

On 8 January 2019, the European Commission approved, under EU State aid rules, a measure to support the production of electricity from renewable energy sources and a measure to support electro-intensive users in Lithuania. The Commission found that the aid had an incentive effect, as the market price did not fully cover the costs of generating electricity from renewable energy sources and the beneficiaries applied for the aid before the installations started working.³⁴¹⁷ The aid was also proportionate and limited to the minimum necessary, as it only covered the difference between the

³⁴¹¹ Commission welcomes political agreement on conclusion on the Clean Energy for All Europeans package, European Commission (Brussels) 18 December 2018. Access date: 13 February 2019. http://europa.eu/rapid/press-release_IP-18-6870_en.htm.

Commission welcomes political agreement on conclusion on the Clean Energy for All Europeans package, European Commission (Brussels) 18 December 2018. Access date: 13 February 2019. http://europa.eu/rapid/press-release_IP-18-6870 en.htm.

Commission welcomes political agreement on conclusion on the Clean Energy for All Europeans package, European Commission (Brussels) 18 December 2018. Access date: 13 February 2019. http://europa.eu/rapid/press-release_IP-18-6870_en.htm.

Commission welcomes political agreement on conclusion on the Clean Energy for All Europeans package, European Commission (Brussels) 18 December 2018. Access date: 13 February 2019. http://europa.eu/rapid/press-release_IP-18-6870 en.htm.

³⁴¹⁵ Signature by the EU and the International Solar Alliance of a Joint Declaration for cooperation on solar energy, European Commission (Brussels) 11 December 2018. Access date: 12 February 2019.

 $https://ec.europa.eu/info/news/signature-eu-and-international-solar-alliance-joint-declaration-cooperation-solar-energy-2018-dec-11_en.\\$

Signature by the EU and the International Solar Alliance of a Joint Declaration for cooperation on solar energy, European Commission (Brussels) 11 December 2018. Access date: 12 February 2019.

 $https://ec.europa.eu/info/news/signature-eu-and-international-solar-alliance-joint-declaration-cooperation-solar-energy-2018-dec-11_en.\\$

³⁴¹⁷ State aid: Commission approves support for production of electricity from renewable energy sources and for electro-intensive users in Lithuania, European Commission (Brussels) 8 January 2019. Access date: 10 February 2019. http://europa.eu/rapid/press-release_IP-19-242_en.htm.

production costs and the market price of electricity.³⁴¹⁸ Therefore, the Commission concluded that the Lithuanian measure was in line with EU State aid rules, as it promoted the generation of electricity from renewable sources, in line with the environmental objectives of the EU, without unduly distorting competition.³⁴¹⁹

On 23 January 2019, EU Member States voted on a Commission proposal to invest almost EUR800 million in key European energy infrastructure projects with major cross-border benefits. The EU funding came from the Connecting Europe Facility (CEF), the European support programme for trans-European infrastructure. Priority was given to projects that increase competitiveness, enhance the EU's security of energy supply through the promotion of safe, secure and efficient network operation, and contribute to sustainable development and environmental protection. This vote concerned CEF financial aid for studies and works for a total of 14 projects: 7 for electricity, 2 for smart grids, 2 for CO2 cross-border transportation and 3 for gas. The proposed CEF-Energy funding amounted to almost EUR800 million, with electricity and smart grids accounting for EUR504 million, EUR9.3 million to support studies on the development of a CO2 transport infrastructure; and EUR286 allocated to the gas sector.

On 18 February 2019, the European Commission launched an initiative on kick-starting energy transition process with islands to support them in becoming more self-sufficient, prosperous and sustainable. Self-sufficient islands officially launched their clean energy transition with the support of the European Commission's Clean Energy for EU Islands Secretariat. In a first phase, 6 islands, the Aran Islands (Ireland) Cres-Lošinj (Croatia), Sifnos (Greece), Culatra (Portugal), Salina (Italy) and La Palma (Spain) were set to develop and publish their clean energy transition agendas by summer 2019. The other 20 islands would do so by summer 2020. Despite having an abundance of renewable sources of energy, such as wind, solar and wave energy, many of them depended on expensive fossil fuel imports for their energy supply. The clean energy transition could help islands not only become more self-sufficient and prosperous, but also unlock new employment opportunities in their communities.

On 12 February 2019, the European Commission, the European Parliament and the Council agreed on a new provisional political agreement to ensure that pipelines with third countries comply with EU gas rules. Following the announcement by President Juncker in his 2017 State of the European

³⁴¹⁸ State aid: Commission approves support for production of electricity from renewable energy sources and for electro-intensive users in Lithuania, European Commission (Brussels) 8 January 2019. Access date: 10 February 2019. http://europa.eu/rapid/press-release IP-19-242 en.htm.

³⁴¹⁹ State aid: Commission approves support for production of electricity from renewable energy sources and for electro-intensive users in Lithuania, European Commission (Brussels) 8 January 2019. Access date: 10 February 2019. http://europa.eu/rapid/press-release_IP-19-242_en.htm.

Energy Union: EU invests a further €800 million in priority energy infrastructure, European Commission (Brussels) 23 January 2019. Access date: 11 February 2019. http://europa.eu/rapid/press-release_IP-19-561_en.htm.

³⁴²¹ Energy Union: EU invests a further €800 million in priority energy infrastructure, European Commission (Brussels) 23 January 2019. Access date: 11 February 2019. http://europa.eu/rapid/press-release IP-19-561 en.htm.

³⁴²² Energy Union: EU invests a further €800 million in priority energy infrastructure, European Commission (Brussels) 23 January 2019. Access date: 11 February 2019. http://europa.eu/rapid/press-release IP-19-561 en.htm.

³⁴²³ 26 European islands launch clean energy transition, European Commission (Brussels) 18 February 2019. Access date: 20 February 2019. https://ec.europa.eu/info/news/26-european-islands-launch-clean-energy-transition-2019-feb-18 en.

³⁴²⁴ 26 European islands launch clean energy transition, European Commission (Brussels) 18 February 2019. Access Date: 20 February 2019. https://ec.europa.eu/info/news/26-european-islands-launch-clean-energy-transition-2019-feb-18_en.

³⁴²⁵ 26 European islands launch clean energy transition, European Commission (Brussels) 18 February 2019. Access date: 20 February 2019. https://ec.europa.eu/info/news/26-european-islands-launch-clean-energy-transition-2019-feb-18_en.

Union speech, the Commission proposed common rules for gas pipelines entering the European gas market, on 8 November 2017. These rules aimed at increasing security of supply. The aim of the proposal was to improve the existing Gas Directive (2009/73/EC) and ensure that the principles of EU energy legislation (third-party access, tariff regulation, ownership unbundling and transparency) apply to all gas pipelines to and from third countries.

On 20 February 2019, the European Commission announced that more European funds were available to support energy efficiency in residential buildings. The European Local ENergy Assistance (ELENA) facility would benefit from EUR 97 million of new funding from the European Commission for its envelope dedicated to residential buildings. This budget would support project development services for energy-efficiency investments in privately and publicly owned housing. The European Investment Bank (EIB), which implements ELENA, would provide assistance and expertise and act as the point of contact. Project development services would mainly be directed towards households and homeowner associations with a view to increasing comfort and reducing energy bills. 3428

On 11 March 2019, Italy and ElectiFI, the EU flagship initiative to de-risk sustainable energy investments in developing countries signed a EUR5 million support agreement. The Italian support would focus on the Sahel Region and Sub-Saharan countries. This bilateral support added to the EU Member States' contribution through the EU budget. Based on the current pipeline, expected results were set to constitute 1.5 million direct and indirect connections or the equivalent of 7 million persons, with about 470 MW additional generation capacity and 430 GWh of electricity from renewable sources per year. 3429

On 19 March 2019, the European Commission announced the launch of the first edition of the RESponsible Island Prize, which was dedicated to islands with innovative and sustainable local renewable energy production for use in electricity, heating, cooling and transport.³4³0 The three winners would receive a cash prize of €500,000, EUR250,000 and EUR100,000, respectively. The competition was launched by Carlos Moedas, Commissioner for Research, Science and Innovation, coinciding with the "OCEANS the future of the blue planet" conference on 19 March in Brussels. The prize was funded under Horizon 2020, the EU research and innovation programme (2014-2020). Successful applicants would also need to demonstrate how their energy system engaged the local community as responsible consumers.³4³¹ Through the prize, the Commission would contribute to fulfilling the objectives of the Political Declaration on Clean Energy on EU Islands and the Smart Islands Initiative. It will also help the EU to advance on one of the eight innovation challenges

³⁴²⁷ More European funds available to support energy efficiency in residential buildings, European Commission (Brussels) 20 February 2019. Access date: 24 March 2019. https://ec.europa.eu/info/news/more-european-funds-available-support-energy-efficiency-residential-buildings-2019-feb-20 en.

³⁴²⁶ Energy Union: Commission welcomes tonight's provisional political agreement to ensure that pipelines with third countries comply with EU gas rules, European Commission (Brussels) 12 February 2019. Access date: 14 February. http://europa.eu/rapid/press-release_IP-19-1069_en.htm.

More European funds available to support energy efficiency in residential buildings, European Commission (Brussels) 20 February 2019. Access date: 24 March 2019. https://ec.europa.eu/info/news/more-european-funds-available-support-energy-efficiency-residential-buildings-2019-feb-20 en.

taly supports EU initiative to boost investment in sustainable energy in developing countries with €5 million, European Commission (Brussels) 11 March 2019. Access date: 25 March 2019. https://ec.europa.eu/europeaid/news-and-events/italy-supports-eu-initiative-boost-investment-sustainable-energy-developing en

Competition starts today: new prize to reward islands for local renewable energy production, European Commission (Brussels) 19 March 2019. Access date: 24 March 2019. https://ec.europa.eu/info/news/competition-starts-today-new-prize-reward-islands-local-renewable-energy-production-2019-mar-19_en.

³⁴³¹ Competition starts today: new prize to reward islands for local renewable energy production, European Commission (Brussels) 19 March 2019. Access date: 24 March 2019. https://ec.europa.eu/info/news/competition-starts-today-new-prize-reward-islands-local-renewable-energy-production-2019-mar-19_en.

defined under Mission Innovation, a global initiative working to accelerate the clean energy transition.³⁴³²

On 9 April 2019, the European Commission published the Renewable Energy Progress Report, which stated that the EU was on track for reaching its renewable energy target for 2020. It claimed that the share of renewable energy in the EU energy mix already reached 17.52 per cent because of the significant cost reductions in renewable energy technologies, the decrease of subsidies through more competitive support schemes the numerous zero or low-cost auction results in several European countries.³⁴³³

On 12 March 2019, call for proposals for the Secure, Clean and Efficient Energy topics of the Horizon 2020 EU funding programme was launched by the European Commission. The funding is available for proposals submitted under 16 topics addressing 5 main areas: buildings, industry, finance, public authorities and policy support and consumer and services.³⁴³⁴

On 16 April 2019, the European Commission's Director-General for International Cooperation and Development, Stefano Manservisi co-chaired the first EU-Cuba Sustainable Development Dialogue. The dialogue took stock of the progress towards meeting the Sustainable Development Goals in Cuba and the EU. This visit to Cuba launched agreements for projects in energy among other areas. This project included allocating EUR4 million to use renewable energy to boost Cuba's energy resilience in extreme weather events and EUR10.5 million to promote energy efficiency and renewable energy use for local development.³⁴³⁵

On 16 April 2019, the European Investment Bank provided Aena with EUR86 million to improve the energy efficiency of its airports. This contract was made possible by the European Fund for Strategic Investments (EFSI), the main pillar of the Investment Plan for Europe that made it possible for the EIB to provide financing on favourable terms to support investments. The EIB-financed investments would facilitate the creation of 635 indirect jobs during the project's implementation phase. The credit line would be available for use by Aena for the next two years and would enable it to finance 75 per cent of the investments set to improve energy efficiency and promote the use of renewable energy in Aena's network of 46 airports and two heliports across Spain. The EIB's Juncker Plan financing would make it possible to replace airport lighting systems with low-energy alternatives, optimise thermal insulation in terminals and renovate ventilation systems and boilers. In addition, the creation of a solar photovoltaic plant for on-site use was planned in Madrid –

3433 Renewable Energy Progress Report, European Commission (Brussels) 9 April 2019. Access date: 29 April 2019. https://ec.europa.eu/commission/sites/beta-political/files/report-progress-renewable-energy-april2019_en.pdf. The new call for energy efficiency is open, European Commission (Brussels) 13 March 2019. Access date: 24 March

2019. https://ec.europa.eu/info/news/new-call-energy-efficiency-open-2019-mar-13_en.

³⁴³² Competition starts today: new prize to reward islands for local renewable energy production, European Commission (Brussels) 19 March 2019. Access date: 24 March 2019. https://ec.europa.eu/info/news/competition-starts-today-new-prize-reward-islands-local-renewable-energy-production-2019-mar-19_en.

Director General Stefano Manservisi in Cuba to discuss boosting cooperation and taking the sustainable development agenda forward, European Commission (Brussels) 16 April 2019. Access date: 29 April 2019. https://ec.europa.eu/europeaid/news-and-events/director-general-stefano-manservisi-cuba-discuss-boosting-cooperation-and-taking en.

Investment Plan for Europe: EIB provides Aena with €86m to improve the energy efficiency of its airports, European Commission (Brussels) 16 April 2019. Access date: 29 April 2019. https://ec.europa.eu/commission/news/investment-plan-europe-eib-provides-aena-eu86m-improve-energy-efficiency-its-airports-2019-apr-16_en.

³⁴³⁷ Investment Plan for Europe: EIB provides Aena with €86m to improve the energy efficiency of its airports, European Commission (Brussels) 16 April 2019. Access date: 29 April 2019. https://ec.europa.eu/commission/news/investment-plan-europe-eib-provides-aena-eu86m-improve-energy-efficiency-its-airports-2019-apr-16_en.

generating 13,600 MWh of clean energy a year and avoiding the emission of 2,980 tonnes of CO2 – as is the installation of around 2,700 electric vehicle recharging points in the network's car parks.³⁴³⁸

On 23 April 2019, the European Commission approved EUR385 million support for production of electricity from renewable sources in Lithuania. Lithuania would now introduce a new aid scheme to support installations generating electricity from renewable sources such as wind, solar or hydropower. This scheme would help Lithuania reach its national target share of renewable energy sources in gross final energy consumption, which was set at 38 per cent by 2025. The renewable energy scheme would be applicable until 1 July 2025 or, alternatively, until the 38 per cent target is reached. The scheme, with an overall budget of EUR385 million, would be open to all renewable installations. The installations benefitting from the scheme would receive support in the form of a premium, which would be set through a competitive bidding process for all types of installations, irrespective of the size of the installation and the renewable technology used. 3441

European Union has taken action to promote the achievement of four relevant targets of the Sustainable Development Goal 7.

Thus, it receives a score of +1.

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³⁴³⁸ Investment Plan for Europe: EIB provides Aena with €86m to improve the energy efficiency of its airports, European Commission (Brussels) 16 April 2019. Access date: 29 April 2019. https://ec.europa.eu/commission/news/investment-plan-europe-eib-provides-aena-eu86m-improve-energy-efficiency-its-airports-2019-apr-16_en.

³⁴³⁹ State Aid: Commission Approved approves €385 million support for production of electricity from renewable sources in Lithuania, European Commission (Brussels) 23 April 2019. Access date: 29 April 2019. http://europa.eu/rapid/press-release_IP-19-2230_en.htm.

State Aid: Commission Approved approves €385 million support for production of electricity from renewable sources in Lithuania, European Commission (Brussels) 23 April 2019. Access date: 29 April 2019. http://europa.eu/rapid/press-release IP-19-2230 en.htm.

³⁴⁴¹ State Aid: Commission Approved approves €385 million support for production of electricity from renewable sources in Lithuania, European Commission (Brussels) 23 April 2019. Access date: 29 April 2019. http://europa.eu/rapid/press-release_IP-19-2230_en.htm.