

The G20 Research Group
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presents the

2018 G20 Buenos Aires Summit Final Compliance Report

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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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Contents

Contents.....	2
Preface.....	3
Toronto Research Team	4
CIIR G20 Research Team	5
Introduction and Summary.....	6
Commitment Breakdown.....	7
Selection of Commitments	7
Final Compliance Scores.....	7
Final Compliance by Member	7
Final Compliance by Commitment	7
Table 1: 2018 G20 Buenos Aires Summit Commitments Selected for Compliance Monitoring	8
Table 2: 2018 G20 Buenos Aires Summit Final Compliance Scores	10
Table 4: 2018 G20 Buenos Aires Summit Final Compliance by Member	11
Table 5: 2018 G20 Buenos Aires Summit Final Compliance by Commitment	12
Table 6: G20 Compliance by Member, 2008–2017	13
Conclusions.....	14
Future Research and Reports	14
Considerations and Limitations	14
Appendix: General Considerations	15
1. Climate Change: Disaster Resilience.....	16
2. Development: Early Childhood Development	47
3. Digital Economy: Data Governance	74
4. Employment: Skills Development	104
5. Energy: Cleaner, Flexible and Transparent Systems	146
6. Financial Regulation: Tax Administration	208
7. Food Security: Malnutrition	240
8. Gender: Economic Empowerment.....	302
9. Reform of the International Financial Institutions: International Monetary Fund.....	358
10. Macroeconomics: Inclusive Growth.....	379
11. Climate Change: Paris Agreement.....	429
12. Digital Economy: Digital Infrastructure	461
13. Employment: Future of Work.....	490
14. Energy: Energy Security.....	513
15. Financial Regulation: Technology	541
16. Financial Regulation: International Taxation	567
17. Food and Agriculture: Sustainable Agriculture	584
18. Health: Universal Health Coverage.....	616
19. Infrastructure: Infrastructure Investment.....	651
20. Trade: Reform of the World Trade Organization	672

5. Energy: Cleaner, Flexible and Transparent Systems

“We encourage energy transitions that combine growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems.”

G20 Buenos Aires Leaders’ Communiqué

Assessment

	No Compliance	Partial Compliance	Full Compliance
Argentina		0	
Australia			+1
Brazil			+1
Canada			+1
China			+1
France			+1
Germany			+1
India			+1
Indonesia			+1
Italy			+1
Japan			+1
Korea			+1
Mexico			+1
Russia			+1
Saudi Arabia		0	
South Africa			+1
Turkey		0	
United Kingdom			+1
United States	-1		
European Union			+1
Average		+0.75	

Background

At the Cannes Summit in 2011, the G20 leaders, for the first time, committed to promote sustainable development and green growth as a part of a larger effort to improving the functionality of energy markets.⁸⁶⁷ Prior to the Cannes Summit, sustainable energy had not been a strategy of G20 members in working towards strong and sustainable growth.

In Los Cabos, Mexico, at the 2012 Summit, the leaders reaffirmed their commitment from 2011 to promote sustainable energy growth., The Los Cabos Summit contained the first mention of climate change in the leaders’ communiqué. In it, they acknowledged the importance of a future that is focused on issues larger than the immediate economic crises of the time. G20 leaders recognized that green growth and sustainable development is capable of providing long-term prosperity and wellbeing.⁸⁶⁸

In the communiqué released at the 2013 St. Petersburg Summit, the G20 leaders collectively praised the progress of international organizations such as the World Bank, Joint Organization Data Initiative, the International Energy Agency and the International Energy Forum and the G20 Energy

⁸⁶⁷ G20 Leader’s Communiqué: Cannes Summit, G20 (Cannes) 4 November 2011. Access Date: 5 January 2018. <http://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html>.

⁸⁶⁸ G20 Leader’s Communiqué: Los Cabos Summit, G20 (Los Cabos) 19 June 2012. Access Date: 5 January 2018. <http://www.g20.utoronto.ca/2012/2012-0619-loscabos.html>.

Sustainability Working Group, among others, towards highlighting ways towards energy transitions and sustainable development and again, separately, recognized the effects that climate change would have on the world economy. Additionally, they committed to supporting the United Nations Framework Convention on Climate Change (UNFCCC) and their ongoing negotiations.⁸⁶⁹

In Brisbane, Australia, in 2014, a focus on energy was referred to as a “priority” and resilient energy markets as “critical” for economic growth. Collectively, the leaders endorsed the G20 Principles on Energy Collaboration put together by their Energy Ministers.⁸⁷⁰ For the first time, the energy ministers called for the G20 members’ support for sustainable growth and development to be consistent with the members’ climate activities. This for the first time linked the climate goals to the goal of energy transitions, even encouraging renewable and clean energy technologies.⁸⁷¹

At the 2015 Antalya summit in Turkey, the leaders included the energy and climate change in the same section. In the communiqué, they recognized that actions relating to energy would be central in tackling climate change and its effects; all whilst acknowledging that climate change is one of the greatest challenges we will face in our lifetimes.⁸⁷²

The follow up to the G20 Principles on Energy Collaboration was named the G20 Energy Access Plan: Voluntary Collaboration on Energy Access, highlighting the division between members on the necessity of taking action towards energy transitions.⁸⁷³ During the 2016 Hangzhou Summit, G20 members merely reiterated their 2016 belief in the importance of energy collaboration towards a future of cleaner energy.⁸⁷⁴ Despite that, 2016 was an important year in that they published the G20 Action Plan on the 2030 Agenda for Sustainable Development, highlighting each individual member’s goals towards achieving sustainable development by 2030.⁸⁷⁵

The 2017 Hamburg Summit was a pivotal moment whereby the first subsection of the ‘Improving Livelihood Section’ was named ‘Energy and Climate’, emphasizing their mutual interconnectedness and stating in it that “a strong economy and a health climate are mutually reinforcing.” In Hamburg, the leaders, without the United States, reaffirmed their support for the Paris Climate Agreement and towards achieving a low greenhouse-gas emission energy system, as well as open, flexible and transparent markets for energy.⁸⁷⁶ In the ‘Climate and Energy Action Plan for Growth’ that also was published in Hamburg, the leaders agreed to work together to “transform their energy systems into

⁸⁶⁹ G20 Leader’s Communiqué: St. Petersburg Summit, G20 (St. Petersburg) 6 September 2013. Access Date: 5 January 2018. <http://www.g20.utoronto.ca/2013/2013-0906-declaration.html#energy>.

⁸⁷⁰ G20 Leader’s Communiqué: Brisbane Summit, G20 (Brisbane) 16 November 2014. Access Date: 5 January 2018. <http://www.g20.utoronto.ca/2014/2014-1116-communique.html>.

⁸⁷¹ G20 Principles on Energy Collaboration: Brisbane Summit, G20 (Brisbane) 16 November 2014. Access Date: 5 January 2018. http://www.g20.utoronto.ca/2014/g20_principles_energy_collaboration.pdf.

⁸⁷² G20 Leader’s Communiqué: Antalya Summit, G20 (Antalya) 16 November 2015. Access Date: 6 January 2018. <http://www.g20.utoronto.ca/2015/151116-communique.html>.

⁸⁷³ G20 Energy Access Plan: Voluntary Collaboration on Energy Access. Antalya Summit, G20 (Antalya) 16 November 2015. Access Date: 6 January 2018. <http://www.g20.utoronto.ca/2015/G20-Energy-Access-Action-Plan.pdf>.

⁸⁷⁴ G20 Leader’s Communiqué: Hangzhou Summit, G20 (Hangzhou) 5 September 2016. Access Date: 6 January 2018. <http://www.g20.utoronto.ca/2016/160905-communique.html>.

⁸⁷⁵ G20 Action Plan on the 2030 Agenda for Sustainable Development. Hangzhou Summit, G20 (Hangzhou) 5 September 2016. Access Date: 6 January 2018. <http://www.g20.utoronto.ca/2016/g20-action-plan-on-2030-agenda.pdf>.

⁸⁷⁶ G20 Leader’s Communiqué: Hamburg Summit, G20 (Hamburg) 8 July 2017. Access Date: 7 January 2018. <http://www.g20.utoronto.ca/2017/2017-G20-leaders-declaration.html>.

affordable, reliable, sustainable and low greenhouse gas emissions energy systems” that are compatible with the Paris Agreement.⁸⁷⁷

At the 2018 Buenos Aires G20 Summit, while acknowledging that the United States intends to withdraw from the Paris Agreement, the other G20 members also recognized the crucial role of energy in shaping the future of the world. In promoting energy security, sustainability, efficiency, stability, affordability, and resilience, the leaders also acknowledged that there are many forms of energy and technological advances that allow for a low emissions future.⁸⁷⁸ The G20 Energy Ministers Communiqué at the Summit stressed that the increasing investments in cleaner technologies, using renewable energy, cooperation in energy efficiency and innovation can all play a part in transforming energy systems, while recognizing that every member has a different possible path towards achieving cleaner energy systems.⁸⁷⁹

Commitment Features

The G20 member committed to “encourage energy transitions that combine growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems.”⁸⁸⁰ In this commitment there are two targets: 1) decreasing greenhouse gas emissions and 2) cleaner, more flexible and transparent [energy] systems. There isn’t a particular or specific policy instrument towards achieving the above-mentioned target, which makes this commitment easily achievable. As such, the threshold for compliance is very low, compliance may be (artificially) higher than past energy commitments.

To “encourage” is understood to mean that compliance with this commitment requires the public support of old initiatives, continuance of ongoing initiatives, or the promotion of new initiatives and/or policies both domestically and internationally that would assist in transitioning energy systems that allow for continued growth whilst simultaneously decreasing greenhouse gas emissions. Full compliance with this commitment does not require the implementation of new initiatives.

Examples of encouragement include reinforcing, promoting or introducing initiatives and/or policies that create an attractive investment space for renewable energy and clean technology, energy efficiency, energy infrastructure and energy projects, providing assistance to other countries to do the same, or actively supporting international platforms and mechanisms such as the UNFCCC and the Paris Agreement. Strengthening cooperation amongst G20 members in the innovation sphere in regards to research, development and demonstration, as well as with scientific analysis, policy adjustments and monitoring within the G20, and in partnership with international or national research institutes, and the private sector can also be substantially beneficial towards the energy transition process.⁸⁸¹ Statements reaffirming the support of cleaner energy transitions may also be considered for compliance.

“Decreasing greenhouse gas emissions” is understood as domestic efforts to lower the total amount of greenhouse gas emissions that each respective member emits into the atmosphere. These efforts

⁸⁷⁷ G20 Hamburg Climate and Energy Action Plan for Growth. Hamburg Summit, G20 (Hamburg) 8 July 2017. Access Date: 7 January 2018. http://unepinquiry.org/wp-content/uploads/2017/07/Climate_and_Energy_Action_Plan_for_Growth.pdf.

⁸⁷⁸ G20 Leader’s Communiqué: Buenos Aires Summit, G20 (Buenos Aires) 1 December 2018. Access Date: 8 January 2018. <http://www.g20.utoronto.ca/2018/2018-leaders-declaration.html>.

⁸⁷⁹ G20 Energy Ministers Communiqué: Buenos Aires Summit, G20 (Bariloche) 15 June 2018. Access Date: 19 January 2019.

⁸⁸⁰ G20 Leader’s Communiqué: Buenos Aires Summit, G20 (Buenos Aires) 1 December 2018. Access Date: 8 January 2018. <http://www.g20.utoronto.ca/2018/2018-leaders-declaration.html>.

⁸⁸¹ Energy Transitions Towards Cleaner, More Flexible and Transparent Systems. International Energy Agency, (Paris) June 2018. Access Date: 8 January 2018. http://www.g20.utoronto.ca/2018/g20_argentina_energy_transitions_wg_energy_transitions.pdf.

will mainly materialize through the implementation of the Paris Agreement and other related commitments, such as keeping the global average temperature from increasing more than two degrees Celsius above pre-industrial levels, increase the ability to adapt to the adverse effects of climate change and make finance flows more consistent with a pathway that leads towards lower greenhouse gas emissions and climate-resilient development.¹⁵

“Cleaner” energy is understood to be energy that is derived from renewable, zero-emissions source (renewables) or energy that is saved via energy efficiency measures, which manages or restrains energy consumption. This part of the commitment can be achieved by taking steps such as policy progress and investments in research, development and demonstration to ensure that energy efficiency is improved, energy storage is possible nuclear energy use is advanced and Carbon Capture, Utilization and Storage technology is further developed.¹⁵

“More flexible and transparent systems” are understood as being systems that will deliver reliable energy at lower costs through efforts at optimizing and making more widely available the operations of the processes in both the demand and supply side of the energy market. This part of the commitment can be achieved by taking steps such as market reforms, and increased regional coordination to transition from emission-intensive energy sources such as coal and oil towards renewable energy sources and Liquefied Natural Gas (LNG), improve regional market integration, regional power system security and the digitalization of the energy system.⁸⁸²

To achieve full compliance, G20 members must encourage energy transitions that not only combine growth with decreased greenhouse gas emissions, but to also improve the cleanliness and operation of the energy system to ensure it becomes cleaner, more flexible and transparent via a range of different possible mechanisms.

Scoring Guidelines

-1	Member does NOT encourage energy transitions that decrease greenhouse gas emissions OR move towards a cleaner, more flexible and transparent energy system.
0	Member encourages energy transitions that combine growth with decreasing greenhouse gases OR move towards a cleaner, more flexible and transparent energy system.
+1	Member encourages energy transitions that combine growth with decreasing greenhouse gas emissions, AND move towards cleaner, more flexible and transparent energy systems.

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Argentina: 0

Argentina has partially complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems.

On 5 December 2018, the Secretary and Minister of Energy Javier Iguacel headed talks for the fourth executive board of Vaca Muerta at the Finance Palace where challenges in the energy sector were discussed. National authorities, sectoral chambers, unions and oil companies discussed increasing in non-conventional production that will maximize exports and minimizes imports on natural gas,

⁸⁸² Energy Transitions Towards Cleaner, More Flexible and Transparent Systems. International Energy Agency, (Paris) June 2018. Access Date: 8 January 2018.
http://www.g20.utoronto.ca/2018/g20_argentina_energy_transitions_wg_energy_transitions.pdf.

promoting the usage of hydrocarbons. The aim of the discussion was to increase energy production while lowering costs.⁸⁸³

On 13 December 2018, the Secretary and Minister of Energy Javier Iguacel attended a lunch organized by the Argentine Institute of Petroleum and Gas at the Sheraton Hotel of Buenos Aires for celebration of the day of oil and gas. Iguacel addressed that “renewable energy is cooperative with gas, not competitive,” and highlighted the importance of collaborating with provinces to produce abundant gas at a competitive price, which will allow for more exports. Various governmental and non-governmental organizations attended the lunch.⁸⁸⁴

On 17 December 2018, Argentina and Brazil signed a cooperation agreement pertaining to nuclear energy at Mercosur Chancellors’ Summit in Montevideo, Uruguay. The agreement aims to cooperate to develop technologies that increase production capacity and competitiveness within the sector. Both parties agreed that they will focus on using nuclear power for peaceful purposes.⁸⁸⁵

On 20 December 2018, the Energy Minister of Finance participated at a conference led by the Minister of Production of Labour Dante Sica, focusing on progress in renewable energy after the implementation of RenovAr energy auction program in November 2018. Sica emphasized the potential of growth of the renewable energy industry, including creating jobs. Progress on consolidating a work agenda focused on simplifying procedures and increasing productivity, amongst other issues.⁸⁸⁶

On 10 January 2019, the Energy Government Secretariat of the Ministry of Finance will conduct auctions for the purchase of gas by distributors to encourage competitiveness and transparency within the gas industry, encouraging usage.⁸⁸⁷ On 14 February 2019, the first electronic auction for the purchase of gas by distributors was held at the field of the Electronic Gas Market.⁸⁸⁸

On 8 February 2019, the government amended decree 44/1991, which regulates hydrocarbon transport, with the aim of boosting competition and investment in the sector. The new framework simplifies processes for investing in infrastructure. These measures are taken under the Vaca Muerta

⁸⁸³The Fourth Executive Board of Vaca Muerta was held, Argentina.gob.ar (Buenos Aires) 5 December 2018. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/se-realizo-la-cuarta-mesa-ejecutiva-de-vaca-muerta>.

⁸⁸⁴The Minister of Energy celebrated the Day of Oil and Gas, Argentina.gob.ar (Buenos Aires) 13 December 2018. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/la-secretaria-de-energia-celebro-el-dia-del-petroleo-y-del-gas>.

⁸⁸⁵Brazil and Argentina sign cooperation agreement on nuclear power, Presidency of the Republic of Brazil (Brasilia) 19 December 2018. Access Date: 24 February 2019. <http://www.brazil.gov.br/about-brazil/news/2018/12/brazil-and-argentina-sign-cooperation-agreement-on-nuclear-power>.

⁸⁸⁶Renewable energy table convened industry leaders, Argentina.gob.ar (Buenos Aires) 21 December 2018. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/mesa-de-energias-renovables-convoco-referentes-del-sector>.

⁸⁸⁷The government seeks greater competition and transparency in the purchase of gas by distributors, Argentina.gob.ar (Buenos Aires) 10 January 2019. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-busca-mayor-competencia-y-transparencia-en-la-compra-de-gas-por-parte-de-las>.

⁸⁸⁸With a volume of gas offered of more than 50 million m3 daily, closed the first auction for the purchase of gas from distributors, Argentina.gob.ar (Buenos Aires) 14 February 2019. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-busca-mayor-competencia-y-transparencia-en-la-compra-de-gas-por-parte-de-las>.

table, published in the Official Gazette. Secretary of Energy also announced that the government would be sending a call for bids for a trunk pipeline construction in the Neuquén basin.⁸⁸⁹

On 13 February 2019, the Secretary of Energy Gustavo Lopetegui led a sectoral meeting at the Treasury Palace to discuss the current state of oil and gas investment and development and employment within the sector. He reported that USD7.5 billion investments in oil are underway. It was announced that an incentive scheme for winter gas production may be underway.⁸⁹⁰

On 14 February 2019, Argentina and Bolivia signed a memorandum of understanding (MoU) to deepen energy integration. Bolivia and Argentina also signed an addendum to the current gas supply contract, which will save Argentina USD460 million in two years. The renegotiation allows Argentina to receive lesser gas in months of lower consumption and avoid penalties imposed by the previous government.⁸⁹¹

On 18 February 2019, Argentina and India signed a MoU in New Delhi to boost cooperation in the sectors of energy between the India's Department of Atomic Energy, and Argentina's National Atomic Energy Commission. Both countries are continuing to engage in talks that will boost cooperation in areas of nuclear power for energy production.⁸⁹²

On 27 February 2019, Argentina was accepted to join the International Counsel of the Extractive Industries Transparency Initiative (EITI). EITI is a global standard for good governance of gas, mineral and gas resources. Argentina seeks to promote transparency in its oil, gas and mining natural resources. They seek accountability of funds from non-renewable natural resources such as oil, gas and mining for the benefit of citizens and the economy.⁸⁹³

On 28 February 2019, La Cumbre II Solar Park became the 30th renewable energy project in commercial operation. The 30 projects have a capacity of producing 795MW of energy and are a result of USD1,220 in investments. This solar park is another step towards achieving objectives set by Law 27,191 (National Promotion Regime for the use of Renewable Energy Sources for the Production of Electric Power).⁸⁹⁴

On 1 March 2019, the Energy Government Secretariat announced a platform that allows households to register to generate electricity for self-consumption and distribution. This will prevent losses of

⁸⁸⁹ The government seeks to favour investment in infrastructure for the transport of oil and gas, Argentina.gob.ar (Buenos Aires) 8 February 2019. Access Date: 2 March 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-busca-favorecer-la-inversion-en-infraestructura-para-el-transporte-de-o>.

⁸⁹⁰ The Vaca Muerta Board brought together the State, employers and workers' representatives, Argentina.gob.ar (Buenos Aires) 13 February 2019. Access Date: 3 March 2019. <https://www.argentina.gob.ar/noticias/la-mesa-de-vaca-muerta-reunio-al-estado-los-empresarios-y-representantes-de-los-0>.

⁸⁹¹ Argentina will save 460 million dollars in two years for the renegotiation of the gas import agreement from Bolivia, Argentina.gob.ar (Buenos Aires) 14 February 2019. Access Date: 3 March 2019. <https://www.argentina.gob.ar/noticias/argentina-ahorrara-460-millones-de-dolares-en-dos-anos-por-la-renegociacion-del-acuerdo-de>.

⁸⁹² India, Argentina sign MoU for Nuclear energy cooperation, Times of India (New Delhi) 19 February 2019. Access Date: 2 March 2019. <https://timesofindia.indiatimes.com/india/india-argentina-sign-mou-for-nuclear-energy-cooperation/articleshow/68056022.cms>.

⁸⁹³ Argentina was accepted as a member of a global initiative to improve the transparency of extractive industries, Argentina.gob.ar (Buenos Aires) 27 February 2019. Access Date: 4 March 2019. <https://www.argentina.gob.ar/noticias/argentina-fue-aceptada-como-miembro-de-iniciativa-mundial-para-mejorar-la-transparencia-de>.

⁸⁹⁴ There are already 30 renewable energy projects in commercial operation, Argentina.gob.ar (Buenos Aires) 28 February 2019. Access Date: 4 March 2019. <https://www.argentina.gob.ar/noticias/ya-son-30-los-proyectos-de-energias-renovables-en-operacion-comercial>.

electricity in distribution circuits and reduce transportation costs. This creates a system to tackle climate change by reducing Czeissions.⁸⁹⁵

On 8 March 2019, Infrastructure Directorate of the Bank of the Investment and Foreign Trade (BICE) with Ministers of Production, Finance, and Environment coordinated consultations for bidding on the construction of extra high voltage sub transmission lines. This transition will improve integration of renewable energy and consumption.⁸⁹⁶

On 11 March 2019, the first Provincial Index of Renewable Attractiveness (IPAR) was published using 27 variables by the Faculty of Economic Sciences of the UBA in collaboration with the Under-secretariat of Renewable Energies and Energy Efficiency of the Ministry of Finance with the purpose to provide information on the degree of development of renewable energy in various provinces. The intent is to identify opportunities and barriers to investing in renewable energy projects.⁸⁹⁷

On 11 March 2019, the Minister of Finance Nicolas Dujovne and the Secretary of Energy Gustavo Lopetegui presented to 120 entrepreneurs at the Argentine Institute of Oil and Gas in Huston, Texas. He highlighted investment opportunities in Argentina's energy sector of USD30 Billion in oil and gas and USD12,000 million in renewable energy of USD12,000. Furthermore, he announced Argentina's intention to start exporting light oil and an increase in gas exports strongly starting 2019.⁸⁹⁸

On 12 March 2019, the Minister of Finance Nicolas Dujovne and the Secretary of Energy, Gustavo Lopetegui met with the Secretary of Energy of the United States of America Rick Perry at the annual conference of energy organized by IHS Markit in Houston, Texas. The Argentine officials discussed details on energy development and American investment plans in Vaca Muetra and renewable energy.⁸⁹⁹

On 13 March 2019, Minister of Finance Nicolás Dujovne and Secretary of Energy Gustavo Lopetegui met with representatives of Chevron, Shell, Total, Cheniere, Wintershall, BP, Petronas and Equinor at Houston, Texas for the CERA week event, a prominent global energy sector event. Lopetegui signed an agreement with the executive director of the International Energy Agency Fatih Birol for a joint work plan for 2019-2020 to strengthen Argentina's energy statistics system.⁹⁰⁰

On 15 March 2019, the Secretary of Energy Gustavo Lopetegui met with the director of Energy of the National Security Council of United States and the Overseas Private Investment Corporation to

⁸⁹⁵ Homes and companies will be able to generate energy and sell it to the network, Argentina.gob.ar (Buenos Aires) 1 March 2019. Access Date: 4 March 2019. <https://www.argentina.gob.ar/noticias/hogares-y-empresas-podran-generar-energia-y-venderla-la-red>.

⁸⁹⁶ The Government launched a tender for the expansion of electric transport capacity, Argentina.gob.ar (Buenos Aires) 8 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-lanzo-licitacion-para-la-ampliacion-de-la-capacidad-de-transporte-electrico>.

⁸⁹⁷ The first Provincial Index of Renewable Attractiveness is already published, Argentina.gob.ar (Buenos Aires) 11 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/ya-esta-publicado-el-primer-indice-provincial-de-atractivo-renovable>.

⁸⁹⁸ Dujovne and Lopetegui presented investment opportunities in the energy sector for US \$ 30,000 million for the coming years, Argentina.gob.ar (Buenos Aires) 11 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/dujovne-y-lopetegui-presentaron-oportunidades-de-inversion-en-el-sector-energetico-por-us>.

⁸⁹⁹ Dujovne and Lopetegui met with the Secretary of Energy of the United States, Rick Perry, Argentina.gob.ar (Buenos Aires) 12 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/dujovne-y-lopetegui-se-reunieron-con-el-secretario-de-energia-de-los-estados-unidos-rick>.

⁹⁰⁰ Dujovne and Lopetegui met with energy companies in the framework of CERA Week, in Houston, Argentina.gob.ar (Buenos Aires) 13 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/dujovne-y-lopetegui-se-reunieron-con-empresas-energeticas-en-el-marco-del-cera-week-en>.

finance energy infrastructure projects including the construction of the Neuquén gas pipeline and the bidding of high voltage electric transmission.⁹⁰¹

On 15 March 2019, the Secretary of Energy Gustavo Lopetegui attended the Council of the Americas meeting where he spoke about the increase in production and exports of oil and gas in Argentina due to the investment of USD4,000 million and drilling of more than 1,000 wells at Vaca Muerta.⁹⁰²

On 19 March 2019, the fifth meeting of Vaca Muerta table was held at the Treasury Palace where Secretary of Energy Gustavo Lopetegui met with businessmen, trade unions and representatives of the national and provincial governments reflecting on meeting production records reaching every month with only 4% of training at the development stage. Furthermore, Lopetegui assured that Argentina will start exportation of light oil by the end of 2019. He stated his plans to meet with president of Chile to find mechanisms that will allow Argentina to increase gas exports during 8 months of lower local demands.⁹⁰³

On 28 March 2019, the Energy Government Secretariat representing the national government reported that they will tender construction of Comodoro Oeste Transformation Station along with two high voltage lines during second quarter of 2019 in Province of Chubut. The aim is to ensure security and reliability of energy supply in response to growing demands and improve services linked to development of oil, petrochemical, mining and refrigeration industries.⁹⁰⁴

On 29 March 2019, the Ministry of Energy established an extension in the 30 per cent discount of the gas rate for public good entities at Buenos Aires registered with National Center. Of Community Organizations. There are an estimated 7,000 organizations that requested this benefit, with a potential of 28,000 beneficiaries that may also receive this benefit, according to a survey by the National Center for Community Organizations (CENOC) and the Ministry of Worship.⁹⁰⁵

On 6 April 2019, the La Banerita wind farm started commercial operation as the first wind project in La Pampa; this totals to 35 renewable projects since 2016 that generate electricity for more than 840,000 homes and represent an investment value of USD1,500 million.⁹⁰⁶

On 16 April 2019, the Secretary of Energy opened bidding for exploration of 3 basins of the Argentine continental shelf for oil and gas opened over 13 companies offered USD995 million for 18 areas.⁹⁰⁷

⁹⁰¹ Lopetegui met with the Director of Energy of the National Security Council of the United States, Argentina.gob.ar (Buenos Aires) 15 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/lopetegui-se-reunio-con-el-director-de-energia-del-consejo-de-seguridad-nacional-de-los>.

⁹⁰² Lopetegui at the Council of the Americas: "With more than 1,000 wells drilled, Vaca Muerta is a reality on the move", Argentina.gob.ar (Buenos Aires) 15 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/lopetegui-en-el-council-americas-con-mas-de-1000-pozos-perforados-vaca-muerta-es-una>.

⁹⁰³ Exports, infrastructure and occupational safety, the main axes of the 5th Vaca Muerta table, Argentina.gob.ar (Buenos Aires) 19 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/exportaciones-infraestructura-y-seguridad-laboral-los-principales-ejes-de-la-5ta-mesa-de>.

⁹⁰⁴ The National Government will tender electricity works for the Province of Chubut, Argentina.gob.ar (Buenos Aires) 28 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-nacional-licitara-obras-de-energia-electrica-para-la-provincia-de-chubut>.

⁹⁰⁵ The government extends the discount in the gas rate for public good entities, Argentina.gob.ar (Buenos Aires) 29 March 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/el-gobierno-amplia-el-descuento-en-la-tarifa-de-gas-para-las-entidades-de-bien-publico>.

⁹⁰⁶ There are already more than 1,000 new MW of renewable energy in commercial operation, Argentina.gob.ar (Buenos Aires) 8 April 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/ya-hay-mas-de-1000-mw-nuevos-de-energias-renovables-en-operacion-comercial>.

Argentina has partially complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems. Argentina has encouraged energy transitions by implementing more renewable energy sources but has encouraged significant investments in oil that are not compatible with decreasing greenhouse gas emissions.

Thus, Argentina receives a score of 0.

Analyst: Amit Dalaya

Australia: +1

Australia has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems.

On 13 December 2018, the Australian government announced that they intend to establish the Underwriting New Generation Investments Program to reduce wholesale electricity prices by increasing competition and supply. This will also improve the reliability of the firm and firmed capacity in the system. The government called for Registrations of Interest for projects under the program which were due by 23 January 2019. A total of 66 submissions were received.⁹⁰⁸

On 21 December 2018, the Australian Energy Market Commission released an annual report with data on factors driving electricity costs and estimated falling of electricity prices in the next 2 years because of new pipelines of renewable energy.⁹⁰⁹

On 11 January 2019, the Clean Energy Ministerial mobilized leaders to compete for 2019 Energy Management Leadership Awards for energy efficiency. The winners will be honoured on May 2019 in Vancouver, Canada.⁹¹⁰

On 6 February 2019, the Australian government's new Business Energy Advice Program intends to advise small businesses to "get better energy deals and reduce their energy usage" and develop an app to allow businesses to compare energy use and costs with their peers. They received funding of AUD10 million for 3 years and an energy benchmark tool for AUD1.6 billion.⁹¹¹

On 25 February 2019, the Australian government announced an AUD3.5 billion Climate Solutions Package, which doubles investment in Emissions Reduction Fund and indicates measures for improving energy efficiency to continue compliance with Australia's 2030 Paris accord targets. The

⁹⁰⁷ 13 companies offered almost USD 1,000 million to explore the Argentine sea in search of oil and gas, Argentina.gob.ar (Buenos Aires) 16 April 2019. Access Date: 28 April 2019. <https://www.argentina.gob.ar/noticias/13-empresas-ofertaron-casi-usd-1000-millones-para-explorar-el-mar-argentino-en-busca-de>.

⁹⁰⁸ Underwriting New Generation Investments program, Australian Government Department of Environment and Energy (Canberra) 13 December 2018. Access Date: 20 March 2019. <https://www.energy.gov.au/government-priorities/energy-supply/underwriting-new-generation-investments-program>.

⁹⁰⁹ Electricity prices falling overall with variation between states and territories, Australian Energy Market Commission (Sydney) 21 December 2018. Access Date: 20 March 2019. <https://2018.aemc.gov.au/price-trends/>.

⁹¹⁰ 2019 Energy Management Leadership Awards, Australian Government Department of Environment and Energy (Canberra) 11 January 2019. Access Date: 20 March 2019. <https://www.energy.gov.au/news-media/news/2019-energy-management-leadership-awards>.

⁹¹¹ Business Energy Advice Program, Australian Government Department of Environment and Energy (Canberra) 6 February 2019. Access Date: 20 March 2019. <https://www.energy.gov.au/government-priorities/energy-programs/business-energy-advice-program>.

package also aims to continue reducing greenhouse gas emissions and lowering energy bills for consumers.⁹¹²

On 26 February 2019, consultations for consumer data right, which allows for consumers to share and access data with accredited service providers in the energy market, were opened. This is expected to allow for more tailored and competitive access to services. This is expected to commence in 2020.⁹¹³

On 28 February 2019, the Australian government announced various measures that will assist businesses, communities and households in improving energy efficiency and reducing power costs. This includes AUD50 million funding to assist businesses in managing energy consumption, AUD6.5 million to introduce energy rating labels, which will reduce 15 million tonnes of emission to 2030 and AUD10.5 million to improve energy efficiency in homes and commercial buildings.⁹¹⁴

On 1 March 2019, the Council of Australian Governments Energy Council established the Hydrogen Working Group to develop a national hydrogen strategy that builds and positions Australia's hydrogen industry as a major global player by 2030, considering the abundance of natural resources in Australia and its proximity to key markets.⁹¹⁵

On 8 March 2019, construction began on the new waste-to-energy facility in Kwinana with an AUD23 million grant and up to AUD90 million on debt finance from the Morrison Government. The facility will be capable of processing 400,000 tonnes of waste to potentially power up to 50,000 homes. This will reduce land waste and greenhouse gas emissions.⁹¹⁶

On 19 March 2019, the Australian Renewable Energy Agency has provided an additional AUD3.1 million towards Toyota Australia Hydrogen Centre project that intends to convert a decommissioned car-manufacturing site into an integrated hydrogen site, which will be fundamental in producing renewable hydrogen fuel cells.⁹¹⁷

On 19 March 2019, the first solar power system at an Australian Antarctic Station was switched on, symbolizing an improvement in stability and transition towards reducing emissions. The solar power

⁹¹² Climate Solutions Package Announced, Australian Government Department of Environment and Energy (Canberra) 25 February 2019. Access Date: 20 March 2019. <https://www.energy.gov.au/news-media/news/climate-solutions-package-announced>.

⁹¹³ Consultations open for the energy consumer data right, Australian Government Department of Environment and Energy (Canberra) 26 February 2019. Access Date: 19 March 2019. <https://www.energy.gov.au/news-media/news/consultations-open-energy-consumer-data-right>.

⁹¹⁴ New energy measures to assist businesses, communities and householders, Australian Government Department of Environment and Energy (Canberra) 28 February 2019. Access Date: 19 March 2019. <https://www.energy.gov.au/news-media/news/new-energy-measures-assist-businesses-communities-and-householders>.

⁹¹⁵ COAG Energy Council Hydrogen Working Group, Australian Government Department of Industry, Innovation and Science (Canberra) 1 March 2019. Access Date: 19 March 2019. <https://www.industry.gov.au/about-us/what-we-do/coag-energy-council-hydrogen-working-group>.

⁹¹⁶ Waste-to-energy project will deliver reliable power and reduce emissions, Australian Government Department of Environment and Energy (Kwinana) 8 March 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190308.html>.

⁹¹⁷ Morrison Government continues investment in hydrogen technology, Australian Government Department of Environment and Energy (Canberra) 19 March 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190319.html>.

system can deliver up to 10 per cent of the station's demands over a year, which will reduce cost and diesel fuel usage.⁹¹⁸

On 29 March 2019, the Australian government proposed the Underwriting New Generation Investments program as recommended by the Australian Competition and Consumer Commissions. The programs objective is to reduce electricity prices and aid in providing affordable energy for commercial and industrial consumers. It also intends to improve the reliability of the electrical systems by increasing the level of firm generation capacity.⁹¹⁹

On 29 March 2019, the Australian government selected the NSW Business chamber, after a competitive tender process, to implement an AUD10 million Energy Advisory Service that will advise thousands of small businesses on reducing power usage and managing electricity bills.⁹²⁰

On 29 March 2019, the Australian government approved a deed for license that allows for Offshore Energy Pty Ltd to explore Commonwealth waters for resource exploration for an offshore wind farm. This exploration, if successful, will allow Australia to be a part of the rapidly growing offshore wind sector in the long term. Offshore wind farms are expected to increase the stability of the electrical grid and lower power prices simultaneously while attracting investments towards cleaner energy systems.⁹²¹

On 1 April 2019, the Federal Energy Minister signed for new regulations under the Greenhouse and Energy Minimum Standards. The new system utilizes new energy rating labels for air conditioners and display energy consumption figures for 3 climate zones designed to reduce energy bills. This will allow for higher minimum energy performance standards that seek to prevent least efficient appliances from being supplied to Australia, resulting in reducing greenhouse gas emissions and saving electricity.⁹²²

On 2 April 2019, the Australian Government announced an investment budget of AUD1.88 billion for affordable and reliable power with initiatives for new renewable energy. This is expected to reduce electricity costs for residential and business and increase reliable electricity supply.⁹²³

On 4 April 2019, the Interim report on liquid fuel security was released to public for review and comment. Meanwhile, the government pledged to work with stakeholders to review Liquid Fuel Emergency Act of 1984 to improve effective measures of emergency responding and to improve transparency and oversight of the fuel industry for better supply management. The government is

⁹¹⁸ Australia leading the way in Antarctic renewable energy, Australian Government Department of Environment and Energy (Canberra) 19 March 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/price/media-releases/mr20190319.html>.

⁹¹⁹ Underwriting New Generation Investments program, Australian Government Department of Environment and Energy (Canberra) 29 March 2019. Access Date: 30 May 2019. <https://www.energy.gov.au/government-priorities/energy-supply/underwriting-new-generation-investments-program>.

⁹²⁰ Delivering trusted energy advice to small business, Australian Government Department of Environment and Energy (Canberra) 29 March 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190329.html>.

⁹²¹ Morrison government approves licence to explore possibility of Australia's first offshore wind farm, Australian Government Department of Environment and Energy (Canberra) 29 March 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190329a.html>.

⁹²² Households and businesses to benefit from improved energy efficiency of appliances, Australian Government Department of Environment and Energy (Canberra) 1 April 2019. Access Date: 29 April 2019. <https://www.energy.gov.au/news-media/news/households-and-businesses-benefit-improved-energy-efficiency-appliances>.

⁹²³ \$1.88 billion on action to reduce power bills and keep the lights on, Australian Government Department of Environment and Energy (Canberra) 2 April 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190402.html>.

also negotiating with International Energy Agency to modernize out-dated rules that disadvantage Australia due to geographic remoteness; changes to policy should reduce stock holding days to 85 days. The government also pledged to maintain the current gas pricing. These changes will ensure reliability of supply at competitive pricing despite any future decisions of the government in investing in fuel stocks.⁹²⁴

On 5 April 2019, the Australian Renewable Energy Agency is providing AUD2.46 million towards running integration trials of virtual power plants (VPP) by the Australian Energy Market Operator, which will explore how a network of small-scale solar PV and battery systems feed into the electrical grid. The VPP can save consumers electricity cost and increase reliability and stability of the electrical grid systems.⁹²⁵

Australia has fully complied with its commitment to encourage energy transitions that focus efforts to combine growth in energy sectors and decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems. Australia has focused efforts in sustainable development by investing in offshore wind farm exploration, invested in cleaner renewable energy such as solar panels and hydrogen fuel cells and improved transparency in legislative efforts to maintain gas and electricity costs.

Thus, Australia receives a score of +1.

Analyst: Amit Dalaya

Brazil: +1

Brazil has fully complied with its commitment to encourage energy transition through combining growth while decreasing greenhouse gas emissions, and progressing towards cleaner, more flexible and transparent energy systems.

On 3 December 2018, the Brazilian Government released a fact sheet pertaining to their environmental initiatives and progress for the COP24 Conference. The National Biofuel Policy, RenovaBio, has committed itself to increase renewables in the biofuel mix from 2019-2028. The policy is aimed at reducing emissions by 425 million to 345 million tons of CO₂, in accordance with Brazil's commitment to the Paris Agreement.⁹²⁶

On 11 December 2018, President Michel Temer signed Law 13,755/2018 creating the "Route 2030 Programme." The programme offers the auto industry BRL1.5 billion tax credits in exchange for BRL5 billion in research and development to move toward the production of cleaner and renewable energy-powered vehicles.⁹²⁷

On 12 December 2018, the National Development Bank (BNDES) committed to provide BRL163 million to projects that aim to reduce emissions, specifically the Climate Fund. The funds will aid in

⁹²⁴ Public consultation opens on fuel security, Australian Government Department of Environment and Energy (Canberra) 4 April 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190404.html>.

⁹²⁵ AEMO trial integration of virtual power plants, Australian Government Department of Environment and Energy (Canberra) 5 April 2019. Access Date: 30 May 2019. <https://www.environment.gov.au/minister/taylor/media-releases/mr20190405.html>.

⁹²⁶ Fact Sheet: Brazil at Cop 24, Presidency of the Republic of Brazil (Brasilia) 3 December 2018. Access Date: 24 February 2019.

<http://www.brazil.gov.br/documents/brazil-at-cop24-factsheet-dec2018.pdf/view>.

⁹²⁷ President sanctions auto industry incentive law, Presidency of the Republic of Brazil (Brasilia) 12 December 2018. Access Date: 14 February 2019.

<http://www.brazil.gov.br/about-brazil/news/2018/12/president-sanctions-auto-industry-incentive-law>.

developing machinery and equipment to reduce greenhouse gas emissions and to adjust to climate change and its adverse effects.⁹²⁸

On 13 December 2018, BNDES received a credit line of BRL163 million for projects aimed at adapting to climate change and controlling greenhouse gas emissions. The funds will be used for machinery, equipment and technology initiatives that aim at reducing the country's emissions. It will include programmes such native reforestation, renewable energy, efficient machinery and equipment, urban mobility, sustainable cities and climate change, solid waste, charcoal, carbon management and services and innovative projects.⁹²⁹

On 14 December 2018, Brazil announced that it reached its CO₂ emission target, set by the agreement signed in 15th Conference of the Parties of the United Nations Framework of Climate Change Convention (UNFCCC), ahead of schedule. Blairo Maggi –Minister of Agriculture, Livestock and Food Supply– presented the findings at the 24th Conference of the Parties (COP24) of the UNFCCC. Brazil reduced emissions by 100.21 to 154.38 million milligrams of CO₂ from 2010 to 2018. It is estimated to represent between 68 per cent and 105 per cent of their reduction goal to be achieved by 2020 and was accomplished by “increasing vegetation coverage (in hectares) multiplied by the corresponding emission factor.” The Low-Carbon Agricultural Plan, also known as the ABC Plan, aims to adopt sustainable technologies and is present in 52 per cent of all municipalities nationwide. BRL 17 billion has been invested to assist farmers in implementing these technologies.⁹³⁰

On 17 December 2018, Brazil and Argentina signed a cooperation agreement pertaining to nuclear energy at Mercosur Chancellors' Summit in Montevideo, Uruguay. The agreement aims to cooperate to develop technologies that increase production capacity and competitiveness within the sector. Both parties agreed that they will focus on using nuclear power for peaceful purposes.⁹³¹

On 26 December 2018, BNDES approved of BRL7.6 billion for electric energy investment across the country.⁹³² The investment will be distributed between the states of Pernambuco, Maranhão, Bahia, Pará, São Paulo, Minas Gerais Gerais, Mato Grosso do Sul, Paraná and Rio Grande Do Sul.⁹³³

On 28 December 2018, former Minister of Mines and Energy Moreira Franco approved the Decennial Energy Expansion Plan 2027. It is expected that this plan will require BRL1.8 trillion in

⁹²⁸ BNDES will provide R\$ 163 million for projects that reduce greenhouse gas emissions BNDES, The Brazilian Development Bank (Brasília) 12 December 2018. Access Date: 24 February 2019.

https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2018/20181212_greenhouseGas.

⁹²⁹ BNDES to have additional R\$ 163 million for GHG control projects, Presidency of the Republic of Brazil (Brasília) 13 December 2018. Access Date: 14 February 2019. <http://www.brazil.gov.br/about-brazil/news/2018/12/bndes-to-have-additional-r-163-million-for-ghg-control-projects>.

⁹³⁰ Brazil hits CO₂ emission target early, Presidency of the Republic of Brazil (Katowice) 14 December 2018. Access Date: 24 February 2019. <http://www.brazil.gov.br/about-brazil/news/2018/12/brazil-hits-co2-emission-target-early>.

⁹³¹ Brazil and Argentina sign cooperation agreement on nuclear power, Presidency of the Republic of Brazil (Brasília) 19 December 2018. Access Date: 24 February 2019. <http://www.brazil.gov.br/about-brazil/news/2018/12/brazil-and-argentina-sign-cooperation-agreement-on-nuclear-power>.

⁹³² BNDES approves of R\$ 7.6 billion for investments in energy in all regions of the country. BNDES, The Brazilian Development Bank (Brasília) 26 December 2018. Access Date: 24 February 2019. https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2018/20181226_bndes_energy.html.

⁹³³ Energy: BNDES approves R\$ 7.6 billion for investments in all the regions of the country, BNDES News Agency (Brasília) 26 December 2018. Access Date: 24 February 2019. [https://agenciadenoticias.bndes.gov.br/detalhe/noticia/Energia-BNDES-aprova-R\\$-76-bi-para-investimentos-em-todas-as-regioes-do-Pais/](https://agenciadenoticias.bndes.gov.br/detalhe/noticia/Energia-BNDES-aprova-R$-76-bi-para-investimentos-em-todas-as-regioes-do-Pais/).

investments, distributed as 21.6 per cent in the electricity sector, 26.1 in the oil and natural gas sector and 2.3 per cent in biofuels.⁹³⁴

On 3 January 2019, Minister of Mines and Energy Bento Albuquerque stated that there will be a need to invest BRL1.8 trillion in energy by 2027 for the Decennial Plan for Energy Expansion, and that BRL1.4 trillion should be given towards the oil and gas sector. Albuquerque continued by stating the importance of balancing renewables and fossil fuels by using them intermittently.⁹³⁵

On 3 January 2019, BNDES and Logum Logistica signed a financing agreement of BRL1.81 billion, which will go towards developing and maintaining the ethanol drainage system. By adding an additional 128 km of new pipelines, it is estimated that the project will prevent 400,00 truck trips and reduce carbon emissions by 700,000 tons per year.⁹³⁶

On 14 January 2019, BNDES signed BRL1.76 billion for Liquefied Natural Gas (LNG) fired power plant.⁹³⁷

On 25 and 26 February 2019, the Ministry of Mines and Energy hosted a workshop regarding “Long-Term Scenarios for the Transition of Clean Energy in Latin America,” as part of the Clean Energy campaign under the International Renewable Energy Agency. The workshop covered long-term energy scenarios for the energy transition and capacity building. Representatives from domestic and international governments as well as other organizations attended the event.⁹³⁸

On 28 February 2019, the Green Climate Fund transferred USD96 million to Brazil. The funds will support rural producers, indigenous people and communities by conserving native vegetation. 80 per cent of this fund will go towards the Pilot Program Incentive to Environmental Services for the Conservation and Recovery of Native Vegetation, Floresta+ and the remainder will be used in the implementation of the National REDD + Strategy that works to decarbonize countries.⁹³⁹

⁹³⁴ Minister Moreira Franco approves Decennial Energy Expansion Plan 2027, Ministry of Mines and Energy (Brasilia). 28 December 2018. Access Date: 24 February 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticias/-/asset_publisher/32hLrOzMKwWb/content/ministro-moreira-franco-aprova-plano-decenal-de-expansao-de-energia-2027?redirect.

⁹³⁵ Energy sector to have investment of R\$1.8 trillion by 2027, says minister Bento Albuquerque at Petrobras, Ministry of Mines and Energy (Brasilia) 3 January 2019. Access Date: 24 February 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticias/-/asset_publisher/32hLrOzMKwWb/content/setor-de-energia-tera-investimento-de-r-1-8-trilhao-ate-2027-diz-ministro-bento-albuquerque-na-petrobras?redirect.

⁹³⁶ The main drainage system of Brazilian ethanol will receive R\$ 1.81 billion financing from BNDES, The Brazilian Development Bank (Brasilia) 3 January 2019. Access Date: 24 February 2019. https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2019/20190103_bndes_ethanol.html.

⁹³⁷ BNDES signs US\$450 million financing for LNG-fired power plant, IPP Journal (Magala) 14 January 2019. Access Date: 24 February 2019. <http://www.ippjournal.com/news/bndes-signs-us-450-million-financing-for-lng-fired-power-plant>.

⁹³⁸ IRENA: MME hosts workshop on long-term scenarios, Ministry of Mines and Energy (Brasilia) 11 March 2019. Access Date: 19 April 2019. http://www.mme.gov.br/web/guest/pagina-inicial/outras-noticias?p_p_id=101&p_p_lifecycle=0&p_p_state=maximized&p_p_mode=view&_101_struts_action=%2Fasset_publisher%2Fview_content&_101_returnToFullPageURL=http%3A%2F%2Fwww.mme.gov.br%2Fweb%2Fguest%2Fpagina-inicial%2Foutras-noticias%3Fp_auth%3DG6G8Uhf5%26p_p_id%3D3%26p_p_lifecycle%3D1%26p_p_state%3Dnormal%26p_p_state_rcv%3D1&_101_assetEntryId=126577390&_101_type=content&_101_urlTitle=irena-mme-sedia-workshop-sobre-cenarios-de-longo-prazo&redirect=http%3A%2F%2Fwww.mme.gov.br%2Fweb%2Fguest%2Fpagina-inicial%2Foutras-noticias%3Fp_p_id%3D3%26p_p_lifecycle%3D0%26p_p_state%3Dmaximized%26p_p_mode%3Dview%26_3_entryClassName%3D%26_3_assetCategoryTitles%3Doutras%2Bnot%25C3%25ADcias%26_3_modifiedto%3D2019-04-

⁹³⁹ Green Fund transfers US \$ 96 million to Brazil, Government of Brazil (Brasilia) 28 February 2019. Access Date: 18 April 2019. <http://www.brasil.gov.br/noticias/meio-ambiente/2019/02/Fundo-verde-repassa-us-96-milhoes-ao-brasil>.

On 5 March 2019, The Ministers of Mines and Energy of Brazil and Peru Bento Albuquerque (Brazil) and Francisco Atilio Ismodes (Peru) signed a Declaration of Cooperation in Energy. The agreement reaffirms their cooperation in renewable energy.⁹⁴⁰

On 21 March 2019, BNDES and the Ministry of Environment continued assessing Amazon Fund operations. The assessment aimed to analyze the characteristics and prospects of the fund, as well as increase the effectiveness.⁹⁴¹

On 23 March 2019, the Government of Brazil released its intentions to expand access to sustainable Amazon products. Brazil's Ministry of Agriculture, Livestock and Food is pairing with the German Cooperation for Sustainable Development to launch the project which will see to create and expand products in a sustainable manner. Products such as nuts, oils and cosmetics. This will aid Brazil's measures to preserve and protect forests and prevent an increase in greenhouse gas emissions.⁹⁴²

On 29 March 2019, Brazil and the United States signed a declaration for a fund of USD100 million for economic development in the Amazon. The investment will address environmental challenges including deforestation⁹⁴³ which in turn would assist in carbon offset maintenance.

On 16 April 2019, the Ministry of Environment published their objectives for their Amazon Sustainable Landscape Project, which is funded and supported by the Global Environmental Facility (GEF). The project's objectives include improving the sustainability of protected areas, reducing biodiversity loss, recovering degraded areas, increasing carbon stock and forest management and strengthening conservation policies.⁹⁴⁴

Brazil's extensive investment in renewables demonstrates its progression towards more transparent energy systems. Its achievement of meeting its 2025 greenhouse gas emission goal ahead of schedule demonstrates its commitment to encouraging the decrease of emissions.

Thus, Brazil receives a score of +1.

Analyst: Kaylin Dave

Canada: +1

Canada has fully complied with its commitment to encourage energy transition through combining growth while decreasing greenhouse gas emissions, and progressing towards cleaner, more flexible and transparent energy systems.

⁹⁴⁰ Brazil and Peru sign declaration of cooperation in energy, Government of Brazil (Toronto) 6 March 2019. Access Date: 18 April 2019. <http://www.brasil.gov.br/noticias/infraestrutura/2019/03/brasil-e-peru-assinam-declaracao-de-cooperacao-em-energia>.

⁹⁴¹ BNDES and Ministry of Environment continue the assessment of operations of the Amazon Fund, Brazilian Development Bank (Rio de Janeiro) 21 March 2019. Access Date: 18 January 2019. https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2019/20190321_bndes_ministry.html.

⁹⁴² Project Launched to Expand Access to Sustainable Amazon Products, Government of Brazil (Brasilia) 23 March 2019. Access Date: 18 April 2019. <http://www.brasil.gov.br/noticias/meio-ambiente/2019/03/projeto-e-lancado-para-ampliar-acesso-aos-produtos-sustentaveis-da-amazonia>.

⁹⁴³ Brazil and US articulate fund creation of U \$100 mi for Amazon, Government of Brazil (Brasilia) 29 March 2019. Access Date: 18 April 2019. <http://www.brasil.gov.br/noticias/meio-ambiente/2019/04/brasil-e-eua-articulam-criacao-de-fundo-de-u-100-mi-para-amazonia>.

⁹⁴⁴ GEF Sustainable Landscapes Project, Ministry of the Environment (Brasilia) 16 April 2019. Access Date: 18 April 2019. <http://www.mma.gov.br/biodiversidade/projetos-sobre-a-biodiversidade/projeto-gef-paisagens-sustent%C3%A1veis.html>.

On 3 December 2018, the Government of Canada released a document in preparation for the 24th Conference of Parties under United Nations Framework Climate Change Convention in Katowice. Canada aims to play a leadership role to finalize the rule book from the 2015 Paris Agreement which outlines how countries will commit to reducing green-house emissions and their progress.⁹⁴⁵

On 12 December 2018, Canada released a study that showed 9 per cent of the greenhouse gases emitted in 2015 came from electricity usage and governments at all levels agreed to collaborate to produce electricity through more sustainable means. To meet its climate goals and support collaboration of federal, provincial and territorial governments, Canada published two regulations in *Canada Gazette*, Part II. They intend to accelerate the phasing out of coal-fired electricity by 31 December 2019, and the regulations will extend to greenhouse gas regulations for natural-gas fired electricity to cover new natural gas-fired electricity units that were converted from coal-fired units.⁹⁴⁶

On 20 December 2018, the Canadian government published an annual report regarding the status of the Pan-Canadian Framework on Clean Growth and Climate Change. The project implements carbon pricing, renewables, building federally funded infrastructure, modernizing electricity systems, reducing reliance on diesel, using cleaner fuels and more. The Pan-Canadian Framework on Clean Growth and Climate Change initiative that stretches across the provinces and works alongside Indigenous Peoples, will see pricing carbon pollution, as well as other complementary policies. These policies include creating a CAD2 billion Low Carbon Fund to help Canadians save both money and energy and publishing regulations to cut methane emissions from oil and gas sector by a factor of 40 to 45 per cent by 2025. Canada is also investing more than CAD2.3 billion to support clean technology and investing CAD21.9 billion in a green infrastructure via renewables. Moreover, Canada commits to continue their work towards collective climate financing and fund US100 billion per year by 2020.⁹⁴⁷

On 20 December 2018, the estimated effects of the Federal Carbon Pollution System were assessed. The analysis states that carbon pollution pricing at the federal level will reduce emission pollution by 80 to 90 million tonnes in 2022, simultaneously growing the economy.⁹⁴⁸

On 20 December 2018, Canada released its Clean Canada plan to protect the environment while growing the economy. The plan includes implementing a carbon pricing to reduce emissions, phasing out traditional coal-fired power plants and investing in renewables, finding cleaner alternatives to diesel and investing in Canadian-made technologies for cleaner solutions.⁹⁴⁹

⁹⁴⁵ COP24 Katowice: frequently asked questions on the annual UN conference on climate change, Government of Canada (Ottawa) 3 December 2018. Access Date: 25 February 2019. <https://www.canada.ca/en/services/environment/weather/climatechange/canada-international-action/un-climate-change-conference/cop24-katowice/frequently-asked-questions.html>.

⁹⁴⁶ Technical backgrounder: Federal regulations for electricity sector, Government of Canada (Ottawa) 12 December 2018. Access Date: 25 February 2019. <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/technical-backgrounder-regulations-2018.html>.

⁹⁴⁷ Pan-Canadian Framework on Clean Growth and Climate Change first annual report: annex I, status of all Pan-Canadian Framework actions, Government of Canada (Ottawa) 20 December 2018. Access Date: 25 February 2019. <https://www.canada.ca/en/environment-climate-change/services/climate-change/pan-canadian-framework-reports/first-annual-report/annex-1.html>.

⁹⁴⁸ Estimated impacts of the Federal Carbon Pollution Pricing System, Government of Canada (Ottawa) 20 December 2018. Access Date: 25 February 2019. <https://www.canada.ca/en/services/environment/weather/climatechange/climate-action/pricing-carbon-pollution/estimated-impacts-federal-system.html>.

⁹⁴⁹ Clean Canada: protecting the environment and growing our economy, Government of Canada (Ottawa) 20 December 2018. Access Date: 25 February 2019. <https://www.canada.ca/en/environment-climate-change/services/climate-change/clean-canada.html>.

On 8 January 2019, the Canadian government proposed to modernize the National Energy Board. The new Canadian Energy Regulator (CER) in Calgary will help integrate Canada's energy, economic and climate goals and increase accountability and inclusivity of Indigenous people by overseeing Canada's sustainable energy sector.⁹⁵⁰ On 4 February 2019, Canada released the "New Canadian Energy Regulator Handbook" regarding the new CER. The purpose of the CER is to create more transparency, certainty and accountability for a more sustainable energy sector. The Handbook states CER it will strengthen protection of the environment, regain public trust, strengthen the economy and support reconciliation with Indigenous peoples, should it be adopted.⁹⁵¹

On 9 January 2019, Canada officially joined the International Renewable Energy Agency (IRENA), committing to providing clean, sustainable energy. IRENA, and its 159 other country members, offer a platform for cooperation and coordination on renewable energy policies and technology.⁹⁵²

On 18 January 2019, the Government of Canada agreed to invest over CAD734,000 into the region of Inuvik and Tuktoyaktuk. The funds will go towards two projects - one aimed at supporting local arts industry and the other aimed at providing clean energy for local businesses.⁹⁵³

On 23 January 2019, Minister of Environment and Climate Change, Catherine McKenna, announced a CAD 5 million investment in the electric vehicle industry across Quebec. She stated that Canada recognizes the role vehicles play in pollution and the funding will go towards building 100 electric vehicles fast chargers to reduce pollutions and offer greener alternatives.⁹⁵⁴

On 24 January 2019, Minister of Natural Resources Amarjeet Sohi, announced an investment of CAD4.1 million into modernizing Saint John's electric grid, to support energy efficiency and provide cleaner, renewable energy.⁹⁵⁵ He also revealed funding of CAD49 million over three years for a solar project in Alberta. The funding will create a 23 megawatts solar farm, capable of tracking the sun's trajectory and capturing energy from either side of the panels.⁹⁵⁶

On 28 January 2019, the Government of Canada announced an investment for CAD4.2 million for two TUGLIQ Energy Corporation projects in Nunavut and Quebec. The projects focus on reducing

⁹⁵⁰ A new Canadian Energy Regulator, Government of Canada (Ottawa) 9 January 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/national-energy-board-modernization.html>.

⁹⁵¹ The New Canadian Energy Regulator Handbook, Government of Canada (Ottawa) 4 February 2019. Access Date: 25 February 2019.

<https://www.canada.ca/en/services/environment/conservation/assessments/environmental-reviews/national-energy-board-modernization/cer-handbook.html>.

⁹⁵² Canada Joins the International Renewable Energy Agency, Natural Resources Canada (Ottawa) 9 January 2019. Access Date: 25 February 2019.

<https://www.canada.ca/en/natural-resources-canada/news/2019/01/canada-joins-the-international-renewable-energy-agency.html>.

⁹⁵³ Clean energy innovation and economic development in Inuvik, Canadian Northern Economic Development Agency (Inuvik) 18 January 2019. Access Date: 15 February 2019. <https://www.newswire.ca/news-releases/clean-energy-innovation-and-economic-development-in-inuvik-861625006.html>.

⁹⁵⁴ Canada Invests in the Country's Largest Public Electric Vehicle Network in Quebec, Natural Resources Canada (Ottawa) 23 January 2019. Access date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/01/canada-invests-in-the-countrys-largest-public-electric-vehicle-network-in-quebec.html>.

⁹⁵⁵ Canada Invests in New Smart Electricity Grid Technologies in Saint John, Natural Resources Canada (Ottawa) 24 January 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/01/canada-invests-in-new-smart-electricity-grid-technologies-in-saint-john.html>.

⁹⁵⁶ Canada Invests in Advanced Solar Technology in Alberta, Natural Resources Canada (Ottawa) 24 January 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/01/a.html>.

diesel reliance by promoting the use of renewables, such as wind, and expanding renewable energy production and storage.⁹⁵⁷

On 13 February 2019, India and Germany agreed to aim for closer cooperation in regard to climate policy. Germany will assist India in climate action projects by providing them an additional EUR35 million. The funds will be devoted to sustaining forests, grid expansion, managing marine litter and storage for renewable energy.⁹⁵⁸

On 20 February 2019, Natural Resources Canada and the Canadian Industry Partnership for Energy Conservation invested in energy efficiency projects across numerous cities throughout the country. CAD40,000 was invested in Hamilton;⁹⁵⁹ CAD10,000 in Montreal;⁹⁶⁰ CAD40,000 in Brockville;⁹⁶¹ and CAD40,000 in Labrador City. Energy efficiency promotes a more sustainable environment by minimizing emissions.⁹⁶²

On 25 February 2019, the Canadian Northern Economic Development Agency announced that Government of Canada supports Kivalliq Hydro-Fire Link that would bring clean energy to Nunavut, as opposed to fossil fuels. The funding will consist of over CAD1.6 million.⁹⁶³

On 27 February 2019, Minister of Natural Resources, Amarjeet Sohi, announced a CAD1.8 million investment in Energy Efficiency Alberta to support commercial and institutional facilities in Alberta and aim to cut pollution. The investment will be used to deliver strategic energy management training to 14 industrial facilities. Energy management systems will allow companies to track and analyze energy use and identify the most cost-effective ways to reduce energy use.⁹⁶⁴

⁹⁵⁷ Government of Canada Promotes Renewable Energy Innovation in Mining, Natural Resources Canada (Ottawa) 28 January 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/01/government-of-canada-promotes-renewable-energy-innovation-in-mining.html>.

⁹⁵⁸ Minister Schulze agrees closer environmental cooperation with India, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin). 13 February 2019. Access Date: 25 February 2019. <https://www.bmu.de/en/pressrelease/schulze-vereinbart-engere-umweltzusammenarbeit-mit-indien/>.

⁹⁵⁹ Canada Invests in Energy Efficiency Improvements in Hamilton, Natural Resources Canada (Ottawa) 20 February 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-hamilton.html>.

⁹⁶⁰ Canada Invests in Energy Efficiency Improvements in Montreal, Natural Resources Canada (Ottawa) 18 February 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-montreal.html>.

⁹⁶¹ Canada Invests in Energy Efficiency Improvements in Brockville, Natural Resources Canada (Ottawa) 15 February 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-brockville.html>.

⁹⁶² Canada Invests in Energy Efficiency Improvements in Labrador City, Natural Resources Canada (Ottawa) 12 February 2019. Access Date: 25 February 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-energy-efficiency-improvements-in-labrador-city.html>.

⁹⁶³ Government of Canada supports Kivalliq Hydro-Fibre Link feasibility work to bring clean energy to Nunavut, Canadian Northern Economic Development Agency. 25 February 2019. Access Date: 25 February 2019. <https://www.newswire.ca/news-releases/government-of-canada-supports-kivalliq-hydro-fibre-link-feasibility-work-to-bring-clean-energy-to-nunavut-833172767.html>.

⁹⁶⁴ Canada Invests in Greener Energy Management Systems in Alberta, Natural Resources Canada (Edmonton) 27 February 2019. Access Date: 19 April 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/02/canada-invests-in-greener-energy-management-systems-in-alberta.html>.

On 11 March 2019, Canada invested CAD300,000 in Prince Edward Islands' first level 3 electric vehicle fast chargers. This investment is part of the CAD182.5 million that will be used to develop a coast-to-coast fast charging network for electric vehicles.⁹⁶⁵

On 13 March 2019, Member of Parliament, Kim Rudd, announced a CAD164,000 investment in strengthening Ontario's electricity grid and reducing pollution.⁹⁶⁶

On 14 March 2019, Canada invested in energy efficiency retrofits in numerous Canadian municipalities. Member of Parliament Gordie Hogg announced a CAD600,00 for the Pembina Institute for two energy efficiency retrofit projects that will help lower energy costs, decrease pollution and support future energy efficiency retrofits in other towns. Of that, CAD200,000 was invested for a pilot program for energy retrofits in British Columbia's housing stock. The remaining CAD400,000 will be allotted to eight different municipalities that are seeking strategies to retrofit their buildings. These investments are part of the country's Investing in Canada infrastructure plan where the government will be investing more than CAD180 billion in 12 years for green infrastructure, public transport, social infrastructure, trade and transportation routes.⁹⁶⁷

On 14 March 2019, Canada released a report stating Alberta's oil and gas sector will receive over CAD72.3 million from federal investments to support clean technology to reduce pollution and create jobs. Canadian Natural was allotted CAD5 million from the Clean Growth Program to develop an in-pit extraction process that will reduce the number of trucks and power needed. Emissions Reductions Alberta is also investing CAD5.6 million in support of this project. Canadian Natural will also receive CAD22.3 million for a steam turbine generator to help produce power at the Athabasca Oil Sands Project that will reduce emissions. Titanium Corporation will receive CAD45 million for technology to remediate oil sands tailings. An additional CAD10 million has been provided by Emissions Reduction Alberta for this project.⁹⁶⁸

On 1 April 2019, Canada invested in London, Ontario's energy efficiency. On behalf of Minister of Natural Resources, Amarjeet Sohi, Parliamentary Secretary of Science and Sport, and of Public Services and Procurement and Accessibility, Kate Young, announced CAD40,000 Ingreion Canada Corporation for an energy management system.⁹⁶⁹

On 5 April 2019, Canada invested in Energy Efficiency and Climate Change Adaptation. Minister of Environment and Climate Change, Catherine McKenna, announced CAD392,000 for energy efficiency and climate change projects. The Canadian Electricity Association received CAD206,000 through Natural Resources Canada's Climate Change Adaptation Program to implement adaptation

⁹⁶⁵ Canada Invests in PEI's First Level 3 Electric Vehicle Fast Charges, Natural Resources (Charlottetown) 11 March 2019. Access Date: 19 April 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/03/canada-invests-in-peis-first-level-3-electric-vehicle-fast-chargers.html>.

⁹⁶⁶ Canada Invests in Next-Generation Electrical Upgrades in Southern Ontario, Natural Resources Canada (Coburg) 13 March 2019. Access Date: 19 April 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/03/canada-invests-in-next-generation-electrical-upgrades-in-southern-ontario.html>.

⁹⁶⁷ Canada Invests in Energy Efficiency Retrofits in Canadian Municipalities, Natural Resources Canada (Vancouver) 14 March 2019. Access Date: 19 April 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/03/canada-invests-in-energy-efficiency-retrofits-in-canadian-municipalities.html>.

⁹⁶⁸ 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 (Calgary) 14 March 2019. Access Date: 19 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>.

⁹⁶⁹ Canada Invests in Energy Efficiency Improvements in London, Natural Resources Canada (London) 1 April 2019. Access Date: 19 April 2019. <https://www.canada.ca/en/natural-resources-canada/news/2019/04/canada-invests-in-energy-efficiency-improvements-in-london.html>.

plans for electrical systems nationwide. QUEST was allotted CAD111,000 to assess local climate risks and improve resilience. The Efficiency Valuation Organization received CAD75,000 to address private sector investment in energy efficiency.⁹⁷⁰

On 12 April 2019, Canada invested in Smart Grid Technology to reduce energy costs in Yukon. Honourable Larry Bagnell announced on behalf of the Ministry of Natural Resources, that there will be a CAD650,000 in Yukon Energy Corporation to reduce fuel and generate more electricity.⁹⁷¹

Canada has fully complied with its commitment to reduce emissions while promoting cleaner, more flexible and transparent energy systems. Canada's investments in cleaner energy and phasing out of carbon-intensive diesel across the country, as well as efforts to introduce legislation to encourage energy transitions highlights its compliance.

Thus, Canada receives a score of +1.

Analyst: Kaylin Dave

China: +1

China has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems.

On 3 December 2018, China attended the 24th Conference of the Parties meeting in Katowice, Poland, the prominent international United Nations Framework Convention on Climate Change climate negotiations. China reiterated that it plans to fulfill its commitments to the Climate Change Convention and the Paris Agreement. China was complimented for having addressed climate change as a primary focus, despite being considered a developing country.⁹⁷²

On 18 December 2018, China revealed its new Emissions Trading Scheme (ETS) will be fully implemented by 2020 and will begin immediately in the energy sector with the aim to hit maximum emissions by 2030, as noted in China's Paris Agreement pledges. This new ground-breaking cap and trade system is expected to cover approximately 15 per cent of all global emissions and gives the Chinese government the ability to more carefully monitor carbon emissions.⁹⁷³

On 24 December 2018, China's Ministry of Ecology and Environment issued a statement outlining their decision to have a more targeted crackdown on pollution law violators. They also asked that local environmental bureaus to put forth pollution treatment solution plans and have open lines of communication with companies under environmental inspection.⁹⁷⁴

⁹⁷⁰ Canada Invests in Energy Efficiency and Climate Change Adaptation, Natural Resources Canada (Ottawa) 5 April 2019. Access Date: 19 April 2019.

<https://www.canada.ca/en/natural-resources-canada/news/2019/04/canada-invests-in-energy-efficiency-and-climate-change-adaptation.html>.

⁹⁷¹ Canada Invests in Smart Grid Technology to Reduce Energy Costs in Yukon, Government of Canada (Ottawa or Whitehorse?) 12 April 2019. Access Date: 19 April 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>

⁹⁷² Can China Be the Saving Grace at COP24, The Diplomat (Tokyo) 13 December 2018. Access Date: 22 February 2019. <https://thediplomat.com/2018/12/can-china-be-the-saving-grace-at-cop24/>.

⁹⁷³ China's 'monumental' new emissions trading scheme, Green Biz (Oakland) 21 December 2018. Access Date: 22 February 2019. <https://www.greenbiz.com/article/chinas-monumental-new-emissions-trading-scheme>.

⁹⁷⁴ China plans more nuanced anti-pollution measures in 2019, Reuters (Toronto) 25 December 2018. Access Date: 23 February 2019. <https://www.reuters.com/article/us-china-pollution/china-plans-more-nuanced-anti-pollution-measures-in-2019-ministry-idUSKCN10O07Y>.

On 29 December 2018, China added two 500MW solar power plants managed by the National Energy Administration to the grid. The plant in Golmud is able to sell its energy for 0.316 yuan per kWh as opposed to the benchmark coal power price of RMB0.325 per kWh.⁹⁷⁵

On 1 January 2019, Renewable Obligation Policy proposed by National Energy Administration (NEA) of the National Development and Reform Commission (NDRC) became effective. This policy assigned quotas on both hydro and non-hydro energy for the provinces and encouraged buyers to acquire extra renewable energy certificates and renewable energy in general.⁹⁷⁶

On 10 January 2019, China's NEA of the National Development and NDRC released a statement on a "notice of work related to photovoltaic power generation without subsidy and parity online." This report outlined that "all relevant units are required to actively promote the construction of wind power, photovoltaic level price online projects and low-cost Internet projects." China will then re-assess the affordable internet access policy in 2020 depending on the status of wind power and photovoltaic power generation implementation.⁹⁷⁷

On 14 January 2019, President Xi Jinping issued a statement for the Abu Dhabi Sustainability Week Conference that "China will work with the United Arab Emirates (UAE) and others to build a clean and beautiful world... For today's China, green, low-carbon sustainable development has become an important part of a successful economic transformation."⁹⁷⁸

On 22 February 2019, NEA and Saudi Arabia's Public Investment Fund (PIF) announced that they had signed a memorandum of understanding (MoU). The MoU pledges China's aid for the PIF to develop renewable energy generation and technologies in Saudi Arabia throughout the next 10 years.⁹⁷⁹

On 26 March 2019, President of French Republic Emanuel Macron and President of People's Republic of China Mr. Xi Jinping agreed to cooperate to implement measures of the Paris Agreement, cooperate to ensure the Green Climate Fund is replenished and governed, to ratify the Kigali amendment to the Montreal Protocol which promotes improvement to energy efficiency standards in the cooling sector and reduces hydrocarbon use and reorienting public and private financial flows to combatting climate change. This agreement was made during China's state visit to France by the invitation of Emanuel Macron.⁹⁸⁰

On 5 March 2019, Li Keqiang, the Chinese Premiere of the State Council, delivered the Government Work Report to the Great Hall of the People during the second session of the 13th National People's

⁹⁷⁵ New Chinese Solar Plant Undercuts Cost of Coal Power, Forbes (New Jersey) 30 December 2018. Access Date: 22 February 2019. <https://www.forbes.com/sites/johnparnell/2018/12/30/new-chinese-solar-plant-undercuts-cost-of-coal-power/#1a6222601182>.

⁹⁷⁶ China is planning provincial quotas for clean energy, China Dialogue (Beijing) 23 April 2018. Access Date: 22 February 2019. <https://www.chinadialogue.net/blog/10574-China-is-planning-provincial-quotas-for-clean-energy/en>.

⁹⁷⁷ Notice of work related to photovoltaic power generation without subsidy and parity online, National Development and Reform Commission (Beijing) 10 January 2019. Access Date: 22 February 2019. http://www.nea.gov.cn/2019-01/10/c_137731320.htm.

⁹⁷⁸ Abu Dhabi Sustainability Week begins with message from China's Xi Jinping, The National (Abu Dhabi) 14 January 2019. Access Date: 22 February 2019. <https://www.thenational.ae/uae/environment/abu-dhabi-sustainability-week-begins-with-message-from-china-s-xi-jinping-1.813074>.

⁹⁷⁹ Saudi Arabia's PIF signs MoU with China's NAE on renewable energy, Arab News (Riyadh) 22 February 2019. Access Date: 23 February 2019. <http://www.arabnews.com/node/1456326/business-economy>.

⁹⁸⁰ Joint declaration between France and China, Ministry of Ecological and Solidarity Transition (Paris) 26 March 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/declaration-conjointe-entre-france-et-chine>.

Congress. Keqiang stated that China will, “vigorously promote green development,” to balance economic development with protection of the environment.⁹⁸¹

On 22 March 2019, China Daily announced that the United Kingdom and China have opened a new research center in Yantai, Shandong province. This initiative will help British wind energy companies export to China, adding to the British and Chinese economies while contributing to renewable energy research and development.⁹⁸²

On 9 April 2019, China engaged in bilateral talks with the European Union (EU) at the 21st EU-China Summit in Brussels. China and the EU both agree to assume leadership positions in pushing the environmental agenda while cooperating in working towards an environmentally stable economy and attempting to fulfil the UN Sustainable Development Goals.⁹⁸³

On 16 April 2019, China hosted the World Energy Conference Information Conference for the representatives who will be in attendance at the 24th World Energy Congress in Abu Dhabi, between September 9-12. The Executive President of the China Electricity Council (CEC), Yang Kun, stated that the CEC will work with conference organizers in order to forge the best possible conditions for Chinese energy companies to, “provide more efficient, timely and convenient services,” in the future.⁹⁸⁴

China has fully complied with its commitment to encourage energy transitions that combine growth with reducing emissions while actively promoting cleaner, more flexible and transparent energy systems. China is making improvements in transitioning to renewable energy and decreasing greenhouse gas emissions both domestically and internationally, through new political carbon use monitoring systems, technological advancements, domestic and foreign investments in renewable energy and active conversation with other Nations.

Thus, China receives a score of +1.

Analyst: Ilan Hughes

France: +1

France has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards a cleaner, more flexible and transparent systems.

On 10 December 2018, Agency of Environment reported that France will save USD44.5 billion if renewable energy sources will replace aging atomic facilities and if France refrains from building 15 new nuclear plants by 2060. This was followed by President Emanuel Macron’s announcement

⁹⁸¹ The Second Session of the 13th National People’s Congress Opens, Ministry of Ecology and Environment (Beijing) March 5 2019. Access Date: 22 April 2019.

http://english.mee.gov.cn/News_service/news_release/201903/t20190307_694737.shtml.

⁹⁸² UK wind energy firms develop China exports. China Daily () 22 March 2019. Access Date: 19 February 2019.

<http://global.chinadaily.com.cn/a/201903/22/WS5c9434e0a3104842260b1ec5.html>.

⁹⁸³ EU-China Summit Joint statement, European External Action Service (Brussels) 9 April 2019, Access Date: 23 February 2019. https://eeas.europa.eu/delegations/china_en/60836/Joint%20statement%20of%20the%2021st%20EU-China%20summit.

⁹⁸⁴ The 24th World Energy Congress Information Conference was held in Beijing, National Energy Administration (Beijing) 19 April 2019. Access Date: 22 April 2019. http://www.nea.gov.cn/2019-04/19/c_137990544.htm.

stating that state-controlled Electricite de France SA will be forced to shut down 14 out of 53 nuclear reactors by 2035 to allow for renewable energy expansion.⁹⁸⁵

On 12 December 2018, Secretary of State to the Minister of Ecological and Solidary Transition of France Brune Poirson, along with leaders from various other EU countries, issued a statement that they believe carbon taxing encourages reductions in greenhouse gas emissions and disincentives investments in carbon-intensive technologies. They also state that they believe the reform of the EU Emission Trading System is a step in the right direction.⁹⁸⁶

On 17 December 2018, Minister for the Ecological and Inclusive Transition, François de Rugy, issued a statement that France is adopting the implementation tools discussed in the 2015 Paris Agreement. He also stated that France has achieved mobilization of funding to support climate change action and upward revisions of the ambition level of contributions.⁹⁸⁷

On 3 January 2019, the Indian Department of Atomic Energy stated that India and France have made satisfactory progress on the Industrial Way Forward Agreement, signed in March 2018, to develop six reactors in Maharashtra, India.⁹⁸⁸

On 16 January 2019, France published a draft ten-year energy strategy plan, *Programmation pluriannuelle de l'énergie (PPE)*, in which France demonstrated its plan to double renewable energy capacity with a system of regular tenders.⁹⁸⁹ PPE also states that France will tender 17.2 GW of solar up to 2025. However, according to the report, nuclear energy will still remain dominant.⁹⁹⁰ On 28 January 2019, Minister for the Ecological and Solidarity Transition and Minister of State François de Rugy, Minister of Economy and Finance Bruno Le Maire, and President of the Strategic Committee for the Nuclear Industry Dominique Minière signed the industry's strategic contract. The contract enforces the guidelines set by PPE, which include research and development in the nuclear energy sector. The plan allows France to restrain the rise in electricity prices.⁹⁹¹

On 22 January 2019, energy regulators from France and Spain rejected an investment request to build the central section of Midi-Catalonia gas pipeline linking both countries due to the project's failure in complying with market needs. Regulators said that the project did not provide "a clear and positive cost-benefit ratio." This decision was in the context of European energy policies focusing on

⁹⁸⁵ France Would Save \$44.5 Billion by Betting on Renewable Energy, Agency Says, Bloomberg (Paris) 10 December 2018. Access Date: 10 March 2019. <https://www.bloomberg.com/news/articles/2018-12-10/french-power-costs-will-rise-if-renewables-are-sidestepped>.

⁹⁸⁶ Statement to strengthen and extend carbon pricing in Europe, ", République Française (Paris) 12 December 2018. Access Date: 25 February 2019. <https://www.gouvernement.fr/en/statement-to-strengthen-and-extend-carbon-pricing-in-europe>.

⁹⁸⁷ COP 24 agreement: "now, fears of a backward step have been removed", République Française (Katowice) 17 December 2018. Access Date: 25 February 2019. <https://www.gouvernement.fr/en/cop-24-agreement-now-fears-of-a-backward-step-have-been-removed>.

⁹⁸⁸ India-France making 'satisfactory progress' on nuclear power plant pact: Government, The Economic Times (New Delhi) 3 January 2019. Access date: 10 March 2019. <https://economictimes.indiatimes.com/industry/energy/power/india-france-making-satisfactory-progress-on-nuclear-power-plant-pact-government/articleshow/67368750.cms>.

⁹⁸⁹ France to double renewables capacity under 10-year energy plan, Reuters (Paris) 16 January 2019. Access Date: 10 March 2019. <https://www.reuters.com/article/us-france-energy/france-to-double-renewables-capacity-under-10-year-energy-plan-idUSKCN1PJ1T0>.

⁹⁹⁰ France to tender 17.2 GW of solar up to 2025, PV magazine (France) 28 January 2019. Access Date: 10 March 2019. <https://www.pv-magazine.com/2019/01/28/france-to-tender-17-2-gw-of-solar-up-to-2025/>.

⁹⁹¹ Nuclear energy: signature of industry's strategic contract, République Française (Paris) 29 January 2019. Access Date: 25 February 2019. <https://www.gouvernement.fr/en/nuclear-energy-signature-of-the-industry-s-strategic-contract>.

reducing greenhouse gas emissions. The France Energy Regulatory Commission Investment Programme for 2019 published on 21 January 2019 also did not mention MidiCat pipeline.⁹⁹²

On 22 January 2019, the Federal Republic of Germany and the French Republic signed the Treaty on Franco-German Cooperation and Integration in Aachen. Merkel stated that the agreement's objective is to usher cooperation across many categories including research and education, "as well as sustainable development, climate and environmental protection."⁹⁹³

On 23 January 2019, Minister of Ecological and Solidarity Transition and Minister of State François de Rugy and Secretary of State to Minister of State Emmanuelle Wargon met with Regional Council of Pays de La Loire to discuss their confirmed commitment to stop electricity production via coal-fired power plants by 2022, pursuant to the French President's July 2017 climate plan. The Minister also discussed a study to convert the Cordemais Coal Power Plant within their region to biomass electricity production plant.⁹⁹⁴

On 23 January 2019, Minister of Ecological and Solidarity Transition and Minister of State François de Rugy issued a request for tenders for the development of 300 megawatt of solar photovoltaic system for the conversion to clean electricity production in the Region of Fessenheim. The call for tenders represents a commitment of EUR250 Million by the French Government over 20 years.⁹⁹⁵

On 23 January 2019, Minister of Ecological and Solidarity Transition and Minister of State François de Rugy announced the launch of the Boiler Conversion Bonus, as a means for the people of France to afford the conversion of their oil or natural gas fired boilers that use cleaner sources energy in an effort to reduce fossil fuel use and for lower heating bills for consumers. This method of such bonus is to provide all households, regardless of income, with government subsidies as high as 50 per cent of the conversion project cost faced by each household, with a statistical objective to have zero. The initiative also calls on the replacement of coal stoves with high-performance woodstoves. Furthermore, the Government will also implement regulations on businesses in France to eliminate use of oil and low-performance natural gas boilers, forcing such to replace them with clean alternatives.⁹⁹⁶

On 24 January 2019, the results of a meeting held in Metz on 21 January 2019 between the elected officials of the Region of Moselle, the Energy Director of the Ministry of Ecological and Solidarity Transition, officials from energy supply company UNIPER, representatives of the Emile Huchet

⁹⁹² Regulators reject key section of planned France-Spain gas pipeline, Euractiv (Paris) 23 January 2019. Access date: 10 March 2019. <https://www.euractiv.com/section/energy/news/regulators-kill-key-section-of-planned-france-spain-gas-pipeline/>.

⁹⁹³ Speech by Federal Chancellor Dr. Angela Merkel at the signing of the Treaty between the Federal Republic of Germany and the French Republic on Franco-German Cooperation and Integration in Aachen, The Federal Government (Aachen) 22 January 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/speech-by-federal-chancellor-dr-angela-merkel-at-the-signing-of-the-treaty-between-the-federal-republic-of-germany-and-the-french-republic-on-franco-german-cooperation-and-integration-in-aachen-on-22-january-2019-1572746>.

⁹⁹⁴ Cordemais coal power station: the elected representatives of the territory received at the Ministry of Ecological and Solidarity Transition, Ministry of Ecological and Solidarity Transition (Paris) 23 January 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/centrale-charbon-cordemais-elus-du-territoire-recus-au-ministere-transition-ecologique-et-solidaire>.

⁹⁹⁵ As part of the conversion of the territory of Fessenheim, François de Rugy and Emmanuelle Wargon launched a tender dedicated to the Haut-Rhin to develop 300 MW of solar photovoltaic, Ministry of Ecological and Solidarity Transition (Paris) 23 January 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/dans-cadre-reconversion-du-territoire-fessenheim-francois-rugy-et-emmanuelle-wargon-lancent-appel>.

⁹⁹⁶ Press release: François de Rugy and Julien Denormandie announce the progressive launch of the boiler conversion bonus, Ministry of Ecology (Paris) 24 January 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/communiqu-presse-francois-rugy-et-julien-denormandie-annoncent-lancement-progressif-prime>.

Power Station, and other State Officials was released to the press. Results indicated that the Ministry of Ecological and Solidarity Transition reaffirmed its goals of clean energy transition in France and elimination of coal energy production by 2022, in accordance to the targeted goals of the government. The targeted goals of government are that the phase-out of coal power not be substituted by creation of new fossil fuel power plants (including natural gas), that biomass should be prioritized as the solution to difficult cases, that electricity supply security to the region of Saint-Avold (a high electricity demand region), and that the greater east region of the country must remain a global exporter of electricity while accommodating the closures of the last coal power plant in Saint Avold, as well as the closure of Fessenheim Nuclear Reactor.⁹⁹⁷

On 25 January 2019, the Government of France published the draft version of the Multiannual Energy Program (EPP), which outlined its strategy towards a successful transition to a more efficient and cleaner energy grid that complies with legal requirements [previously enacted by the Government], with an ultimate goal for France to achieve carbon neutrality by 2050.⁹⁹⁸

On 28 January 2019, Minister of Ecological and Solidarity Transition and Minister of State François de Rugy met with Minister of Economy and Finance Bruno Le Maire, and, Chairman of the Strategic Committee for the Nuclear Industry Dominique Minière to sign the strategic contract of the nuclear industry. The nuclear industry of France will coordinate towards high-stakes structuring projects that follow four axes, which include employment and training, digital transformation of the nuclear industry, research and development for ecological transformation and global strategic planning. The program intends to achieve half the share of electricity in the mix in 2035, according to François de Rugy.⁹⁹⁹

On 28 January 2019, Ministry of Ecological and Solidarity Transition drafted a work program with Electricité de France. This aims towards the development of biomass fuel production by governmental projects in proposed sites of Cordemais and Le Havre that utilize wood waste to produce energy. This model will commit towards a cleaner and sustainable energy transitions using renewable and waste resources.¹⁰⁰⁰

On 30 January 2019, the plan for the release of renewable energies by the Ministry of Ecological and Solidarity Transition and the Ministry of the Armed Forces was proposed during a meeting with stakeholders to present the results of the implementation of wind power working groups. This will improve acceptability at a local level and development in the wind energy sector.¹⁰⁰¹

⁹⁹⁷ Saint-Avold Coal Plant (Moselle): The Ministry of Ecological and Solidarity Transition implements the commitments of the Climate Plan, Ministry of Ecological and Solidarity Transition (Paris) 24 January 2019.

Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/centrale-charbon-saintavold-moselle-ministere-transition-ecologique-et-solidaire-met-en-oeuvre>.

⁹⁹⁸ The Government publishes the draft Multiannual Energy Program (EPP) in its entirety, Ministry of Ecological and Solidarity Transition (Paris) 25 January 2019. Access Date: 1 May 2019.

<https://www.ecologique-solidaire.gouv.fr/gouvernement-publie-projet-programmation-pluriannuelle-lenergie-ppe-dans-integralite>.

⁹⁹⁹ Signature of the strategic contract of the nuclear industry, Ministry of Ecological and Solidarity Transition (Paris) 28 January 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/signature-du-contrat-strategique-filiere-nucleaire>.

¹⁰⁰⁰ Future of the Cordemais Coal Plant: The Ministry of the Ecological and Solidarity Transition implements the commitments of the Climate Plan and establishes a work program with EDF, Ministry of Ecological and Solidarity Transition (Paris) 28 January 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/avenir-centrale-charbon-cordemais-ministere-transition-ecologique-et-solidaire-met-en-oeuvre>.

¹⁰⁰¹ Plan for the release of renewable energies - Assessment of the implementation of the proposals of the "wind energy" working group to accelerate the development of the sector, Ministry of Ecological and Solidarity Transition (Paris) 30 February 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/plan-liberation-des-energies-renouvelables-bilan-mise-en-oeuvre-des-propositions-du-groupe-travail>.

On 4 February 2019, the Minister of Ecological and Solidarity Transition and Minister of State François de Rugy launched the development of a territorial project in Moselle following the closure of Saint-Avold powerplant, as an initiative towards reducing fossil fuel dependency and greenhouse gas emissions.¹⁰⁰²

On 7 February 2019, France announced support for the European Union energy-rules amendments, which will extend the EU-gas market regulations to offshore pipelines. Such amendments may interfere with the completion of the underwater natural gas pipeline, Nord Stream 2, between Russia and Germany under the Baltic Sea.¹⁰⁰³

On 12 February 2019, the Minister of Ecological and Solidarity Transition and Minister of State François de Rugy and the Secretary of State to the Minister of State Emmanuelle Wargon held a preparatory meeting in Marseille with the elected officials of the territory of Gardanne, representatives of employees and the company UNIPER, in efforts towards cessation of coal-dependent electricity production in France. The decision aims to sustain carbon-free energy production and reduce emissions by decommissioning the coal slice of the Gardanne-Meyreuil coal plant.¹⁰⁰⁴ On 22 February 2019, a follow-up meeting was held to discuss the closure of the coal slice of the Gardanne power station at the region of Bouches-du-Rhône. A steering committee with working groups will study the project to launch the construction of the territorial project to close down the station down in efforts of committing towards a carbon-free sustainable energy production model.¹⁰⁰⁵

On 10 March 2019, President Emanuel Macron's office announced that the draft energy and climate law bill due to be presented to the cabinet on 11 March 2019 has been postponed so it can be amended with "more ambitious environmental goals." The draft law will provide a broad framework on climate goals to make more precise commitments, including a focus on how France will cut down reliance on nuclear energy. The bill will also include a detailed outline of France's plans for reducing greenhouse gas emissions. The office mentioned that the bill would still be presented to the lower house of parliament in June, as planned.¹⁰⁰⁶

On 13 February 2019, the French government took note of the deliberation of the Energy Regulatory Commission (CRE), which is an independent administrative authority on regulated tariffs for the sale of electricity. While the CRE increased tariffs to cope with increase in wholesale electricity market prices and in price of electricity capacity and the governments are obliged to apply them, the French government will not apply the new increased rates until the winter heating period is

¹⁰⁰² Saint-Avold coal-fired power plant (Moselle): The Ministry of the Ecological and Solidarity Transition launches the development of a territorial project with all the stakeholders, Ministry of Ecological and Solidarity Transition (Moselle) 8 February 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/centrale-charbon-saint-avold-moselle-ministere-transition-ecologique-et-solidaire-lance-lelaboration>.

¹⁰⁰³ France Backs Changes To EU Energy Rules Seen As Threat To Nord Stream 2, RadioFreeEuropeRadioLiberty (Prague) 7 February 2019. Access Date: 10 March 2019. <https://www.rferl.org/a/france-backs-changes-to-eu-energy-rules-seen-as-threat-to-nord-stream-2/29757783.html>.

¹⁰⁰⁴ Preparatory meeting for the closure of the coal slice of the Gardanne power station, Ministry of Ecological and Solidarity Transition (Marseille) 15 February 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/reunion-preparatoire-fermeture-tranche-charbon-centrale-gardanne>.

¹⁰⁰⁵ Launch of the Territorial Project for the Gardanne-Meyreuil Coal Plan, Ministry of Ecological and Solidarity Transition (Marseille) 26 February 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/lancement-du-projet-territoire-centrale-charbon-gardanne-meyreuil>.

¹⁰⁰⁶ French government working on 'more ambitious' energy and climate bill, Euronews (Paris) 10 March 2019. Access Date: 10 March 2019. <https://www.euronews.com/2019/03/10/french-government-working-on-more-ambitious-energy-and-climate-bill>.

over, as per the deadlines in the law, in efforts to maintain the price of electricity for consumers during periods of high consumption.¹⁰⁰⁷

On 25 February 2019, the European Union Commission approved French state aid projects by the French Movement and Energy Management Agency for the aid of EUR1.2 billion. This project will consist of four floating wind turbine pilot farms that contribute to the European Union's energy and climate objectives.¹⁰⁰⁸

On 6 March 2019, the Secretary of State to the Minister of Ecological and Solidarity Transition Brune Poirson defended the climate ambition and movement towards carbon neutrality in 2050 by calling for a reorientation of public funding to the European Union budget and an increase in private funding for ecological transitions including energy and economic development.¹⁰⁰⁹

On 25 March 2019, the Secretary of State to Minister of State Emmanuelle Wargon assembled a "heat and cold renewable" working group that consists of administrations, local authorities and professional federations. The main focuses of the working group will be to create and develop heating and cooling networks, ensure their competitiveness, strengthen renewable energy within networks and innovate tools for design and pilot.¹⁰¹⁰

On 25 March 2019, the Minister of Ecological and Solidarity Transition and Minister of State François de Rugy launched a campaign that sends energy checks to low-income households to help them pay energy bills. The benefit will apply to 2.2 million more households this year, totalling to 5.8 million households. Amounts paid increased by EUR50, reaching up to EUR277 per household.¹⁰¹¹

On 26 March 2019, President of French Republic Emanuel Macron and President of People's Republic of China Mr. Xi Jinping agreed to cooperate to implement measures of the Paris Agreement, cooperate to ensure the Green Climate Fund is replenished and governed, to ratify the Kigali amendment to the Montreal Protocol which promotes improvement to energy efficiency standards in the cooling sector and reduces hydrocarbon use and reorienting public and private financial flows to combatting climate change. This agreement was made during China's state visit to France by the invitation of Emanuel Macron.¹⁰¹²

On 3 April 2019, Ministry of Ecological and Solidarity Transition placed the European Sustainable Development Week, organized throughout Europe from 30 May to 5 June 2019, as a prerequisite for

¹⁰⁰⁷ Regulated tariffs for sale of electricity: The Government takes note of the deliberation of the CRE and confirms that it will not apply these new rates during the winter, Ministry of Ecological and Solidarity Transition (Marseille) 13 February 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/tarifs-reglementes-vente-lelectricite-gouvernement-prend-acte-deliberation-cre-et-confirme-quil>.

¹⁰⁰⁸ François de Rugy welcomes the agreement given by the European Commission to the support given by the French State to the 4-pilot floating wind turbine projects, Ministry of Ecological and Solidarity Transition (Paris) 28 February 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/francois-rugy-salue-laccord-donne-commission-europeenne-au-soutien-apporte-letat-francais-aux-4>.

¹⁰⁰⁹ France pleads for increased climate ambition and health protection at the Council of Environment Ministers of the European Union, Ministry of Ecological and Solidarity Transition (Paris) 6 March 2019. Access date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/france-plaide-ambition-climatique-et-protection-sanitaire-accrues-lors-du-conseil-des-ministres>.

¹⁰¹⁰ Emmanuelle Wargon launches a working group "Heat and cold renewable", Ministry of Ecological and Solidarity Transition (Paris) 25 March 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/emmanuelle-wargon-lance-groupe-travail-chaleur-et-froid-renouvelables/>.

¹⁰¹¹ Government launches energy checks campaign for 2019, Ministry of Ecological and Solidarity Transition (Paris) 25 March 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/gouvernement-lance-campagne-envoi-des-cheques-energie-2019>.

¹⁰¹² Joint declaration between France and China, Ministry of Ecological and Solidarity Transition (Paris) 26 March 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/declaration-conjointe-entre-france-et-chine>.

success in ecological transition. Communities, businesses, and citizens are required to complete a form that indicates how their initiatives involve one or more of the United Nations' Sustainable Development Goals, which includes energy, in order to participate.¹⁰¹³

On 9 April 2019, Minister of Ecological and Solidarity Transition François de Rugy and German Minister of Environment, Nature Conservation and Nuclear Safety Svenja Schulze reaffirmed their commitment to implement a to environmental protection and developing an ecological transition. François de Rugy also specifically stated that both countries strongly believe that a measure for reducing emissions is a well-designed measure that implements price for CO₂ pollution. This reaffirmation was made in the context that France continues to hold the presidency of the G7 and Germany of the European Union.¹⁰¹⁴

On 16 April 2019, Minister of State and Minister of Ecological and Solidarity Transition François de Rugy and President of Environment and Energy Management Agency Arnaud Leroy and Minister of Transport Elisabeth Borne announced nineteen winning communities for the call of low emission zone (ZFE) projects. More than EUR1.3 million will be allocated between these communities to study the feasibility of ZFEs as a mean of reducing emissions and to support their implementation.¹⁰¹⁵

On 23 April 2019, the government launched a Low Carbon Seal, which is the first climate certification framework adopted by France. The label is an inexpensive and rigorous framework that ensures the reality of emission reductions and environmental quality of projects. Local projects that reduce emissions will be offered this certificate as well, in hopes that it attracts new financiers. The labeling will also allow for communities, businesses, and consumers to consciously support climate-positive projects without compromising quality and provide compensation for doing so. This label was built in collaboration with the Ministry of Agriculture and Food and other governmental and non-governmental organizations.¹⁰¹⁶

On 30 April 2019, Minister of Ecological and Solidarity Transition and Minister of State François de Rugy presented the draft law on energy and climate that aims to meet the objective of zero net greenhouse gas emissions by 2050 at the Council of Ministers meeting. More specific goals within the law include ending coal electricity production by 2022, increasing the timeframe of reducing nuclear power to 50 per cent by 2035 instead of 2025, appointing a High Council to evaluate the implementation of these engagements and facilitating the development of renewable energy.¹⁰¹⁷

¹⁰¹³ European Sustainable Development Week: opening of the platform to participate!, Ministry of Ecological and Solidarity Transition (Paris) 3 April 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/semaine-europeenne-du-developpement-durable-ouverture-plateforme-participer>.

¹⁰¹⁴ François de Rugy's visit to Berlin - Joint Statement with the German Minister for the Environment, Nature Conservation and Nuclear Safety, Svenja Schulze, Ministry of Ecological and Solidarity Transition (Paris) 9 April 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/deplacement-francois-rugy-berlin-declaration-conjointe-ministre-allemande-lenvironnement-protection>.

¹⁰¹⁵ Low Emission Zones: 19 Communities Commit to Clean Air, Ministry of Ecological and Solidarity Transition (Paris) 16 April 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/zones-faibles-emissions-19-collectivites-sengagent-qualite-lair>.

¹⁰¹⁶ Government launches Low Carbon Seal, a tool to encourage and reward local climate action, Ministry of Ecological and Solidarity Transition (Paris) 23 April 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/gouvernement-lance-label-bas-carbone-outil-encourager-et-recompenser-actions-locales-en-faveur-du>.

¹⁰¹⁷ Objective zero net emission of CO₂ by 2050: François de Rugy presented the bill on energy and climate in the Council of Ministers, Ministry of Ecological and Solidarity Transition (Paris) 30 April 2019. Access Date: 1 May 2019. <https://www.ecologique-solidaire.gouv.fr/objectif-zero-emission-nette-co2-dici-2050-francois-rugy-presente-projet-loi-relatif-lenergie-et-au>.

France has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards a cleaner, more flexible and transparent systems.

France has continually demonstrated commitment towards carbon neutrality by 2050, developed initiatives and subsidies for business and consumers to choose climate-positive products, improved transparency without compromising quality with the Low Carbon Seal, and cooperated with global leaders to reduce emissions and transition to cleaner energy sources.

Thus, France receives a score of +1.

Analyst: Amit Dalaya

Germany: +1

Germany has fully complied with its commitment to encourage energy transition through combining growth while decreasing greenhouse gas emissions, and progressing towards cleaner, more flexible and transparent energy systems.

On 3 December 2018, Chancellor Merkel allocated another EUR500 million for the Cleaner Air Programme at a summit with local representatives in Berlin. Portions of the funds will go towards electrifying urban traffic and retrofitting diesel buses in public transport.¹⁰¹⁸

On 12 December 2018, the Federal Cabinet approved of Act to accelerate the power grid expansion. Federal Minister Altmaier stated that power grids are essential to energy transition.¹⁰¹⁹

On 16 December 2018, Germany attended the COP 24 United Nations Climate Change Conference in Katowice and agreed to take measures to reach the Paris Agreement goals alongside 189 other countries. Germany pledged to provide an additional EUR68 million to the Nationally Determined Contributions to assist developing countries in fighting against climate change. Environmental Minister Svenja Schulze also committed EUR70 million to the Adaptation Fund to support those affected directly by climate change, through innovative projects. Further, the German government promised to double its funding for the Green Climate fund to EUR1.5 billion to mitigate adaptation in emerging economies and implement low-emission systems.¹⁰²⁰

On 19 December 2018, AIDAnova –a boat built in Germany that runs on liquefied natural gas (LNG)– departed on its first voyage. It was developed with funding from the Federal Ministry for Economic Affairs and Energy as part of a green shipping campaign known as “Energy in Transport.” Sustainable maritime transport is an important feature to the Federal Government’s Maritime Agenda 2025.¹⁰²¹

¹⁰¹⁸ Another 500 million euros for clean air, The Federal Government (Berlin) 3 December 2018. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/another-500-million-euros-for-clean-air-1557404>.

¹⁰¹⁹ Federal Cabinet endorses Act to accelerate the power grid expansion, Federal Ministry for Economic Affairs and Energy (Berlin) 12 December 2018. Access Date: 25 February 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2018/20181212-federal-cabinet-endorses-act-to-accelerate-the-power-grid-expansion.html>.

¹⁰²⁰ Concrete steps agreed, The Federal Government (Katowice) 16 December 2018. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/concrete-steps-agreed-1563250>.

¹⁰²¹ Ships ‘made in Germany’: world’s first cruise ship powered by LNG takes maiden voyage, Federal Ministry for Economic Affairs and Energy (Berlin) 19 December 2018. Access Date: 25 February 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2018/20181219-ships-made-in-germany.html>.

On 3 January 2019, The Federal Ministry of Transport and Digital Infrastructure (BMVI) laid its funding guidelines for “Clean Air 2017-2020” programme. BMVI is contributing EUR207 million to the program to retrofit the diesel buses to reduce nitrogen oxide pollution.¹⁰²²

On 18 January 2019, Angela Merkel delivered a speech at the Global Forum for Food and Agriculture in Berlin. Merkel commented on the connection and growing research connecting food and agriculture to CO2 emissions, stating that agriculture will need to play a role in decarbonization of the economy by the end of the century. As a solution, Merkel recommends precision agriculture to reduce nitrogen and pesticides utilized in intensive farming.¹⁰²³

On 21 January 2019, the Federal Network Agency finished the “Ultratnet” power line, expanding the power grid and allowing for wind power from the North Sea to reach a car plant in Baden-Württemberg, ultimately aiding in the production of electric cars.¹⁰²⁴

On 22 January 2019, the Federal Republic of Germany and the French Republic signed the Treaty on Franco-German Cooperation and Integration in Aachen. Merkel stated that the agreement’s objective is to usher cooperation across many categories including research and education, “as well as sustainable development, climate and environmental protection.”¹⁰²⁵

On 23 January 2019, at the World Economic Forum in Davos, Merkel stated that the way to mitigate climate change is to compromise and work multilaterally. In accordance to Germany’s plan to decrease coal and nuclear energy, gas will play more important of a role, and Germany will subsequently continue importing gas from Russia and possibly the United States of America.¹⁰²⁶

On 28 January 2019, The Commission on Growth, Structural Change and Employment stated it would phase out coal-fired power stations by 2038 or sooner. A total of EUR40 billion will be provided over the next 20 years to those states affected to assist in ending the use of coal in power generation. Moreover, the Commission also proposes to establish an Fraunhofer institute for energy infrastructure and geothermal power with the purpose of decarbonizing the energy sector.¹⁰²⁷

¹⁰²² “Clean air emergency program”: BMVI lays down new funding guidelines, The Federal Ministry of Transport and Digital Infrastructure (Berlin) 3 January 2019. Access Date: 25 February 2019. https://www.bmvi.de/SiteGlobals/Forms/Suche/DE/Expertensuche_Formular.html?resourceId=12880&input_=12872&pageLocale=de&templateQueryStringSearch=emissions&cl2Categories_Themen=&cl2Categories_Themen.GROUP=1&documentType_=&documentType_.GROUP=1&lastChangeAfter=&lastChangeBefore=&selectSort=commonSortDate_dt+desc&selectSort.GROUP=1.

¹⁰²³ Speech by Federal Chancellor Dr. Angela Merkel at the Global Forum for Food and Agriculture in Berlin on 18 January 2019, The Federal Government (Berlin) 23 January 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/speech-by-federal-chancellor-dr-angela-merkel-at-the-global-forum-for-food-and-agriculture-in-berlin-on-18-january-2019-1572744>.

¹⁰²⁴ Minister Altmaier: “We have taken an important step in grid expansion,” Federal Ministry for Economic Affairs and Energy (Berlin) 21 January 2019. Access Date: 25 February 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20190121-altmaier-we-have-taken-an-important-step-in-grid-expansion.html>.

¹⁰²⁵ Speech by Federal Chancellor Dr. Angela Merkel at the signing of the Treaty between the Federal Republic of Germany and the French Republic on Franco-German Cooperation and Integration in Aachen, The Federal Government (Aachen) 22 January 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/speech-by-federal-chancellor-dr-angela-merkel-at-the-signing-of-the-treaty-between-the-federal-republic-of-germany-and-the-french-republic-on-franco-german-cooperation-and-integration-in-aachen-on-22-january-2019-1572746>.

¹⁰²⁶ Compromises are acting responsibly, says Chancellor, The Federal Government (Berlin) 23 January 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/compromises-are-acting-responsibly-says-chancellor-1573618>.

¹⁰²⁷ The beginning of the end of the age of coal, The Federal Government (Berlin) 28 January 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/the-beginning-of-the-end-of-the-age-of-coal-1574864>.

On 29 January 2019, the Federal Ministry for Economic Affairs and Energy and the Federal Office for Information Security published a “Standardized Strategy for Cross-Sector Digitalisation of the Energy Transition” that will help integration of renewables into the grid. The Strategy includes comprehensive digital communication from the grid operator to the supplier to the consumer.¹⁰²⁸

On 13 February 2019, Germany and India agreed to aim for closer cooperation in regard to climate policy. Germany will assist India in climate action projects by providing them an additional EUR35 million. The funds will be devoted to sustaining forests, grid expansion, managing marine litter and storage for renewable energy.¹⁰²⁹

On 16 February 2019, Angela Merkel made a speech at the 55th Munich Security Conference. Merkel discussed the Anthropocene, which includes the traces of nuclear tests, exploitation of materials and climate change in the contexts of global security, highlighting it as an issue. Merkel reaffirmed Germany’s commitment to investing in Liquefied Natural Gas (LNG) and phasing out nuclear energy, lignite and black coal.¹⁰³⁰

On 27 February 2019, Germany released its 2019 annual report on research and innovation. Experts recommend higher taxes on carbon emissions to make clean energy forms more attractive, tax incentives to promote research and development in small and medium enterprises, more blockchain technology and start-ups.¹⁰³¹

On 4 March 2019, the Federal Environment Ministry stated it will be proving an extra EUR180 million for electric buses in public transportation. They will be specifically targeting transport that exceed the nitrogen dioxide limit. In total, the Ministry is spending approximately EUR300 million on this transition to cleaner public transport.¹⁰³²

On 7 March 2019, the Federal Ministry for the Environment pledged to open a competence centre for climate protection in energy-intensive industries. Its intention is to promote decarbonization by cooperating with research institutions, industry and international institutions. The industries include steel, cement, lime, metallurgy, and other industries where high emissions are common. The centre will open in Cottbus later in 2019.¹⁰³³

¹⁰²⁸ Roadmap for smart energy grids of the future, Federal Ministry for Economic Affairs and Energy (Berlin) 29 January 2019. Access Date: 25 February 2019. <https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2019/20190129-roadmap-for-smart-energy-grids-of-the-future.html>.

¹⁰²⁹ Minister Schulze agrees closer environmental cooperation with India, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 13 February 2019. Access Date: 25 February 2019. <https://www.bmu.de/en/pressrelease/schulze-vereinbart-engere-umweltzusammenarbeit-mit-indien/>.

¹⁰³⁰ Speech by Federal Chancellor Dr. Angela Merkel on 16 February 2019 at the 55th Munich Security Conference, The Federal Government (Munich) 16 February 2019. Access Date: 25 February 2019. <https://www.bundesregierung.de/breg-en/search/speech-by-federal-chancellor-dr-angela-merkel-on-16-february-2019-at-the-55th-munich-security-conference-1582318>.

¹⁰³¹ The experts’ recommendations - energy, blockchain and start-ups, The Federal Government (Berlin) 27 February 2019. Access Date: 19 April 2019. <https://www.bundesregierung.de/breg-en/search/the-experts-recommendations-energy-blockchain-and-start-ups-1585856>.

¹⁰³² Federal Environment Ministry increases subsidies for electric buses to almost 300 million euros, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 4 March 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/bundesumweltministerium-erhoeht-foerderung-von-elektrobussen-auf-fast-300-millionen-euro/>.

¹⁰³³ Federal Ministry for the Environment sets up “Competence Center for Climate Protection in Energy-Intensive Industries” in Cottbus, Federal Ministry for Environment, Nature Conservation and Nuclear Safety (Berlin) 7 March 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/bundesumweltministerium-richtet-kompetenzzentrum-klimaschutz-in-energieintensiven-industrien-in-co/>.

On 12 March 2019, Germany pledged more money for the energy shift, even after the end of nuclear power in 2022. EUR4.5 billion will be made available for the Energy Climate Fund in 2019. The funds will be used to increase efficiency in trade and industry, renewable energy, building modernization, national and international climate change mitigation, projects and research, electricity, compensation for electricity-intensive business and expanding the National Action Plan on Energy Efficiency.¹⁰³⁴

On 13 March 2019, Germany attended the Sixth Global Environmental Outlook (GEO-6) at the fourth session of the United Nations Environment Assembly (UNEA) in Nairobi, Kenya. State Secretary Jochen Flasbarth stated a need to have an “environmental policy that hold its own... for long-term prosperity,” and that there’s a need to “advance the overdue transformational change to more sustainable consumption and economic practices.” Germany reaffirmed to meet their Sustainable Development Goals (SDGs) by 2030, which would allow for sustainable energy, industry, agriculture and transportation.¹⁰³⁵

On 25 March 2019, Federal Environmental Ministry expressed their support for projects for decarbonization of industry. The ministry will provide funds for decarbonization in the industrial sector.¹⁰³⁶

On 26 March 2019, the Federal Environment Ministry called for project ideas on climate action and biodiversity. Funded by the International Climate Initiative, the ministry is seeking ideas on how to decrease emissions and adapt to climate change.¹⁰³⁷

On 3 April 2019, the Federal Ministry for Economic Affairs and Energy (BMWi) and the Federal Ministry for the Environment, Conservation and Nuclear Safety (BMU) honoured participants in innovation efficiency networks. 33 companies that jointly saved 16,4000 tonnes of CO₂ are pursuing new approaches to energy management and efficiency, which includes diverse energy sources, efficient production, green buildings and low-emission mobility solutions.¹⁰³⁸

From 3 to 4 April, Germany attended the XV Alpine Conference in Innsbruck, Austria, alongside the ministers of other parties to the Alpine Convention. The Alpine Convention is an agreement to

¹⁰³⁴ More money for the energy shift, The Federal Government (Berlin) 12 March 2019. Access Date: 19 April 2019. <https://www.bundesregierung.de/breg-en/news/more-money-for-the-energy-shift-1589036>.

¹⁰³⁵ UNO report calls for decisive action for more environmentally sound economic practices and more sustainable lifestyles, Federal Ministry for Environment, Nature Conservation and Nuclear Safety (Berlin) 13 March 2019. Access Date: 19 April 2019. <https://www.bmu.de/en/pressrelease/uno-bericht-fordert-entschlossenes-handeln-fuer-eine-umweltvertraeglichere-gestaltung-der-wirtschaft-u/>.

¹⁰³⁶ Federal Environment Ministry supports projects for the decarbonisation of industry, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 25 March 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/bundesumweltministerium-foerdert-projekte-zur-dekarbonisierung-der-industrie/>.

¹⁰³⁷ Federal Environment Ministry launches call for project ideas for global climate actions and biodiversity conservation, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 26 March 2019. Access Date: 19 April 2019. <https://www.bmu.de/en/pressrelease/bundesumweltministerium-startet-ideenwettbewerb-fuer-weltweiten-klima-und-biodiversitaetsschutz/>.

¹⁰³⁸ Energy efficiency as an engine of innovation: Federal Government awards successful energy efficiency networks, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 3 April 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/energieeffizienz-als-innovationsmotor-bundesregierung-zeichnet-erfolgreiche-energieeffizienz-netzwe/>.

increase cooperation on climate action in the Alps, a region especially susceptible to climate change. The Convention aims to make the Alpine region climate neutral by 2050.¹⁰³⁹

On 8 April 2019, Federal Environment Minister, Svenja Schulze, and French Minister, Francois de Rugy, committed to continue Germany and France's cooperation on climate and species protection, and their path to climate neutrality. Minister de Rugy stated that they believe a well carbon price will help cut emissions.¹⁰⁴⁰

On 8 April 2019, Federal Minister of Economics, Peter Altmaier, discussed with ministers from Belgium, Netherlands, Luxembourg, France, Austria, Switzerland, Norway, Sweden, Denmark, Poland, the Czech Republic and the EU Commission about coordinating their electricity market as they phase out coal.¹⁰⁴¹

On 9 to 10 April 2019, Berlin hosted a two-day conference that examined the global consequences of energy transition. The Berlin Energy Transition Dialogue 2019 hosted delegates from 50 countries and addressed both opportunities and challenges of transition. Federal Foreign Minister Heiko Maas stated the importance of international cooperation to fight climate change. The task involves ending fossil fuel usage and restructuring the energy sector.¹⁰⁴²

On 9 April 2019, German Deputy Economy and Energy Minister Thomas Bareiss met with Alparslan Bayraktar and both parties acknowledged strong partnership between both countries to cooperate in renewables, energy storage and efficiency and have set up four working groups to achieve better cooperation.¹⁰⁴³

On 10 April 2019, Germany adopted its National Reform Programme 2019 to read its agreed economic financial goals. The programme is designed to address and overcome structural weakness in the European economy, and includes increasing energy efficiency.¹⁰⁴⁴

On 11 April 2019, the German Advisory Council on Climate Change (WBGU) released its report "Our Common Digital Future." The WBGU report states the need for digital transformation to support sustainability. The digital transformation will aid in research initiatives, such as the Koperniku projects that are developing "digital, technological and economic solutions for the transformation of the energy system."¹⁰⁴⁵

¹⁰³⁹ Alpine region to be climate neutral by 2050, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Innsbruck) 4 April 2019. Access Date: 19 April 2019. <https://www.bmu.de/en/pressrelease/alpenregion-soll-bis-2050-klimaneutral-werden/>.

¹⁰⁴⁰ Schulze and de Rugy reaffirm their close cooperation in protecting the climate and biodiversity, Federal Ministry for the Environment, Nature Conservation and Nuclear Energy (Berlin) 8 April 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/schulze-und-de-rugy-bekraeftigen-enge-zusammenarbeit-beim-schutz-des-klimas-und-der-biologischen-viel/>.

¹⁰⁴¹ Altmaier: German decision to cut coal is being closely coordinated with our neighbouring states, the Ministry for Economic Affairs and Energy (Berlin) 8 April 2019. Access Date: 19 April 2019. <https://www.bmwi.de/Redaktion/DE/Pressemitteilungen/2019/20190408-altmaier-deutsche-entscheidung-zum-kohleausstieg-mit-nachbarstaaten-abgestimmt.html>.

¹⁰⁴² The energy transition is the future, The Federal Government (Berlin) 9 April 2019. Access Date: 19 April 2019. <https://www.bundesregierung.de/breg-en/news/the-energy-transition-is-the-future-1599552>.

¹⁰⁴³ Turkey and Germany to boost renewable cooperation, Anadolu Agency (Ankara) 18 April 2019. Access date: 20 April 2019. <https://www.aa.com.tr/en/economy/turkey-and-germany-to-boost-renewable-cooperation/1456703>.

¹⁰⁴⁴ National Reform Programme 2019, The Federal Government (Berlin) 10 April 2019. Access Date: 19 April 2019. <https://www.bundesregierung.de/breg-en/news/national-reform-programme-2019-1599820>.

¹⁰⁴⁵ WBGU report: Digitization as a driver of sustainability, The Federal Ministry for Environment, Nature Conservation and Nuclear Safety (Berlin) 11 April 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/wbgu-gutachten-digitalisierung-als-motor-fuer-nachhaltigkeit/>.

On 17 April 2019, Germany and Ukraine stated their goal for a German-Ukrainian Energy Partnership. The partnership would aim at the modernization of the Ukrainian energy sector, and the expansion of renewable energy and efficiency.¹⁰⁴⁶

On 15 April 2019, Germany voted in the EU Council for stricter fuel consumption and climate limits for cars and commercial vehicles to cut CO₂ emissions. The EU regulation was adopted in the Council of Member States and Germany approved the regulation. The regulation also sets that CO₂ emissions of cars must reduce by 37.5 per cent by 2030. Federal Environment Minister Svenja Schulze stated that the automotive industry will have reliable conditions until 2030. Manufacturers will be able to switch production to new drives in reasonable time, which is important for Germany to remain a world-leading automotive location.¹⁰⁴⁷

On 16 April 2019, Germany opened the largest Baltic wind farm with the capacity to power 400,000 households. Chancellor Angela Merkel states that renewables are now the focus in energy supply and called for an increase in the building of power transmission lines to promote use of renewables.¹⁰⁴⁸

Germany has fully complied with its commitment to reduce emissions and encourage energy transitions towards cleaner and more transparent energy systems. Germany adoption of new EU automobile emission regulations, investments in research and development pertaining to alternative energy sources, and international cooperation to reduce emissions and promote energy efficiency highlight its compliance.

Thus, Germany receives a score of +1.

Analyst: Kaylin Dave

India: +1

India has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and moving towards cleaner, more flexible and transparent energy systems.

On 17 December 2018, the Union Cabinet chaired by Prime Minister Shri Narendra Modi approved of a Memorandum of Understanding (MoU) signed between the Solar Energy Corporation of India Limited (SECI) and a French state-owned research entity to further collaboration in the development of e-vehicles.¹⁰⁴⁹ Specifically, the French company intends to help SECI develop a charging station with embedded batteries for e-vehicles powered by solar panels.¹⁰⁵⁰ This initiative would further

¹⁰⁴⁶ German-Ukrainian Energy Partnership, the Federal Ministry for Economic Affairs and Energy (Berlin) 17 April 2019. Access Date: 19 April 2019.

<https://www.bmwi.de/Redaktion/DE/Pressemitteilungen/2019/20190417-deutsch-ukrainische-energiepartnerschaft.html>.

¹⁰⁴⁷ Schulze: New EU limits make new cars more economical and climate-friendly, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin) 15 April 2019. Access Date: 19 April 2019. <https://www.bmu.de/pressemitteilung/schulze-neue-eu-grenzwerte-machen-neuwagen-sparsamer-und-klimafreundlicher/>.

¹⁰⁴⁸ Largest Baltic wind farm does online, The Federal Government (Berlin) 16 April 2019. Access Date: 19 April 2019. <https://www.bundesregierung.de/breg-en/news/largest-baltic-wind-farm-goes-online-1601694>.

¹⁰⁴⁹ Press Release: Cabinet approves Memorandum of Understanding between India and France in the field of new and renewable energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 17 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1556311>.

¹⁰⁵⁰ Press Release: Cabinet approves Memorandum of Understanding between India and France in the field of new and renewable energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 17 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1556311>.

support the Government of India's plan to encourage electrical vehicles and minimizing their impact on electrical grids.¹⁰⁵¹

On 20 December 2018, the Ministry of New and Renewable Energy announced support for a recently implemented program called "Waste to Energy" which transforms urban, industrial, and agricultural waste to energy in the form of Biogas power.¹⁰⁵² Under the program, 184 Waste to Energy plants have been set up in the private sector which have an aggregate capacity of 315.24 MWeq.¹⁰⁵³

On 27 December 2018, the Ministry of New and Renewable Energy finalized bids to set up wind power projects with an aggregate capacity of 8389.90 MW.¹⁰⁵⁴ The Government of India has promoted wind power projects by providing fiscal and financial incentives such as Accelerated Depreciation benefits, custom duty exemptions on the parts of electric wind generator, among other benefits.¹⁰⁵⁵ Technical support has also been offered for potential wind power sites in Chennai.¹⁰⁵⁶

On 3 January 2019, Indian Department of Atomic Energy stated that India and France have made satisfactory progress on the Industrial Way Forward Agreement, signed in March 2018, to develop six reactors in Maharashtra, India.¹⁰⁵⁷

On 6 February 2019, the Cabinet Committee on Economic Affairs chaired by Prime Minister Shri Narendra Modi approved of the Ministry of New and Renewable Energy's proposal for implementing the Central Public Sector Undertaking Scheme Phase II. This phase entails setting up 12,000 MW grid-connected Solar Photovoltaic Power Projects for use by Government entities.¹⁰⁵⁸ The project is planned to be completed in 4 years and will encourage the domestic production of solar cells for its usage.¹⁰⁵⁹ The project will allow for direct employment of 60,000 people in the pre-commission activity phase and around 18,000 people for 25 years in the operation and maintenance

¹⁰⁵¹ Press Release: Cabinet approves Memorandum of Understanding between India and France in the field of new and renewable energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 17 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1556311>.

¹⁰⁵² Press Release: Power Generation from Waste, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 20 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1556850>.

¹⁰⁵³ Press Release: Power Generation from Waste, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 20 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1556850>.

¹⁰⁵⁴ Press Release: Bids for setting up of Wind Power Projects of over 8000 MW Capacity Finalised, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 27 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1557495>.

¹⁰⁵⁵ Press Release: Bids for setting up of Wind Power Projects of over 8000 MW Capacity Finalised, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 27 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1557495>.

¹⁰⁵⁶ Press Release: Bids for setting up of Wind Power Projects of over 8000 MW Capacity Finalised, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 27 December 2018. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1557495>.

¹⁰⁵⁷ India-France making 'satisfactory progress' on nuclear power plant pact: Government, The Economic Times (New Delhi) 3 January 2019. Access Date: 10 March 2019. <https://economictimes.indiatimes.com/industry/energy/power/india-france-making-satisfactory-progress-on-nuclear-power-plant-pact-government/articleshow/67368750.cms>.

¹⁰⁵⁸ Press Release: CCEA approves proposal for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 6 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1562963>.

¹⁰⁵⁹ Press Release: CCEA approves proposal for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 6 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1562963>.

period.¹⁰⁶⁰ An additional 120,000 employment opportunities will be offered for the local population in setting up the Solar Power Projects and in the domestic manufacturing of solar cells.¹⁰⁶¹

On 7 February 2019, an Expert Committee chaired by Secretary, Ministry of New and Renewable energy, has proposed a draft National Energy Storage Mission that encourages innovation and cost reduction in the energy storage sector.¹⁰⁶² Further technical cooperation on energy storage has been pursued through India's bilateral agreement, specifically under the India-United Kingdom Energy for Growth Partnership.¹⁰⁶³

On 12 February 2019, the Government of India implemented a number of measures to promote the rooftop solar program, including providing central financial assistance for sectors connected to the program, providing experts for the implementation of the program, creating an online platform to expedite the program's implementation, and looked into the availability of loans from the World Bank and Asian Development Bank to fund the project when appropriate.¹⁰⁶⁴

On 12 February 2019, the Government of India announced a plan to promote solar energy usage among farmers. The plan current involves setting up grid-connected renewable power plants in the rural area, installing standalone off-grid solar water plants to fulfill irrigation needs, making pre-existing agriculture pumps solar-power dependent, and helping famers sell surplus power to receive extra income.¹⁰⁶⁵

On 13 February 2019, India and Germany agreed to aim for closer cooperation in regard to climate policy. Germany will assist India in climate action projects by providing them an additional EUR35 million. The funds will be devoted to sustaining forests, grid expansion, managing marine litter and storage for renewable energy.¹⁰⁶⁶

On 18 February 2019, Argentina and India signed a MoU in New Delhi to boost cooperation in the sectors of energy between the India's Department of Atomic Energy, and Argentina's National

¹⁰⁶⁰ Press Release: CCEA approves proposal for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 6 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1562963>.

¹⁰⁶¹ Press Release: CCEA approves proposal for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 6 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1562963>.

¹⁰⁶² Press Release: Government of India has been making concerted efforts for Developing Energy Storage Technologies, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 7 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1563308>.

¹⁰⁶³ Press Release: Government of India has been making concerted efforts for Developing Energy Storage Technologies, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 7 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1563308>.

¹⁰⁶⁴ Press Release: A number of measures taken to popularise Roof Top Solar Power System, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 12 February 2019. Access Date: 29 February 2018. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1564038>.

¹⁰⁶⁵ Press Release: Kusum Scheme to Promote Use of Solar Energy Among Farmers Under Consideration: Shri R. K. Singh, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 12 February 2019. Access Date: 29 February 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PMO=3&PRID=1564036>.

¹⁰⁶⁶ Minister Schulze agrees closer environmental cooperation with India, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Berlin). 13 February 2019. Access Date: 25 February 2019. <https://www.bmu.de/en/pressrelease/schulze-vereinbart-engere-umweltzusammenarbeit-mit-indien/>.

Atomic Energy Commission. Both countries are continuing to engage in talks that will boost cooperation in areas of nuclear power for energy production.¹⁰⁶⁷

On 28 February 2019, the Union Cabinet chaired by Prime Minister Narendra Modi signed a MoU with Tajikistan to promote renewable energy initiatives.¹⁰⁶⁸ Institutional cooperation mandated by the MoU will include bilateral technical cooperation in promoting renewable energy infrastructure, the development and deployment of new and renewable energy and storage technologies.¹⁰⁶⁹ Other cooperative efforts may include exchange and training of scientific and technical personnel and information, organizing workshops, seminars, and working groups to transfer equipment on a non-commercial basis, development of joint research initiatives, and other projects as deemed necessary.¹⁰⁷⁰

On 6 March 2019, the Ministry of Environment, Forest, and Climate Change amended the Hazardous and Other Wastes (Management & Transboundary Movement) Rules to bolster the implementation of environmentally sound hazardous waste policies.¹⁰⁷¹ The revision upholds the principles of sustainable development, ensures the principle of sustainable development are upheld, and simplifies procedures under the act.¹⁰⁷² A notable change includes the prohibition of the importation of solid plastic waste into the country in special economic zones.¹⁰⁷³

On 8 March 2019, the Ministry of Environment, Forest, and Climate Change launched a new program called the “India Cooling Action Plan” (ICAP) which reduces the cooling demand across the country.¹⁰⁷⁴ Cooling demand refers to the demand for energy to reduce the temperature indoors for comfort.¹⁰⁷⁵ The Environment Minister says that this new ICAP wants to achieve both environmental and socioeconomic benefits to reduce direct and indirect emissions.¹⁰⁷⁶ The goal is to

¹⁰⁶⁷ India, Argentina sign MoU for Nuclear energy cooperation, Times of India (India) 19 February 2019. Access Date: 2 March 2019. <https://timesofindia.indiatimes.com/india/india-argentina-sign-mou-for-nuclear-energy-cooperation/articleshow/68056022.cms>.

¹⁰⁶⁸ Press Release: Cabinet apprised of MoU between India and Tajikistan on Cooperation in the field of Renewable Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 28 February 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1566772>.

¹⁰⁶⁹ Press Release: Cabinet apprised of MoU between India and Tajikistan on Cooperation in the field of Renewable Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 28 February 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1566772>.

¹⁰⁷⁰ Press Release: Cabinet apprised of MoU between India and Tajikistan on Cooperation in the field of Renewable Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 28 February 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1566772>.

¹⁰⁷¹ Press Release: Amendment in Hazardous Waste (Management& Transboundary Movement) Rules, 2016, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 06 March 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1567682>.

¹⁰⁷² Press Release: Amendment in Hazardous Waste (Management& Transboundary Movement) Rules, 2016, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 06 March 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1567682>.

¹⁰⁷³ Press Release: Amendment in Hazardous Waste (Management& Transboundary Movement) Rules, 2016, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 06 March 2019. Access Date: 18 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1567682>.

¹⁰⁷⁴ Press Release: India Cooling Action Plan Launched, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 08 March 2019. Access Date: 20 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1568328>.

¹⁰⁷⁵ Press Release: India Cooling Action Plan Launched, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 08 March 2019. Access Date: 20 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1568328>.

¹⁰⁷⁶ Press Release: India Cooling Action Plan Launched, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 08 March 2019. Access Date: 20 April 2019. <http://pib.nic.in/PressReleaseDetail.aspx?PRID=1568328>.

promote a decrease in cooling demand across all sectors, reduce greenhouse gas emissions related to cooling, enhance energy efficiency, and promote the innovation of better technology with a 20 year time period.¹⁰⁷⁷

On 18 March 2019, the Ministry of New and Renewable Energy approved of a program implementing solar pumps and solar plant-powered grids for rural farmers.¹⁰⁷⁸

On 15 April 2019, the Union Cabinet, chaired by Prime Minister Shri Narendra Modi, approved of a Cooperation Agreement between the Ministry of New and Renewable Energy of India and Ministry for Energy, Utilities, and Climate of the Kingdom of Denmark focused on strategic cooperation in the field of renewable energy, with a focus on offshore wind energy.¹⁰⁷⁹ Further areas of cooperation would include cultivating technical expertise for management of offshore wind projects, implementing infrastructure to develop and sustain a highly efficient wind industry onshore and offshore, and programs to ensure the high quality of wind turbines, components, and certification requirements.¹⁰⁸⁰ An accompanying letter of intent also established an Indo-Danish Centre of Excellence for renewable energy in India.¹⁰⁸¹ This centre will be tasked to work on renewable energy resource assessments, hybridization of wind, solar, hydro, and storage technologies, testing, research and development, and capacity building.¹⁰⁸² These programs will collectively aim to strengthen bilateral relations between India and Denmark.¹⁰⁸³

India has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent energy systems. India demonstrated compliance by funding renewable energy initiatives such as wind power and solar power projects, implementing programs to transform industrial waste into biogas energy, providing infrastructure to support e-vehicle usage and cooperating with other nations to boost energy production and diversify the energy sector.

¹⁰⁷⁷ Press Release: India Cooling Action Plan Launched, Press Information Bureau Government of India Ministry of Environment, Forest, and Climate Change (New Delhi) 08 March 2019. Access Date: 20 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1568328>.

¹⁰⁷⁸ Press Release: Advisory to General Public: Fraudulent websites for registration under Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM) Scheme, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 18 March 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1569000>.

¹⁰⁷⁹ Press Release: Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 15 April 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1570599>.

¹⁰⁸⁰ Press Release: Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 15 April 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1570599>.

¹⁰⁸¹ Press Release: Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 15 April 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1570599>.

¹⁰⁸² Press Release: Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 15 April 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1570599>.

¹⁰⁸³ Press Release: Cabinet approves Cooperation Agreement between India and Denmark in the field of Renewable Energy with focus on Offshore Wind Energy, Press Information Bureau Government of India Ministry of New and Renewable Energy (New Delhi) 15 April 2019. Access Date: 18 April 2019.
<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1570599>.

Thus, India receives as score of +1.

Analyst: Andrea Ho

Indonesia: +1

Indonesia has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and moving towards cleaner, more flexible and transparent energy systems.

On 10 December 2018, the Minister of Energy and Mineral Resources (EDSM) inaugurated the Green Energy Station at the General Petrol Filling Station.¹⁰⁸⁴ This new station will also provide a General Electric Charging Station for electric cars.¹⁰⁸⁵ The minister further commented that he hopes that other gas stations will fill its electricity needs from renewable sources and that electric cars and renewable energy should be the focus of future energy policies.¹⁰⁸⁶

On 29 January 2019, Japan's Ministry of Economy Trade and Industry, and Indonesia's Ministry of Industry attended the inaugural Japan-Indonesia Automotive Dialogue. This event took place in Jakarta, Indonesia and clarified the importance of electric vehicle development to counteract environmental problems and stem the growth of industries relating to non-renewable energies.¹⁰⁸⁷

On 24 February 2019, the Deputy Minister of EDSM inaugurated solar power street lighting in Bukik Gadang Village in Sawahlunto City.¹⁰⁸⁸ ESDM reports that the solar-powered lamp is an effective solution to add light to streets that do not have access to electricity.¹⁰⁸⁹

On 25 February 2019, the President of the Republic of Indonesia Joko Widodo inaugurated a 600 MW Steam Power Plant (PLTU) in Karangandri Village, Cilacamp, Central Java.¹⁰⁹⁰ This project marks the ongoing project to bring electrical power to remote villages in Indonesia.¹⁰⁹¹ Additionally,

¹⁰⁸⁴ Minister Jonan Inaugurates SPLU for Electric Cars, 6,500 Pertamina SPBU Asked to Use Renewable Energy, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 10 December 2018. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/menteri-jonan-resmikan-splu-untuk-mobil-listrik-6500-spbu-pertamina-diminta-gunakan-energi-terbarukan>.

¹⁰⁸⁵ Minister Jonan Inaugurates SPLU for Electric Cars, 6,500 Pertamina SPBU Asked to Use Renewable Energy, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 10 December 2018. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/menteri-jonan-resmikan-splu-untuk-mobil-listrik-6500-spbu-pertamina-diminta-gunakan-energi-terbarukan>.

¹⁰⁸⁶ Minister Jonan Inaugurates SPLU for Electric Cars, 6,500 Pertamina SPBU Asked to Use Renewable Energy, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 10 December 2018. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/menteri-jonan-resmikan-splu-untuk-mobil-listrik-6500-spbu-pertamina-diminta-gunakan-energi-terbarukan>.

¹⁰⁸⁷ First Japan-Indonesia Automotive Dialogue Held, Ministry of Economy, Trade and Industry (Tokyo) 29 January 2019. Access Date: 23 February 2019. http://www.meti.go.jp/english/press/2019/0212_001.html.

¹⁰⁸⁸ Solar Street Lighting, Able to Save on Sawahlunto City Budget, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 24 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/penerangan-jalan-tenaga-surya-mampu-menghemat-apbd-kota-sawahlunto>.

¹⁰⁸⁹ Solar Street Lighting, Able to Save on Sawahlunto City Budget, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 24 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/penerangan-jalan-tenaga-surya-mampu-menghemat-apbd-kota-sawahlunto>.

¹⁰⁹⁰ Inaugurates Cilacap PLTU Expansion of 1x 660 MW, President: End of this Year 99.9% of Indonesia is Electrified, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 25 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/resmikan-pltu-cilacap-ekspansi-1x-660-mw-presiden-akhir-tahun-ini-999-indonesia-terlistriki>.

¹⁰⁹¹ Inaugurates Cilacap PLTU Expansion of 1x 660 MW, President: End of this Year 99.9% of Indonesia is Electrified, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 25 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/resmikan-pltu-cilacap-ekspansi-1x-660-mw-presiden-akhir-tahun-ini-999-indonesia-terlistriki>.

President Widodo reiterated support for renewable energy projects, like the PLTU, which will eventually replace the use of fossil fuels.¹⁰⁹²

On 25 February 2019, President Joko Widodo implemented a new policy to increase the number of electricity projects with the final goal of providing electricity to all Indonesia communities.¹⁰⁹³ These electricity project will focus on equitable access by distributing Energy-Saving Solar Energy Lights for the 2,519 villages that do not have access to electricity.¹⁰⁹⁴

On 12 March 2019, a Japan-Indonesia Energy Forum was held in Jakarta, Indonesia, in order to persuade Indonesia to capitalize on Japan's available knowledge on clean energy and related business. This is meant to both make a positive environmental impact, as well as strengthening bonds between the two countries through co-development of environmental projects.¹⁰⁹⁵

On 23 March 2019, the Minister of Energy and Mineral Resources Ignasius Joan inaugurated several infrastructure developments in East Nusa Tenggara (NTT) including public solar street lighting, energy-saving solar power lights, and groundwater drilling wells.¹⁰⁹⁶ This development is aimed at improving both sustainable development and the welfare of NTT citizens.¹⁰⁹⁷

On 27 March 2019, the Government of Indonesia announced it was committed to gradually changing coal fueled energy to renewable energy.¹⁰⁹⁸ By 2025, Indonesia intends to use 23 per cent of renewable energy sources.¹⁰⁹⁹ The Deputy Minister of EDSM Arcandra Tahar notes that the transition from coal to renewable energy sources will be carried out in stages after the economy has

¹⁰⁹² Inaugurates Cilacap PLTU Expansion of 1x 660 MW, President: End of this Year 99.9% of Indonesia is Electrified, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 25 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/resmikan-pltu-cilacap-ekspansi-1x-660-mw-presiden-akhir-tahun-ini-999-indonesia-terlistriki>.

¹⁰⁹³ In Four Years of Electricity Growing Fast, President: No More Complaints Byar Pet, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 25 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/dalam-empat-tahun-listrik-tumbuh-cepat-presiden-tidak-ada-lagi-keluhan-byar-pet>.

¹⁰⁹⁴ In Four Years of Electricity Growing Fast, President: No More Complaints Byar Pet, Ministry of Energy and Mineral Resources Public Information Services (Jakarta) 25 February 2019. Access Date: 27 February 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/dalam-empat-tahun-listrik-tumbuh-cepat-presiden-tidak-ada-lagi-keluhan-byar-pet>.

¹⁰⁹⁵ Japan-Indonesia Government-Private Workshop on Clean Energy Technology to be Held, Ministry of Trade and Industry (Tokyo) 6 March 2019. Access Date: 23 April 2019. https://www.meti.go.jp/english/press/2019/0306_001.html.

¹⁰⁹⁶ Press Release: Improve Quality of Life in NTT, Lighting and Clean Water Become a Solution, Indonesia Public Information Services Minister of Energy and Mineral Resources (Jakarta) 23 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/en/media-center/arsip-berita/tingkatkan-kualitas-hidup-di-ntt-penerangan-dan-air-bersih-jadi-solusi>.

¹⁰⁹⁷ Press Release: Improve Quality of Life in NTT, Lighting and Clean Water Become a Solution, Indonesia Public Information Services Minister of Energy and Mineral Resources (Jakarta) 23 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/en/media-center/arsip-berita/tingkatkan-kualitas-hidup-di-ntt-penerangan-dan-air-bersih-jadi-solusi>.

¹⁰⁹⁸ Press Release: Like other countries, the portion of coal will be replaced by gradual renewable energy, Indonesia Public Information Services Ministry of Energy and Mineral Resources (Jakarta) 27 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/seperti-negara-lain-porsi-batubara-akan-diganti-energi-terbarukan-bertahap>.

¹⁰⁹⁹ Press Release: Like other countries, the portion of coal will be replaced by gradual renewable energy, Indonesia Public Information Services Ministry of Energy and Mineral Resources (Jakarta) 27 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/seperti-negara-lain-porsi-batubara-akan-diganti-energi-terbarukan-bertahap>.

fully developed, modeled after the European and Chinese methods.¹¹⁰⁰ His concern of transition too quickly is that Indonesia will be unable to compete with competitive export markets if their source of energy is too expensive.¹¹⁰¹ However, Arcandra Tahar reaffirms the strong efforts to convert to renewable resources.¹¹⁰²

Indonesia has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and moving towards cleaner, more flexible and transparent energy systems. Indonesia demonstrated compliance by funding renewable energy initiatives such as solar power street lighting projects and steam power plants, connecting rural communities to renewable electrical power grids, and providing charging stations for electric cars.

Thus, Indonesia receives a score of +1.

Analyst: Andrea Ho

Italy: +1

Italy has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems.

On 5 December 2018, Italy agreed to offer support to Zambia towards transitioning to renewable energy sources. Italy has previously cooperated with Zambia by assisting to build the two major dams, Kariba and Itzshitezhi, that meet most of the electricity demand in Zambia.¹¹⁰³

On 5 December 2018, two government officials announced plans for an amendment to the 2019-2020 budget which will allow the government to offer subsidies up to EUR6,000 to buyers of low emissions vehicles and to increase sub-charge up to EUR3,000 for buyers of traditional petroleum and diesel vehicles based on their emissions. This will apply to cars bought starting March 2019 until 2021.¹¹⁰⁴

On 13 December 2019, Environment Minister Sergio Costa attended the COP24 Summit in Katowice, Poland where he engaged in talk with other environment and education ministers,

¹¹⁰⁰ Press Release: Like other countries, the portion of coal will be replaced by gradual renewable energy, Indonesia Public Information Services Ministry of Energy and Mineral Resources (Jakarta) 27 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/seperti-negara-lain-porsi-batubara-akan-diganti-energi-terbarukan-bertahap>.

¹¹⁰¹ Press Release: Like other countries, the portion of coal will be replaced by gradual renewable energy, Indonesia Public Information Services Ministry of Energy and Mineral Resources (Jakarta) 27 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/seperti-negara-lain-porsi-batubara-akan-diganti-energi-terbarukan-bertahap>.

¹¹⁰² Press Release: Like other countries, the portion of coal will be replaced by gradual renewable energy, Indonesia Public Information Services Ministry of Energy and Mineral Resources (Jakarta) 27 March 2019. Access Date: 20 April 2019. <https://www.esdm.go.id/id/media-center/arsip-berita/seperti-negara-lain-porsi-batubara-akan-diganti-energi-terbarukan-bertahap>.

¹¹⁰³ Italy is ready to invest in renewable energy in Zambia, Ministry of Foreign Affairs of Italy (Lusaka) 5 December 2018. Access Date: 30 April 2019. https://www.esteri.it/mae/en/sala_stampa/archivionotizie/rete_diplomatica/2018/12/italia-pronta-ad-investire-in-energia-rinnovabile-in-zambia.html.

¹¹⁰⁴ Italy proposes measures to spur sales of low-emission cars, Reuters (Rome) 5 December 2018. Access Date: 30 April 2019. <https://www.reuters.com/article/us-italy-cars-incentives/italy-proposes-measures-to-spur-sales-of-low-emission-cars-idUSKBN1041MU>.

international organizations and NGOs regarding better implementing the measures of the Paris Agreement. He emphasized Italy's plan to fully eliminate coal in the economy by 2025.¹¹⁰⁵

On 5 February 2019, officials from Ministry of Environment presented Italian proposal for an integrated National Integrated Energy and Climate Plan (PNIEC) to the EU commission. The proposal aimed for a long-term decarbonization goal by 2050. The proposal aims for gradual elimination of coal in energy production, minimization of environmental impacts of renewable energy transition, and integration of renewable energy sources in energy production.¹¹⁰⁶ On 4 April 2019, Environment Minister Sergio Costa announced that the preliminary PNIEC was forwarded to qualified stakeholders. This consultation will be completed in 30 days, after which comments will be forwarded to Ministries of Environment, Economic Development and Infrastructure. These ministries will then draft an "environmental report" which will be subjected to public consultation for 90 days where Italian citizens will be able to view it to propose "evaluations, criticisms and modifications." After public consultation, the report will be finally evaluated and approved by President of Council of Ministers and then transmitted to the European Union. This process of consultation with institutions responsible for all environment matters is aimed to increase awareness and collaboration with all Italian citizens.¹¹⁰⁷

On 10 January 2019, the Ministry of Energy Undersecretary Davide Crippa issued a statement which noted that upstream gas and oil activity was "not of strategic importance for the country." Hence, the government is planning to block the issuing of 36 permits, including the 3 already-issued permits, to look for oil and gas in efforts to reduce the country's carbon footprint.¹¹⁰⁸

On 14 February 2019, the proposal to issue a moratorium of 18 months on offshore oil and gas exploration was approved by the parliament. Group of nine oil and gas companies called Per L'Energia Nazionale has strongly appealed the government to change the moratorium.¹¹⁰⁹

On 18 February 2019, the European Union announced that 26 European islands have officially launched their clean energy transition to become more energy self-reliant and prosperous. Among them are the 3 Italian regions of Salina, Favignana, and Pantelleria.¹¹¹⁰

On 5 March 2019, Environment Minister Sergio Costa spoke about the significance of efforts to achieve the objectives of the Paris Agreement at the EU Council of Environment Ministers in Brussels. He noted that a "decrease in dependence on hard coal and the drive towards energy

¹¹⁰⁵ COP24, Costa: "We are here to fully implement the Paris agreement, including on environmental education", Ministry of Environment and Protection of the Territory and the Sea (Rome) 13 December 2019. Access date: 30 April 2019. <https://www.minambiente.it/comunicati/cop24-costa-siamo-qui-dare-piena-attuazione-accordo-di-parigi-anche-su-educazione>.

¹¹⁰⁶ National Energy and Climate Integrated Plan proposal presented in the EU Commission, Ministry of Environment and Protection of the Territory and the Sea (Rome) 5 February 2019. Access Date: 30 April 2019. <https://www.minambiente.it/comunicati/presentata-commissione-ue-proposta-piano-nazionale-integrato-energia-e-clima>.

¹¹⁰⁷ Fundamental popular consultation for shared management of energy planning, Ministry of Environment and Protection of Territory and the Sea (Rome) 4 April 2019. Access Date: 30 April 2019. <https://www.minambiente.it/comunicati/piano-clima-energia-avviata-la-procedura-vas>.

¹¹⁰⁸ Italy to block oil and gas exploration permits, Economic Times (Milan) 10 January 2019. Access Date: 30 April 2019. <https://energy.economictimes.indiatimes.com/news/oil-and-gas/italy-to-block-oil-and-gas-exploration-permits/67464982>.

¹¹⁰⁹ Italy initiates 18-month moratorium on offshore O&G exploration, KallanishEnergy (Rome) 14 February 2019. Access Date: 30 April 2019. <http://www.kallanishenergy.com/2019/02/14/italian-parliament-initiates-18-month-moratorium-on-offshore-og-exploration/>.

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

innovation” is necessary to progress towards a low-carbon economic model. He concluded that it will be crucial to set up regulatory framework, to “create coherence between climate policies and industrial strategies” and to “support and exploit the potential of research and innovation to the maximum.”¹¹¹¹

On 12 March 2019, Xebec Adsorption, a provider of renewable gas solutions announced that it has signed a contract with the Italian Government to build a landfill biogas-upgrading plant that will produce approximately 5 million cubic meters of carbon neutral Renewable Natural Gas (RNG) per year, replacing the equivalent of approximately 5 million liters of diesel fuel.¹¹¹²

On 20 March 2019, Environment Minister Sergio Costa and Minister Di Maio announced the start of public consultation of the Energy and Climate Plan of 2030. This plan establishes Italy’s objectives towards achieving measures on energy efficiency and renewable sources to meet the EU Framework targets and other objectives to maintain energy security and energy market competitiveness. Proposals of sustainable mobility are also being discussed.¹¹¹³

On 21 March 2019, Italian state-controlled electricity transmission operator Terna announced that it would invest into improvements to its power grid in preparation for the shift out of fossil fuels to renewable sources of energy.¹¹¹⁴

On 3 April 2019, GlobalData report on Underground Gas Storage Industry Outlook in Europe to 2023 showed that Italy is expected to add around 249 billion feet³ of underground gas storage capacity between 2019 and 2023. This expansion is aimed to ensure uninterrupted gas supply during peak winters.¹¹¹⁵

On 15 April 2019, Environment Minister Sergio Costa announced that he is proud of Italy’s contribution of “putting more ambitious targets on paper” in regard to the new rules of emissions of carbon dioxide from cars and light commercial vehicles. The new rules state that from 2030 new cars and vans will generate lower CO₂ emissions by 37%.¹¹¹⁶

Italy has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and to move towards cleaner, more flexible and transparent energy systems. Italy is making efforts to advance towards diversification of energy sources, reducing carbon dioxide emissions and transitioning towards a carbon-free economy as seen in legislation and statements at international events.

¹¹¹¹ The minister at the EU Environment Council: "Creating coherence between climate policies and industrial strategies", Ministry of Environment and Protection of Territory and the Sea (Rome) 5 March 2019. Access date: 30 April 2019. <https://www.minambiente.it/comunicati/nucleare-costa-sempre-e-convintamente-netto-e-tombale-no>.

¹¹¹² Xebec Receives Another Significant Order in Italy, GlobeNewswire (Montreal) 12 March 2019. Access Date: 20 March 2019. <https://www.globenewswire.com/news-release/2019/03/12/1751796/0/en/Xebec-Receives-Another-Significant-Order-in-Italy.html>.

¹¹¹³ Climate: The National Integrated Energy and Climate Plan was presented to 2030, Ministry of Environment and Protection of Territory and the Sea (Rome) 20 March 2019. Access date: 30 April 2019. <https://www.minambiente.it/comunicati/clima-presentato-il-piano-nazionale-integrato-energia-e-clima-al-2030>.

¹¹¹⁴ Italy’s Terna to spend record sums on grid for shift to renewables, Reuters (Milan) 21 March 2019. Access Date: 22 March 2019. <https://www.reuters.com/article/us-terna-plan/italys-terna-to-spend-record-sums-on-grid-for-shift-to-renewables-idUSKCN1R210L>.

¹¹¹⁵ Italy increasing underground gas storage capacity, Energy Global (London) 3 April 2019. Access date: 30 April 2019. <https://www.energyglobal.com/downstream/tanks-terminals/03042019/italy-increasing-underground-gas-storage-capacity/>.

¹¹¹⁶ Good for EU Emissions Cut, Fundamental Contribution from Italy, Ministry of Environment and Protection of the Territory and the Sea (Rome) 15 April 2019. Access date: 30 April 2019. <https://www.minambiente.it/comunicati/clima-costa-bene-ok-ue-taglio-emissioni-da-italia-contributo-fondamentale>.

Thus, Italy receives a score of +1.

Analyst: Drishti Thakkar

Japan: +1

Japan has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems.

On 3 December 2018, Japan sent 116 delegates to the 24th Conference of the Parties (COP24), part of United Nations Framework Convention on Climate Change, to take part in important climate negotiations with the other 14,000 Party delegates.¹¹¹⁷ Japan intends to merge environmental protection and economic growth, creating a model for other countries to follow.¹¹¹⁸

On 17 December 2018, Ministry of Economy, Trade and Industry (METI) announced plans to implement tracking of non-fossil fuel energy certificates which signify products stemming from renewable energy sources. This will allow companies to specifically purchase renewable energy power as opposed to non-renewable energy power.¹¹¹⁹

On 25 December 2019, METI announced its backing of the Task Force on Climate-related Financial Disclosures (TCFD) Study Group's recommendations to increase green finance with increased corporate disclosure. METI aims to encourage companies to disclose their plans and efforts for combating climate change.¹¹²⁰

On 14 January 2019, the Minister of Economy, Trade and Industry Hiroshige Seko addressed the International Group of Liquefied Natural Gas Importers, announcing that Japan's liquified natural gas (LNG) policies will expand past primarily importing LNG to Japan and will now "support development of LNG businesses by Japanese companies into rapidly growing third countries, and growth in the LNG market."¹¹²¹

On 25 January 2019, Japan's Ministry of Environment announced that it will host the International Carbon dioxide Capture, Utilization and Storage (CCUS) Symposium for Low-Carbon Society. The purpose of this conference is to put forth Japan's idea that "not only the extension of conventional efforts but also new innovation are necessary" to combat climate change. This conference will be used to demonstrate projects from the CCUS which could decrease CO2 emissions.¹¹²²

On 29 January 2019, Japan's METI and Indonesia's Ministry of Industry attended the inaugural Japan-Indonesia Automotive Dialogue. This event took place in Jakarta, Indonesia and clarified the

¹¹¹⁷ Which countries have sent the most delegates to COP24, Carbon Brief (London) 4 December 2018. Access Date: 23 February 2019. <https://www.carbonbrief.org/analysis-countries-sent-most-delegates-cop24>.

¹¹¹⁸ COP24 Japan Pavillion: Lead the World Forward, Ministry of the Environment (Katowice) 3 December 2018. Access Date: 23 February 2019. <http://copjapan.env.go.jp/cop/cop24/en/>.

¹¹¹⁹ Demonstration Experiment on Sale of Non-fossil fuel energy certificates with Tracking Information, Ministry of Economy, Trade and Industry (Tokyo) 17 December 2018. Access Date: 23 February 2019. http://www.meti.go.jp/english/press/2018/1217_005.html.

¹¹²⁰ METI Formulates TCFD Guidance and Declares its Support for TCFD, Ministry of Economy, Trade and Industry (Tokyo) 25 December 2018. Access Date: 23 February 2019. http://www.meti.go.jp/english/press/2018/1225_006.html.

¹¹²¹ Japan's coming of age in the Asian LNG market, Knect365 (London) 14 January 2019. Access Date: 23 February 2019. <https://knect365.com/energy/article/24a50c57-2ab9-4363-90e2-cd368df29762/japans-coming-of-age-in-the-asian-lng-market>.

¹¹²² International CCUS Symposium for Low-Carbon Society, Ministry of the Environment (Tokyo) 25 January 2019. Access Date: 23 February 2019. <https://www.env.go.jp/en/headline/2392.html>.

importance of electric vehicle development to counteract environmental problems and stem the growth of industries relating to non-renewable energies.¹¹²³

On 14 February 2019, the METI launched the “Subcommittee on Electricity Resilience toward Decarbonized Society,” which will study the resilience of Japan’s electricity infrastructures and attempt to incorporate new technologies with the end-goal of a decarbonized future.¹¹²⁴

On 11 March 2019, Japan attended the 4th UN General Assembly on Environment in Nairobi, Kenya. In addition to adopting the Ministerial Declaration and Resolutions, Japan announced a joint-project with Sri Lanka and Norway to combat ocean plastic waste.¹¹²⁵

On 12 March 2019, a Japan-Indonesia Energy Forum was held in Jakarta, Indonesia, in order to persuade Indonesia to capitalize on Japan’s available knowledge on clean energy and related business. This is meant to both make a positive environmental impact, as well as strengthening bonds between the two countries through co-development of environmental projects.¹¹²⁶

On 26 March 2019, The Ministry of the Environment held the 3rd Environmental Technology Demonstration Project Steering Committee in order to encourage the development of environmental technology to aid environmental protection and the industries surrounding it, such as organic wastewater treatment technology.¹¹²⁷

Japan has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems. Japan demonstrates compliance by implementing technology to incentivize energy transitions, diversifying the energy sector, engaging in meaningful international conversations to work towards a zero-carbon emission future.

Thus, Japan receives a score of +1.

Analyst: Ilan Hughes

Korea: +1

Korea has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems.

On 3 December 2018, Korea sent 80 delegates to the 24th Conference of the Parties (COP24) to take part in important climate talks with the other 14,000 Party delegates at the prominent international climate negotiations as part of United Nations Framework Convention on Climate Change.¹¹²⁸ The

¹¹²³ First Japan-Indonesia Automotive Dialogue Held, Ministry of Economy, Trade and Industry (Tokyo) 29 January 2019. Access Date: 23 February 2019. http://www.meti.go.jp/english/press/2019/0212_001.html.

¹¹²⁴ METI to Launch Subcommittee on Electricity Resilience towards a Decarbonized Society, Ministry of Economy, Trade and Industry (Tokyo) 14 February 2019. Access Date: 23 February 2019. http://www.meti.go.jp/english/press/2019/0214_002.html.

¹¹²⁵ On the adoption of the Ministerial Declaration and Resolutions at the United Nations General Assembly on Environment, Ministry of the Environment (Tokyo) 16 March 2019. Access Date: April 23 2019. <https://www.env.go.jp/annai/kaiken/h31/s0316.html>.

¹¹²⁶ Japan-Indonesia Government-Private Workshop on Clean Energy Technology to be Held, Ministry of Trade and Industry (Tokyo) 6 March 2019. Access Date: 23 April 2019. https://www.meti.go.jp/english/press/2019/0306_001.html.

¹¹²⁷ About Holding of the 2019 Environmental Technology Demonstration Project Steering Committee, Ministry of the Environment (Tokyo) 18 March 2019. Access Date: 22 April 2019. <http://www.env.go.jp/press/106589.html>.

¹¹²⁸ Which countries have sent the most delegates to COP24, Carbon Brief (London) 4 December 2018. Access Date: 24 February 2019. <https://www.carbonbrief.org/analysis-countries-sent-most-delegates-cop24>.

Delegation was led by Korea's Minister of Environment Cho Myung-Rae, and planned to focus on climate finance and their belief that developing countries must start providing greater financial contributions to Green Climate Fund.¹¹²⁹

On 23 December 2018, Korea released a parliamentary report assuring that the levelized costs of producing solar energy in Korea will drop below 100 KRW per KWH within 5 years and 84 KRW per KWH by 2030. The levelized cost includes the cost of acquiring and operating the infrastructure.¹¹³⁰

On 24 December 2018, Minister of Environment Cho, Myung-Rae, issued the updated Korean Sustainable Development Goals, which include climate change response, specifically to strive, "to preserve a clean environment that can be enjoyed by all generations."¹¹³¹

On 16 January 2019, Deputy Prime Minister and Minister for Economy and Finance, Hong Nam-Ki, announced the plan to add 80,000 hydrogen-powered vehicles to the roads by 2022. The plan is intended to encompass all aspects of the hydrogen car industry,

On 16 January 2019, the Korea Forest Service and the Global Green Growth Institute (GGGI) finalized and signed a memorandum of understanding (MoU) pertaining to developing projects that revolve around renewable energy and reforestation, specifically in including producers of the fuel and transportation methods, and is a part of a broader strategy to expand hydrogen industries into North Korea.¹¹³² The GGGI director-general, Frank Rijsberman, stated that this allows Korea to share their values of spreading clean energy and reforestation to the rest of the Korean Peninsula.¹¹³³

On 21 January 2019, Trade, Industry and Energy Minister Sung Yun-Mo spoke to over 150 energy industry executives at a New Year conference held in Seoul. The Minister stated that Korea would create plans to use the energy transition to boost innovation and create new jobs.¹¹³⁴

On 14 February 2019, Ministry of Trade, Industry and Energy released a public notice stating that it supplied 2,989 megawatts (MW) through renewable energy facilities in 2018. The target figure of renewable energy production for 2018 outlined in the Government's "Renewable Energy 3020 Plan" was 72 per cent lower than the actual amount produced.¹¹³⁵

¹¹²⁹ 24th Session of Conference of Parties (COP24) to UN Framework Convention on Climate Change Concludes, Ministry of Foreign Affairs (Seoul) 16 December 2018. Access Date: 24 February 2019. http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=320292&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=

¹¹³⁰ Cost of solar power generation to drop to below 100 won by 2023, The Korea Herald (Seoul) 23 December 2018. Access Date: 24 February 2019. http://www.koreaherald.com/view.php?ud=20181223000112&ACE_SEARCH=1.

¹¹³¹ A milestone for the sustainable future, establishing K-SDGs, Ministry of Environment (Seoul) 24 December 2018. Access Date: 24 February 2019.

<http://eng.me.go.kr/eng/web/board/read.do?pagerOffset=0&maxPageItems=10&maxIndexPages=10&searchKey=&searchValue=&menuId=21&orgCd=&boardId=934470&boardMasterId=522&boardCategoryId=&decorator=>

¹¹³² Korea sets FCEV target at 80,000 units by 2022, The Korea Herald (Seoul) 16 January 2019. Access Date: 24 February 2019. http://www.koreaherald.com/view.php?ud=20190116000695&ACE_SEARCH=1.

¹¹³³ GGGI inks MOU with Korea Forest Service, aims to collaborate on reforestation in NK. The Korea Herald (Seoul) 16 January 2019. Access Date: 24 February 2019. http://www.koreaherald.com/view.php?ud=20190116000572&ACE_SEARCH=1.

¹¹³⁴ Minister Sung delivers speech to energy industry leaders at New Year's meeting, Ministry of Trade, Industry and Energy (Seoul) 22 January 2019. Access Date: 24 February 2019. http://english.motie.go.kr/en/tp/energy/bbs/bbsView.do?bbs_seq_n=790&bbs_cd_n=1&view_type_v=TOPIC¤tPage=1&search_key_n=&search_val_v=&cate_n=3.

¹¹³⁵ Chinese Companies Benefit from S. Korea's Push for Renewable Energy, Business Korea (Seoul) 15 February 2019. Accessed 24 February 2019. <http://www.businesskorea.co.kr/news/articleView.html?idxno=29133>.

On 20 February 2019, the United States Assistant Secretary of State for the Bureau of Energy Resources Francis Fannon visited Deputy Minister for Economic Affairs of the Ministry of Foreign Affairs Yun Kang-Hyeon. They engaged in talks to discuss how Korea and American energy sectors can increase comprehensive cooperation.¹¹³⁶

On 7 March 2019, Trade, Industry and Energy Minister Sung Yun-mo asked for more investment and overseas expansion in renewable energy at a meeting with Korean leaders in the renewable energy sectors, such as solar and wind power companies, at the Korea Chamber of Commerce and Industry in Seoul.¹¹³⁷

On 19 March 2019, the Ministry of Foreign Affairs hosted Korea-Asia Energy Cooperation Seminar in Seoul to discuss the power industry, renewable energy industry and infrastructure in Asia, and way for other countries to work with Korea on future projects.¹¹³⁸

On 19 April 2019, the Director of the Ministry of Trade, Industry and Energy, Park Jae-young, addressed a public hearing in Seoul on Korea's plans to implement safer and cleaner energy, and stated that Korea will significantly increase its use of renewable energy to between 30 per cent and 35 per cent by the year 2040.¹¹³⁹

Korea has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems. Korea has acted to encourage energy transitions that combine economic growth with decreasing greenhouse gas emissions both domestically and internationally, invest in renewable energy and clean technology.

Thus, Korea receives a score of +1

Analyst: Ilan Hughes

Mexico: +1

Mexico has fully complied with its commitment to encourage energy transitions that combines growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent systems.

¹¹³⁶ US Assistant Secretary of State for Energy Resources Fannon Visits ROK, Ministry of Foreign Affairs (Seoul) 20 February 2019. Access Date: 24 February 2019.
http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=320403&srchFr=&srchTo=&srchWord=Energy&srchTp=0&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1&titleNm=

¹¹³⁷ Minister Sung presides over meeting with Korean renewable energy leaders, Ministry of Trade, Industry and Energy (Seoul) 9 March 2019. Access Date: 23 April 2019.
http://english.motie.go.kr/en/tp/energy/bbs/bbsView.do?bbs_seq_n=823&bbs_cd_n=1&view_type_v=TOPIC¤tPage=1&search_key_n=&search_val_v=&cate_n=3

¹¹³⁸ Korea-Asia Energy Cooperation Seminar to Take Place, Ministry of Foreign Affairs (Seoul) 18 March 2019. Access Date: 23 April 2019.
http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=320442&srchFr=&srchTo=&srchWord=Energy&srchTp=0&multi_itm_seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1&titleNm=

¹¹³⁹ Korea raises renewable energy target to 30-35 percent by 2040, The Korea Herald (Seoul) 19 April 2019, Access Date: 23 April 2019. http://www.koreaherald.com/view.php?ud=20190419000498&ACE_SEARCH=1

On 3 December 2018, Rició Nahle, the secretary of energy, confirmed the two-year suspension of the future shale and conventional clean energy contract auctions that were scheduled in the month of February.¹¹⁴⁰

On 9 December 2018, the Government of Mexico announced the Fuel Production Plan, in which six existing refineries of Minatitlán, Salamanca, Tula, Cadereyta, Madero and Salina Cruz will be rehabilitated, which will increase production of gasoline and fuels. A new maintenance plan, especially for the neglected plants, will be implemented. The Mexican government also announced the construction of a new refinery in Dos Bocas.¹¹⁴¹

On 15 December 2018, President Andrés Manuel López Obrador introduced the National Plan to increase the production of hydrocarbons, which aims to boost oil production to 2 million 400 barrels per day by 2024.¹¹⁴²

On 20 December 2018, President Andrés Manuel López Obrador announced that he signed an agreement with Hydro Québec, owned by the Government of Canada, for the modernization of the 60 hydroelectric plants in Mexico. This deal would reduce electricity prices by increasing energy production.¹¹⁴³

On 9 January 2019, Secretariat of Energy (SENER) reported that as of 28 November 2018, Mexico issued 522 permits to import gasoline and 550 to import diesel. After 31 December 2018, SENER granted 3705 permits to import gasoline, gas, diesel and turbosine.¹¹⁴⁴

On 26 February 2019, the Federal Electricity Commission invested USD700 million to start up its thermoelectric plant in Huexca. This plant is capable of supplying electricity to the entire state of Morelos.¹¹⁴⁵

On 28 February 2019, at the New Energy Policy for the Welfare of Mexico state forum in San Francisco, Campeche, Secretary of Energy Roció Nahle declared that the Government of Mexico would design a national energy plan through three consultative forums which took place in Campeche, Tabasco and Tamaulipas, in accordance with the Mexico constitution. He confirmed that Mexico is working towards transitioning to clean energy as per the law in October 2015 that mandates 35% of electricity be produced from clean energy by 2024. He also emphasized the need to

¹¹⁴⁰ Mexico's energy sector awaits AMLO's next move, Argus (Mexico City) 03 December 2018. Access Date: 23 February 2019. <https://www.argusmedia.com/en/news/1803307-mexicos-energy-sector-awaits-amlos-next-move>.

¹¹⁴¹ The Government of Mexico announces the National Refining Plan that will ensure access to energy and balanced development, Secretary of Energy (Mexico City) 9 December 2018. Access Date: 23 February 2019. <https://www.gob.mx/sener/es/articulos/el-gobierno-de-mexico-anuncia-el-plan-de-produccion-de-combustibles-que-asegurara-el-acceso-a-la-energia-y-al-desarrollo-equilibrado?idiom=es>.

¹¹⁴² Message from the President Andrés Manuel López Obrador during the presentation of the National Plan for the Production of Hydrocarbons, Secretary of Energy (Mexico City) 15 December 2018. Access Date: 23 February 2019. <https://www.gob.mx/sener/es/articulos/mensaje-del-presidente-andres-manuel-lopez-obrador-durante-la-presentacion-del-plan-nacional-para-produccion-de-hidrocarburos?idiom=es>.

¹¹⁴³ AMLO signs agreement with Canada to invest in hydroelectric power plants, The Mazatlán Post (Mexico City) 20 December 2018. Access Date: 30 April 2019. <https://themazatlanpost.com/2018/12/20/amlo-signs-agreement-with-canada-to-invest-in-hydroelectric-power-plants/>.

¹¹⁴⁴ Permits granted by SENER for the importation of petroleum products, Secretary of Energy (Mexico City) 8 January 2019. Access Date: 23 February 2019. <https://www.gob.mx/sener/es/articulos/permisos-otorgados-por-sener-para-la-importacion-de-petroliferos?idiom=es>.

¹¹⁴⁵ The turmoil behind the thermoelectric plant in Morelos, Justino Miranda (Mexico City) 26 February 2019. Access Date: 30 April 2019. <https://www.eluniversal.com.mx/english/turmoil-behind-thermoelectric-plant-morelos>.

combat hydrocarbon theft and to implement a safe distribution strategy.¹¹⁴⁶ On 1 March 2019, at the second consultative energy forum held in Tabasco, the Secretary of Energy affirmed that the Government of Mexico is working towards generating electricity through clean energy sources. He also emphasized the importance of technology in transitioning to clean energy sources and affirmed that Mexico was up to date.¹¹⁴⁷

On 3 March 2019, President Andrés Manuel López Obrador announced the termination of the Los Cardones mine in Baja California Sur.¹¹⁴⁸

On March 11 2019, President Andrés Manuel López Obrador announced that MXN358,596 million will be spent on the production of oil, gas and electricity, in a report of first 100 days in government. He also reports that MXN7.5 billion was allocated in the restoration of the existing six refineries of Minatitlán, Salamanca, Tula, Cadereyta, Madero and Salina Cruz.¹¹⁴⁹

On 21 March 2019, at the Mexico WindPower convention, the Secretary of Energy supported the need for renewable energy to generate zero-polluting and environment-friendly electricity. He further disclosed that the Federal Electricity Commission was reviewing the contracts from the electricity auctions. This delay in the auditing process is to prevent any irresponsible actions that can negatively affect the infrastructure of Mexican markets.¹¹⁵⁰

Mexico has fully complied with its commitment to encourage energy transitions that combines growth with decreasing greenhouse gas emissions towards a cleaner, more flexible and transparent systems. The modernization of hydroelectric plants, acknowledgement of Mexico's move towards cleaner energy systems, and transition towards thermoelectric power plants demonstrates Mexico's compliance.

Thus, Mexico receives a score of +1.

Analyst: Abhishek Trivedi

Russia: +1

Russia has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems.

On 21 February 2019, the Economy Minister of Russia, Maxim Oreshkin, met with the Economy Minister of Germany, Peter Altmaier, in Berlin to discuss the new regulations enacted by the Parliament of the European Union regarding control and operation rights of the "Nord Stream 2"

¹¹⁴⁶ New Development Plan a new energy policy for the welfare of Mexico, Secretary of Energy (Campeche) 28 February 2019. Access Date: 30 April 2019. <https://www.gob.mx/sener/es/articulos/plan-nacional-de-desarrollo-una-nueva-politica-energetica-para-el-bienestar-de-mexico?idiom=es>.

¹¹⁴⁷ The Government of Mexico works to generate electricity and walk towards clean energy, Secretary of Energy (Tabasco) 1 March 2019. Access Date: 30 April 2019. <https://www.gob.mx/sener/es/articulos/el-gobierno-de-mexico-trabaja-para-generar-electricidad-y-caminar-hacia-las-energias-limpias?idiom=es>.

¹¹⁴⁸ Presents the president of Mexico Andrés Manuel López Obrador the report of the first 100 days of government, Secretary of Energy (Mexico City) 11 March 2019. Access Date: 30 April 2019. <https://www.gob.mx/sener/es/articulos/presenta-el-presidente-de-mexico-andres-manuel-lopez-obrador-el-informe-de-los-primeros-100-dias-de-gobierno?idiom=es>.

¹¹⁴⁹ Presents the president of Mexico Andrés Manuel López Obrador the report of the first 100 days of government, Secretary of Energy (Mexico City) 11 March 2019. Access Date: 30 April 2019. <https://www.gob.mx/sener/es/articulos/presenta-el-presidente-de-mexico-andres-manuel-lopez-obrador-el-informe-de-los-primeros-100-dias-de-gobierno?idiom=es>.

¹¹⁵⁰ Mexico is a pioneer in clean electricity generation, Secretary of Energy (Mexico City) 21 March 2019. Access Date: 30 April 2019. <https://www.gob.mx/sener/es/articulos/mexico-es-pionero-en-la-generacion-electrica-limpia-195841?idiom=es>.

pipeline project linking Germany with Russian Natural Gas, and how these new regulations can be accommodated within the project.¹¹⁵¹

On 4 March 2019, Russian Prime Minister Dmitry Medvedev and Bulgarian Prime Minister Boyko Borissov held a joint news conference whereby they discussed the results of their discussions, primarily regarding energy.¹¹⁵² The results of these talks include renewed cooperation between Russia and Bulgaria for Russian Natural Gas exports to Bulgaria's Balkan Gas Distribution center, to supply Europe with a cleaner source of energy.¹¹⁵³

On 08 March 2019, Chinese Minister of Foreign Affairs announced that the "Power of Siberia" natural gas pipeline under construction from Russia to China would open this year.¹¹⁵⁴ The Russian pipeline will contribute to the reduction of China's former reliance on coal.¹¹⁵⁵

Russia has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions by engaging in bilateral talks, agreements, and construction of cleaner energy infrastructure to encourage its commercial partners located all across Europe and Asia. It has made progress towards cleaner, more flexible and transparent systems by expanding its involvement in the more flexible and cleaner energy forms of Liquefied Natural Gas (LNG) and nuclear energy.

Thus, Russia receives a score of +1.

Analyst: Nasser Haidar

Saudi Arabia: 0

Saudi Arabia has partially complied with its commitment to encourage energy transitions that combine growth decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems.

On 17 December 2018, Saudi Arabian diplomats attending the United Nations Climate Summit rejected the language used in the Intergovernmental Panel on Climate Change scientific report that would have accepted the recent important warnings regarding climate change.¹¹⁵⁶

On 9 January 2019, Energy Minister Khalid al-Falih announced that Saudi Aramco, a Saudi Arabian national petroleum and natural gas company, will issue bonds in the second quarter of 2019 and will be listed in 2021.¹¹⁵⁷

¹¹⁵¹ Russia and Germany in talks on tackling Nord Stream 2 project, Financial Times (Berlin, Moscow) 21 February 2019. Access Date: 17 March 2019. <https://www.ft.com/content/7d24961a-35b5-11e9-bb0c-42459962a812>.

¹¹⁵² Russia-Bulgaria Talks, The Russian Government (Moscow) 04 March 2019. Access Date: 17 March 2019. <http://government.ru/en/news/35907/>.

¹¹⁵³ Russia-Bulgaria Talks, The Russian Government (Moscow) 04 March 2019. Access Date: 17 March 2019. <http://government.ru/en/news/35907/>.

¹¹⁵⁴ Russia-to-China 'Power of Siberia' Pipeline to Open in 2019, Caixin Global (Beijing) 08 March 2019. Access Date: 17 March 2019. <https://www.caixinglobal.com/2019-03-08/russia-to-china-power-of-siberia-pipeline-to-open-in-2019-101389328.html>.

¹¹⁵⁵ Russia-to-China 'Power of Siberia' Pipeline to Open in 2019, Caixin Global (Beijing) 08 March 2019. Access Date: 17 March 2019. <https://www.caixinglobal.com/2019-03-08/russia-to-china-power-of-siberia-pipeline-to-open-in-2019-101389328.html>.

¹¹⁵⁶ Diplomats Narrowly Avoid Failure At UN Climate Summit, Forbes Magazine (Katowice) 17 December 2019. Access Date: 19 Feb 2019. <https://www.forbes.com/sites/davekeating/2018/12/17/diplomats-narrowly-avoid-failure-at-un-climate-summit/#4ff3161d5c11>.

¹¹⁵⁷ Saudi Aramco to Issue Bonds, Reuters (Riyadh) 9 January 2019. Access Date: 19 February 2019.

On 16 January 2019, Minister of Energy announced that at least twelve projects are to be opened for bidding in order to complete the Vision 2030 programme that aims to diversify the energy sector. These projects include those that will shift the kingdom's electricity sector from an oil and gas-based system to one that focuses on gas and renewable energy.¹¹⁵⁸

On 20 February 2019, Energy Minister Khalid al-Falih stated that the country expects to reach an agreement to resume oil output from the Neutral Zone it shares with Kuwait. The Neutral zone is 5,770 square km of land between the two countries that has not been defined upon the establishment of the border by the Uqair Convention of 2 December 1922.¹¹⁵⁹

On 22 February 2019, China's National Energy Administration and Saudi Arabia's Public Investment Fund (PIF) announced that they had signed a memorandum of understanding (MoU). The MoU pledges China's aid for the PIF to develop renewable energy generation and technologies in Saudi Arabia throughout the next 10 years.¹¹⁶⁰

On 5 March 2019, the Chairman of the Renewable Energy Committee in Riyadh Chamber of Commerce and Industry, Abdulrahman al-Ibrahim, told Asharq Al-Awsat news agency that Saudi Arabia's renewable energy plans aim to boost localization chances and global partnerships with several developed countries, such as Russia, China, the United States, and European countries.¹¹⁶¹

On 5 March 2019, the Saudi Arabian delegation led by Governor of the General Investment Authority (SAGIA) and the co-chair of the Saudi Arabia-Azerbaijan Intergovernmental Joint Commission Ibrahim bin Abdul Rahman Al-Omar met with the Azerbaijani Energy Minister Parviz Shabbazov to discuss issues related to the development of bilateral relations in economic and energy sectors, aiming to identify new avenues for cooperation and investments. Abdul Rahman Al-Omar affirmed Saudi Arabia's desire to invest in the energy sector of Azerbaijan¹¹⁶².

On 7 March 2019, Energy Minister Khalid Al-Falih announced to the Saudi state news agency SPA that large quantities of gas have been discovered in the Red Sea. Aramco is currently studying petrochemical projects in order to develop sustainable options.¹¹⁶³

On 10 March 2019, the Ministry of Power presented a concrete plan for the construction of thirty-five fully equipped solar energy sites. The expectation is that this will not only create one hundred thousand job opportunities but also help the country provide oil. This action, while aiding the sustainable resource acquisition still focuses on the production of oil.¹¹⁶⁴

<https://www.reuters.com/article/saudi-oil-aramco/saudi-aramco-to-issue-bonds-in-q2-2019-list-in-2021-energy-minister-idUSL8N1Z955H>.

¹¹⁵⁸ Saudi Energy Ministry Eyes 12 Renewable Energy Projects in 2019, Construction Weekly Online (Abu Dhabi) 16 January 2019. Access Date: 19 February 2019. <https://www.constructionweekonline.com/168727-saudi-energy-ministry-eyes-12-renewable-energy-proects-in-2019>.

¹¹⁵⁹ Saudi Minister sees deal with Kuwait to resume oil output from neutral zone, Reuters (New Delhi) 20 February 2019. Access Date: 20 Feb 2019. <https://www.reuters.com/article/asia-saudi-india-falih/saudi-minister-sees-deal-with-kuwait-to-resume-oil-output-from-neutral-zone-in-2019-idUSI8N1XU029>.

¹¹⁶⁰ Saudi Arabia's PIF signs MoU with China's NAE on renewable energy, Arab News (Riyadh) 22 February 2019. Access Date: 23 February 2019. <http://www.arabnews.com/node/1456326/business-economy>.

¹¹⁶¹ <https://aawsat.com/english/home/article/1619766/saudi-arabia-plans-invest-80-bn-renewable-energy>

¹¹⁶² Azerbaijan, Saudi Arabia discuss energy cooperation, Azernews (Baku) 5 March 2019. Access Date: 19 April 2019. <https://www.azernews.az/business/146788.html>

¹¹⁶³ Saudi Energy Minister: Large quantities of gas discovered in Red Sea, Arab News (Riyadh) 7 March 2019. Access Date: 19 April 2019. <http://www.arabnews.com/node/1463196/saudi-arabia>.

¹¹⁶⁴ Saudi Arabia to produce over 50% of solar energy globally, Saudi Gazette (Jeddah) 03 March 2019. Access Date: 19 April 2019. <http://saudigazette.com.sa/article/560864/BUSINESS/Saudi-Arabia-to-produce-over-50-of-solar-energy-globally>.

On 12 March 2019, The Renewable Energy Project Development Office (REPDO) of Saudi Arabia's Ministry of Energy launched its second phase of the renewable energy program with seven solar photovoltaic energy projects that would generate 1.52 gigawatts and direct investments worth \$1.51 billion.¹¹⁶⁵ The projects would generate energy that can serve 226,500 households and create more than 4,500 job opportunities during construction, operations and maintenance. The projects include Qurayyat (200 MW), Madinah (50 MW), Rafha (45 MW), Alfaisaliah (600 MW), Rabigh (300 MW), Jeddah (300 MW) and Mahad Duhab (20 MW).¹¹⁶⁶

On 13 March 2019, the Ministry of Energy unveiled Phase Two of the National Renewable Energy Program (NREP). The program is based on seven solar photovoltaic (PV) projects being developed which will generate 1.52 GW of energy and gain over USD1.51 billion in investments. NREP's goals include diversifying local energy resources, stimulate economic development and provide further economic stability.¹¹⁶⁷

On 22 March 2019, the Eastern Province of Saudi Arabia hosted the fifth annual "Al-Ahsa Investment Forum" as part of the "Sharqiah Season." The forum explored the country's windows for investment by providing information to key stakeholders and investors. Panel sessions and workshops comprised discussions on energy, investment and privatization opportunities, looking into future jobs and assessing vital projects in the Kingdom, next to industrial and agricultural investments on the rise in Saudi Arabia.¹¹⁶⁸

On 25 March 2019, the governor of Mecca Province Khalid Bin Faisal Al Saud and Energy Minister Khalid Al-Falih co-signed a memorandum of understanding to construct a solar park in the region of Mecca. The 2.6 GW Faisaliah Solar Power Project will take several stages and will be built in partnership with the Development Authority of Mecca.¹¹⁶⁹

On 4 April 2019, Saudi Arabian sources announced plans to issue a multi-billion-dollar tender in 2020 to construct its first two nuclear power reactors and is discussing the project with U.S. and other potential suppliers.¹¹⁷⁰

On 18 April 2019, the energy watchdog, OilPrice, reported based on data from the Joint Organisations Data Initiative that Saudi Arabia cut down on oil exports in order to balance the market. This initiative was affirmed by the Energy Minister, who stated that his government would cut production close to 9.8 million barrels per day in March.¹¹⁷¹

Saudi Arabia has partially complied with its commitment to encourage energy transitions that combine growth decreasing greenhouse gas emissions towards cleaner, more flexible and transparent

¹¹⁶⁵ Saudi Arabia Announces 7 Renewable Energy Projects Worth \$1.5 Bn (Al-Jawf). 12 March 2019. Access Date: June 25 2019. <https://aawsat.com/english/home/article/1630351/saudi-arabia-announces-7-renewable-energy-projects-worth-15-bn>.

¹¹⁶⁶ Saudi Arabia Announces 7 Renewable Energy Projects Worth \$1.5 Bn (Al-Jawf). 12 March 2019. Access Date: June 25 2019. <https://aawsat.com/english/home/article/1630351/saudi-arabia-announces-7-renewable-energy-projects-worth-15-bn>.

¹¹⁶⁷ Saudi Arabia reveals details of \$1.5bn solar energy plan, Trade Arabia (Bahrain) 13 March 2019. Access Date: 19 April 2019. http://www.tradearabia.com/news/OGN_352154.html.

¹¹⁶⁸ 2019 is a promising year for Saudi Arabia, Saudi Gazette (Riyadh) 23 March 2019. Access Date: 19 April 2019. <http://saudigazette.com.sa/article/561852/BUSINESS/2019-is-a-promising-year-for-Saudi-Arabia>.

¹¹⁶⁹ Saudi Arabia plans 2.6 GW solar park near Mecca, PV Magazine (Riyadh) 25 March 2019. Access Date: 19 April 2019. <https://www.pv-magazine.com/2019/03/25/saudi-arabia-plans-2-6-gw-solar-park-near-mecca/>.

¹¹⁷⁰ Saudi plans to invite bids for nuclear power project in 2020: sources, Reuters (Riyadh) 4 April 2019. Access Date: 19 April 2019. <https://uk.reuters.com/article/us-saudi-nuclear/saudi-plans-to-invite-bids-for-nuclear-power-project-in-2020-sources-idUKCN1RG1LL>.

¹¹⁷¹ Saudi oil exports fall below 7 million bpd in February, OilPrice (USA) 18 April 2019. Access Date: 19 April 2019. <https://oilprice.com/Latest-Energy-News/World-News/Saudi-Oil-Exports-Fall-Below-7-Million-Bpd-In-February.html>.

systems. Saudi Arabia has taken steps to diversify the energy sector to complete Vision 2030. However Saudi Arabia has also agreed to renew oil production from the Neutral zone and issue bonds for a petroleum and natural gas company, potentially increasing its greenhouse gas emissions.

Thus, Saudi Arabia receives a score of 0.

Analyst: Sila Naz Elgin

South Africa: +1

South Africa has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent system.

On 30 November 2018, the Karoshoek Solar One Project began as a part of South African Government's Renewable Energy Independent Power Producer Procurement programme (REIPPP); this will add 100MW additional power to the grid.¹¹⁷² On 24 February 2019, Jeff Radebe confirmed that the REIPPP programme has helped decrease 33.2 million tonnes of carbon dioxide emission and save 39.2 million kiloliters of water by 31 December 2018.¹¹⁷³

On 3 December 2018, African Development Bank approved a ZAR3 billion loan to develop the 100MW Redstone solar power project. The solar power plant, located in the province of North Cape, is expected to generate 466 GWh of energy per year, accelerating energy transition and diversifying energy production.¹¹⁷⁴

On January 18 2019, there was a meeting held in Pretoria between Minister of Energy of the Republic of South Africa Jeff Radebe and Minister of Energy, Industry and Mineral Resources of the Saudi Arabia, Khalid Al-Falih, which aimed to continue discussing a USD10 billion investment prospect in the South African economy, a significant portion of which will go towards energy. Discussions revolved around a potential crude oil refinery and petrochemical plant in South Africa. The two ministers concluded the meeting by signing a Declaration of Intent to cooperate.¹¹⁷⁵

On 5 February 2019, South African Department of Energy's director General for Clean Energy Mokgadi Modise addressed the South African National Energy Development Institute suggesting that the country needs to adopt and intensify the use of smart grids to improve its environmental health.¹¹⁷⁶

On 6 February 2019, the Minister of Energy delivered in speech in which he outlined South Africa's efforts to enhance links between the energy and mining sector. The South African Mining sector is responsible for more than 38 per cent of industrial energy use, demonstrating a significant reliance on non-renewable energy sources. He noted the need to de-carbonize the economy and highlighted the

¹¹⁷² South Africa: 100MW Karoshoek Solar One project goes live, ESI AFRICA (Cape Town) 3 December 2019. Access Date: 24 February 2019. <https://www.esi-africa.com/s-africa-100mw-karoshoek-solar-one-project-goes-live/>.

¹¹⁷³ Minister Jeff Radebe: Renewable Energy Independent Power Producer Procurement programme, Department of Energy (Cape Town) 24 February 2019. Access Date: 29 April 2019. <https://www.gov.za/speeches/media-statement-minister-energy-jeff-radebe-renewable-energy-independent-power-producer>.

¹¹⁷⁴ AfDB injects R3bn in South Africa's solar-based power project, ESI AFRICA (Cape Town) 3 December 2019. Access Date: 24 February 2019. <https://www.esi-africa.com/afdb-injects-r3bn-in-south-africas-solar-based-power-project/>.

¹¹⁷⁵ Minister Jeff Radebe on meeting outcomes with Minister Khalid Al Falih of Saudi Arabia, South African Government (Pretoria) 18 January 2019. Access Date: 29 April 2019. <https://www.gov.za/speeches/minister-jeff-radebe-meeting-outcomes-minister-khalid-al-falih-saudi-arabia-18-jan-2019>.

¹¹⁷⁶ Smart grids the answer to South Africa's energy crisis – says Dept of Energy, The South African (Cape Town) 5 February 2019. Access Date: 24 February 2019. <https://www.thesouthafrican.com/smart-grids-answer-to-south-africas-energy-crisis-dept-of-energy/>.

decrease in costs of renewable energy. He emphasized that it is crucial for the mining companies to engage in discussions with the energy sector to ensure that profitability is not impacted, however, the focus towards transitioning towards cleaner energy sources is maintained.¹¹⁷⁷

On 24 February 2019, Energy Minister Jeff Radebe announced South Africa's plans to expand use of renewable power and reduce climate change, considering that less than 5 per cent of the total energy produced comes from renewable sources.¹¹⁷⁸

On 25 February 2019, Energy Minister Jeff Radebe announced that Eskom (South Africa's state-owned power utility) has launched a large-scale distribution of battery energy storage systems over the next three years at the South Africa Renewable Energy and Energy Storage Systems Conference. This programme will be carried out by one 440 MWh of energy storage capacity, along with proposals of 200 MW to be released by mid-2019. The battery energy storage systems will assist in the stable implementation of cost-effective renewable energy technologies, and permit the decentralisation, modernisation and digitalisation of electric grids.¹¹⁷⁹

On 16 April 2019, Energy Minister Jeff Radebe announced that the National Development Plan aims to install USD5 million worth of solar water geysers in residential areas, which will potentially create 11 million jobs by 2030 in his speech at the Appreciation ceremony in Port Elizabeth.¹¹⁸⁰

South Africa has fully complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions and move towards cleaner, more flexible and transparent system. The implementation of new solar power plants, battery energy storage systems and acknowledgements that South Africa must shift to cleaner energy systems demonstrate South Africa's compliance.

Thus, South Africa receives a score of +1.

Analyst: Abhishek Trivedi

Turkey: 0

Turkey has partially complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions, and move towards cleaner, more flexible and transparent energy systems.

On 14 December 2018, Turkish Atomic Energy Authority granted a limited works permit to Akkuyu Nuclear to build the second unit of the country's first nuclear power plant. This permit will allow for

¹¹⁷⁷ Minister Jeff Radebe: Links between energy and mining sectors, Department of Energy (Cape Town) 6 February 2019. Access Date: 29 April 2019. <https://www.gov.za/speeches/speech-delivered-minister-energy-jeff-radebe-enhancing-links-between-energy-and-mining>.

¹¹⁷⁸ South Africa Committed to More Renewable Power Radebe Says, Bloomberg (Cape Town) 24 February 2019. Access Date: 24 February 2019. <https://www.bloomberg.com/news/articles/2019-02-24/south-africa-committed-to-expanding-renewable-power-radebe-says>.

¹¹⁷⁹ Minister Jeff Radebe: South Africa Renewable Energy and Energy Storage Systems Conference, Department of Energy (Cape Town) 25 February 2019. Access Date: 29 April 2019. <https://www.gov.za/speeches/minister-jeff-radebe-south-africa-renewable-energy-and-energy-storage-systems-conference-25>.

¹¹⁸⁰ Minister Jeff Radebe: Handover of certificates of appreciation and walkout in Walmer, Department of Energy (Port Elizabeth) 16 April 2019. Access Date: 29 April 2019. <https://www.gov.za/speeches/speech-minister-energy-jeff-radebe-C2%A0-handover-certificates-appreciation-solar-water-heater>.

the construction and installation works at the unit's facilities. The plant is expected to meet 10 per cent of Turkish energy needs. Russia is a major consortium partner for this plant.¹¹⁸¹

On 4 January 2019, the Turkish Wind Energy Association head Mustafa Serdar Ataseven announced that Turkey's wind energy capacity is expected to reach 8 gigawatts (GW) with the addition of 600 megawatts (MW) in 2019. Ataseven noted this was due to Renewable Energy Resource Zone Project (YEKA) and that pre-licences for YEKA wind projects will be finalized at the end of 2019 and plants will begin to operate within three years.¹¹⁸²

On 22 January 2019, Goldwind completed installing the first 3.4MW wind turbine as part of the AKSU RES wind power project in Kayseri. This project became commercially operable in February 2019. The installment is a part of the National Renewable Action Plan which aims to diversify energy sources.¹¹⁸³

On 25 January 2019, Foreign Minister Mevlut Cavunsoglu announced that Turkey would begin drilling for natural resources in Cyprus. Turkey and the Greek Cypriot government have overlapping jurisdiction claims for offshore oil in the oil-rich Eastern Mediterranean region.¹¹⁸⁴

On 2 February 2019, the General Directorate of Energy Affairs website announced plans for a high school level Energy Productivity contest which would be taking applications until 22 February 2019. The contest aims to create awareness on energy issues in Turkey and also teach youth about the needs of the country when it comes to energy.¹¹⁸⁵

On 2 February 2019, the General Directorate of Energy Affairs website announced the list of students who gained distinction in the 2018-2019 picture and story competition that was organized under the purview of the Directorate. The competition aimed to encourage open dialogue on what sustainable energy means and how it will help future generations understand the planet.¹¹⁸⁶

On 6 February 2019, the General Directorate of Energy Affairs website released a document on the National Energy Efficiency Action Plan which reaffirmed Turkey's commitment to developing and providing energy alternatives in line with the slogan "Efficient Energy, Powerful Turkey."¹¹⁸⁷ The document outlines plans for new windmill energy plants and awareness campaigns for sustainable energy usage.

On 18 February 2019, Turkey's official gazette announced that Turkey approved a 15.3 per cent annual increase in public expenditure in its energy and mining sectors in 2019, a rise from TRY8.51

¹¹⁸¹ Turkey's first nuclear plant Akkuyu gets limited permit for unit 2, Daily News (Ankara) 15 December 2018. Access date: 10 March 2019. <http://www.hurriyetdailynews.com/turkeys-first-nuclear-plant-akkuyu-gets-limited-permit-for-unit-2-139742>.

¹¹⁸² Turkey's wind energy capacity to reach 8 GW in 2019, Daily Sabah (Istanbul) 4 January 2019. Access date: 10 March 2019. <https://www.dailysabah.com/energy/2019/01/05/turkeys-wind-energy-capacity-to-reach-8-gw-in-2019>.

¹¹⁸³ Wind Energy in Turkey: Goldwind wind turbines for a wind farm, Reve (Kayseri) 2 March 2019. Access date: 20 April 2019. <https://www.evwind.es/2019/03/02/wind-energy-in-turkey-goldwind-wind-turbines-for-a-wind-farm/66313>.

¹¹⁸⁴ Turkey to begin drilling for resources around Cyprus, Cavunsoglu says, ekthimerini.com (Nicosia) 25 January 2019. Access date: 10 March 2019. <http://www.ekathimerini.com/237035/article/ekathimerini/news/turkey-to-begin-drilling-for-resources-around-cyprus-cavusoglu-says>.

¹¹⁸⁵ High School Students Energy Efficiency Competition, YEGM (Ankara) 2 February 2019. Access Date: 9 March 2019. http://www.yegm.gov.tr/document/2019_yili_proje_yarismasi.pdf.

¹¹⁸⁶ 2018-2019 list of successful students in the picture and story competition, YEGM (Ankara) 2 February 2019. Access Date: 9 March 2019. http://www.yegm.gov.tr/document/2018_2019_resim_ve_oyku_resim_yarismasi_v2.pdf.

¹¹⁸⁷ National Energy Efficiency Action Plan (NEEAP), YEGM (Ankara) 2 February 2019. Access Date: 9 March 2019. http://www.yegm.gov.tr/document/20180102M1_2018_eng.pdf.

billion in 2018 to TRY9.81 billion in 2019. Turkish Petroleum Pipeline Corporation will receive TRY3.7 billion for ongoing projects.¹¹⁸⁸

On 21 February 2019, Energy and Natural Resources Minister Faith Dönmez announced that the Trans Anatolian Natural Gas Pipeline (TANAP) would strengthen Turkey's position as a key player in the region's energy sector. Dönmez also announced that this pipeline, which already delivers gas to Turkey, would extend to the Greek border in the coming months. Minister Dönmez also stated that the construction of Trans Adriatic Pipeline, which connects to TANAP at the Turkey İpsala border, would be complete by 2020, with the first gas from this pipeline being delivered to the European markets by mid-2020. These announcements were made at the 5th Ministerial Meeting of the Southern Gas Corridor (SGC).¹¹⁸⁹

On 28 February 2019, Turkish Statistical Institute and Trade Ministry released a report, which showed a 48 per cent increase in Turkey's crude oil imports and a six per cent increase in the total energy import bill in January 2019 compared to January 2018. Crude oil import was 2.18 million tonnes in January 2019, compared to 1.47 million tonnes in January 2018.¹¹⁹⁰

On 11 March 2019, Energy Ministry's annual report stated that Turkey inspected 8,088 mining sites in 2018, a 24 per cent increase from 2017. The most hazardous mining sites were inspected at least 4 times, as per ministry policies. The report also stated that the ministry has been working to hire 180 new inspectors.¹¹⁹¹

On 13 March 2019, the Turkish Geothermal Power Plant Investors Association stated that Turkey aims to increase geothermal power generation capacity to 2,000 MW by 2020. This is in alignment with the Renewable Energy Promotion Mechanism by the Turkish government that allows companies tax benefits and power purchase guarantees until 2020.¹¹⁹²

On 20 March 2019, Turkey and Denmark signed an extension of the existing energy cooperation between both nations titled Roadmap for Offshore Wind in Turkey. This means that the Danish Energy Agency will assist Turkey in developing policies, strategies and solution that focus on offshore wind energy based on the Danish experience with offshore wind. Offshore wind turbines can potentially generate 7-10GW.¹¹⁹³

On 21 March 2019, Energy and Natural Resources Minister Faith Dönmez announced that Turkey has discovered high-quality oil in Southeastern provinces of Siirt and Diyarbakir due to ongoing oil

¹¹⁸⁸ Turkey's state energy expenditure up by 15.3 pct in 2019, Anadolu Agency (Ankara) 18 February 2019. Access Date: 10 March 2019. <https://www.aa.com.tr/en/economy/turkeys-state-energy-expenditure-up-153-pct-in-2019/1396335>.

¹¹⁸⁹ TANAP to strengthen Turkey's energy position in the region, Daily Sabah (Istanbul) 21 February 2019. Access Date: 10 March 2019. <https://www.dailysabah.com/energy/2019/02/21/tanap-to-strengthen-turkeys-energy-position-in-region>.

¹¹⁹⁰ Turkey's energy import bill up 6 pct in January 2019, Daily News (Ankara) 28 February 2019. Access Date: 10 March 2019. <http://www.hurriyetdailynews.com/turkeys-energy-import-bill-up-6-pct-in-january-2019-141541>.

¹¹⁹¹ Over 8,000 Turkish mine sites inspected in 2018, Daily News (Ankara) 11 March 2019. Access date: 20 April 2019. <http://www.hurriyetdailynews.com/over-8-000-turkish-mine-sites-inspected-in-2018-141804>.

¹¹⁹² Turkey wants to make better use of geothermal energy potential, Germany Trade & Invest (Izmir) 11 March 2019. Access Date: 20 April 2019. <https://www.gtai.de/GTAI/Navigation/DE/Trade/Maerkte/suche,t=tuerkei-will-geothermisches-energiepotenzial-besser-nutzen,did=2236712.html>.

¹¹⁹³ Danish experience will help Turkey expand offshore wind, Danish Energy Agency (Copenhagen) 20 March 2019. <https://presse.ens.dk/pressreleases/danske-erfaringer-skal-hjaelpe-tyrkiet-med-udbygning-af-offshore-vind-2849625>.

exploration in those regions. Commercially viable reserve in the field totals up to 2 million barrels in Siirt and 200 barrels per day in Diyarbakir.¹¹⁹⁴

On 23 March 2019, the 8th Uludag Economy Summit ended, which hosted 100 speakers and 1,500 business people from Turkey and world-wide. A variety of topics were discussed, including energy. Turkish Agriculture and Forest Minister Bekir Pakdemirli was also in attendance.¹¹⁹⁵

On 28 March 2019, Qatar Financial Center CEO announced that largescale energy projects, including financing oil and gas, petrochemicals and alternative energy, implemented in Turkey will be able to access loans from the USD10 billion capital fund of Qatari Energy Bank, the world's largest Islamic energy-focused lender.¹¹⁹⁶

On 26 March 2019, Turkey's Energy Market Regulatory Authority's data revealed that monthly LNG imports reached a historic high at 2.34 billion cubic metres, however natural gas imports reduced by 6.54 per cent in January 2019.¹¹⁹⁷ Data also showed that crude oil imports increased by 48 per cent in January 2019, compared to January 2018.¹¹⁹⁸

On 9 April 2019, Deputy Energy and Natural Resources Minister Alparslan Bayraktar announced at the 5th Berlin Energy Transition Dialogue in Germany that Turkey aims to invest USD11 billion in energy efficiency over the next 5 years, which should cut primary energy consumption by 14 per cent and reduce CO₂ emissions by 66 million tonnes. He emphasized prioritizing infrastructure to make the grid more reliable for transmission and distribution in the gas and power sectors and that they would like to see more "flexible, competitive terms and conditions" on gas contracts as the 4th largest gas market in Europe. He also stated that Turkey aims to add 10 GW of solar and 10 GW of wind energy over the next 10 years, as outlined in the Transition 2.0 plan announced in 2017.¹¹⁹⁹ Furthermore, German Deputy Economy and Energy Minister Thomas Bareiss met with Alparslan Bayraktar and both parties acknowledged strong partnership between both countries to cooperate in renewables, energy storage and efficiency and have set up four working groups to achieve better cooperation.¹²⁰⁰

On 10 April 2019, data from Turkey's Energy and Natural Resources Ministry showed that Turkey added 445 megawatts of installed electricity production capacity from 100 per cent domestic and renewable energy sources in the first quarter of 2019. To meet the target of creation of 10MW solar and 10MW wind energy, the government does not plan to permit new power plants from imported resources.¹²⁰¹

¹¹⁹⁴ High quality oil discovered in Turkey's Diyarbakir, Siirt provinces, Daily Sabah (Istanbul) 22 March 2019. Access Date: 20 April 2019. <https://www.dailysabah.com/energy/2019/03/22/high-quality-oil-discovered-in-turkeys-diyarbakir-siirt-provinces>.

¹¹⁹⁵ Uludag Economy summit ends in Turkey's Bursa province, Anadolu Agency (Bursa) 23 March 2019. Access Date: 20 April 2019. <https://www.aa.com.tr/en/economy/uludag-economy-summit-ends-in-turkey-s-bursa-province/1426960>.

¹¹⁹⁶ World's largest energy leader to include Turkish projects, Daily Sabah (Istanbul) 28 March 2019. Access Date: 20 April 2019. <https://www.dailysabah.com/energy/2019/03/28/worlds-largest-islamic-energy-lender-to-include-turkish-projects>.

¹¹⁹⁷ Turkey hits historic LNG import record in Jan '19, Anadolu Agency (Ankara) 29 March 2019. Access Date: 20 April 2019. <https://www.aa.com.tr/en/economy/turkey-hits-historic-lng-import-record-in-jan-19/1433650>.

¹¹⁹⁸ Turkey's oil imports up 48.1 percent in January, Daily News (Ankara) 26 March 2019. Access Date: 20 April 2019. <http://www.hurriyetdailynews.com/turkeys-oil-imports-up-48-1-percent-in-january-142197>.

¹¹⁹⁹ Turkey set to invest \$11 billion in energy efficiency, Daily News (Ankara) 10 April 2019. Access Date: 20 April 2019. <http://www.hurriyetdailynews.com/turkey-set-to-invest-11-billion-in-energy-efficiency-142556>.

¹²⁰⁰ Turkey and Germany to boost renewable cooperation, Anadolu Agency (Ankara) 18 April 2019. Access Date: 20 April 2019. <https://www.aa.com.tr/en/economy/turkey-and-germany-to-boost-renewable-cooperation/1456703>.

¹²⁰¹ Domestic and renewable add 445MW in Turkey in Q1, Anadolu Agency (Ankara) 10 April 2019. Access date: 20 April 2019. <https://www.aa.com.tr/en/economy/domestic-and-renewables-add-445-mw-in-turkey-in-q1/1447967>.

On 11 April 2019, figures released by Turkish Statistical Institute showed that the 2017 CO₂ emissions totaled to 523.6 million tons and the energy sector accounted for 72.2 per cent of those emissions. This demonstrates a 140.1 per cent increase from 1990.¹²⁰²

On 19 April 2019, Turkey and Romania signed a protocol for the Joint Economic and Trade Committee (JETCO), which aims to improve trade relations between both countries. The JETCO protocol includes energy, amongst many other topics.¹²⁰³

Turkey has partially complied with its commitment to encourage energy transitions that combines growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems. While Turkey has committed to diversifying the energy sector with investments in renewable energies, it has also continued to invest in energy sources that could increase its greenhouse gas emissions.

Thus, Turkey receives a score of 0.

Analyst: Drishti Thakkar

United Kingdom: +1

United Kingdom has fully complied with its commitment to encourage energy transitions that combines growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems.

On 3 December 2018, 52 United Kingdom delegates attended the 24th Conference of the Parties, the most prominent United Nations Framework Convention on Climate Change international climate change negotiations.¹²⁰⁴ Discussions were aimed at producing a “rule-book” to further work out details of the 2015 Paris Agreement.

On 6 February 2019, The Department of Business established the Colombian Fund for Non-Conventional Renewable Energies and Efficient Energy Management (FENOGE) with approximately EUR13 million to address the lack of electricity that close to 3 million people in Colombia are experiencing. The aim is to utilize Colombia’s vast natural resources to promote sustainable electricity within the country and the world.¹²⁰⁵

On 1 February 2019, the government launched a EUR3.5 million initiative aimed at making the nation’s largest cities into “climate hubs,” where research hubs focus on low-carbon technologies, climate mitigation, and adaptation measures, to ensure sustainable energy practices are viable in the current structure of how the cities operate. The goal is to aid the aims of the 2015 Paris Agreement and keep temperatures between the Agreement’s trajectories.¹²⁰⁶

On 6 March 2019, the Energy and Clean Growth Minister Claire Perry announced that the forthcoming Sector Deal would include “ambitious plans to increase the proportion of women

¹²⁰² Turkey’s greenhouse gas emissions hit over 526 million tons, Daily Sabah (Istanbul) 12 April 2019. Access date: 20 April 2019. <https://www.dailysabah.com/turkey/2019/04/12/turkeys-greenhouse-gas-emissions-hit-over-526-million-tons>.

¹²⁰³ Turkey, Romania sign trade protocol, Anadolu Agency (Istanbul) 19 April 2019. Access date: 20 April 2019. <https://www.aa.com.tr/en/economy/turkey-romania-sign-trade-protocol/1457909>.

¹²⁰⁴ Analysis: Which countries have sent the most delegates to COP24? Carbon Brief (Katowice) 4 February 2019. Access Date: 26 February 2019. <https://www.carbonbrief.org/analysis-countries-sent-most-delegates-cop24>.

¹²⁰⁵ UK PACT’s First Project in Colombia will improve energy access, Government Website (London) 6 February 2019. Access Date: 19 February 2019. <https://www.gov.uk/government/news/uk-pacts-first-project-in-colombia-will-improve-energy-access>.

¹²⁰⁶ UK Cities to become climate hubs under new scheme, Edie Net (London) 1 February 2019. Access Date: 19 February 2019. <https://www.edie.net/news/11/UK-cities-to-become-climate-hubs-under-new-3-5m-scheme/>.

working in the offshore wind sector and triple the number of highly skilled jobs. The deal aims to cultivate “partnerships between the government and industry on sector-specific issues can create significant opportunities to boost productivity, employment, innovation, and skills” in support of the country’s Industrial Strategy, which was implemented to reduce costs, increase productivity, decarbonize the economy, and grow a skilled workforce.¹²⁰⁷

On 7 March 2019, Minister Claire Perry announced the launch of a new joint government-industry Offshore Wind Sector Deal, which is tasked with helping create tens of thousands of highly-skilled employment positions, attract investment, and increase the country’s offshore capacity to at least 30 gigawatts (GW) by 2030.¹²⁰⁸

On 11 March 2019, The Minister for Africa, Harriett Baldwin has announced new funding to provide access to affordable and clean energy across Africa. The funding will see GBP30 million added to the Transforming Energy Access program, which makes the total UK investment GBP100 million, where it will continue until 2024. The Transforming Energy Access program is stated to be leading development of innovative technologies, business models, partnerships and skills that will accelerate access to affordable, clean energy services for households and enterprises in developing countries.¹²⁰⁹

On 15 March 2019, the Foreign and Commonwealth Office announced that the Department for International Development’s Transforming Energy Access programme is investing KSH220 million in the development of two solar plants in rural Kenya through InfraCo Africa, a Private Infrastructure Development Group (PIDG) company. Minister for Africa, Harriett Baldwin, announced the development of two solar plants in Samburu and Transmara, each at a capacity of 10 MWAC. This will allow more people to have access to affordable and clean energy.¹²¹⁰

On 22 March 2019, China Daily announced that the United Kingdom and China have opened a new research center in Yantai, Shandong province. This initiative will help British wind energy companies export to China, adding to the British and Chinese economies while contributing to renewable energy research and development.¹²¹¹

On 29 March 2019, the Department for Business, Energy and Industrial Strategy published its quarterly “Energy Trends” report, which revealed findings from 2018 and 2019. The electricity generation across the UK fell by 1.4 per cent from before. Coal, gas, and nuclear generation all saw declines in 2018 and increases in renewable energy generation — primarily from bioenergy, wind, and solar were recorded.¹²¹²

¹²⁰⁷ UK offshore wind to provide a third of the country’s electricity by 2030, Cleantechnia (USA) 7 March 2019. Access Date: 19 February 2019. <https://cleantechnica.com/2019/03/07/uk-offshore-wind-to-provide-a-third-of-countrys-electricity-by-2030/>.

¹²⁰⁸ UK offshore wind to provide a third of the country’s electricity by 2030, Cleantechnia (USA) 7 March 2019. Access Date: 19 February 2019. <https://cleantechnica.com/2019/03/07/uk-offshore-wind-to-provide-a-third-of-countrys-electricity-by-2030/>.

¹²⁰⁹ Clean Energy: UK increases aid to Africa. The North Africa Post (Rabat). 11 March 2019. Access Date: 19 February 2019. <http://northafricapost.com/28808-clean-energy-uk-increases-aid-to-africa.html>.

¹²¹⁰ UK aid to give clean energy boost to Kenya. Africanews (Pointe-Noire) 15 March 2019. Access Date: 19 February 2019. <https://www.africanews.com/2019/03/15/uk-aid-to-give-clean-energy-boost-to-kenya/>.

¹²¹¹ UK wind energy firms develop China exports. China Daily () 22 March 2019. Access Date: 19 February 2019. <http://global.chinadaily.com.cn/a/201903/22/WS5c9434e0a3104842260b1ec5.html>.

¹²¹² UK Renewables generate record levels of electricity in 2018. Cleantechnia (USA) 29 March 2019. Access Date: 19 February 2019. <https://cleantechnica.com/2019/03/29/uk-renewables-generate-record-levels-of-electricity-in-2018/>.

On 17 April 2019, a meeting held between the Minister of Power, Energy and Business Development Ravi Karunanayake and the British High Commissioner to Sri Lanka James Dauris resulted in the implementation of a waste-to-electricity program.¹²¹³

The United Kingdom has taken steps to encourage energy transitions that decrease greenhouse gas emissions with initiatives that encourage research and development of sustainable energy practices. The establishment of FENOGE demonstrates UK's commitment to develop cleaner, more transparent and flexible energy.

Thus, the United Kingdom receives a score of +1.

Analyst: Sila Naz Elgin

United States: -1

The United States has not complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent energy systems.

On 03 March 2019, the President of the United States Donald Trump, announced that [the US government] would expedite approval for proposed Oil pipelines in Texas to gain 30-40 per cent more [of the world's Oil Production], during a speech he made at the 2019 Conservative Political Action Conference.¹²¹⁴

On 05 March 2019, the State Energy & Environmental Impact Center analyzed the impact of rolling back six major climate change regulations and released a report stating that recent de-regulation of energy in the United States could boost carbon dioxide emissions by 200 million tons per year.¹²¹⁵

On 21 March 2019, the United States Energy department announced USD30 Million for Front-End Engineering Design Studies for Carbon Capture Systems, in an effort to reduce emissions from power plants.¹²¹⁶

On 22 March 2019, the United States Energy Department finalized a loan that guarantees worth up to USD3.7 billion to finance the continued construction of the Vogtle Nuclear Power Plant in the state of Georgia.¹²¹⁷

The United States of America has not complied with its commitment to encourage energy transitions that combine growth with decreasing greenhouse gas emissions. The United States, although taking measures to encourage energy transitions, has not taken steps to combine that transition with decreasing greenhouse gas emissions.

¹²¹³ UK to introduce waste-to-electricity system in Sri Lanka. Adaderana (Colombo) 17 April 2019. Access Date: 19 February 2019. <http://www.adaderana.lk/news/54433/uk-to-introduce-waste-to-electricity-system-in-sri-lanka>.

¹²¹⁴ Remarks by President Trump at the 2019 Conservative Political Action Conference, Whitehouse (National Harbor) 02 March 2019. Access Date: 20 March 2019. <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-2019-conservative-political-action-conference/>.

¹²¹⁵ Trump climate deregulation could boost CO2 emissions by 200 million tonnes a year: study, Reuters (Washington, D.C.) 05 March 2019. Access Date: 20 March 2019. <https://www.reuters.com/article/us-usa-climatechange-trump/trump-climate-deregulation-could-boost-co2-emissions-by-200-million-tonnes-a-year-study-idUSKCN1QM2KC>.

¹²¹⁶ U.S. Department of Energy Announces \$30 Million for Front-End Engineering Design Studies for Carbon Capture Systems, U.S. Department of Energy (Washington, D.C.) 24 March 2019. Access Date: 23 March 2019. <https://www.energy.gov/articles/us-department-energy-announces-30-million-front-end-engineering-design-studies-carbon>.

¹²¹⁷ U.S finalizes \$3.7 bln loan for Vogtle nuclear power plant, Reuters (Washington, D.C.) 22 March 2019. Access Date: 22 March 2019. <https://www.reuters.com/article/usa-nuclearpower-vogtle/u-s-finalizes-3-7-bln-loan-for-vogtle-nuclear-power-plant-idUSL1N219001>.

Thus, the United States of America receives a score of −1.

Analyst: Nasser Haida

European Union: +1

The European Union has fully complied with its commitment to encourage energy transitions that combine decreasing green-house gas emissions towards cleaner, more flexible and transparent system.

On 3 December 2018, 83 European Union delegates attended the 24th Conference of the Parties (COP24), the most prominent United Nations Framework Convention on Climate Change international climate change negotiations.¹²¹⁸ Discussions were aimed at producing a “rule-book” to further work out details of the 2015 Paris Agreement.

On 18 December 2018, the European Commission accepted the political agreement on the conclusion of the Clean Energy for All Europeans package, which combats climate change and fulfills the priorities that are set by the European Commission, under the presidency of Jean-Claude Juncker. The rules outlined would help EU energy markets to “include more renewables, empower customers, and better manage energy flows across EU.” European Commission also addressed that the next steps are for the texts to be prepared in all EU languages whereby submitted to the European Parliament for approval. After approval, the laws will go into effect immediately and will be published in the Official Journal of the Union and be transposed into national laws within 18 months. The commission had previously proposed new rules in order to assist the energy industry in including sustainable alternatives and change their focus to renewable energy sources.¹²¹⁹

On 13 March 2019, the European Parliament banned the use of biofuel derived from palm oil in order to combat the negative effects on that come from palm oil acquisition on the environment. It results in excessive deforestation, resulting in more carbon in the air.¹²²⁰

On 4 April 2019, it was announced that access to clean energy in The Gambia is set to be transformed under a new EUR 142 million initiative to harness solar power and supply clean energy across the country, backed by the European Investment Bank, World Bank and European Union.¹²²¹

On 13 March 2019, the European Commissioner Johannes Hahn criticized Bosnia’s actions and commitment to international treaties and EU rules in light of Bosnian lawmakers approving a guarantee for a MAR1.2 billion loan from state-funded Export-Import Bank of China. He said it raised questions “about the choice of the energy technology as well as about a sound cost-benefit analysis in a responsible and transparent manner.”¹²²²

¹²¹⁸ Analysis: Which countries have sent the most delegates to COP24? Carbon Brief (Katowice) 4 February 2019. Access Date: 26 February 2019. <https://www.carbonbrief.org/analysis-countries-sent-most-delegates-cop24>.

¹²¹⁹ Commission welcomes political agreement on conclusion of the Clean Energy for All Europeans package, European Commission (Brussels) 18 December 2019. Access Date: 19 February 2019. http://europa.eu/rapid/press-release_IP-18-6870_en.htm.

¹²²⁰ U Labels Biofuel from Palm Oil As Unsustainable, Bans Subsidies. Forbes (New York) 14 March 2019. Access Date: 19 Feb 2019. <https://www.forbes.com/sites/davekeating/2019/03/14/eu-labels-biofuel-from-palm-oil-as-unsustainable-bans-subsidies/#31142f7c9c9d>.

¹²²¹ European backing for EUR 142 million Gambia renewable energy programme. AfricaNews (Rabat) 4 March 2019. Access Date: 19 Feb 2019. <https://www.africanews.com/2019/03/04/european-backing-for-eur-142-million-gambia-renewable-energy-programme/>.

¹²²² EU official criticizes Bosnia's backing of Chinese power loan. Reuters (International) 13 March 2019. Access Date: 19 Feb 2019. <https://www.reuters.com/article/us-bosnia-eu-energy/eu-official-criticizes-bosnias-backing-of-chinese-power-loan-idUSKBN1QU1JD>.

On 20 March 2019, the European Commission announced that it is updating its main funding instrument for nature, biodiversity, climate action and clean energy projects (LIFE). The Commission proposed a total financial envelope of EUR5.45 billion for LIFE for the period 2021-2027. This includes EUR3.5 billion for the area of environment, and EUR1.95 billion for the area of climate action. The final amounts are not yet set.¹²²³

On 26 March 2019, the European Commission accepted the market design rules by the European Parliament, which marks the finalization of negotiations on the Clean Energy for All Europeans package. The new rules are designed to empower energy consumers to play an active role in the energy transition and to fully benefit a digitalized and sustainable energy system in which they also enable active participation.¹²²⁴

On 15 April 2019, Commissioner Margrethe Vestager announced the acceptance of scheme that will support combined heat and power installations connected to district heating networks in Poland, costing EUR5 billion. It is designed to lower emissions and ensure sustainable practices in the region.¹²²⁵

On 2 April 2019, the European Commission adopted a EUR4 billion investment package for sustainable energy infrastructures across 10 of its member states. The investment package is made up of Bulgaria, Czechia, Germany, Greece, Hungary, Italy, Malta, Poland, Portugal and Romania. The projects cover a wide range of areas, but most notable is the sustainable energy commitment. With national funding, the total investment amounts to EUR8 billion.¹²²⁶

The European Union has fully complied with its commitment to encourage energy transitions that combine decreasing green-house gas emissions towards cleaner, more flexible and transparent system. Attendance at COP24 and the European Commission's efforts to set priorities to include more renewable sources in the energy markets demonstrate EU's compliance.

Thus, European Union receives a score of +1.

Analyst: Sila Naz Elgin

¹²²³ LIFE programme – Coreper confirms common understanding reached with Parliament. European Commission (Brussels) 20 March 2019. Access Date: 19 April 2019. <https://www.consilium.europa.eu/en/press/press-releases/2019/03/20/life-programme-coreper-confirms-common-understanding-reached-with-parliament/>.

¹²²⁴ Clean Energy for All Europeans: Commission welcomes European Parliament's adoption of new electricity market design proposals. European Commission (Brussels) 26 March 2019. Access Date: 19 April 2019. http://europa.eu/rapid/press-release_IP-19-1836_en.htm.

¹²²⁵ State aid: Commission approves €5 billion Polish support for cogenerated electricity and surcharge reductions for large energy consumers; opens in-depth investigation into reductions in capacity mechanism surcharge. European Commission (Brussels) 15 April 2019. Access Date: 19 April 2019. http://europa.eu/rapid/press-release_IP-19-2150_en.htm.

¹²²⁶ Commission adopts €4 billion investment package for infrastructure projects across 10 Member States. European Commission (Brussels) 2 April 2019. Access Date: 19 April 2019. http://europa.eu/rapid/press-release_IP-19-1872_en.htm.