2024 G20 Rio de Janeiro Summit
Interim Compliance Report

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Prepared by
Irene Wu and Mahek Kaur
and the G20 Research Group

www.g20.utoronto.ca • g20@utoronto.ca • @g20rg

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UNIVERSITY OF TORONTO

G20 Research Group
University of Toronto
6 Hoskin Avenue, Toronto Ontario M5S 1H6 Canada
g20@utoronto.ca +1-416-946-8953
www.g20.utoronto.ca www.g7g20.utoronto

Contents

1. Energy: Energy Transition Supply Chains

"We support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies."

G20 Rio de Janeiro Leaders' Declaration

Assessment

	No Compliance	Partial Compliance	Full Compliance
Argentina		0	
Australia			+1
Brazil			+1
Canada			+1
China		0	
France			+1
Germany		0	
India			+1
Indonesia			+1
Italy			+1
Japan			+1
Korea			+1
Mexico			+1
Russia			+1
Saudi Arabia			+1
South Africa		0	
Türkiye			+1
United Kingdom			+1
United States			+1
African Union		0	
European Union			+1
Average	+0.76 (88%)		

Background

Since the 2009 Pittsburgh Summit, the G20 has consistently referred to the necessity of adopting renewable energy technologies and increasing renewable energy supplies as part of G20 members' climate and sustainable development goals. Since the 2021 Rome Summit, the G20 has specifically highlighted the importance of supply chain resilience in regard to critical minerals and materials, as well as semiconductors and other technologies. In recognition of its global leadership position, the G20 reiterated its commitment to developing supply chains for energy transitions as part of its climate goals and the United Nations' Sustainable Development Goals at the 2024 Rio de Janeiro Summit.

At the 2009 Pittsburgh Summit, G20 leaders noted the importance of increasing renewable energy supplies and adopting renewable energy technology for promoting sustainable growth and strengthening energy security.[3]

At the 2010 Seoul Summit, G20 leaders committed to creating "environments conducive to the development and deployment of energy efficiency and clean energy technologies" through policies including "technical transfer and capacity building."[4]

[3] G20 Leaders Statement: Pittsburgh Summit, G20 Research Group (Toronto) 25 September 2009. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2009/2009communique0925.html

At the 2011 Cannes Summit, G20 leaders affirmed its support for "the development and deployment of clean energy and energy efficiency (C3E) technologies."[5]

At the 2012 Los Cabos Summit, G20 leaders acknowledged "G20 countries' efforts to foster investment" in clean energy technologies "through the sharing of national experiences regarding challenges for technology deployment."[6]

At the 2013 St. Petersburg Summit, G20 leaders welcomed "efforts aimed at promoting sustainable development, energy efficiency, inclusive green growth and clean energy technologies and energy security."[7] The G20 stated it would continue to cooperate with "with international organisations sharing national experiences and case studies regarding sustainable development, clean energy and energy efficiency as well as development, deployment and broader application of related technologies and will take forward work, on a voluntary basis, on corresponding policy options and technologies."

At the 2015 Antalya Summit, G20 leaders affirmed that "increasing investments in clean energy technologies and supporting related research and development activities will be important in tackling climate change and its effects."[8]

At the 2016 Hangzhou Summit, G20 leaders launched the G20 Initiative on Supporting Industrialization in Africa and least developed countries, which encompassed policies including "promoting investment in sustainable and secure energy."[9]

At the 2017 Hamburg Summit, G20 leaders stated its view of "energy security as one of the guiding principles for the transformation of [G20] energy systems."[10] The G20 welcomed "international cooperation on the development, deployment and commercialisation of sustainable and clean energy technologies and support financing by Multilateral Development Banks to promote universal access to affordable, reliable, sustainable and clean energy."

At the 2018 Buenos Aires Summit, G20 leaders encouraged "energy transitions that combine growth with decreasing greenhouse gas emissions towards cleaner, more flexible and transparent systems and cooperation in energy efficiency."[11] The G20 acknowledged "the role of all energy sources and technologies in the energy mix and different possible national paths to achieve cleaner energy systems under the term 'transitions'."

At the 2019 Osaka Summit, G20 leaders acknowledged "the importance of energy transitions that realize the "3E+S" (Energy Security, Economic Efficiency and Environment + Safety) in order to transform [G20] energy systems into affordable, reliable, sustainable and low GHG [greenhouse gas] emissions systems."[12] The G20 further acknowledged "the importance of global energy security as one of the guiding principles for

[4] G20 Seoul Summit Leaders' Declaration, G20 Research Group (Toronto) 12 November 2010. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2010/g20seoul-doc.pdf

[5] Cannes Summit Final Declaration, G20 Research Group (Toronto) 4 November 2011. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2011/2011-cannes-declaration-111104-en.html

[6] G20 Los Cabos Summit Leaders' Declaration, G20 Research Group (Toronto) 19 June 2012. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2012/2012-0619-loscabos.pdf

[7] G20 St. Petersburg Summit Leaders' Declaration, G20 Research Group (Toronto) 6 September 2013. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2013/2013-0906-declaration.html

[8] G20 Antalya Summit Leaders' Communiqué, G20 Research Group (Toronto) 16 November 2015. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2015/151116-communique.html

[9] G20 Hangzhou Summit Leaders' Communiqué, G20 Research Group (Toronto) 5 September 2016. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2016/160905-communique.html

[10] G20 Hamburg Summit Leaders' Declaration, G20 Research Group (Toronto) 8 July 2017. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2017/2017-G20-leaders-declaration.pdf

[11] G20 Buenos Aires Summit Leaders' Declaration, G20 Research Group (Toronto) 1 December 2018. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2018/2018-leaders-declaration.html

[12] G20 Osaka Summit Leaders' Declaration, G20 Research Group (Toronto) 29 June 2019. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2019/2019-g20-osaka-leaders-declaration.html

the transformation of energy systems, including resilience, safety and development of infrastructure and undisrupted flow of energy from various sources, suppliers and routes."

At the 2020 Riyadh Summit, G20 leaders reaffirmed their commitment to ensuring a "stable and uninterrupted supply of energy to support economic growth." Leaders recognized the importance of expediting universal access to affordable and reliable energy for all, emphasizing innovation across various fuel and technology options. The summit also underscored the need to "maintain undisrupted energy flows and enhance energy security and market stability while promoting open, competitive and free international energy markets."[13]

At the 2021 Rome Summit, G20 leaders made a commitment to "cooperate on deployment and dissemination of zero or low carbon emission and renewable technologies, including sustainable bioenergy, to enable a transition towards low-emission power systems."[14] In light of addressing energy security challenges, the G20 also recognized the importance of "reliable, responsible and sustainable supply chains of critical minerals and materials, as well as semiconductors and related technologies."

At the 2022 Bali Summit, G20 leaders called for support to developing countries "in terms of providing access to affordable, reliable, sustainable and modern energy, capacity building, affordable latest technology within the public domain, mutually beneficial technology cooperation and financing mitigation actions in the energy sector."[15] G20 leaders also committed to accelerating energy transitions "by strengthening energy supply chain and energy security and diversifying energy mixes and systems."

At the 2023 New Delhi Summit, G20 leaders affirmed support for "reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semi-conductors and technologies."[16] G20 leaders underscored "the crucial role of technologically neutral, integrated and inclusive approaches to develop and deploy a variety of low-emitting energies, sustainable fuels and technologies."

At the 2024 Rio de Janeiro Summit, G20 leaders reaffirmed their commitment "to accelerating clean, sustainable, just, affordable and inclusive energy transitions."[17] They emphasized the importance of reliable, diversified, sustainable and responsible supply chains for energy transitions, underscoring the need for increased international cooperation, investment and technological innovation to strengthen energy security and support the transition to low-carbon economies.

Commitment Features

At the 2024 Rio de Janeiro Summit, leaders committed to "support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies."[18] This commitment builds on previous G20 discussions on energy security, climate action and economic resilience by emphasizing the strengthening and diversification of global supply chains to support clean energy transitions. Given the increasing demand for critical minerals, semiconductors and clean energy technologies, this commitment seeks to address vulnerabilities in global supply chains while ensuring their sustainability and ethical sourcing.

[13] G20 Riyadh Summit Leaders' Declaration, G20 Research Group (Toronto) 21 November 2020. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2020/2020-g20-leaders-declaration-1121.html

[14] G20 Rome Summit Leaders' Declaration, G20 Research Group (Toronto) 31 October 2021. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2021/211031-declaration.html

[15] G20 Bali Summit Leaders' Declaration, G20 Research Group (Toronto) 16 November 2022. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2022/221116-declaration.html

[16] G20 New Delhi Summit Leaders' Declaration, G20 Research Group (Toronto) 9 September 2023. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2023/230909-declaration.html

[17] G20 Rio de Janeiro Summit Leaders' Declaration, G20 Research Group (Toronto) 18 November 2024. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2024/241118-declaration.html

[18] G20 Rio de Janeiro Summit Leaders' Declaration, G20 Research Group (Toronto) 18 November 2024. Access Date: 7 March 2025. https://www.g20.utoronto.ca/2024/241118-declaration.html

The commitment does not mandate specific policy instruments or implementation mechanisms, granting G20 members the flexibility to determine their own approaches to compliance. However, it requires demonstrable action in at least one of three key areas: supply chains for critical minerals and materials beneficiated at source, semiconductors and energy transition technologies. Full compliance requires meaningful action in all three areas, reflecting a comprehensive approach to securing supply chains essential for energy transitions.

Definitions and Concepts

The term "support" is understood as the action or act of providing aid, assistance, or backing up an initiative or entity through policies, financial investment, or institutional measures that actively contribute to achieving the commitment's objectives.[19]

"Reliable" is understood to mean consistent in performance and able to function without failure.[20] In the context of supply chains, it implies ensuring consistent availability of critical materials, minimizing disruptions caused by geopolitical tensions, trade restrictions or resource scarcity.[21]

"Diversified" refers to a supply chain that sources critical minerals, semiconductors and technologies from multiple regions or suppliers to mitigate risks associated with reliance on a single source.[22]

"Sustainable" refers to a supply chain that is environmentally and socially responsible, minimizing negative ecological impacts, carbon emissions and waste.[23]

"Responsible" supply chains adhere to ethical, transparent and accountable business practices, including fair labour practices, human rights standards and transparency, preventing exploitation and environmental degradation.[24]

"Critical minerals and materials" refer to naturally occurring elements and compounds essential for energy technologies, including copper, chromium, zinc, aluminium, major battery metals (lithium, nickel, cobalt, manganese, graphite), cadmium, molybdenum, rare earth elements and others.[25]

"Beneficiated at source" means processing and refining raw materials within the country of extraction before exporting them.[26]

"Semiconductors and technologies" refer to microelectronic components [e.g. GaAs, indium arsenide (InAs), gallium nitride (GaN) and indium phosphide] and advanced energy-related tools, systems and innovations

[19] Compliance Coding Manual for International Institutional Commitments, G7 and G20 Research Groups (Toronto) 12 November 2020. Access Date: 7 March 2025. http://www.g7.utoronto.ca/compliance/Compliance_Coding_Manual_2020.pdf

[20] Reliable, Merriam-Webster (Springfield) n.d. Access Date: 7 March 2025. https://www.merriam-webster.com/dictionary/reliable

[21] Keys to resilient supply chains, Organisation for Economic Co-operation and Development (Paris) n.d. Access Date: 7 March 2025. https://www.oecd.org/content/dam/oecd/en/events/2024/3/forum-on-critical-supply-chains--policy-tools-for-preparedness-and-responsiveness/Resilient-Supply-Chains_Brochure-2025.pdf

[22] Keys to resilient supply chains, Organisation for Economic Co-operation and Development (Paris) n.d. Access Date: 7 March 2025. https://www.oecd.org/content/dam/oecd/en/events/2024/3/forum-on-critical-supply-chains--policy-tools-for-preparedness-and-responsiveness/Resilient-Supply-Chains_Brochure-2025.pdf

[23] Building more resilient and sustainable global value chains through responsible business conduct, Organisation for Economic Co-operation and Development (Paris) 2021. Access Date: 7 March 2025. https://mneguidelines.oecd.org/Building-more-resilient-and-sustainable-global-value-chains-through-responsible-business-conduct.pdf

[24] Building more resilient and sustainable global value chains through responsible business conduct, Organisation for Economic Co-operation and Development (Paris) 2021. Access Date: 7 March 2025. https://mneguidelines.oecd.org/Building-more-resilient-and-sustainable-global-value-chains-through-responsible-business-conduct.pdf

[25] The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions, International Energy Agency (Paris) 2022. Access Date: 7 March 2025. https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf

[26] Beneficiation, Merriam-Webster (Springfield) n.d. Access Date: 7 March 2025. https://www.merriam-webster.com/dictionary/beneficiation

essential for modern energy infrastructure, including smart grids, battery storage and renewable energy deployment.[27]

General Interpretive Guidelines

Full compliance, or a score of +1, will be given to a G20 member that takes strong action in both areas of supply chains specified by 1) supporting reliable, diversified, sustainable and responsible supply chains for energy transitions, taken together as a combined welfare objective; and 2) strengthening supply chains for a) critical minerals and materials beneficiated at source, b) semiconductors and c) energy transition technologies. To fulfill the requirements of full compliance, the G20 member must take strong action across Part 1 of the commitment and at least two of the three components of Part 2.

Strong actions include significant policy action, financial investment or institutional support that advances the commitment, including the establishment of new government agencies or institutions dedicated to supply chain security, enforcing trade agreements that enhance resilience or participating in international frameworks that regulate ethical and sustainable resource extraction. Examples of strong actions that contribute to beneficiation at source include building local processing and refining facilities for lithium, cobalt and rare earth elements, establishing technology-sharing partnerships between resource-rich and industrialized countries, implementing domestic policies that require a percentage of minerals to be processed before export or investing in domestic refining and processing facilities. Strong action to strengthen semiconductor supply chains includes providing subsidies or financial incentives for domestic semiconductor manufacturing, establishing trade partnerships with leading semiconductor-producing nations to secure supply chains or investing in research and development of next-generation semiconductors. To align with technological advancements that facilitate energy transitions, G20 members can implement policies that encourage private sector investment in clean energy technology or facilitate international cooperation on technology transfers and joint research initiatives.

Partial compliance, or a score of 0, will be assigned to a G20 member that takes strong action in at least 50 per cent of the commitment: 1) supporting reliable, diversified, sustainable and responsible supply chains for energy transitions, taken together as a combined welfare objective; and 2) strengthening supply chains for a) critical minerals and materials beneficiated at source, b) semiconductors and c) energy transition technologies. To achieve partial compliance, the G20 member must take strong action in two of the four aforementioned areas (i.e. all of Part 1 and one of the sub-areas of Part 2 or two of the sub-areas of Part 2) or take weak action all four areas. Examples of weak action includes announcing plans or intentions to improve supply chain security but without concrete policy implementation, verbal reiterations of support, diplomatic action without tangible support behind it, such as funds, conference attendance or participation and the like.

Non-compliance, or a score of −1, will be assigned if the G20 member takes insufficient action that does not meet the criteria for a 0, such as taking action in only one area, or taking actions that are directly and explicitly antithetical to the commitment, such as blocking or withdrawing from trade agreements or partnerships that facilitate supply chain resilience or delaying or rolling back policies that support clean technology or critical mineral development.

[27] The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions, International Energy Agency (Paris) 2022. Access Date: 7 March 2025. https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf

Scoring Guidelines

−1	The G20 member has taken insufficient action to 1) support the combined welfare target of reliable, diversified, sustainable and responsible supply chains for energy transitions and 2) to strengthen supply chains for a) critical minerals and materials beneficiated at source, b) semiconductors and c) energy transition technologies. This includes action that does not meet the criteria for partial compliance, such as taking action in only one of the four areas or taking actions that are directly and explicitly antithetical to the commitment.
0	The G20 member has taken strong action across 50 per cent of the commitment, or two of the four components or has taken weak action across all four areas: 1) supporting reliable, diversified, sustainable and responsible supply chains for energy transitions, taken together as a combined welfare objective and 2) strengthening supply chains for a) critical minerals and materials beneficiated at source, b) semiconductors and c) energy transition technologies.
+1	The G20 member has taken strong action towards 1) the combined welfare target of reliable, diversified, sustainable and responsible supply chains for energy transitions and 2) to strengthen supply chains in at least two of the three areas: a) critical minerals and materials beneficiated at source, b) semiconductors and c) energy transition technologies.

Compliance Director: Erfan Ehsan
Lead Analyst: Ana Grace Rans Kolakovic

Argentina: 0

Argentina has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 2 December 2024, Undersecretary of the Environment Ana Lamas met with Finnish Ambassador Nicola Lindertz to promote the establishment of a circular economy.[28] Undersecretary Lamas called for continued innovation regarding bioenergy and waste recovery technologies.

On 10 December 2024, Secretary of Mining Luis Lucero presented mining investment opportunities in Argentina as part of Raw Materials Week 2024 in Brussels.[29] The presentation included discussion on the extraction, processing and refining of critical raw materials in Argentina.

On 8 January 2025, Argentina approved a solar park development project's application for membership in the Incentive Regime for Large Investments (RIGI).[30] With its membership in RIGI, the project will receive special tax, customs and exchange rate incentives. The project will receive an investment of USD211 million and will have a 305 megawatts (MW) capacity once complete.

On 29 January 2025, the Secretariat of Energy eliminated the National Registry of Charging Infrastructure for Electric and Hybrid Electric Vehicles, aiming to promote the expansion of charging stations by reducing costs and regulatory obstacles.[31]

[28] Argentina y Finlandia impulsan una agenda de cooperación estratégica en economía circular, Jefatura de Gabinete de Ministros (Buenos Aires) 2 December 2024. Translation provided by Google Translate. Access Date: 1 May 2025. https://www.argentina.gob.ar/noticias/argentina-y-finlandia-impulsan-una-agenda-de-cooperacion-estrategica-en-economia-circular
[29] Economía presentó las oportunidades de inversión que ofrece Argentina en la Raw Materials Week, Ministerio de Economía (Buenos Aires) 10 December 2024. Translation provided by Google Translate. Access Date: 1 May 2025. https://www.argentina.gob.ar/noticias/economia-presento-las-oportunidades-de-inversion-que-ofrece-argentina-en-la-raw-materials
[30] El Gobierno aprobó la solicitud de adhesión al RIGI del proyecto Parque Solar El Quemado, Ministerio de Economía (Buenos Aires) 8 January 2025. Translation provided by Google Translate. Access Date: 1 May 2025. https://www.argentina.gob.ar/noticias/el-gobierno-aprobo-la-solicitud-de-adhesion-al-rigi-del-proyecto-parque-solar-el-quemado
[31] El Gobierno Nacional avanza en la desregulación de los vehículos eléctricos e híbridos, Ministerio de Economía (Buenos Aires) 29 January 2025. Translation provided by Google Translate. Access Date: 1 May 2025. https://www.argentina.gob.ar/noticias/el-gobierno-nacional-avanza-en-la-desregulacion-de-los-vehiculos-electricos-e-hibridos

On 30 January 2025, Argentina and India held the First Meeting of the Joint Working Group on Mineral Resources in Buenos Aires.[32] The delegations agreed to establish sub-working groups on exploration cooperation and on investment and to hold a second meeting in 2026.

On 17 February 2025, Argentina launched a large-scale initiative to modernize the electrical grid in the Buenos Aires Metropolitan Area.[33] This initiative includes the installation of 500 MW of energy storage capacity at strategic grid nodes, with an estimated investment of USD500 million over a period of 12 to 18 months.

On 5 March 2025, Secretary Lucero and Minister of Natural Resources of Canada Jonathan Wilkinson signed an agreement to collaborate on critical minerals and mining sustainability.[34] This partnership aims to facilitate sustainable investment in the mining sector and support global supply chain integration.

On 14 March 2025, Argentina implemented reforms simplifying the process of registering mining activities.[35] The measures are designed to benefit mining companies in the production and exploration stages.

On 19 May 2025, the Secretariat for Energy and Mining Coordination, the National Electricity Administration of Paraguay and the Yacyretá Binational Entity signed an agreement whereby Argentina will be able to access up to 85 per cent of the energy produced in a binational hydroelectric plant.[36] This capacity will support reduced costs and support an equitable supply of energy.

On 29 May 2025, the Ministry of Economy announced a national plan to expand Argentina's electricity transportation.[37] The plan includes an additional 5,610 kilometres of electricity transmission lines to ensure a reliable power supply, mitigate outages and address underinvestment. This plan will be carried out by private companies funded through consumer fees.

Argentina has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated, at source, semiconductors and technologies. Argentina has taken strong action towards the combined welfare target of reliable, diversified, sustainable and responsibly supply chains through initiatives to modernize the electrical grid in the Buenos Aires Metropolitan Area, expand electricity transmission lines across the country and access more affordable hydroelectric energy. It has also taken strong action to strengthen supply chains for energy transition technologies through its investment in a solar park development project. However, it has not taken strong action across all four commitment components.

Thus, Argentina has received a score of 0.

Analyst: Maham Khokhar

[32] Primera reunión del Grupo de Trabajo Conjunto en Recursos Mineros entre la Argentina e India, Ministerio de Economía (Buenos Aires) 30 January 2025. Translation provided by Google Translate. Access Date: 1 May 2025. https://www.argentina.gob.ar/noticias/primera-reunion-del-grupo-de-trabajo-conjunto-en-recursos-mineros-entre-la-argentina-e

[33] Argentina inicia modernización eléctrica histórica en AMBA y convoca a las provincias a replicarlo en nodos críticos, Ministerio de Economía (Buenos Aires) 17 February 2025. Translation provided by Google Translate. Access Date: 16 May 2025. https://www.argentina.gob.ar/noticias/argentina-inicia-modernizacion-electrica-historica-en-amba-y-convoca-las-provincias

[34] Economía firmó un acuerdo sobre minerales críticos con el ministerio de Recursos Naturales de Canadá, Ministerio de Economía (Buenos Aires) 5 March 2025. Translation provided by Google Translate. Access Date: 16 May 2025. https://www.argentina.gob.ar/noticias/economia-firmo-un-acuerdo-sobre-minerales-criticos-con-el-ministerio-de-recursos-naturales

[35] El gobierno facilita el trámite del Registro Fiscal de Actividades Mineras, Presidencia de la Nación (Buenos Aires) 14 March 2025. Translation provided by Google Translate. Access Date: 20 May 2025. https://www.argentina.gob.ar/noticias/el-gobierno-facilita-el-tramite-del-registro-fiscal-de-actividades-mineras

[36] Argentina y Paraguay firmaron un acuerdo sobre Yacyretá que ordena el uso de la energía y baja el gasto, Ministerio de Economía (Buenos Aires) 19 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.argentina.gob.ar/noticias/argentina-y-paraguay-firmaron-un-acuerdo-sobre-yacyreta-que-ordena-el-uso-de-la-energia-y

[37] El Gobierno presentará un plan nacional de obras de ampliación del transporte eléctrico que financiará el sector privado, Ministerio de Economía (Buenos Aires) 29 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.argentina.gob.ar/noticias/el-gobierno-presentara-un-plan-nacional-de-obras-de-ampliacion-del-transporte-electrico-que

Australia: +1

Australia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 28 November 2024, Parliament passed the Future Made in Australia legislation which aims to support the net zero transition.[38] The legislation will focus on renewable energy investments and economic resilience.

On 6 December 2024, Minister for Resources and Northern Australia Madeleine King announced a total of AUD21 million in funding for five projects aimed at "diversify[ing] global supply chains for critical minerals and rare earth elements."[39] This contributes to the commitment's combined welfare target and supports strengthening supply chains for critical minerals and materials beneficiated at source.

On 6 December 2024, Prime Minister Anthony Albanese and Minister for Trade and Tourism Senator Don Farrell announced an additional AUD475 million in financing for Western Australia's Eneabba Rare Earths Refinery project.[40] The project will support global supply chain resilience for rare earth elements and support sustainable critical minerals that contribute towards the net zero transition.

On 6 December 2024, the Clean Energy Finance Corporation (CEFC) allocated AUD50 million to Bank Australia as part of the Household Energy Upgrades Fund program.[41] This funding will enable up to AUD100 million in green loans, including a lean Energy Home Loan, to strengthen supply chains for the renewable energy transition. This will also contribute to more reliable and sustainable supply chains.

On 6 December 2024, the Department of Climate Change, Energy, the Environment and Water announced a First Nations Clean Energy Strategy that focuses on sustainable and reliable clean energy for First Nations communities.[42] Over the next five years, this strategy will include investments in clean energy supply chains, focus on improving energy performance, establish partnerships with First Nations communities for energy and support First Nations individuals in having a greater role in the clean energy sector.

On 9 December 2024, the CEFC invested USD75 million in "global alternative investment manager Resource Capital Funds" to support Australia's emerging critical mineral supply chain.[43] This investment will bring capital to Australian mining projects and help decarbonize Australia's critical mineral supply chain.

On 20 December 2024, Australia and Korea signed a new Green Economy Partnership Arrangement on Climate and Energy.[44] The partnership agreement includes cooperation on renewable hydrogen, critical

[38] Future Made in Australia legislation passes the Senate, Department of Industry, Science and Resources (Canberra) 28 November 2024. Access Date: 23 June 2025. https://www.minister.industry.gov.au/ministers/king/media-releases/future-made-australia-legislation-passes-senate

[39] New grants to build Australia's critical minerals sector, Department of Industry, Science and Resources (Canberra) 6 December 2024. Access Date: 23 June 2025. https://www.minister.industry.gov.au/ministers/king/media-releases/new-grants-build-australias-critical-minerals-sector

[40] Additional help for rare earths refining for a Future Made in Australia, Department of Industry, Science and Resources (Canberra) 6 December 2024. Access Date: 23 June 2025. https://www.minister.industry.gov.au/ministers/king/media-releases/additional-help-rare-earths-refining-future-made-australia

[41] HEUF delivers green home loans for renovations with Bank Australia, Clean Energy Finance Corporation (Sydney) 6 December 2024. Access Date: 4 May 2025. https://www.cefc.com.au/media/media-release/heuf-delivers-green-home-loans-for-renovations-with-bank-australia/

[42] First Nations Clean Energy Strategy, Department of Climate Change, Energy, the Environment and Water (Canberra) 6 December 2024. Access Date: 4 May 2025. https://www.energy.gov.au/energy-and-climate-change-ministerial-council/working-groups/first-nations-engagement-working-group/first-nations-clean-energy-strategy#achieve-economic-benefits-with-first-nations-peoples

[43] CEFC invests in homegrown critical minerals to strengthen clean energy supply chain, Clean Energy Finance Corporation (Sydney) 9 December 2024. Access Date: 28 March 2025. https://www.cefc.com.au/media/media-release/cefc-invests-in-homegrown-critical-minerals-to-strengthen-clean-energy-supply-chain

minerals and green metals projects. This supports both members' commitments to diversified energy transition technologies and supply chains.

On 15 January 2025, the National Reconstruction Fund Corporation announced AUD200 million in funding for Arafura Rare Earths.[45] This investment will help advance the critical minerals supply chain by enabling the development of a new mine and processing facility that is expected to produce 4,440 tonnes of neodymium and praseodymium.

On 16 January 2025, the CEFC announced an AUD100 million investment for an innovating financing mechanism called the built-to-rent strategy.[46] This strategy focuses on building energy efficient and electric homes which can be powered with renewable energy. This action contributes to an equitable energy transition.

On 20 January 2025, Australia unveiled plans for a new Green Aluminium Production Credit facility, investing AUD2 billion "to support aluminum smelters in transitioning to renewable electricity sources before 2036."[47] This plan aims to support decarbonization in Australia's aluminum industry.

On 23 January 2025, Australia allocated an additional AUD2 billion to the CEFC.[48] These funds will support initiatives for Australia's green transition and renewable energy projects.

On 31 January 2025, the CEFC announced AUD300 million in co-financing with the National Australia Bank to reduce costs associated with the net zero transition.[49] Of note, the Bank's Green Finance for Vehicles and Equipment program will receive AUD200 million from the CEFC to support investment discounts for the manufacturing of "key components used in renewable energy generation" and net zero vehicles and for recycling facilities.

On 4 February 2025, Minister King and Western Australia Mines and Petroleum Minister David Michael announced a AUD3 million investment for a feasibility study of a Critical Minerals Advanced Processing CMAP facility in Western Australia.[50] This facility would process critical minerals and help Australia meet its commitment towards reliable, sustainable and responsible critical minerals supply chains.

[44] Australia and the Republic of Korea Strengthen Cooperation on Climate and Energy, Department of Climate Change, Energy, the Environment and Water (Canberra) 19 December 2024. Access Date: 16 May 2025. http://dcceew.gov.au/about/news/australia-republic-korea-strengthen-cooperation-climate-energy

[45] $200 million investment in critical minerals to build Australia's future, Minister for Industry and Science (Canberra) 15 January 2025. Access Date: 23 June 2025. https://www.minister.industry.gov.au/ministers/husic/media-releases/200-million-investment-critical-minerals-build-australias-future

[46] CEFC invests $100 million to deliver affordable, greener housing, Clean Energy Finance Corporation (Sydney) 16 January 2025. Access Date: 23 June 2025. https://www.cefc.com.au/media/media-release/cefc-invests-100-million-to-deliver-affordable-greener-housing/

[47] Australia commits USD 1.2bn to renewable-powered aluminium production, Renewables Now (Sofia) 20 January 2025. Access Date: 28 March 2025. https://renewablesnow.com/news/australia-commits-usd-1-2bn-to-renewable-powered-aluminium-production-1269552/

[48] CEFC given extra support to help renewable energy transition, Department of Climate Change, Energy, the Environment and Water (Canberra) 23 January 2025. Access Date: 16 May 2025. https://www.energy.gov.au/news/cefc-given-extra-support-help-renewable-energy-transition

[49] CEFC and NAB back low-cost green finance for industry, farmers, Clean Energy Finance Corporation (Sydney) 31 January 2025. Access Date: 4 May 2025. https://www.cefc.com.au/media/media-release/cefc-and-nab-back-low-cost-green-finance-for-industry-farmers/

[50] Growing critical minerals processing power in WA, Department of Industry, Science and Resources (Canberra) 4 February 2025. Access Date: 16 May 2025. https://www.minister.industry.gov.au/ministers/king/media-releases/growing-critical-minerals-processing-power-wa

On 7 February 2025, the Department of Climate Change, Energy, the Environment and Water announced AUD2.4 million in funding to enhance the electric vehicle charging infrastructure in Australia.[51] This funding will be provided through the Australian Renewable Energy Agency and support the Driving the Nation program which aims to encourage electric vehicle adoption.

On 10 February 2025, Parliament passed legislation for two tax incentives aimed at bolstering Australia's critical minerals and hydrogen production sectors.[52] The Critical Minerals Production Tax Incentive will target critical minerals including lithium, cobalt and rare earth minerals.

On 14 February 2025, the Department of Climate Change, Energy, the Environment and Water announced AUD1.85 million for Allegro Energy.[53] This will support the creation of reliable battery storage technology.

On 14 February 2025, Parliament allocated an additional AUD2 billion to the CEFC.[54] This initiative will support investment in renewable energy generation and energy storage projects.

On 5 March 2025, the Department of Climate Change, Energy, the Environment and Water announced an AUD20 million investment by the CEFC for green loans for healthcare providers.[55] This initiative aims to encourage healthcare providers to use rooftop solar, electric vehicles, energy-efficient fixtures and other ecologically friendly technologies.

On 17 March 2025, the CEFC announced a partnership with Lannock Strata Finance "to develop a green strata loan product for residential strata properties via the Household Energy Upgrades Fund."[56] The partnership will improve the affordability of installing solar panels on residential buildings, enabling the energy transition by encouraging clean energy adoption.

On 13 May 2025, the CEFC announced an AUD3 million investment for EcoJoule Energy, a clean energy technology company.[57] This investment will support actions to strengthen the power grid and ensure energy networks are equipped to function with distributed energy resources. This will enhance reliability and capacity within the renewable energy supply chain.

Australia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Australia has taken strong action to support reliable, diversified, sustainable and responsible supply chains for energy transitions through investments by the CEFC, funding for electric vehicle charging infrastructure, tax credits, the Future Made in Australia legislation and the First Nations Clean Energy Strategy. It has also strengthened supply chains for critical minerals and materials beneficiated at source and energy transition technologies through investments to decarbonize Australia's critical mineral supply chain, support Western Australia's Eneabba Rare Earths Refinery project, enhance global critical minerals and rare elements supply chains and encourage renewable energy adoption for consumers.

[51] EV charging infrastructure boosted with $2.4m initiative, Department of Climate Change, Energy, the Environment and Water (Canberra) 7 February 2025. Access Date: 23 June 2025.
[52] Production tax credits pass the Senate, Ministry of Industry, Science and Resources (Canberra) 10 February 2025. Access Date: 23 June 2025. https://www.minister.industry.gov.au/ministers/king/media-releases/production-tax-credits-pass-senate
[53] Battery technology powering our future, Department of Climate Change, Energy, the Environment and Water (Canberra) 14 February 2025. Access Date: 16 May 2025. https://www.energy.gov.au/news/battery-technology-powering-our-future
[54] CEFC welcomes additional $2 billion capital allocation from Australian Government, Clean Energy Finance Corporation (Sydney) 14 February 2025. Access Date: 15 April 2025. https://www.cefc.com.au/media/statement/cefc-welcomes-additional-2-billion-capital-allocation-from-australian-government/
[55] Green loans available for healthcare providers, Department of Climate Change, Energy, the Environment and Water (Canberra) 5 March 2025. Access Date: 23 June 2025. https://www.energy.gov.au/news/green-loans-available-healthcare-providers
[56] CEFC signs MOU with Lannock Strata Finance to develop green finance for strata properties, Clean Energy Finance Corporation (Sydney) 17 March 2025. Access Date: 23 June 2025. https://www.cefc.com.au/media/media-release/cefc-signs-mou-with-lannock-strata-finance-to-develop-green-finance-for-strata-properties/
[57] CEFC backs EcoJoule Energy to enhance grid stability, Clean Energy Finance Corporation (Sydney) 13 May 2025. Access Date: 23 June 2025. https://www.cefc.com.au/media/media-release/cefc-backs-ecojoule-energy-to-enhance-grid-stability/

Thus, Australia receives a score of +1.

Analysts: Ana Grace Rans Kolakovic and Erfan Ehsan

Brazil: +1

Brazil has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 29 November 2024, the Ministry of Mines and Energy announced two new resolutions effective 2 December 2024 to maintain water levels in hydroelectric plant reservoirs.[58] This action aims to ensure sustainable water use while supporting energy security.

On 2 December 2024, Minister of Mines and Energy Alexandre Silveira met with the board of Rosatom, Russia's largest nuclear company, to discuss a partnership between Brazil and Rosatom for nuclear energy.[59] The pair are expected to finalize an agreement by the end of 2025 that adheres to responsible, safe and sustainable critical mineral use while expanding Brazil's economic and technological growth.

On 3 December 2024, the National Energy Policy Council (CNPE) and Infra SA signed a Technical Cooperation Agreement to "expand the traceability of raw materials" through the Brazilian National Biofuel Policy and to strengthen Decarbonization Credits.[60] This aims to advance Brazil's goal of decarbonizing the energy sector.

On 5 December 2024, the Ministry of Science, Technology and Innovation announced BRL220 million for Ceitec.[61] This funding will go towards the large-scale production of silicon carbide semiconductors which are essential for the energy transition.

On 10 December 2024, the CNPE approved the establishment of a permanent technical committee to regulate the Fuel for the Future legislation announced in October 2024.[62] The law aims to advance green diesel, sustainable aviation fuel and biomethane, carbon storage and capture and other mechanisms to advance sustainable low-carbon energy.

On 10 December 2024, the CNPE approved a resolution that establishes minimum targets regarding the use of residual oils and fats during the production of biomethane, sustainable aviation fuel and green diesel.[63] The

[58] Alexandre Silveira articula medidas para recuperação dos níveis dos reservatórios de Furnas e de hidrelétricas do Rio Paranaíba, Ministério de Minas e Energia (Brasília) 29 November 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-articula-medidas-para-recuperacao-dos-niveis-dos-reservatorios-de-furnas-e-de-hidreletricas-do-rio-paranaiba

[59] Alexandre Silveira atua para fortalecer cadeia de energia nuclear no Brasil, Ministério de Minas e Energia (Brasília) 2 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-atua-para-fortalecer-cadeia-de-energia-nuclear-no-brasil

[60] MME assina Acordo de Cooperação Técnica com a Infra S.A. para fortalecer a rastreabilidade de matérias-primas para o Renovabio, Ministério de Minas e Energia (Brasília) 3 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/mme-assina-acordo-de-cooperacao-tecnica-com-a-infra-s-a-para-fortalecer-a-rastreabilidade-de-materias-primas-para-o-renovabio

[61] MCTI anuncia investimento de R$ 220 milhões na Ceitec para produção de semicondutores, Ministério da Ciência, Tecnologia e Inovação (Brasília) 5 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/noticias/2024/12/mcti-anuncia-investimento-de-r-220-milhoes-na-ceitec-para-producao-de-semicondutores

[62] CNPE cria comitê interministerial para coordenar a regulamentação do Combustível do Futuro, Ministério de Minas e Energia (Brasília) 10 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/cnpe-cria-comite-interministerial-para-coordenar-a-regulamentacao-do-combustivel-do-futuro

[63] CNPE aprova resolução para estimular o uso de óleos e gorduras residuais na produção de biocombustíveis, Ministério de Minas e Energia (Brasília) 10 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/cnpe-aprova-resolucao-para-estimular-o-uso-de-oleos-e-gorduras-residuais-na-producao-de-biocombustiveis

resolution aims to increase the availability of raw materials used to produce biomethane, while supporting sustainable energy.

On 10 December 2024, the CNPE approved a resolution that sets mandatory targets for the reduction of greenhouse gases in Brazil between 2025 and 2034.[64] This resolution is set through the Brazilian National Biofuel Policy and focuses on decarbonizing the transport sector to ensure sustainable energy security, expand Brazil's renewable energy supply chains and ensure sustainable development. The resolution aims to reduce greenhouse gas emissions by 11.37 per cent by 2034 based on 2018 levels.

On 7 January 2025, Minister Silveira announced a partnership between the Brazilian Development Bank (BNDES) and the Brazilian Studies and Projects Financing Agency (Finep) to promote safe and sustainable mining, especially for critical minerals like lithium, rare earths, nickel, graphite and silicon which are essential to the energy transition.[65] Brazil will invest BRL5 million for this initiative.

On 8 January 2025, the BNDES and government funding agency Finep allocated BRL5 billion in financing for strategic minerals projects.[66] The initiative aims to support strategic mineral production as well as investments in batteries, photovoltaic cells and magnets.

On 10 January 2025, Minister Silveira and the United Arab Emirates' Ministry of Investment signed a Memorandum of Understanding to promote critical minerals which are needed for the clean energy transition.[67] This partnership will include an investment of up to BRL15 million for "mineral research, processing, commercialization, technology transfer and workforce training" to advance sustainable development.

On 10 January 2025, President Luis Inácio Lula da Silva signed a law authorizing offshore wind farm development.[68] This law supports Brazil's energy transition and includes provisions to consult with local communities.

On 31 January 2025, the Ministry of Mines and Energy and the Brazilian Nuclear and Binational Energy Holding Company allocated BRL100 million for government buildings to transition to using renewable energy via renovations and installations of "local renewable energy generation technologies."[69] This supports

[64] CNPE aprova metas do Renovabio para redução de emissões de toneladas de CO2 nos próximos dez anos, Ministério de Minas e Energia (Brasília) 10 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/cnpe-aprova-metas-do-renovabio-para-reducao-de-emissoes-de-toneladas-de-co2-nos-proximos-dez-anos

[65] Alexandre Silveira destaca investimento de R$ 5 bilhões em minerais estratégicos com foco na transição energética, Ministério de Minas e Energia (Brasília) 7 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-destaca-investimento-de-r-5-bilhoes-em-minerais-estrategicos-com-foco-na-transicao-energetica

[66] Com R$ 5 bi, BNDES e Finep apoiarão projetos para transformação de minerais estratégicos, Agência BNDES de Notícias (Rio de Janeiro) 7 January 2025. Translation provided by Google Translate. Access Date: 14 May 2025. https://agenciadenoticias.bndes.gov.br/detalhe/noticia/Com-R$-5-bi-BNDES-e-Finep-apoiarao-projetos-para-transformacao-de-minerais-estrategicos/

[67] Silveira viabiliza cooperação de R$ 15 bilhões com Emirados Árabes para comercialização de minerais estratégicos na transição energética Silveira viabiliza cooperação de R$ 15 bilhões com Emirados Árabes para comercialização de minerais estratégicos na transição energética, Ministério de Minas e Energia (Brasília) 10 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/silveira-formaliza-cooperacao-com-emirados-arabes-unidos-para-comercializacao-de-minerais-estrategicos-na-transicao-energetica

[68] President Lula signs law creating renewable energy generation from offshore wind turbines, Governo Federal (Brasília) 13 January 2025. Access Date: 23 June 2025. https://www.gov.br/planalto/en/latest-news/2025/01/president-lula-signs-law-creating-renewable-energy-generation-from-offshore-wind-turbine

[69] ENBPar e MME disponibilizam R$ 100 milhões para "zerar" consume de energia em prédios públicos, Empresa Brasileira de Participações em Energia Nuclear e Binacional (Brasília) 31 January 2025. Translation provided by Google Translate. Access Date: 9 May 2025. https://enbpar.gov.br/enbpar-e-mme-disponibilizam-r-100-milhoes-para-zerar-consumo-de-energia-em-predios-publicos/

reliable and responsible energy transition technologies with financial transparency measures and partnerships with local energy producers.

On 2 February 2025, the Ministry of Mines and Energy and the Uruguayan Ministry of Industry, Energy and Mining signed a Memorandum of Understanding to promote electrical energy transfer from the Presidente Médici Power Substation in Uruguay to Brazil's Candiota II SE in Rio Grande do Sul.[70] This partnership aims to promote energy integration while supporting renewable energy.

On 18 February 2025, the CNPE approved Brazil's participation as a member in the International Energy Agency and International Renewable Energy Agency and as a participant country in the Charter of Cooperation between Oil Producing Countries.[71] This will help Brazil advance its leadership and involvement in the energy transition.

On 18 February 2025, the CNPE approved the creation of a Working Group focused on diversifying raw materials and supporting small biofuel producers including family farms.[72] This action aims to advance clean energy across the supply chain including in the transportation sector.

On 13 March 2025, the BNDES approved a BRL241.8 million loan to support Stellantis Automóveis Brasil Ltd. in developing technologies for the production of hybrid and electric vehicles at its Betim plant.[73] This initiative will help the company develop engine technologies for the Brazilian market.

On 26 March 2025, BNDES approved BRL690 million for the construction of two wind farms.[74] The facilities will be part of the Serra do Tigre Wind Complex which has a total capacity of 756 megawatts.

On 28 March 2025, President Lula met with the President of Vietnam to announce and sign the "Action Plan for 2025-2030" which includes increased cooperation for renewable energy development and implementation.[75] This supports the diversification of renewable energy technologies as well as research partnerships in semiconductors, artificial intelligence and energy.

On 9 April, Minister of Science, Technology and Innovation Luciana Santos announced public investments for the state-owned company CEITEC.[76] CEITEC, in collaboration with the Ministry of Science, Technology

[70] Brasil e Uruguai assinam acordo para ampliar integração energética na América do Sul, Ministério de Minas e Energia (Brasília) 2 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/brasil-e-uruguai-assinam-acordo-para-ampliar-integracao-energetica-na-america-do-sul

[71] CNPE aprova engajamento do Brasil em organismos internacionais estratégicos para a transição energética, Ministério de Minas e Energia (Brasília) 18 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/cnpe-aprova-engajamento-do-brasil-em-organismos-internacionais-estrategicos-para-a-transicao-energetica

[72] CNPE cria Grupo de Trabalho para diversificar matérias-primas e incluir agricultores familiares e pequenos produtores na produção de biocombustíveis, Ministério de Minas e Energia (Brasília) 18 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/cnpe-cria-grupo-de-trabalho-para-diversificar-materias-primas-e-incluir-agricultores-familiares-e-pequenos-produtores-na-producao-de-biocombustiveis

[73] BNDES aprova R$ 241,8 mi para Stellantis desenvolver tecnologia para produção de veículos híbridos e elétricos no Brasil, Banco Nacional de Desenvolvimento Econômico e Social (Rio de Janeiro) 13 March 2025. Access Date: 16 April 2025. https://www.bndes.gov.br/wps/portal/site/home/imprensa/noticias/conteudo/bndes-aprova-r-2418-mi-para-stellantis-desenvolver-tecnologia-para-producao-de-veiculos-hibridos-e-eletricos-no-brasil/

[74] Com R$ 690 mi, BNDES financia construção de parques eólicos no RN, Banco Nacional de Desenvolvimento Econômico e Social (Rio de Janeiro) 26 March 2025. Access Date: 16 May 2025. https://www.bndes.gov.br/wps/portal/site/home/imprensa/noticias/conteudo/com-690-milhoes-de-reais-bndes-financia-construcao-de-parques-eolicos-no-rn

[75] Brasil e Vietnã oficializam Plano de Ação para o período de 2025 a 2030, Presidência da República (Hanoi) 28 March 2025. Translation provided by Google Translate. Access Date: 9 May 2025. https://www.gov.br/planalto/pt-br/acompanhe-o-planalto/noticias/2025/03/brasil-e-vietna-oficializam-plano-de-acao-para-o-periodo-de-2025-a-2030?set_language=pt-br

[76] Na Câmara dos Deputados, Ministra anuncia novidades no CEITEC e no programa Conhecimento Brasil. Ministério da Ciência, Tecnologia e Inovação (Brasília) 9 April 2025. Translation provided by Google Translate. Access Date: 10 May 2025. https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/noticias/2025/04/na-camara-dos-deputados-ministra-anuncia-novidades-no-ceitec-e-no-programa-conhecimento-brasil

and Innovation, will produce silicon carbide semiconductors. Furthermore, the investments will create a program that will incentivize Brazilian scientists abroad to return and work on silicon carbide semiconductors in Brazil.

On 15 April 2025, Minister Silveira inaugurated an innovative biofuel production unit which will produce green fuel to replace diesel. This facility will receive a BRL80 million investment for research, development and construction. In addition, Minister Silveira also announced construction for a new industrial unit which will produce up to 210 million liters of wheat ethanol per year as well as 153,200 tonnes of animal feed.[77] This facility will receive BRL1.1 billion in funding.

On 11 May 2025, Minister Silveira, China's Windey Energy Technology Group and SENAI CIMATEC signed a Memorandum of Understanding to develop energy storage, advance wind energy and green hydrogen in Brazil, promote renewable energy in rural agricultural areas and promote renewable energy within the electrical grid.[78] The two-year partnership ultimately aims to advance renewable energy and low-carbon technologies.

On 13 May 2025, Finep President Celso Pansera signed a Technical Cooperation Agreement with the Brazilian Mining Institute to provide technical and financial support for research and development in the mining sector.[79] The initiative seeks to encourage private sector investment in innovative mining projects.

On 13 May 2025, Minister Silveira and China's National Energy Administration signed an agreement to enable Brazil to access China's ethanol market.[80] This partnership is focused on bioethanol and low-carbon ethanol and involves the creation of a Bilateral Working Group on Ethanol and Sustainable Fuels to develop innovative uses for ethanol. This includes its potential to replace gasoline for transportation vehicles.

On 13 May 2025, Minister Silveira and China's National Development and Reform Commission signed an agreement to advance sustainable development in mining.[81] Aiming to support the energy transition, this partnership includes periodic meetings, workforce training and the future creation of the China-Brazil Mining Investment Alliance.

On 16 May 2025, the Ministry of Mines and Energy announced that a new transmission line with a 500-kilovolt potential has been integrated into the National Interconnected System.[82] This action aims to advance energy security, connectivity between Northeast and Southeast Brazil and enable thermoelectric and wind energy to flow from Rio de Janeiro and Espírito Santo to the rest of the country.

[77] Alexandre Silveira inaugura unidade de produção do combustível renovável que substitui o diesel, Ministério de Minas e Energia (Brasília) 15 April 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-inaugura-unidade-de-producao-do-combustivel-renovavel-que-substitui-o-diesel

[78] Ministro Alexandre Silveira assina acordo com a China para impulsionar energias renováveis e tecnologias de baixo carbono, Ministério de Minas e Energia (Brasília) 12 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/ministro-alexandre-silveira-assina-acordo-com-a-china-para-impulsionar-energias-renovaveis-e-tecnologias-de-baixo-carbono

[79] Finep e Instituto Brasileiro de Mineração (IBRAM) assinam acordo de cooperação técnica para fomentar a pesquisa, o desenvolvimento e a inovação no setor mineral, Financiadora de Estudos e Projetos (Rio de Janeiro) 14 May 2025. Translation provided by Google Translate. Access Date: 16 May 2025. http://www.finep.gov.br/noticias/todas-noticias/6962-finep-e-instituto-brasileiro-de-mineracao-ibram-acordo-de-cooperacao-tecnica-para-fomentar-a-pesquisa-o-desenvolvimento-e-a-inovacao-no-setor-mineral

[80] Alexandre Silveira assina acordo com a China para aumentar exportações do etanol brasileiro, Ministério de Minas e Energia (Brasília) 13 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-assina-acordo-com-a-china-para-aumentar-exportacoes-do-etanol-brasileiro

[81] Silveira assina plano de ação com governo chinês para desenvolver a mineração sustentável, Ministério de Minas e Energia (Brasília) 13 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/silveira-assina-plano-de-acao-com-governo-chines-para-desenvolver-a-mineracao-sustentavel

[82] Ministério de Minas e Energia (Brasília) 13 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025.

Brazil has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Brazil has taken strong action towards the combined welfare target by diversifying its supply chains for energy transitions and focusing on reliable, sustainable and responsible supply chains through domestic and international actions. It has also advanced supply chains for critical minerals and materials beneficiated at source, semiconductors and energy transition technologies.

Thus, Brazil receives a score of +1.

Analyst: Arash Aslan-Beigi

Canada: +1

Canada has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 21 November 2024, Minister of Energy and Natural Resources Jonathan Wilkinson announced CAD2.1 million in funding for the Qikiqtani Inuit Association to "purchase heavy equipment simulators dedicated to the Pond Inlet Research and Training Centre," support training Inuit Nunavummiut individuals in the natural resources industry and build meaningful partnerships with Nunavut residents.[83] As mining is one of Nunavut's biggest private sector industries, this action will help strengthen crucial critical minerals supply chains and help build a more resilient and sustainable sector.

On 28 November 2024, Minister Wilkinson announced CAD7.5 million in funding for five clean energy technology projects that aim to support the energy transition in British Columbia.[84] This includes CAD2.5 million for British Columbia Biocarbon Ltd., CAD1.8 million for Arca Climate Technologies Inc. and CAD1.5 million for the University of British Columbia.

On 2 December 2024, Canada's Minister of Export Promotion, International Trade and Economic Development of Canada Mary Ng and Indonesia's Minister of Trade Budi Santoso jointly announced the conclusion of negotiations on a comprehensive economic partnership agreement and committed to signing it in 2025.[85] The agreement includes commitments to cooperate on critical minerals, with an emphasis on developing secure and resilient critical mineral supply and value chains.

On 8 December 2024, Minister of Environment and Climate Change Steven Guilbeault and Minister of Public Safety, Democratic Institutions and Intergovernmental Affairs Dominic LeBlanc announced over CAD1 billion in investments to support New Brunswick's supply chain and ensure energy transitions are reliable and affordable.[86] These investments include up to CAD1 billion for Indigenous-led wind projects,

[83] Government of Canada Supports Increased Indigenous Participation in the Natural Resources Economy in Nunavut, Natural Resources Canada (Pond Inlet) 21 November 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/11/government-of-canada-supports-increased-indigenous-participation-in-the-natural-resources-economy-in-nunavut.html

[84] Government of Canada Takes Strides to Advance Decarbonization of Heavy-Emitting Industries in British Columbia, Natural Resources Canada (Squamish) 28 November 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/11/government-of-canada-takes-strides-to-advance-decarbonization-of-heavy-emitting-industries-in-british-columbia0.html

[85] Joint statement by the Government of the Republic of Indonesia and the Government of Canada on the conclusion of the negotiations of the Indonesia – Canada Comprehensive Economic Partnership Agreement, Government of Canada (Jakarta) 2 December 2024. Access date: 10 May 2025. https://www.international.gc.ca/country_news-pays_nouvelles/2024-12-03-indonesia-indonesie.aspx?lang=eng

[86] Powering Canada's Future: Ensuring Access to Affordable, Reliable and Clean Electricity in New Brunswick, Natural Resources Canada (Dieppe) 8 December 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/12/powering-canadas-future-ensuring-access-to-affordable-reliable-and-clean-electricity-in-new-brunswick.html

CAD25 million for the New Brunswick and Mi'kmaq First Nations' "25-megawatt Neweg Energy wind project" and CAD25 million to support pre-development for NB Power's plan to increase small modular reactor capacity by 600 megawatts. This action will support the reliability and sustainability of the supply chain and clean energy technologies.

On 13 December 2024, Member of Parliament George Chahal announced CAD215 million in funding for nine Albertan clean energy projects including a focus on solar, wind and grid infrastructure upgrades.[87] These projects will support reliable, affordable and responsible supply chains for energy transitions, increasing the clean energy capacity with for an additional 170,000 homes.

On 13 December 2024, Minister Wilkinson and the United States announced a co-investment for the Canadian mining company Fireweed Metals Corp. to support the pre-development of a "transmission line between Faro and Ross River."[88] The pre-development phase will include responsible management through consultations with First Nations groups. Natural Resources Canada will provide CAD12.9 million for this initiative through the Critical Minerals Infrastructure Fund alongside USD15.8 million from the United States.

On 19 December 2024, Member of Parliament Brendan Hanley announced CAD1.4 million in funding from the Oil to Heat Pump Affordability program and CAD287,000 from the Low Carbon Economy Fund to help reduce home energy costs for low and middle-income residents in Yukon.[89] This funding will enable maximum rebates of CAD24,000 and a CAD250 one-time payment to individuals to homeowners that "add high-efficiency heat pumps in homes currently heated with oil." This action will support supply chains for energy transitions by increasing the demand for clean energy technologies.

On 20 December 2024, Minister Wilkinson announced an investment of up to CAD20 million for Foran Mining Corporation to build a hydro transmission line.[90] This will support the electrification of the McIlvenna Bay mine as part of Canada's efforts to support a responsible supply chain for energy transitions.

On 20 December 2024, Minister Wilkinson allocated up to CAD10 million for Torngat Metals' pre-development activities regarding the construction of a 170-kilometre access road to transport rare earth elements from Nunavik, Quebec to Labrador.[91] This will help strengthen critical minerals supply chains and support energy transitions as rare earth elements are vital for clean energy.

On 7 January 2025, Member of Parliament Marcus Powlowski announced over CAD11 million to strengthen Canada's clean and alternative energy sectors.[92] This funding will be divided between eight projects to support reliable and sustainable supply chains for the energy transition.

[87] Powering Canada's Future: More Renewable, Affordable and Reliable Power for Albertans, Natural Resources Canada (Calgary) 13 December 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/12/powering-canadas-future-more-renewable-affordable-and-reliable-power-for-albertans.html

[88] Canada and United States Co-Invest to Unlock Critical Minerals Development in Yukon, Natural Resources Canada (Ottawa) 13 December 2024. Access Date: 4 May 2025. Canada and United States Co-Invest to Unlock Critical Minerals Development in Yukon

[89] New Investments to Help Yukoners Reduce Energy Costs and Stay Warm, Natural Resources Canada (Whitehorse) 19 December 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/12/new-investments-to-help-yukoners-reduce-energy-costs-and-stay-warm.html

[90] Canada Invests in Infrastructure Upgrades to Support Critical Minerals Development in Saskatchewan, Natural Resources Canada (Saskatoon) 20 December 2024. Access Date: 4 May 2025.

[91] Canada to Unlock Critical Minerals Rare Earth Development in Northern Quebec and Labrador With New Funding, Natural Resources Canada (Montreal) 20 December 2024. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2024/12/canada-to-unlock-critical-minerals-rare-earth-development-in-northern-quebec-and-labrador-with-new-funding.html

[92] Federal Government Invests in Made-in-Canada Technologies to Advance Clean Fuels Sector, Natural Resources Canada (Fort Frances) 7 January 2025. Access Date: 4 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/01/federal-government-invests-in-made-in-canada-technologies-to-advance-clean-fuels-sector0.html

On 6 February 2025, Minister Wilkinson announced CAD43.5 million for critical minerals projects in Quebec.[93] The funding will support six projects focused on the development and transportation of critical minerals. Up to CAD39.8 million will be invested for these initiatives alongside CAD3.7 million for the recovery of lithium from "spodumene ore."

On 12 February 2025, Parliamentary Secretary Marc Serré announced CAD14.2 million for carbon capture and storage.[94] This supports investment in energy transition technologies.

On 13 February 2025, Minister Wilkinson announced that Canada has joined the Global Offshore Wind Alliance in addition to the Governments of Nova Scotia and Newfoundland and Labrador.[95] This action demonstrates Canada's commitment towards offshore wind energy generation as part of the energy transition.

On 24 February 2025, Canada announced CAD500,000 in funding for Phase Two of the Global Initiative for Transitioning Remote Communities to Renewable Energy.[96] In partnership with the International Renewable Energy Agency, phase two will focus on helping remote communities develop ways to transition towards reliable, sustainable and affordable clean energy.

On 3 March 2025, Minister Wilkinson announced the extension of the 15 per cent Mineral Exploration Tax Credit and CAD500 million funding for the Critical Minerals Infrastructure Fund.[97] This funding will be given to projects that develop "energy and transportation infrastructure" to increase access to Canadian critical minerals.

On 5 March 2025, Minister Wilkinson and Argentina's Secretary of Mining Luis Lucero of signed an agreement to collaborate on critical minerals and mining sustainability.[98] This partnership aims to facilitate sustainable investment in the mining sector and support global supply chain integration.

On 5 March 2025, Minister Wilkinson announced several investments for nuclear energy as part of Canada's commitment towards the clean energy transition and facilitating a low-carbon economy.[99] This includes a CAD304 million agreement with AtkinsRéalis to develop a "natural uranium–fuelled Canadian deuterium uranium" (CANDU) nuclear reactor, CAD55 million for Ontario Power Generation's Darlington New Nuclear Project which aims to develop three new small modular reactors (SMRs) that produce no greenhouse gases during use and CAD52.4 million for other SMR and CANDU reactor projects that advance decarbonization in Saskatchewan, Alberta and Ontario.

[93] Canada Invests in Quebec's Critical Minerals Sector to Create Jobs and a Strong Economy, Natural Resources Canada (Montreal) 6 February 2025. Access Date: 16 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/02/canada-invests-in-quebecs-critical-minerals-sector-to-create-jobs-and-a-strong-economy0.html

[94] Canada Invests in Cutting-Edge Carbon Capture and Storage to Drive Clean Energy Innovation, Natural Resources Canada (Toronto) 12 February 2025. Access Date: 15 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/02/canada-invests-in-cutting-edge-carbon-capture-and-storage-to-drive-clean-energy-innovation0.html

[95] Government of Canada Joins Global Efforts to Accelerate the Deployment of Offshore Wind and Help Power Canada's Economy¸ Natural Resources Canada (Halifax) 13 February 2025. Access Date: 23 June 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/02/government-of-canada-joins-global-efforts-to-accelerate-the-deployment-of-offshore-wind-and-help-power-canadas-economy.html

[96] Canada Invests in Phase 2 of the Global Initiative on Transitioning Remote Communities to Renewable Energy, Natural Resources Canada (Ottawa) 24 February 2025. Access Date: 23 June 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/02/canada-invests-in-phase-2-of-the-global-initiative-on-transitioning-remote-communities-to-renewable-energy.html

[97] Investing to Make Canada a Global Critical Minerals Superpower, Natural Resources Canada (Toronto) 3 March 2025. Access Date: 15 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/03/investing-to-make-canada-a-global-critical-minerals-superpower0.html

[98] Economía firmó un acuerdo sobre minerales críticos con el ministerio de Recursos Naturales de Canadá, Ministerio de Economía (Buenos Aires) 5 March 2025. Translation provided by Google Translate. Access Date: 16 May 2025. https://www.argentina.gob.ar/noticias/economia-firmo-un-acuerdo-sobre-minerales-criticos-con-el-ministerio-de-recursos-naturales

[99] Canada Invests in the Next Generation of Canadian-Made, Clean, Affordable Nuclear Energy, Natural Resources Canada (Cambridge) 5 March 2025. Access Date: 23 June 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/03/canada-invests-in-the-next-generation-of-canadian-made-clean-affordable-nuclear-energy0.html

On 18 March 2025, Natural Resources Canada announced CAD11 million to support clean energy projects in Indigenous communities.[100] This supports Canada's commitment to use responsible energy transition technologies.

Canada has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Canada has taken strong action towards the combined welfare target of supporting reliable, diversified, sustainable and responsibly supply chains for energy transitions through investments in clean energy projects and mining transportation projects. It has also taken strong action to strengthen supply chains for critical minerals and clean energy technologies.

Thus, Canada receives a score of +1.

Analysts: Ana Grace Rans Kolakovic and Erfan Ehsan

China: 0

China has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 29 November 2024, China's Sinoma EC International Investment and Uzbekistan's Ministry of Investment, Industry and Trade signed an investment agreement for a solar power plant in Uzbekistan.[101] The agreement also includes the construction of an energy storage plant.

On 30 November 2024, the Electricity Council released a new bluebook that promises to establish a framework for a national unified power market by 2029.[102] The plan includes the inclusion of hydropower and nuclear power in the market. In addition, it claims that 50 per cent of renewable energy will be integrated by 2025.

On 6 February 2025, China and Pakistan released a joint statement on cooperation on geological surveys for mining.[103] The governments shared their support of Chinese investment in Pakistan's mining industry and offshore oil and gas projects.

On 17 February 2025, the Ministry of Industry and Information Technology shared a new action plan dedicated to the energy storage manufacturing sector.[104] This includes upgrading lithium batteries, new technological innovations and energy storage methods.

On 27 February 2025, China and Laos celebrated the launch ceremony of the China-Laos power interconnection project.[105] This project will advance the transmission of clean electricity between China and

[100] Government of Canada Announces Funding for Clean and Reliable Energy in First Nations and Inuit Communities, Natural Resources Canada (Thunder Bay) 18 March 2025. Access Date: 15 May 2025. https://www.canada.ca/en/natural-resources-canada/news/2025/03/government-of-canada-announces-funding-for-clean-and-reliable-energy-in-first-nations-and-inuit-communities0.html

[101] Sinoma EC International will build a solar power plant in Uzbekistan, the Government Portal of the Republic of Uzbekistan (Toshkent) 29 November 2024. Access Date: 29 March 2025. https://gov.uz/en/miit/news/view/28981

[102] China on track for unified power market, the State Council People's Republic of China (Beijing) 30 November 2024. Access Date: 29 March 2025. https://english.www.gov.cn/news/202411/30/content_WS674a7eacc6d0868f4e8ed8de.html

[103] Full Text: Joint Statement between the People's Republic of China and the Islamic Republic of Pakistan, the State Council People's Republic of China (Beijing) 6 February 2025. Access Date: 29 March 2025. https://english.www.gov.cn/news/202502/06/content_WS67a46355c6d0868f4e8ef66f.html

[104] Govt policy moves from past week, the State Council People's Republic of China (Beijing) 27 February 2025. Access Date: 29 March 2025. https://english.www.gov.cn/policies/policywatch/202502/27/content_WS67bfc56cc6d0868f4e8f0088.html

[105] Construction begins on Lao section of China-Laos 500 kV power interconnection project, Belt and Road Portal (Vientiane) 28 February 2025. Access Date: 29 March 2025. https://eng.yidaiyilu.gov.cn/p/01FAKKRM.html

Laos. The project is part of the larger China-Laos Economic Corridor and will strengthen energy cooperation.

On 27 March 2025, the Ministry of Ecology and Environment announced that steel, cement and electrolytic aluminum industries will be included in the carbon trading market.[106] This will allow for the promotion of the green transition within major industries, which covers 60 per cent of China's total carbon emissions.

On 12 April 2025, Vice Minister of Industry and Information Technology Xin Guobin and the United Kingdom Minister of State for Trade Policy and Economic Security Douglas Alexander discussed deepening China-UK industrial cooperation for artificial intelligence, digital economy and green energy.[107] The talks demonstrate a step in strengthening cooperation for energy transition technologies.

On 18 April 2025, Minister of Industry and Information Technology Li Leheng and the United Arab Emirates Minister of Industry and Advanced Technology Sultan Al Jaber furthered cooperation in renewable energy, artificial intelligence, technical equipment and photovoltaic projects.[108] This cooperation enhances China's commitment to diversified and reliable supply chains for the energy transition.

On 29 April 2025, President Xi Jinping visited the Shanghai "Model Space" where he highlighted the importance of funding technological innovation, artificial intelligence and enhancing China's position as a global leader.[109]

On 11 May 2025, China's Windey Energy Technology Group, SENAI CIMATEC and Brazil's Minister of Mines and Energy Alexandre Silveira signed a Memorandum of Understanding to develop energy storage, advance wind energy and green hydrogen in Brazil, promote renewable energy in rural agricultural areas and promote renewable energy within the electrical grid.[110] The two-year partnership ultimately aims to advance renewable energy and low-carbon technologies.

On 13 May 2025, the National Energy Administration and Minister Silveira signed an agreement to enable Brazil to access China's ethanol market.[111] This partnership is focused on bioethanol and low-carbon ethanol and involves the creation of a Bilateral Working Group on Ethanol and Sustainable Fuels to develop innovative uses for ethanol. This includes its potential to replace gasoline for transportation vehicles.

On 13 May 2025, the National Development and Reform Commission and Minister Silveira signed an agreement to advance sustainable development in mining.[112] Aiming to support the energy transition, this

[106] Three additional industries added to carbon trading market, the State Council People's Republic of China (Beijing) 27 March 2025. Access Date: 29 March 2025. https://english.www.gov.cn/news/202503/27/content_WS67e508a1c6d0868f4e8f13a1.html
[107] 辛国斌会见英国商业贸易部国务大臣道格拉斯·亚历山大, 国际合作司、办公厅、工信微报 (Beijing) 12 April 2025. Translation provided by Google Translate. Access Date: 18 May 2025.
https://www.miit.gov.cn/xwfb/bldhd/art/2025/art_5cf485364cd24447aca9634f21fb57ef.html
[108] 李乐成会见阿联酋工业与先进技术部部长苏尔坦, 国际合作司、办公厅、工信微报(Beijing) 18 April 2025. Translation provided by Google Translate. Access Date: 18 May 2025.
https://www.miit.gov.cn/xwfb/bldhd/art/2025/art_17fce8041daa479394ba069465632cd4.html
[109] 习近平在上海考察时强调：加快建成具有全球影响力的科技创新高地, 新华社 (Shanghai) 29 April 2025. Translation provided by Google Translate. Access Date: 18 May 2025.
https://www.miit.gov.cn/xwfb/szyw/art/2025/art_559a1af7f4e84eb99867da5f5b59bf2f.html
[110] Ministro Alexandre Silveira assina acordo com a China para impulsionar energias renováveis e tecnologias de baixo carbono, Ministério de Minas e Energia (Brasília) 12 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025.
https://www.gov.br/mme/pt-br/assuntos/noticias/ministro-alexandre-silveira-assina-acordo-com-a-china-para-impulsionar-energias-renovaveis-e-tecnologias-de-baixo-carbono
[111] Alexandre Silveira assina acordo com a China para aumentar exportações do etanol brasileiro, Ministério de Minas e Energia (Brasília) 13 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/alexandre-silveira-assina-acordo-com-a-china-para-aumentar-exportacoes-do-etanol-brasileiro
[112] Silveira assina plano de ação com governo chinês para desenvolver a mineração sustentável, Ministério de Minas e Energia (Brasília) 13 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.gov.br/mme/pt-br/assuntos/noticias/silveira-assina-plano-de-acao-com-governo-chines-para-desenvolver-a-mineracao-sustentavel

partnership includes periodic meetings, workforce training and the future creation of the China-Brazil Mining Investment Alliance.

China has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. China has taken strong action towards the combined welfare target and to support supply chains for energy transition technologies through projects for energy storage and renewable energy including investing in a solar power plant and energy storage plant in Uzbekistan, cooperating for clean electricity between China and Laos and partnering with Brazil. However, China has not taken strong action to support supply chains for critical minerals or semiconductors.

Thus, China receives a score of 0.

Analyst: Michelle Kim

France: +1

France has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 20 November 2024, Proparco and the German Investment and Development Company announced a EUR115 million green loan to support Turkish power producer Enerjisa Enerji Üretim A.Ş. in its clean energy transition.[113] This financing will enable Enerjisa "to develop nine onshore wind power plants with a combined capacity of 750" megawatts (MW), helping to advance renewable energy capacity in the country. Proparco will provide EUR75 million for this project with EUR40 million provided by the German Investment and Development Company.

On 1 December 2024, France's Inter-Ministerial delegate for Critical Ores and Metals Benjamin Gallezot and Nigeria's Minister of Solid Minerals Dele Alake signed a Memorandum of Understanding on critical minerals.[114] The memorandum includes joint projects to diversify and secure the critical minerals supply chain, promote sustainable mining and decarbonize the energy sector in both countries.

On 27 December 2024, the Ministry of the Economy announced the results of a competitive tender for the construction and operation of two floating offshore wind farms in the Mediterranean.[115] Two winning bids were selected to develop 250 MW projects off the coast of Narbonais and Golfe de Fos.

On 16 January 2025, the Ministry of the Economy announced its selection of a winning tender to develop a biomethane production facility and reiterated its commitment to accelerating national biomethane production.[116] The facility will produce 36 gigawatt hours of energy per year.

[113] En Turquie, Proparco soutient Enerjisa dans sa stratégie verte, Proparco (Paris) 20 November 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.proparco.fr/fr/actualites/en-turquie-proparco-soutient-enerjisa-dans-sa-strategie-verte

[114] Nigeria, France sign MOU on critical minerals, Premium Times (Abuja) 1 December 2024. Access Date: 23 June 2025. https://www.premiumtimesng.com/news/top-news/758254-nigeria-france-sign-mou-on-critical-minerals.html?tztc=1

[115] Construction et l'exploitation de deux parcs éoliens en mer flottants : les deux lauréats de l'appel d'offres désignés, Ministère de l'Économie, des Finances et de la Souveraineté Industrielle et Numérique (Paris) 27 December 2024. Translation provided by Google Translate. Access Date: 16 April 2025. https://presse.economie.gouv.fr/construction-et-lexploitation-de-deux-parcs-eoliens-en-mer-flottants-les-deux-laureats-de-lappel-doffres-designes/

[116] Résultats de l'appel d'offres « biométhane injecté » et lancement d'une concertation sur la mise en œuvre du dispositif de certificats de production de biogaz, Ministère de l'Économie, des Finances et de la Souveraineté Industrielle et Numérique (Paris) 16 January 2025. Translation provided by Analyst. Access Date: 16 April 2025. https://presse.economie.gouv.fr/resultats-de-lappel-doffres-biomethane-injecte-et-lancement-dune-concertation-sur-la-mise-en-oeuvre-du-dispositif-de-certificats-de-production-de-biogaz/

On 23 January 2025, Proparco announced EUR500,000 in funding for Netis, a telecommunications company developing hydrogen-based electricity production equipment.[117] This funding will enable Netis to test this clean energy solution which aims to reduce the carbon footprint.

On 5 February 2025, the French Development Agency (AFD), European Union, Indonesian Ministry of Energy and Mineral Resources and the National Electricity Company launched the 2025-2030 Indonesia Energy Transition Facility, under the Just Energy Transition Partnership Framework.[118] This project will focus on developing and implementing renewable energy and transmission projects and ensuring appropriate public policies for the energy transition. The AFD will provide EUR4.1 million for this initiative and the EU will provide EUR10.6 million.

On 10 February 2025, the AFD and Watt for Change Foundation signed a three-year partnership agreement whereby France will provide EUR860,000 in funding to support access to energy in Benin, Mauritania and Madagascar.[119] The funding will be divided amongst French associations aiming to advance projects for solar pumping, clean cooking methods and other needs.

On 14 February 2025, France signed a new strategic sector contract for the "New Energy Systems" industry, covering the period 2024–2027.[120] Under this initiative, France is partnering with industry actors to develop industries related to the energy transition, with plans to study heat recovery technologies, energy flexibility and alternative fuels.

On 2 March 2025, France initiated a public consultation on the third Multiannual Energy Program for the 2025–2035 period, which remained open until 5 April 2025.[121] The draft plan sets ambitious targets for offshore wind and marine renewable energy development, aiming to reduce dependence on fossil fuels and transition to a decarbonized energy mix.

On 26 March 2025, Proparco, the German Investment and Development Company and Standard Charter announced USD60 million in joint financing for Indonesia's Saguling floating solar photovoltaic power plant under the Just Energy Transition Partnership.[122] Once complete, the plant will support the energy transition by decreased Indonesia's carbon emissions by 63,100 tonnes per year and increasing solar electricity generation in the country by 13 per cent.

[117] Avec le soutien de Proparco, NETIS expérimente une solution de production d'énergie à base d'hydrogène dédiée aux acteurs télécoms en Afrique subsaharienne, Proparco (Paris) 23 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.proparco.fr/fr/actualites/avec-le-soutien-de-proparco-netis-experimente-une-solution-de-production-denergie-base

[118] La France et l'UE renforcent leur partenariat avec l'Indonésie pour accélérer la transition énergétique, Agence Française de Développement (Paris) 5 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.afd.fr/fr/actualites/communique-de-presse/la-france-et-lue-renforcent-leur-partenariat-avec-lindonesie-pour-accelerer-la-transition-energetique

[119] La Fondation Watt For Change et l'Agence Française de Développement (AFD) s'engagent pour financer trois projets de développement en Afrique grâce aux énergies vertes, Agence Française de Développement (Paris) 10 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.afd.fr/fr/actualites/communique-de-presse/la-fondation-watt-change-et-lagence-francaise-de-developpement-afd-sengagent-pour-financer-trois-projets-de-developpement-en-afrique-grace-aux-energies-vertes

[120] Nouveaux systèmes énergétiques : un nouveau contrat stratégique de filière au service du développement d'industries clefs pour la transition, Ministère de l'Économie, des Finances et de la Souveraineté Industrielle et Numérique (Paris) 14 February 2025. Translation provided by Google Translate. Access Date: 16 April 2025. https://presse.economie.gouv.fr/nouveaux-systemes-energetiques-un-nouveau-contrat-strategique-de-filiere-au-service-du-developpement-dindustries-clefs-pour-la-transition/

[121] France defines its energy roadmap until 2035: Offshores wind and the transition to a decarbonized mix, Strategic Energy Europe (Paris) 12 March 2025. Translation provided by Google Translate. Access Date: 5 May 2025. https://strategicenergy.eu/france-defines-its-energy-roadmap-until-2035-offshore-wind-and-the-transition-to-a-decarbonized-mix/

[122] Le premier projet solaire du JETP Indonésien mobilise 60 millions de dollars US, Proparco (Paris) 2 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.proparco.fr/fr/actualites/le-premier-projet-solaire-du-jetp-indonesien-mobilise-60-millions-de-dollars-us

On 15 April 2025, France published an updated version of its National Hydrogen Strategy.[123] New measures include a EUR4 billion support mechanism for low-carbon hydrogen production, government support for the development of hydrogen technologies across the supply chain, support for the deployment of hydrogen-powered vehicles and support for studies on synthetic fuel. France also announced that it will support two energy and industry sector decarbonization projects and a value chain development project aimed at producing low-carbon hydrogen.

On 12 May 2025, the AFD Group and Office Chérifien des Phosphates (OCP) Group announced a EUR350 million financing agreement to support the OCP Group in transitioning towards 100 per cent renewable energy by 2027.[124] Additionally, this funding will enable the group to produce and promote decarbonized fertilizers, develop green hydrogen and green ammonia and increase clean energy and non-conventional water production. This partnership aims to support Morocco's low-carbon transition and promote sustainable agriculture in Africa.

France has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. France has taken strong action towards the combined welfare target through the New Energy Systems contract, funding for access to energy projects in Benin, Mauritania and Madagascar and new measures announced via the updated National Hydrogen Strategy. It has also supported supply chains for energy transition technologies and critical minerals through its partnership with Nigeria to diversify critical minerals, funding for Indonesia's clean energy transition and solar plant, funding for Netis and green loan to Enerjisa.

Thus, France receives a score of +1.

Analyst: Eszter Réti

Germany: 0

Germany has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 20 November 2024, the German Investment and Development Company and France's Proparco announced a EUR115 million green loan to support Turkish power producer Enerjisa Enerji Üretim A.Ş. in its clean energy transition.[125] This financing will enable Enerjisa "to develop nine onshore wind power plants with a combined capacity of 750" megawatts (MW), helping to advance renewable energy capacity in the country. Proparco will provide EUR75 million for this project with EUR40 million provided by the German Investment and Development Company.

[123] Stratégie nationale hydrogène (SNH II) : Le Gouvernement publie sa mise à jour, Ministère de l'Économie, des Finances et de la Souveraineté Industrielle et Numérique (Paris) 15 April 2025. Translation provided by Google Translate. Access Date: 16 April 2025. https://presse.economie.gouv.fr/strategie-nationale-hydrogene-snh-ii-le-gouvernement-publie-sa-mise-a-jour/
[124] OCP Group and AFD Group formalize their strategic partnership in support of Morocco's low-carbon transition and the development of sustainable and inclusive agriculture, OCP Group (Casablanca) 12 May 2025. Access Date: 23 June 2025. https://www.ocpgroup.ma/press-release-article/ocp-group-and-afd-group-formalize-their-strategic-partnership-support
[125] En Turquie, Proparco soutient Enerjisa dans sa stratégie verte, Proparco (Paris) 20 November 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.proparco.fr/fr/actualites/en-turquie-proparco-soutient-enerjisa-dans-sa-strategie-verte

On 4 December 2024, Federal Cabinet adopted the National Circular Economy Strategy which aims to secure raw materials, such as critical minerals, supply chains.[126] One tactic is to increase recycling capacity, which would enable the creation of "secondary raw materials."

On 11 December 2024, the Federal Cabinet approved amendments to the 2023 Renewable Energy Sources Act to increase flexibility for use and funding for biogas plants.[127] This aims to ensure the full potential of bioenergy.

On 2 January 2025, the government-owned KfW Development Bank, announced a EUR100 million loan to Chile's economic development agency to bolster Chile's green hydrogen economy, on behalf of the Ministry for Economic Affairs and Climate Action.[128] This funding will be used for the production and use of green hydrogen across Chile's entire value chain. This loan is part of the European Global Gateway Renewable Hydrogen Funding platform which finances public and private investments for renewable hydrogen.

On 21 January 2025, Germany, Italy, Austria, Algeria and Tunisia signed a Joint Declaration of Intent to develop the Southern Hydrogen Corridor.[129] This initiative aims to establish a 3,500-4,000-kilometre pipeline transporting renewable hydrogen from North Africa to Europe and is expected to deliver up to 163 terawatt-hours of hydrogen annually to Europe.

On 3 February 2025, Minister of Finance Jörg Kukies met with Saudi Minister of Energy Abdulaziz bin Salman to discuss cooperation in the energy sector and particularly clean hydrogen.[130] Following the meeting, the Ministers witnessed the signing of the "Saudi-German Green Hydrogen Bridge" Memorandum of Understanding between ACWA Power and SEFE, under which the companies will jointly develop projects for the development and export of green hydrogen from Saudi Arabia to Europe.

On 12 February 2025, Germany announced joint initiatives with the African Development Bank to accelerate energy access across Africa.[131] The initiatives include increasing funding for renewable energy projects and supporting regional power integration programs.

On 13 February 2025, the Ministry for Economic Cooperation and Development announced funding to support green hydrogen production in Morocco, through its PtX Development Fund.[132] PtX will provide a EUR30 million grant to support the construction of a green hydrogen plant which is expected to reduce

[126] Federal Cabinet adopts National Circular Economy Strategy, Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (Berlin) 4 December 2024. Access Date: 26 August 2025. https://www.bundesumweltministerium.de/en/pressrelease/federal-cabinet-adopts-national-circular-economy-strategy

[127] Die Bundesregierung hat heute die Änderungen energierechtlicher Vorschriften beschlossen, Bundesministerium für Wirtschaft und Energie (Berlin) 11 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Pressemitteilungen/2024/12/20241211-aenderungen-energierechtlicher-vorschriften.html

[128] Leveraging extraordinary potential for green hydrogen: KfW supports Chile in mobilising private investment, KfW (Frankfurt) 2 January 2025. Access Date: 14 August 2025. https://www.kfw.de/About-KfW/Newsroom/Latest-News/Pressemitteilungen-Details_833344.html

[129] Joint political declaration of intent to develop the Southern Hydrogen Corridor, Bundesministerium für Wirtschaft und Energie (Rome) 21 January 2025. Access Date: 16 April 2025. https://www.bmwk.de/Redaktion/EN/Pressemitteilungen/2025/01/20250121-joint-political-declaration-of-intent-develop-southern-hydrogen-corridor.html

[130] Saudi Energy Minister and German Finance Minister Witness Signing of the 'Saudi-German Green Hydrogen Bridge' MoU between ACWA Power and SEFE, Saudi Press Agency (Riyadh) 3 February 2025. Access Date: 20 May 2025. https://www.spa.gov.sa/en/N2254675

[131] African Development Bank and Germany announce major initiatives on energy access and private sector development, African Development Bank (Abidjan) 12 February 2025. Access Date: 21 May 2025. https://www.afdb.org/en/news-and-events/press-releases/african-development-bank-and-germany-announce-major-initiatives-energy-access-private-sector-development-80896

[132] Deutschland unterstützt Einstieg in grüne Wasserstoffproduktion in Marokko mit Investition in nachhaltige Düngerherstellung, Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (Berlin) 13 February 2025. Translation provided by Google Translate. Access Date: 16 April 2025. https://www.bmz.de/de/aktuelles/archiv-aktuelle-meldungen/einstieg-gruene-wasserstoffproduktion-marokko-247346

carbon emissions by 300,000 tonnes per year by producing 100,000 tonnes of green ammonia to be used for climate-friendly fertilizers.

On 25 March 2025, the Ministry for Economic Affairs and Energy announced that the KfW Development Group is providing EUR172 million in financing as the first installment for the construction of a hydrogen core network.[133] Once complete, the network will extend 9,040 kilometres and support a climate-neutral transition.

On 26 March 2025, the German Investment and Development Company, Proparco and Standard Charter announced USD60 million in joint financing for Indonesia's Saguling floating solar photovoltaic power plant under the Just Energy Transition Partnership.[134] Once complete, the plant will support the energy transition by decreased Indonesia's carbon emissions by 63,100 tonnes per year and increasing solar electricity generation in the country by 13 per cent.

On 11 April 2025, the Ministry for Economic Affairs and Climate Protection announced the opening of a green hydrogen plant to produce carbon dioxide-free iron in Namibia.[135] The plant will reduce 20,000 tonnes of carbon emissions per year and produce 15,000 tonnes of green iron per year. Germany provided EUR13 million for this project.

On 29 April 2025, DEG, the German Investment and Development Company, Proparco and Standard Charter announced USD60 million in funding for ACWA Power and Indonesia Power Renewables' floating solar photovoltaic project.[136] As the first solar initiative under the Just Energy Transition Partnership, it will reduce Indonesia's annual carbon dioxide levels and boost solar power capacity, supporting diversified supply chains and sustainable development.

On 7 May 2025, KfW announced EUR27 million in financing to Siemens, a German electronics company and Pakistan's National Grid Company to build a transformer substation in Pakistan's Gharo Wind Corridor.[137] The substation will enable the energy created from the wind corridor to be fed into power grids.

Germany has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Germany has taken steps to support reliable, diversified, sustainable and responsible supply chains for energy transitions and strengthened supply chains for renewable hydrogen. However, it has not taken strong action with regards to critical minerals or semiconductor supply chains.

Thus, Germany receives a score of 0.

Analyst: Henri Hopkins

[133] Finanzierung des Wasserstoff-Kernnetzes: Die erste Auszahlung an die Wasserstoff-Kernnetzbetreiber aus dem Amortisationskonto ist erfolgt, Bundesministerium für Wirtschaft und Energie (Berlin) 23 March 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Pressemitteilungen/2025/20250324-finanzierung-des-wasserstoff-kernnetzes-erste-auszahlung-ist-erfolgt.html

[134] Le premier projet solaire du JETP Indonésien mobilise 60 millions de dollars US, Proparco (Paris) 2 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.proparco.fr/fr/actualites/le-premier-projet-solaire-du-jetp-indonesien-mobilise-60-millions-de-dollars-us

[135] Vom Bundesministerium für Wirtschaft und Klimaschutz gefördertes Wasserstoffprojekt Oshivela/HyIron in Namibia eröffnet, Bundesministerium für Wirtschaft und Energie (Berlin) 11 April 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Pressemitteilungen/2025/20250411-vom-bundesministerium-fuer-wirtschaft-und-klimaschutz-gefoerdertes-wasserstoffprojekt-oshivela-hyIronin-namibia-eroeffnet.html

[136] DEG finanziert erstmals schwimmendes Solarvorhaben in Indonesien, DEG (Cologne) 29 April 2025. Translation provided by Google Translate. Access Date: 14 August 2025. https://www.deginvest.de/Newsroom/News/News-Details_847553.html

[137] Saubere Energie für Pakistan mit deutscher Spitzentechnologie, KfW (Frankfurt) 10 July 2025. Translation provided by Google Translate. Access Date: 14 August 2025. https://www.kfw-entwicklungsbank.de/%C3%9Cber-uns/News/News-Details_857280.html

India: +1

India has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and energy transition technologies.

On 6 December 2024, India's International Solar Alliance and the United States Agency for International Development signed a Memorandum of Understanding (MoU) to advance grid interconnection.[138] This partnership seeks to expand the use of renewable energy and strengthen energy interconnections across regions, supporting the development of a unified grid. These initiatives will enhance the sustainability and reliability of energy transition technologies.

On 20 January 2025, the Ministry of Mines and the Government of Odisha hosted the third National Mines Ministers' Conference at Konark, Odisha.[139] The conference focused on fostering collaboration to ensure efficient, safe and eco-friendly mining operations countrywide aligning with the 2030 Sustainable Development Goals.

On 29 January 2025, the Cabinet approved the launch of the National Critical Mineral Mission with an expenditure of INR163 billion and an expected investment of INR18 billion by Public Sector Undertakings, for a period of seven years from 2024-25 to 2030-31.[140] The mission aims to build a resilient value chain for critical mineral resources vital to green technologies, encompassing all stages including exploration, processing and recycling. This will enhance the sustainability and responsibility of supply chains for critical minerals.

On 1 February 2025, Minister of Finance Nirmala Sitharaman proposed amendments to the Atomic Energy Act and the Civil Liability for Nuclear Damage Act to encourage private and foreign investment in India's nuclear sector.[141] These legislative changes aim to facilitate the development of small modular nuclear reactors, contributing to the diversification and reliability of India's energy supply chains.

On 4 February 2025, Minister of Coal and Mines Kishan Reddy met with Saudi Arabia's Minister of Industry and Mineral Resources Bandar Ibrahim Alkhorayef to discuss cooperation for critical minerals.[142] The ministers discussed the need for reliable critical minerals supply chains and discussed potential cooperation for critical minerals to support the energy transition.

On 13 February 2025, Minister of Petroleum and Natural Gas Hardeep Singh Puri announced several MoUs signed by India to advance energy security and sustainable and diversified supply chains for energy and the oil and gas sector.[143] These include an MoU between India's International Oil and Natural Gas Corporation and Petrobras to advance oil and gas projects focused on low-carbon solutions and diversifying the sector in Brazil, India and other developing countries and an MoU for "hydrocarbon exploration in India's deep and ultra-deep offshore basins."

[138] The United States Agency for International Development and International Solar Alliance Sign MOU to Advance Grid Interconnection, U.S. Embassy and Consulates in India (New Delhi) 6 December 2024. Access Date: 29 March 2025. https://in.usembassy.gov/the-united-states-agency-for-international-development-and-international-solar-alliance-sign-mou-to-advance-grid-interconnection

[139] 3rd National Mines Ministers' Conference held at Konark, Odisha today, Press Information Bureau (New Delhi) 20 January 2025. Access Date: 29 March 2025. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2094308

[140] Cabinet approves launch of National Mineral Exploration Mission, Press Information Bureau (New Delhi) 29 January 2025. Access Date: 29 March 2025. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2097309

[141] Union Budget 2025 calls for 'active private partnership' in guarded nuclear sector, Hindustan Times (New Delhi) 1 February 2025. Access Date: 19 May 2025. https://www.hindustantimes.com/business/union-budget-2025-calls-for-active-private-partnership-in-guarded-nuclear-sector-101738405796088.html

[142] Union Minister Shri G. Kishan Reddy Meets Saudi Minister to Strengthen Cooperation in Critical Minerals Sector, Ministry of Mines (New Delhi) 4 February 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2099793

[143] India Strengthens Global Energy Partnerships at India Energy Week 2025, Ministry of Petroleum and Natural Gas (New Delhi) 13 February 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2102887

On 13 February 2025, United States President Donald Trump hosted Prime Minister Narendra Modi for an Official Working Visit in Washington D.C. where a Strategic Mineral Recovery initiative was launched. The initiative is a new US-India cooperative program to recover and process critical minerals including lithium, cobalt and rare earths from heavy industries like aluminum, coal mining and oil and gas.[144] President Trump and Prime Minister Modi also re-committed to the US-India Energy Security Partnership, including in oil, gas and civil nuclear energy.

On 15 February 2025, Minister of State for Coal and Mines Satish Chandra Dubey met with Sri Lanka's Minister of Industry and Entrepreneurship Development Sunil Handunnetti to discuss the finalization of a MoU on cooperation in the mineral resources.[145] Their discussion included Sri Lanka's graphite and beach sand mineral resources, India's National Critical Mineral Mission and the energy transition.

On 19 February 2025, Minister Reddy met with the Governor of Caramarca, Argentina Raúl Alejandro Jalil in New Delhi to discuss lithium and mineral cooperation.[146] During the meeting, an MoU was signed between the Mineral Exploration and Consultancy Limited and the Catamarca provincial government to accelerate lithium exploration projects, enhance resource security and create new opportunities for Indian companies in the Latin American mining sector.

On 25 March 2025, the fifth India–Africa Strategic Dialogue convened to explore synergies between India's Critical Minerals Mission and the African Green Minerals Strategy.[147] Building on momentum from India's G20 presidency and the African Union's inclusion as a permanent member, the dialogue emphasized the importance of equitable partnerships. One session highlighted the need for India and African nations to integrate social responsibility into critical mineral extraction.

On 1 April 2025, Prime Minister Modi issued a joint statement with Chile's President Gabriel Boric to accelerate collaboration in exploration, mining and processing along with research and development to promote investment across the entire critical mineral value chain for mutual benefit.[148] This is aimed at strengthening the critical mineral supply chain as Chile is the world's largest producer of copper and second-largest producer of lithium. This supports the combined welfare target of a reliable supply chain for energy transition.

On 8 April 2025, the Ministry of Coal signed two Coal Mine Development and Production Agreements with Marwatola-II and Namchik West, respectively.[149] These agreements aim to advance domestic coal production and self-reliance by exploring coal mines.

On 25 April 2025, the Council of Scientific and Industrial Research's Institute of Minerals and Materials Technology signed two Joint Declarations of Intent with Russia's State Research and Design Institute of the

[144] India-U.S. Bilateral Relations Brief, Embassy of India, Washington, D.C. (Washington D.C.) March 2025. Access Date: 19 May 2025. https://indianembassyusa.gov.in/pdf/menu/Brief_Bilateral_March_2025.pdf

[145] India and Sri Lanka Strengthen Ties in Critical Minerals, Exploration, and Mining, Ministry of Mines (New Delhi) 15 February 2025. Access Date: 19 May 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2103502

[146] India and Argentina Strengthen Cooperation in Lithium Exploration and Mining with a MoU, Ministry of Mines (New Delhi) 19 February 2025. Access Date: 19 May 2025. https://mines.gov.in/admin/storage/ckeditor/Press_Release_Press_Information_Bureau_1740394343.pdf

[147] India and Africa: Partnership in the Next Decade, Manohar Parrikar Institute for Defence Studies and Analyses (New Delhi) 25 March 2025. Access Date: 19 May 2025. https://www.idsa.in/wp-content/uploads/2025/03/Booklet-5th-IASD-25-26-March-2025.pdf

[148] India - Chile Joint Statement, Prime Minister's Office (New Delhi) 1 April 2025. Access Date: 19 May 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2117396

[149] Ministry of Coal Executes Agreements for Two More Commercial Coal Mines, Advancing India's Energy Security and Employment Goals, Ministry of Coal (New Delhi) 8 April 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2120151

Rare Metal Industry and the National University of Science and Technology MISIS.[150] Both agreements are focused on collaboration for critical mineral technologies.

India has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. India has taken strong action to advance the welfare target of reliable, diversified, sustainable and responsibly supply chains for energy transitions and critical minerals through partnerships for grid integration, MoUs for diversified supply chains, the National Critical Mineral Mission and two Coal Mine Development and Production Agreements.

Thus, India receives a score of +1.

Analyst: Ajay Gokul Sivanandam

Indonesia: +1

Indonesia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 21 November 2024, the Indonesian Semiconductor Ecosystem Preparation Task Force and Arizona State University signed a Memorandum of Understanding (MoU) to develop a joint semiconductor workforce acceleration program and supply chain policy initiatives.[151] Minister for Economic Affairs Airlangga Hartarto noted that the MoU will help encourage the growth and resilience of semiconductor supply chains.

On 2 December 2024, Minister of Trade Budi Santoso and Canada's Minister of Export Promotion, International Trade and Economic Development Mary Ng jointly announced the conclusion of negotiations on a comprehensive economic partnership agreement and committed to signing it in 2025.[152] The agreement includes commitments to cooperate on critical minerals, with an emphasis on developing secure and resilient critical mineral supply and value chains.

On 3 December 2024, Minister of Energy and Mineral Resources Bahlil Lahadalia announced that Indonesia is accelerating its use of nuclear energy as part of its commitment to diversify energy.[153] This action contributes to Indonesia's target of 23 per cent renewable energy by 2025 and ultimate goal to achieve a net zero energy sector.

[150] CSIR-IMMT Signs Joint Declarations of Intent with Russia's Giredmet, Rosatom, Moscow and National University of Science and Technology, Moscow to Advance Critical Mineral Technologies, Ministry of Science and Technology (New Delhi) 25 April 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2124199

[151] Bangun Ekosistem Industri Semikonduktor di Indonesia, Menko Airlangga Dorong Kerja Sama dengan Arizona State University, Ministry for Economic Affairs (Washington D.C.) 22 November 2024. Translation provided by Google Translate. Access date: 10 May 2025. https://www.ekon.go.id/publikasi/detail/6070/bangun-ekosistem-industri-semikonduktor-di-indonesia-menko-airlangga-dorong-kerja-sama-dengan-arizona-state-university

[152] Joint statement by the Government of the Republic of Indonesia and the Government of Canada on the conclusion of the negotiations of the Indonesia – Canada Comprehensive Economic Partnership Agreement, Government of Canada (Jakarta) 2 December 2024. Access date: 10 May 2025. https://www.international.gc.ca/country_news-pays_nouvelles/2024-12-03-indonesia-indonesie.aspx?lang=eng

[153] Menteri ESDM Pastikan Nuklir Jadi Bagian Diversifikasi Energi, Kementerian Energi dan Sumber Daya Mineral (Jakarta) 3 December 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.esdm.go.id/en/media-center/news-archives/menteri-esdm-pastikan-nuklir-jadi-bagian-diversifikasi-energi

On 20 December 2024, the Ministry of Energy and Mineral Resources unveiled regulations to support the development of Carbon Capture and Storage (CCS) technology.[154] These regulations unlock various opportunities and incentives to enhance Indonesia's position as a regional hub for carbon storage.

On 3 January 2025, Minister Lahadalia announced that Indonesia's has modified its biofuel regulations to require diesel fuel to include 40 per cent palm oil-based biofuel instead of 35 per cent, as of 1 January 2025.[155] This regulation aims to reduce foreign imports of diesel while supporting the net zero transition by reducing carbon emissions by 41.46 million tonnes per year.

On 12 February 2025, the Ministry of Energy and Mineral Resources announced cooperation with the Ministry of Energy and Natural Resources of Türkiye to accelerate clean energy development in Indonesia, including the signing of a Memorandum of Understanding.[156] This collaboration will bolster Indonesia's commitment to clean power generation.

On 18 February 2025, the Ministry of Energy and Mineral Resources announced the ratification of a new mineral law that aims to enhance energy security and supporting the mining sector.[157] The law contains provisions to prioritize domestic coal needs and ensure appropriate mining governance.

On 18 February 2025, National Economic Council Chairman Luhut Panjaitan announced that Indonesia's sovereign wealth fund Danantara is in talks with the United Arab Emirates to establish a joint venture to develop 10 gigawatts of renewable energy.[158] This venture will bolster Indonesia's commitment to the energy transition and sustainability.

On 17 April 2025, Indonesia and Saudi Arabia signed several MoUs aimed at increasing cooperation in the mining sector.[159] The agreements will foster collaboration in areas including "mineral exploration, geological surveying, sustainable mining practices, mineral production and processing and the development of modern technologies for the mining and metallurgical industries."

On 6 April 2025, Minister Lahadalia announced that he has asked Indonesian company PT Perusahaan Listrik Negara to build a Geothermal Power Plant in Maluku.[160] The plant is expected to have a 40 megawatts capacity, supporting clean energy and access to energy for the country.

[154] Upstream oil & gas sector welcomes newly established CCS regulation, Indonesia Business Post (Jakarta) 7 January 2025. Access date: 16 April 2025. https://indonesiabusinesspost.com/3448/investment-and-risk/upstream-oil-gas-sector-welcomes-newly-established-ccs-regulation

[155] Wujudkan Ketahanan Energi dan Kurangi Impor, Menteri ESDM: Mandatori B40 Berlaku 1 Januari 2025, Kementerian Energi dan Sumber Daya Mineral (Jakarta) 3 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.esdm.go.id/en/media-center/news-archives/wujudkan-ketahanan-energi-dan-kurangi-impor-menteri-esdm-mandatori-b40-berlaku-1-januari-2025

[156] Disaksikan Presiden Prabowo dan Presiden Erdogan, Menteri Bahlil Teken Kerja Sama di Sektor Energi, Ministry of Energy and Natural Resources (Jakarta) 12 February 2025. Translation provided by Google Translate. Access date: 10 May 2025. https://www.esdm.go.id/en/media-center/news-archives/disaksikan-presiden-prabowo-dan-presiden-erdogan-menteri-bahlil-teken-kerja-sama-di-sektor-energi

[157] RUU Minerba Resmi Disahkan Menjadi Undang-Undang, Kementerian Energi dan Sumber Daya Mineral (Jakarta) 18 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.esdm.go.id/en/media-center/news-archives/ruu-minerba-resmi-disahkan-menjadi-undang-undang

[158] Danatara to partner with UAE to develop 10 GW renewable energy, Luhut says, The Jakarta Post (Jakarta) 18 February 2025. Access date: 16 April 2025. https://www.thejakartapost.com/business/2025/02/18/danantara-to-partner-with-uae-to-develop-10-gw-renewable-energyluhut-says.html

[159] Saudi Arabia, Indonesia sign key agreements to boost trade and mining cooperation, Arab News (Riyadh) 17 April 2025. Access Date: 20 May 2025. https://www.arabnews.com/node/2597430/business-economy

[160] Menteri Bahlil Minta PLN Bangun Pembangkit Geotermal 40 MW di Maluku, Kementerian Energi dan Sumber Daya Mineral (Jakarta) 6 April 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.esdm.go.id/en/media-center/news-archives/menteri-bahlil-minta-pln-bangun-pembangkit-geotermal-40-mw-di-maluku

Indonesia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Through investments in renewable energy sources, Indonesia has taken steps to support reliable, diversified, sustainable and responsible supply chains for energy transitions. It has taken action to strengthen supply chains for energy transition technologies through regulatory reform, critical minerals and materials beneficiated at source via its agreement with Canada and semiconductors through its partnership with Arizona State University.

Thus, Indonesia receives a score of +1.

Analyst: Henri Hopkins

Italy: +1

Italy has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 26 November 2024, the Ministry of the Environment and Energy Security presented the National Hydrogen Strategy which focuses on low-carbon hydrogen and decarbonization.[161] The strategy focuses on achieving net zero by 2050 through a transition towards renewable energy, development of Carbon Capture Storage, biofuel, biomethane, hydrogen and potentially nuclear.

On 13 December 2024, Prime Minister Giorgia Meloni chaired the closing meeting of the Italian G7 Presidency.[162] During the meeting, she reiterated Italy's commitment to green energy development through the Energy for Growth in Africa initiative. The program supports the implementation of infrastructure for the production and distribution of renewable energy, contributing to the expansion of energy transition technologies.

On 31 December 2024, the Ministry of the Environment and Energy Security opened a call for research, development and technological innovation project proposals aimed at supporting the supply chain for critical and strategic raw minerals.[163] Selected projects will receive a total of EUR21 million in funding to support the transition to clean technologies.

On 1 January 2025, Minister of Environment and Energy Security Gilberto Pichetto Fratin attended the Future Minerals Forum in Riyadh.[164] He underscored Italy's priority of establishing secure and sustainable access to critical raw materials. His remarks focused on international cooperation and domestic policy to ensure responsible development of critical minerals and materials, especially for clean energy supply chains.

[161] Idrogeno: presentata la Strategia Nazionale, più scenari per la sua diffusione, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 26 November 2024. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/idrogeno-presentata-la-strategia-nazionale-piu-scenari-per-la-sua-diffusione?p_l_back_url=%2Fportale%2Fcomunicati-stampa%3Fdelta%3D30%26start%3D3

[162] President Meloni chairs G7 leaders' meeting: focus on Ukraine, Middle East, Venezuela and handover, Governo Italiano (Rome) 13 December 2024. Access Date: 8 May 2025. https://www.governo.it/en/articolo/president-meloni-chairs-g7-leaders-meeting-focus-ukraine-middle-east-venezuela-and-handover

[163] Mission Innovation 2.0: avviso MASE da 21 milioni su Materie Prime Critiche e Materie Prime Strategiche, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 13 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/mission-innovation-2.0-avviso-mase-da-21-milioni-su-materie-prime-critiche-e-materie-prime-strategiche.

[164] Materie prime critiche, il ministro Pichetto a Riad per il Future Minerals Forum, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 13 January 2025. Translation provided by Google Translate. Access Date: 8 May 2025. https://www.mase.gov.it/comunicati/materie-prime-critiche-il-ministro-pichetto-riad-il-future-minerals-forum

On 14 January 2025, Minister Pichetto and Minister of Energy of Saudi Arabia, Abdulaziz Bin Salman Al-Saud signed a Memorandum of Understanding for energy.[165] The countries will collaborate to advance the energy transition and energy security through the advancement of renewable energy, decreasing methane emissions, carbon capture and storage and supporting supply chain projects in developing countries.

On 15 January 2025, Prime Minister Meloni visited Abu Dhabi and participated in the signing of a trilateral agreement between Italy, the United Arab Emirates and Albania for the development and export of renewable electricity from Albania to Italy.[166] The agreement involves the construction of an undersea power cable, contributing to regional integration and strengthening Italy's infrastructure for clean energy.

On 21 January 2025, Italy, Germany, Austria, Algeria and Tunisia signed a Joint Declaration of Intent to develop the Southern Hydrogen Corridor.[167] This initiative aims to establish a 3,500-4,000-kilometre pipeline transporting renewable hydrogen from North Africa to Europe and is expected to deliver up to 163 terawatt-hours of hydrogen annually to Europe.

On 27 January 2025, Prime Minister Meloni conducted an official visit to Saudi Arabia, where she met with government officials to strengthen bilateral cooperation on clean energy technologies.[168] Discussions focused on the development and deployment of renewable energy systems, in line with Italy's broader strategy of enhancing energy transition partnerships.

On 21 February 2025, the Ministry of the Environment and Energy Security announced EUR38 million in funding for innovative renewable energy projects in Italy.[169] These include projects that combine energy plants with carbon storage facilities and projects that encourage "self-consumption of energy."

On 24 February 2025, Minister Pichetto signed two strategic agreements with the United Arab Emirates.[170] The first agreement supports bilateral cooperation on hydrogen, decarbonization and renewable energy. The second outlines collaboration in the field of critical minerals, with a focus on ethical extraction and sustainable development, reinforcing responsible supply chains for energy transitions.

On 13 March 2025, the Ministry of the Environment and Energy Security announced that it will provide EUR232 million for energy sustainability in Italian cities beginning on 8 April 2025.[171] This will support projects to advance renewable energy, reduce consumption and finance "photovoltaic and solar thermal systems, heat pumps, relamping systems, high-efficiency fixtures and hybrid solutions."

On 7 April 2025, the Ministry of Environment and Energy Security and Research on the Energy System announced a call for project proposals aimed at technological innovation for renewable energy and clean

[165] Energia: firmato a Riad un memorandum tra Italia e Arabia Saudita, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 14 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/energia-firmato-a-riad-un-memorandum-tra-italia-e-arabia-saudita

[166] President Meloni visits United Arab Emirates, Governo Italiano (Rome) 15 January 2025. Access Date: 8 May 2025. https://www.governo.it/en/articolo/president-meloni-visits-united-arab-emirates/27489

[167] Joint political declaration of intent to develop the Southern Hydrogen Corridor, Bundesministerium für Wirtschaft und Energie (Rome) 21 January 2025. Access Date: 16 April 2025. https://www.bmwk.de/Redaktion/EN/Pressemitteilungen/2025/01/20250121-joint-political-declaration-of-intent-develop-southern-hydrogen-corridor.html

[168] President Meloni visits Saudi Arabia, Governo Italiano (Rome) 27 January 2025. Access Date: 8 May 2025. https://www.governo.it/en/articolo/president-meloni-visits-saudi-arabia/27547

[169] Energia: da MASE 38 milioni a Regioni per "progetti esemplari" su rinnovabili, anche CER, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 21 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/energia-da-mase-38-milioni-a-regioni-per-progetti-esemplari-su-rinnovabili-anche-cer

[170] Italia – Emirati: Pichetto sigla due accordi strategici in settore energetico e minerali critici, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 24 February 2025. Translation provided by Google Translate. Access Date: 8 May 2025. https://www.mase.gov.it/comunicati/italia-emirati-pichetto-sigla-due-accordi-strategici-settore-energetico-e-minerali

[171] Energia: MASE, 232 milioni per i comuni con l'avviso C.S.E. 2025, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 13 March 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/energia-mase-232-milioni-per-i-comuni-con-l-avviso-c.s.e.-2025

hydrogen.[172] Selected projects will receive a total of EUR200 million for "non-programmable renewable sources, flexibility and energy storage, data and digitalization of networks, electrolysers and networks, biohydrogen and biofuels."

Italy has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. It has taken strong action towards the combined welfare target and supported supply chains for energy transitions and critical minerals through a Memorandum of Understanding with the United Arab Emirates and Albania, participation in the Southern Hydrogen Corridor, funding for critical and strategic minerals and clean energy projects and funding for energy sustainability.

Thus, Italy receives a score of +1.

Analyst: Michelle Kim

Japan: +1

Japan has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 4 December 2024, the Ministry of Economy, Trade and Industry (METI) hosted the sixth RD20, an initiative under Japan's leadership that promotes international collaboration on research and development for carbon neutrality among G20 countries and regions.[173] The event brought together heads of leading research institutions and focused on enhancing low-carbon energy systems, with particular attention to cooperation on hydrogen, carbon capture and solar technologies.

On 24 December 2024, Japan and the United States agreed to strengthen cooperation in the development and deployment of advanced clean energy technologies.[174] This includes floating offshore wind, clean hydrogen and derivatives such as ammonia and synthetic fuels, carbon capture and recycling and small modular reactors. Japan also committed to collaborate on resilient mineral supply chains and methane emission reductions in the Indo-Pacific. Japan and the United States also co-hosted a session involving private sector representatives to boost public-private collaboration in the energy transition. Participants exchanged views on emerging clean energy markets, including synthetic methane and hydrogen, to meet the growing demand for clean electricity in the digital age.

On 27 January 2025, Prime Minister Shigeru Ishiba announced new domestic financing to support the green transformation.[175] This includes a supplementary budget allocating over JPY900 billion to enhance productivity and wage growth and a bill aimed at creating a carbon pricing framework to attract more than JPY150 trillion in green investment.

On 25 February 2025, METI released updates on the implementation of the Pro-Growth Carbon Pricing Concept under the Act on the Promoting Transition to the Decarbonized Growth Economic Structure.[176]

[172] Mission Innovation 2.0: cinque bandi MASE da 200 milioni per ricerca e innovazione, Ministero dell'Ambiente e della Sicurezza Energetica (Rome) 7 April 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.mase.gov.it/portale/-/mission-innovation-2.0-cinque-bandi-mase-da-200-milioni-per-ricerca-e-innovazione-

[173] RD20 2024 was Held, Ministry of Economy, Trade and Industry (Tokyo) 4 December 2024. Access Date: 2 April 2025. https://www.meti.go.jp/english/press/2024/1204_002.html

[174] Results of the Japan-U.S. Clean Energy Partnership (JUCEP) Ministerial Meeting, Ministry of Economy, Trade and Industry (Tokyo) 24 December 2024. Access Date: 2 April 2025. https://www.meti.go.jp/english/press/2024/1224_001.html

[175] Forum for Dialogue with the Business Community, Prime Minister's Office of Japan (Tokyo) 27 January 2025. Access Date: 2 April 2025. https://japan.kantei.go.jp/103/actions/202501/27forum.html

[176] Cabinet Decision on the Bill for the Act for Partially Amending the Act on the Promoting Transition to the Decarbonized Growth Economic Structure and the Act on the Promotion of Effective Utilization of Resources, Ministry of Economy, Trade and Industry (Tokyo) 25 February 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0225_001.html

These updates aim to balance economic growth with emissions reduction by building a circular economy and introducing carbon pricing mechanisms.

On 7 March 2025, the Cabinet approved a bill to amend the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities.[177] The amendment aims to allow the installation of marine renewable energy facilities in Japan's Exclusive Economic Zones and to strengthen environmental research efforts, contributing to Japan's 2050 carbon neutrality goal.

On 17 March 2025, the Japan Organization for Metals and Energy Security and Iwatani Corporation announced EUR100 million in joint financing for Caremag SAS's rare earth refining plant in France.[178] This funding will support the development of the plant which aims to minimize carbon emissions through the use of recycled materials, reduce water usage, diversify rare earth sources and strengthen rare earth supply chains. Caremag has also agreed to provide 50 per cent of its rare earth products to the Japan Organization and Iwatani Corporation, on a long-term basis.

On 21 March 2025, METI announced updated electricity purchase prices under the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources.[179] The pricing adjustments are based on supply efficiency and profitability, promoting the expansion of renewable energy use through market mechanisms.

On 28 March 2025, Minister of Economy, Trade and Industry Muto Yoji met with Governor of Alaska Mike Dunleavy to discuss Japanese investment in energy projects in Alaska.[180] The meeting underscored Japan's strategic involvement in global energy initiatives and support Alaskan energy projects.

On 28 April 2025, METI participated in the Summit on the Future of Energy Security, co-hosted by the International Energy Agency and the United Kingdom.[181] Discussions addressed the resilience of clean energy supply chains and securing access to critical minerals, reaffirming Japan's engagement in global cooperation for energy transition resilience.

On 29 April 2025, METI signed a Memorandum of Cooperation with the Ministry of Industry and Trade of Vietnam on clean energy transitions.[182] The agreement reaffirmed both parties' commitment to the Asia Zero Emission Community principles and aimed to promote investment and technology exchange to support decarbonization pathways.

On 11 May 2025, Japan and the European Union held the third Digital Partnership Council to reinforce Japan and the EU's cooperation in technology.[183] Both members agreed to collaborate on semiconductor,

[177] Cabinet Decision on the Bill for the Act for Partially Amending the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities, Ministry of Economy, Trade and Industry (Tokyo) 7 March 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0307_003.html

[178] Equity and Debt Financing to Caremag SAS - Project participation to diversify rare earth sources -, Japan Organization for Metals and Energy Security (Tokyo) 17 March 2025. Access Date: 23 June 2025. https://www.jogmec.go.jp/english/news/release/news_08_00035.html

[179] METI Sets the Surcharge Rate for FY2025, Renewable Energy Purchase Prices for FY2025 Onward, and Other Details Relating to the FIT and FIP Schemes, Ministry of Economy, Trade and Industry (Tokyo) 21 March 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0321_001.html

[180] Minister Muto Holds Meeting with Governor Dunleavy of the State of Alaska, Ministry of Economy, Trade and Industry (Tokyo) 28 March 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0328_002.html

[181] Summit on the Future of Energy Security Held, Ministry of Economy, Trade and Industry (Tokyo) 28 April 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0428_001.html

[182] METI Signs Memorandum of Cooperation with the Ministry of Industry and Trade of the Socialist Republic of Viet Nam on the Promotion of Bilateral Cooperation Projects for Energy Transitions, Ministry of Economy, Trade and Industry (Tokyo) 29 April 2025. Access Date: 12 May 2025. https://www.meti.go.jp/english/press/2025/0429_001.html

[183] EU and Japan reinforce tech and digital partnership, European Commission (Brussels) 11 May 2025. Access Date: 15 May 2025. http://ec.europa.eu/commission/presscorner/detail/en/ip_25_1185

artificial intelligence and 5G/6G research. This will support both members diversification of responsible semiconductor supply chains.

Japan has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Japan has taken several important steps toward fulfilling its G20 commitment, including passing legislation to promote marine renewable energy, advancing green growth through carbon pricing initiatives and strengthening bilateral and multilateral cooperation on clean energy transitions. It has also participated in global dialogues to enhance supply chain resilience and updated its renewable energy procurement policies to reflect efficiency and cost considerations. Finally, Japan has taken strong action to support supply chains for rare earth elements through its funding for Caremag.

Thus, Japan receives a score of +1.

Analyst: Maham Khokhar

Korea: +1

Korea has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 27 November 2024, the Ministry of Trade, Industry and Energy announced plans to provide KRW14 trillion in low-interest loans throughout 2024 to support the semiconductor industry.[184] This initiative aims to enhance competitiveness and includes KRW1.8 trillion allocated for developing power transmission infrastructure for new chip complexes in Yongin and Pyeongtaek.

On 27 November 2024, the Ministry of Economy and Finance announced the establishment of a KRW1.4 trillion policy fund for 2025 to support the semiconductor sector.[185] This initiative is designed to alleviate corporate burdens related to infrastructure in semiconductor clusters by expanding tax breaks for private research and development and facility investments.

On 17 December 2024, Korea announced the allocation of KRW2.7 trillion in 2025 to develop technologies for adapting to climate change over the next decade.[186] This investment aims to enhance the country's resilience to climate-related challenges.

On 20 December 2024, Korea and Australia signed a new Green Economy Partnership Arrangement on Climate and Energy.[187] The partnership agreement includes cooperation on renewable hydrogen, critical minerals and green metals projects. This supports both members' commitments to diversified energy transition technologies and supply chains.

[184] South Korea to roll out $10 bln in loans next year to support chip industry, Bonik Barta (Dhaka) 27 November 2024. Access Date: 19 March 2025. https://en.bonikbarta.com/technology/RxMDvFn2tgfnSH6a

[185] KRW 1.4T policy fund in 2025 to support semiconductor sector, Government of Korea (Seoul) 28 November 2024. Access Date: 19 March 2025. https://www.korea.net/NewsFocus/policies/view?articleId=262459

[186] Korea to invest in climate change adaptation projects, Government of Korea (Seoul) 6 February 2025. Access Date: 5 May 2025. https://www.korea.net/NewsFocus/polices/view?articleId=263466

[187] Australia and the Republic of Korea Strengthen Cooperation on Climate and Energy, Department of Climate Change, Energy, the Environment and Water (Canberra) 19 December 2024. Access Date: 16 May 2025. http://dcceew.gov.au/about/news/australia-republic-korea-strengthen-cooperation-climate-energy

On 1 January 2025, Korea announced that an increased budget of KRW196.3 billion will be invested to install more than 64 hydrogen charging stations, with a target of over 450 cumulative stations.[188] This initiative supports the adoption of hydrogen vehicles and the development of related infrastructure.

On 21 February 2025, Korea outlined a new energy mix plan for 2038, which includes constructing two large nuclear power plants and one small modular reactor.[189] The country aims to increase its nuclear power generation and boost renewable energy, targeting an average of seven gigawatts annually until 2030. Overall, carbon-free power generation, including nuclear and renewables is expected to reach 70 per cent by 2038.

On 15 April 2025, Korea announced an expanded support package for its semiconductor industry, increasing total aid to KRW33 trillion, up from the previous KRW26 trillion.[190] Financial assistance specifically for the chips sector will also increase to KRW20 trillion, from KRW17 trillion.

Korea has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. It has taken strong action to support reliable, diversified, sustainable and responsible supply chains for energy transitions by providing subsidies, partnering with Peru in cooperation for the critical minerals sector and providing low-interest semiconductor loans. Regular allocation of funds to increasing capacity for clean energy and supporting domestic industries underscore Korea's alignment to their G20 commitments.

Thus, Korea receives a score of +1.

Analyst: Eszter Réti

Mexico: +1

Mexico has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 6 January 2025, President Claudia Sheinbaum launched Olinia, a manufacturer of mini electric vehicles.[191] The government is partnering with academic institutions and private companies to develop the technology and support regional manufacturers to develop affordable electric vehicles. The government will allocate MXN25 million to the National Polytechnic Institute and the National Institute of Technology of Mexico in 2025 for this initiative.

On 13 January 2025, President Sheinbaum announced "Plan Mexico" which entails USD277 billion in investment for various industries.[192] In part, Plan Mexico is focused on developing a domestic semiconductor industry.[193]

[188] Gov't to spend W50B to build hydrogen infrastructure, Government of Korea (Seoul) 8 February 2025. Access Date: 5 May 2025. https://www.korea.net/Government/Briefing-Room/Press-Releases/view?artcleId=1718330&insttCode=A260112&type=N

[189] South Korea confirms need for new reactors, World Nuclear News (London) 21 February 2025. Access Date: 5 May 2025. https://www.world-nuclear-news.org/articles/south-korea-confirms-need-for-new-reactors

[190] South Korea announces over $23 billion for chip sector as Trump tariffs on semiconductor imports loom, CNBC (New Jersey) 14 April 2025. Access Date: 5 May 2025. https://www.cnbc.com/2025/04/15/south-korea-announces-over-23-billion-for-chip-sector-as-trump-tariffs-on-semiconductor-imports-loom-.html

[191] Presidenta Claudia Sheinbaum presenta Olinia, primera armadora mexicana de mini vehículos eléctricos desarrollados en México, Presidencia de la República (Mexico City) 6 March 2025. Translation provided by Google Translate. Access Date: 18 March 2025. https://www.gob.mx/presidencia/prensa/presidenta-claudia-sheinbaum-presenta-olinia-primera-armadora-mexicana-de-mini-vehiculos-electricos-desarrollados-en-mexico

[192] Presidenta Claudia Sheinbaum presenta el Plan México que contempla un portafolio de inversiones de 277 mmdd, Presidencia de la República (Mexico City) 13 January 2025. Access Date: 16 April 2025. https://www.gob.mx/presidencia/prensa/presidenta-claudia-sheinbaum-presenta-el-plan-mexico-que-contempla-un-portafolio-de-inversiones-de-277-mmdd

On 23 February 2025, the Federal Electricity Commission and the National Institute of Indigenous Peoples announced an investment of MXN421 million for off-grid solar and grid extensions for Indigenous households.[194]

On 28 March 2025, Undersecretary for Planning and Energy Transition Jorge Islas announced that all future Mexican wind and solar plants will require battery storage up to 30 per cent of their original capacity.[195] This promotes energy transition technologies and storage.

On 9 April 2025, Secretary Luz Elena Gonzales Escobar announced a MXN624 billion investment in the electric sector, of which MXN430 billion will be used to increase generation capacity.[196] This investment supports Mexico's plans for increasing access to electricity while contributing to the energy transition.

On 2 May 2025, Mexico's Secretariat of Science, Humanities, Technology and Innovation and the Government of Sonora signed a collaboration agreement to advance the country's semiconductor industry. [197] The agreement supports the federal "Kutsari" initiative, aiming to strengthen the semiconductor value chain and enhance Mexico's technological sovereignty.

Mexico has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Mexico has supported the joint welfare target and supported supply chains for energy transition technologies and semiconductors through its support for mini electric vehicles, Plan Mexico's investment for the domestic semiconductor industry, collaboration with the Government of Sonora for semiconductors, investment for off-grid solar and grid extensions for Indigenous communities and major investment for the electric sector.

Thus, Mexico receives a score of +1.

Analyst: Aiden Hunt

Russia: +1

Russia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

[193] Plan Mexico: Sheinbaum's strategy to attract investment amid uncertainty over Trump, El País (Mexico City) 27 January 2025. Access Date: 16 April 2025. https://english.elpais.com/international/2025-01-27/plan-mexico-sheinbaums-strategy-to-attract-investment-amid-uncertainty-over-trump.html

[194] La SENER, CFE e INPI continúan electrificando comunidades indígenas en la Sierra de Durango, Secretaría de Energía (Mexico City) 23 February 2025. Translation provided by Google Translate. Access Date: 24 March 2025. https://www.gob.mx/sener/articulos/la-secretaria-de-energia-comision-federal-de-electricidad-e-instituto-nacional-de-los-pueblos-indigenas-continuan-electrificando-comunidades-indigenas-en-la-sierra-de-durango-391079

[195] Mexico announces battery storage mandate for renewable energy plants, PV Magazine (Berlin) 31 March 2025. Access Date: 9 May 2025. https://www.pv-magazine.com/2025/03/31/mexico-announces-battery-storage-mandate-for-renewable-energy-plants/

[196] Secretary Luz Elena González Escobar presented the actions of the electricity sector aimed at promoting the development of Plan Mexico, Secretaría de Energía (Mexico City) 9 April 2025, Translation provided by Google Translate, Access Date: 14 April 2025. https://www.gob.mx/sener/articulos/la-secretaria-de-energia-luz-elena-gonzalez-escobar-presento-las-acciones-del-sector-electrico-encaminadas-a-impulsar-el-desarrollo-del-plan-mexico

[197] Secihti y gobierno de Sonora firman convenio para fortalecer cadena de valor en semiconductores de México, Secretaría de Ciencia, Humanidades, Tecnología e Innovación (Ciudad de México) 2 May 2025. Access Date: 20 May 2025. https://secihti.mx/sala-de-prensa/secihti-y-gobierno-de-sonora-firman-convenio-para-fortalecer-cadena-de-valor-en-semiconductores-de-mexico/

On 25 November 2024, Russia announced new investments in clean energy initiatives aimed at improving energy efficiency and reducing environmental impact.[198] These investments include the construction of a Green Cyber Farm.

On 2 December 2024, Russia extended several benefits including decreased insurance premium rates to companies manufacturing semiconductor production equipment, including Computer Numerical Control machines and microcircuit development tools, supporting semiconductor supply chain security.[199] These incentives aim to bolster semiconductor supply chain security, which indirectly contributes to the resilience of clean energy systems.

On 5 December 2024, Russia approved measures to enhance safety for nuclear technologies, line with International Atomic Energy Agency recommendations.[200] This action is part of Russia's long-standing commitment to nuclear energy development. Additionally, Russia launched the Green Cyber Farm project which promotes sustainable agriculture through automated platforms powered by renewable energy. This project seeks to address environmental sustainability in agriculture, leveraging technological innovation to support green energy use in the farming sector.

On 12 December 2024, Russia held a strategic session to discuss increasing the energy and resource efficiency of the national economy.[201] This session discussed ongoing efforts to modernize infrastructure, transition boiler stations to more efficient fuel sources and expand the use of alternative and renewable energy.

On 31 January 2025, Deputy Minister of Energy Roman Marshavin and Ambassador of Kyrgyzstan to Russia Kubanychbek Bokontayev met to discuss energy sector cooperation.[202] This included a focus on joint electric projects in Kyrgyzstan, oil and gas cooperation and the Central Asian Coordinating Electric Power Council.

On 17 April 2025, the Ministry of Energy allocated RUB3.1 million to update Rostov Region's power grid to ensure a reliable energy supply for residents.[203] This includes plans to modernize the electric grid, create a mobile reserve for energy generation and implement new technologies.

On 25 April 2025, the State Research and Design Institute of the Rare Metal Industry and the National University of Science and Technology MISIS signed separate Joint Declarations of Intent with India's Council of Scientific and Industrial Research's Institute of Minerals and Materials Technology.[204] Both agreements are focus on collaboration for critical mineral technologies.

[198] О новых инвестициях в чистую энергию, Government of Russia (Moscow) 25 November 2024. Translation provided by Google Translate. Access Date: 29 March 2025. http://government.ru/en/news/53701/

[199] О мерах поддержки производителей оборудования для микроэлектроники, Government of Russia (Moscow) 2 December 2024. Translation provided by Google Translate. Access Date: 29 March 2025. http://government.ru/en/news/53572/

[200] О развитии атомной энергетики и проекта 'Зеленая Киберферма, Government of Russia (Moscow) 5 December 2024. Translation provided by Google Translate. Access Date: 29 March 2025. http://government.ru/en/news/53580/

[201] О повышении энергоэффективности национальной экономики, Government of Russia (Moscow) 12 December 2024. Translation provided by Google Translate. Access Date: 29 March 2025. http://government.ru/en/news/53442/

[202] Россия и Киргизия развивают сотрудничество в энергетике, Минэнерго России (Moscow) 31 January 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://minenergo.gov.ru/press-center/news-and-events?news-item=rossiya-i-kirgiziya-razvivayut-sotrudnichestvo-v-energetike

[203] Минэнерго выделило 3,1 млрд рублей на обеспечение надежного энергоснабжения Ростовской области, Минэнерго России (Moscow) 17 April 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://minenergo.gov.ru/press-center/news-and-events?news-item=minenergo-vydelilo-3-1-mlrd-rubley-na-obespechenie-nadezhnogo-energosnabzheniya-rostovskoy-oblasti

[204] CSIR-IMMT Signs Joint Declarations of Intent with Russia's Giredmet, Rosatom, Moscow and National University of Science and Technology, Moscow to Advance Critical Mineral Technologies, Ministry of Science and Technology (New Delhi) 25 April 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2124199

On 14 May 2025, the Ministry of Energy announced that a modernized hydroelectric unit has begun operation at the Krasnoyarsk hydroelectric plant.[205] This unit has a capacity of 500 megawatts which will increase the plant's annual electricity generation by 5 per cent.

Russia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Russia has taken strong action towards the combined welfare target and supported supply chains for energy transitions and semiconductors through financial incentives for semiconductor manufacturers, funding to update Rostov Region's power grid, a new hydroelectric unit and investments for clean energy initiatives.

Thus, Russia has received a score of +1.

Analyst: Maham Khokhar

Saudi Arabia: +1

Saudi Arabia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 26 November 2024, Saudi Arabia signed investment agreements worth over USD9 billion to develop extraction and processing facilities for metals and rare earth elements.[206]

On 3 December 2024, Saudi Arabia hosted the fourth Saudi Green Initiative Forum and announced USD60 million in new funding for climate and environmental initiatives.[207] This funding will support renewable energy projects, protection of natural ecosystems and reducing desertification.

On 9 January 2025, the National Semiconductor Hub and National Technology Development Program formed a partnership with Kneron, an artificial intelligence (AI) semiconductor solutions company.[208] Kneron will establish a Riyadh subsidiary that will support Saudi Arabia's semiconductor ecosystem.

On 4 February 2025, Minister of Industry and Mineral Resources Bandar Ibrahim Alkhorayef and India's Minister of Coal and Mines Kishan Reddy met in New Delhi to discuss cooperation for critical minerals.[209] The ministers discussed the need for reliable critical minerals supply chains and discussed potential cooperation for critical minerals to support the energy transition.

[205] Модернизированный гидроагрегат увеличит среднегодовую выработку электроэнергии Красноярской ГЭС до 5%, Минэнерго России (Moscow) 14 May 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://minenergo.gov.ru/press-center/news-and-events?news-item=modernizirovannyy-gidroagregat-uvelichit-srednegodovuyu-vyrabotku-elektroenergii-krasnoyarskoy-ges-d

[206] Saudi Arabia secures metals investment deals worth $9.3bn, Mining Technology (New York) 27 November 2024. Access Date: 29 March 2025. https://www.mining-technology.com/news/saudi-arabia-secures-metals-investment/?cf-view

[207] Saudi Arabia advances climate action at the 2024 SGI Forum, Saudi and Middle East Green Initiatives (Riyadh) 3 December 2024. Access Date: 16 May 2025. https://www.sgi.gov.sa/knowledge-hub/saudi-arabia-advances-climate-action-at-the-2024-sgi-forum/

[208] Kneron forms partnership with Saudi Arabia's National Semiconductor Hub and establishes local subsidiary, EIN Presswire (San Diego) 9 January 2025. Access Date: 16 April 2025. https://www.einpresswire.com/article/775610317/kneron-forms-partnership-with-saudi-arabia-s-national-semiconductor-hub-and-establishes-local-subsidiary

[209] Union Minister Shri G. Kishan Reddy Meets Saudi Minister to Strengthen Cooperation in Critical Minerals Sector, Ministry of Mines (New Delhi) 4 February 2025. Access Date: 23 June 2025. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2099793

On 5 February 2025, the Ministry of Investment selected EdgeCortix, a semiconductor company, to join the NSH program.[210] As part of this partnership, EdgeCortix will establish a local subsidiary to drive advanced semiconductor engineering and edge AI development.

On 10 February 2025, Saudi Arabia committed USD1.5 billion to AI chip startup Groq to expand the delivery of its advanced AI chips to the country.[211] This funding will support the development of reliable semiconductors supply chains.

On 14 February 2025, Saudi Arabia signed Memorandum of Understanding for mineral resource development with Djibouti, Jordan, the United Kingdom, Zambia, Austria and France.[212] This collaboration will help the diversification of Saudi Arabia's critical minerals supply chains.

On 16 February 2025, Saudi Arabia launched the Mining Innovation Studio to drive advancements in mineral exploration and processing.[213] The initiative, supported by key government and private sector stakeholders, focuses on accelerating technology adoption, enhancing efficiency and fostering sustainable practices in the mining sector.

On 17 April 2025, Saudi Arabia and Indonesia signed a series of memoranda of understanding aimed at increasing cooperation in the mining sector. The agreements will foster collaboration in areas including "mineral exploration, geological surveying, sustainable mining practices, mineral production and processing and the development of modern technologies for the mining and metallurgical industries."[214]

Saudi Arabia has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. Saudi Arabia has taken strong action towards the combined welfare target and supported supply chains for critical minerals, semiconductors and energy transition technologies through the Mining Innovation Studio, funding for AI chip startup Groq, funding for renewable energy projects and investing in extraction and processing facilities for metals and rare earth elements.

Thus, Saudi Arabia receives a score of +1.

Analysts: Ana Grace Rans Kolakovic and Erfan Ehsan

South Africa: 0

South Africa has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

[210] EdgeCortix selected by Saudi Arabia's Ministry of Investment to expand into Riyadh in partnership with the National Semiconductor Hub, Business Wire (Tokyo) 5 February 2025. Access Date: 16 April 2025. https://www.businesswire.com/news/home/20250205996760/en/EdgeCortix-Selected-by-Saudi-Arabias-Ministry-of-Investment-to-Expand-into-Riyadh-in-Partnership-with-the-National-Semiconductor-Hub

[211] Saudi Arabia Announces $1.5 Billion Expansion to Fuel AI-powered Economy with AI Tech Leader Groq, Groq (Mountain View and Riyadh) 10 February 2025. Access Date: 29 March 2025. https://groq.com/news/saudi-arabia-announces-1-5-billion-expansion-to-fuel-ai-powered-economy-with-ai-tech-leader-groq

[212] Saudi Arabia champions global collaboration and innovation at Future Minerals Forum, Arab News (Riyadh) 14 January 2025. Access Date: 16 April 2025. https://www.arabnews.com/node/2586366/business-economy

[213] Saudi Arabia Launches Mining Innovation Studio to Accelerate Sector Transformation, Saudi Press Agency (Riyadh) 16 January 2025. Access Date: 29 March 2025. https://www.spa.gov.sa/en/N2243898

[214] Saudi Arabia, Indonesia sign key agreements to boost trade and mining cooperation, Arab News (Riyadh) 17 April 2025. Access Date: 20 May 2025. https://www.arabnews.com/node/2597430/business-economy

On 23 December 2024, Minister of Electricity and Energy Kgosientsho Ramokgopa announced bidders for the Renewable Energy Independent Power Producer Procurement Programme.[215] This program is designed to facilitate the procurement of up to 5,000 megawatts of renewable energy capacity.

On 3 January 2025, President Cyril Ramaphosa signed into law a 150 per cent tax deduction on investments in electric and hydrogen-powered vehicles.[216]

On 12 March 2025, President Ramaphosa, President of the European Commission Ursula von der Leyen and President of the European Council António Costa signed a joint statement on various issues including supply chains and energy transition technologies.[217] The members agreed to launch negotiations for a "Clean Trade and Investment Partnership." This partnership will include investment in raw materials supply chains and renewable energy projects.

On 28 March 2025, the Cabinet approved the South Africa Renewable Energy Master Plan. This plan pursues a target of developing three to five gigawatts of energy generation to support domestic manufacturing.[218] The plan seeks to "improve the resilience and sustainability of energy supply."

On 14 April 2025, Minister of Forestry, Fisheries and the Environment Dion Goerge welcomed Eskom's issuance of a tender to establish a separate renewable energy business unit.[219] Minister Goerge encouraged private sector actors to participate and drive innovation to bolster renewable energy capacity.

On 17 April 2025, South Africa signed a Memorandum of Understanding with Nigeria to deepen cooperation in the mining sector. [220] The agreement outlines several areas of cooperation including technical support, training, technology transfer and joint exploration projects.

South Africa has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. South Africa has made steps to increase the renewable share of the energy production. It has also taken steps to work with other African countries to increase the output of critical minerals. However, South Africa has not taken action with regards to semiconductors or energy transition technologies.

Thus, South Africa receives a score of 0.

Analyst: Aiden Hunt

[215] Minister Kgosientsho Ramokgopa on 8 Preferred Bidders under Renewable Energy Independent Power Producer Procurement Programme and 8 Preferred Bidders under Battery Energy Storage Independent Power Producer Procurement P, Government of South Africa (Cape Town) 23 December 2024. Access Date: 21 March 2025. https://www.gov.za/news/media-statements/minister-kgosientsho-ramokgopa-8-preferred-bidders-under-renewable-energy

[216] South Africa Launches Tax Break, Helping to Lure China EV Makers, BNN Bloomberg (Johannesburg) 3 January 2025. Access Date: 16 April 2025. https://www.bnnbloomberg.ca/investing/commodities/2025/01/03/ev-tax-break-may-lure-china-to-27-billion-south-africa-industry/

[217] EU - South Africa Summit Declaration, European Commission (Cape Town) 12 March 2025. Access Date: 15 May 2025. https://ec.europa.eu/commission/presscorner/detail/en/statement_25_773

[218] Minister Kgosientsho Ramokgopa welcomes Cabinet's approval of the South African Renewable Energy Master Plan, government, Government of South Africa (Cape Town) 28 March 2025, Access Date: 8 May 2025. https://www.gov.za/news/media-statements/minister-kgosientsho-ramokgopa-welcomes-cabinet%E2%80%99s-approval-south-african

[219] Minister Dion George welcomes Eskom's tender for renewable energy business unit, Government of South Africa (Cape Town) 14 April 2025, Access Date: 14 April 2025. https://www.gov.za/news/media-statements/minister-dion-george-welcomes-eskoms-tender-renewable-energy-business-unit-14

[220] Nigeria Partners with South Africa to Unlock Mineral Wealth and Diversify Economy, Voice of Africa (Washington D.C.) 29 April 2025. Access Date: 5 May 2025. https://thevoiceofafrica.com/nigeria-partners-with-south-africa-to-unlock-mineral-wealth-and-diversify-economy/

Türkiye: +1

Türkiye has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 27 November 2024, Minister of Energy Alparslan Bayraktar discussed strategies for energy transitions with Germany and private stakeholders at the German-Turkish Energy Forum.[221] Minister Bayraktar called for German investors to partner in Türkiye's efforts to increase wind and solar capacity and several memoranda of understanding were signed between Turkish and German organizations.

On 10 February 2025, President Recep Tayyip Erdoğan met with Malaysian Prime Minister Anwar Ibrahim to announce increased partnership in the research, development and production of semiconductors.[222] This partnership includes Turkish firms hiring Malaysian engineers and Malaysia purchasing Turkish semiconductors.

On 12 February 2025, the Ministry of Energy and Natural Resources and Indonesia's Ministry of Energy and Mineral Resources announced cooperation to accelerate clean energy development in Indonesia, including the signing of a Memorandum of Understanding.[223] This collaboration will bolster Indonesia's commitment to clean power generation.

On 2 May 2025, Minister of Energy Alparslan Bayraktar announced that state-owned company MTA has plans to renew its partnership with Niger.[224] Minister Bayraktar along with Nigerien Minister of Mines announced that MTA has had significant progress in the mining of critical minerals in Niger and has developed a partnership that is mutually beneficial.

On 2 May 2025, Hungarian Deputy Minister of Foreign Affairs and Trade Boglarka Illes announced that the Turkish state-owned Turkish Petroleum Corporation has signed an agreement with Hungary to commence mineral exploration and extraction within Hungary.[225] This supports the diversification of minerals within the energy transition supply chain.

On 7 May 2025, President Erdoğan announced a commitment to invest USD80 billion by 2035 to ensure Türkiye's energy transition to renewable energy.[226] Türkiye aims to raise its wind and solar power capacity to 120,000 megawatts by 2035.

Türkiye has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. It has taken action domestically and internationally to diversify supply chains for energy transitions and has taken steps to strengthen supply chains for critical minerals and semiconductors.

[221] 6th Turkish-German Energy Forum, Türkiye Energy Partnership (Berlin) 27 November 2024. Access Date: 16 April 2025. https://energypartnership-turkiye.org/highlights/6th-turkish-german-energy-forum/
[222] Erdoğan begins Malaysia trip in bid for more ties with Asia, Daily Sabah (Kuala Lumpur) 10 February 2025. Access Date: 10 May 2025. https://www.dailysabah.com/politics/diplomacy/erdogan-begins-malaysia-trip-in-bid-for-more-ties-with-asia
[223] Disaksikan Presiden Prabowo dan Presiden Erdogan, Menteri Bahlil Teken Kerja Sama di Sektor Energi, Ministry of Energy and Natural Resources (Jakarta) 12 February 2025. Translation provided by Google Translate. Access date: 10 May 2025. https://www.esdm.go.id/en/media-center/news-archives/disaksikan-presiden-prabowo-dan-presiden-erdogan-menteri-bahlil-teken-kerja-sama-di-sektor-energi
[224] Türkiye rapidly becoming global player in mining: Energy Minister, Daily Sabah (Istanbul) 2 May 2025. Access Date: 10 May 2025. https://www.dailysabah.com/business/energy/turkiye-rapidly-becoming-global-player-in-mining-energy-minister
[225] Türkiye rapidly becoming global player in mining: Energy Minister, Daily Sabah (Istanbul) 2 May 2025. Access Date: 10 May 2025. https://www.dailysabah.com/business/energy/turkiye-rapidly-becoming-global-player-in-mining-energy-minister
[226] Türkiye advances renewable push, opens new solar, wind plants, Daily Sabah (Ankara) 7 May 2025. Access Date: 10 May 2025. https://www.dailysabah.com/business/energy/turkiye-advances-renewable-push-opens-new-solar-wind-plants

Thus, Türkiye receives a score of +1.

Analyst: Arash Aslan-Beigi

United Kingdom: +1

The United Kingdom has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 9 December 2024, the United Kingdom, the United States and Tokamak Energy announced a joint fusion energy project for lithium research which is essential to diversify the energy sector to include fusion energy.[227] Fusion energy, once commercially available, has the potential to provide ample clean electricity. This project will be supported by GBP40.5 million in funding of which the United Kingdom and United States will each provide GBP13.5 million.

On 10 December 2024, UK Export Finance offered JDR Cables a GBP30 million bond support for a project in the floating winds sector.[228] JDR Cables is a British power-cable company that installs subsea cables for electricity. This financial assistance will support the technology development of green energy solutions and public-private partnerships for renewable energy sources in the United Kingdom.

On 10 December 2024, contracts for the East Coast Cluster in Teesside were signed.[229] This is part of the United Kingdom's carbon capture, usage and storage project and is aligned with the government's Plan for Change environmental policy. The Teesside project will capture carbon emission from regional industries and provide the contractors of the East coast Cluster with GBP4 billion to be used in technological innovation, energy security and supply chain development.

On 5 February 2025, Foreign Secretary David Lammy announced GBP17 million in funding to support round two of the InnovateUkraine initiative.[230] Projects selected through this initiative will advance low-carbon energy solutions for Ukraine with a focus on renewable energy, smart grids, industrial decarbonization and green fuels.

On 13 February 2025, the Department for Energy Security and Net Zero launched the Clean Industry Bonus to support clean energy manufacturing and create skilled jobs in industrial towns and coastal areas.[231] The initiative offers financial support to offshore wind developers who invest in deprived regions, build low-carbon factories and enhance net-zero supply chains.

On 21 February 2025, the Department for Energy Security and Net Zero started a consultation process for policy proposals of relaxing the eligibility criteria on planning consent, changing how offshore wind budgets

[227] UK and US announce first joint project in fusion energy innovation, Department for Energy Security and Net Zero (London) 9 December 2024. Access Date: 23 June 2025. https://www.gov.uk/government/news/uk-and-us-announce-first-joint-project-in-fusion-energy-innovation

[228] GBP30 Million UKEF Support Fuels JDR Cables' Global Expansion in the Renewable Energy Sector, United Kingdom Export Finance (London) 10 December 2024. Access Date: 14 April 2025. https://www.gov.uk/government/news/30-million-ukef-support-fuels-jdr-cables-global-expansion-in-the-renewable-energy-sector

[229] Contracts signed for UK's first carbon capture projects in Teesside, Department of Energy and Security and Net Zero (London) 10 December 2024. Access Date: 14 April 2025. https://www.gov.uk/government/news/contracts-signed-for-uks-first-carbon-capture-projects-in-teesside

[230] InnovateUkraine opens second round of investment for clean energy projects, Foreign, Commonwealth & Development Office (London) 5 February 2025. Access Date: 23 June 2025. https://www.gov.uk/government/news/innovateukraine-opens-second-round-of-investment-for-clean-energy-projects

[231] New industry bonus opens to support good jobs and low carbon manufacturing factories, Department for Energy Security and Net Zero (London) 13 February 2025. Access Date: 15 May 2025. https://www.gov.uk/government/news/new-industry-bonus-opens-to-support-good-jobs-and-low-carbon-manufacturing-factories

are set and published and increasing the Contracts for Difference contract term.[232] These policy changes will help bolster the UK commitment to a clean energy system by 2030 as they will strengthen sustainable energy infrastructure through increased investment and the promotion of public-private cooperation in green energy systems.

On 11 March 2025, the Department for Energy Security and Net Zero introduced the Planning and Infrastructure Bill which will help expedite green electricity project initiatives. [233] This bill will bring "ready-to-go" infrastructure projects at the front of the grid connection queue instead of approving projects on a first come first serve basis. This shift in policy framework will aid the timeline of renewable energy projects and bring the UK closer to its decarbonization goals in the Clean Power 2030 Action Plan.

On 27 March 2025, the UK Atomic Energy Authority announced GBP3.5 million in funding for 13 organizations to "develop robust sensing technologies for use in future fusion power plants."[234] These technologies are essential to diversifying the energy sector to include fusion energy.

On 28 March 2025, the Department for Science, Innovation and Technology announced a third wave of semiconductor startups which will receive GBP1.1 million to advance innovative technologies related to semiconductors.[235] The selected companies include RX-Watt which is developing "battery-free sensors that can be wirelessly powered using safe microwave signals."

On 7 April 2025, the Department for Energy Security and Net Zero shortlisted 27 hydrogen projects as part of the next step of the government's hydrogen plan.[236] This initiative is another step in the decarbonization process and creates investment opportunities for the private sector to engage in the implementation process for these hydrogen projects.

On 12 April 2025, Minister of State for Trade Policy and Economic Security Douglas Alexander and China's Vice Minister of Industry and Information Technology Xin Guobin discussed deepening China-UK industrial cooperation in artificial intelligence, digital economy and green energy.[237] The talks demonstrate a step in strengthening cooperation in energy transition technologies.

On 24 April 2025, the Department for Energy Security and Net Zero and energy company Eni agreed to a deal that will create GBP2 billion in supply chain contracts for the Liverpool Carbon Capture and Storage Project.[238] This deal will increase investment in the United Kingdom's green energy industry and is a major commitment to the decarbonization process of the region.

[232] Essential reforms to pave the way for clean power by 2030, Department of Energy and Security and Net Zero (London) 21 February 2025. Access Date: 9 May 2025. https://www.gov.uk/government/news/essential-reforms-to-pave-the-way-for-clean-power-by-2030

[233] Planning revolution to fuel growth and make Britain energy secure, Ministry of Housing, Communities and Local Government and Department of Energy and Security and Net Zero (London) 10 March 2025. Access Date: 9 May 2025. https://www.gov.uk/government/news/planning-revolution-to-fuel-growth-and-make-britain-energy-secure

[234] Creating sensors for extreme fusion energy conditions, UK Atomic Energy Authority (London) 27 March 2025. Access Date: 23 June 2025. https://www.gov.uk/government/news/creating-sensors-for-extreme-fusion-energy-conditions

[235] Government backs next wave of semiconductor start-ups to scale up growth, Department for Science, Innovation and Technology (London) 28 March 2025. Access Date: 23 June 2025. https://www.gov.uk/government/news/government-backs-next-wave-of-semiconductor-start-ups-to-scale-up-growth

[236] New hydrogen power projects to boost growth, Department for Energy Security and Net Zero (London) 7 April 2025. Access Date 15 May 2025. https://www.gov.uk/government/news/new-hydrogen-power-projects-to-boost-growth

[237] 辛国斌会见英国商业贸易部国务大臣道格拉斯·亚历山大, 国际合作司、办公厅、工信微报 (Beijing) 12 April 2025. Access Date: 18 May 2025. https://www.miit.gov.cn/xwfb/bldhd/art/2025/art_5cf485364cd24447aca9634f21fb57ef.html

[238] Major carbon capture project to deliver jobs and growth, Department of Energy and Security and Nets Zero (London) 24 April 2025. Access Date: 9 May 2025. https://www.gov.uk/government/news/major-carbon-capture-project-to-deliver-jobs-and-growth

On 14 May 2025, the Department for Energy Security and Net Zero announced a Great British Energy scheme with GBP4 million in funding for Scottish clean energy projects.[239] Selected projects will focus on community-based clean energy projects including onshore wind, solar and hydropower.

The United Kingdom has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. The United Kingdom has taken strong action towards the combined welfare target and supported supply chains for energy transitions and semiconductors through sustainable supply chain projects, investment for clean energy projects, funding for semiconductor startups and fusion energy technologies and support for the InnovateUkraine initiative. The UK has also signed a critical minerals partnership with Saudi Arabia.

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

Analyst: Simeon Karakolev

United States: +1

The United States has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and energy transition technologies.

On 9 December 2024, the United Kingdom, the United States and Tokamak Energy announced a joint fusion energy project for lithium research which is essential to diversify the energy sector to include fusion energy.[240] Fusion energy, once commercially available, has the potential to provide ample clean electricity. This project will be supported by GBP40.5 million in funding of which the United Kingdom and United States will each provide GBP13.5 million.

On 19 December 2024, President Joe Biden announced a new climate target for the United States, aiming for a 61-66 per cent reduction in net greenhouse gas emissions by 2035 from 2005 levels.[241] The strategy includes leveraging investments from the Inflation Reduction Act and Bipartisan Infrastructure Law, implementing federal standards and mobilizing private capital. This commitment supports the sustainability and responsibility of energy transition supply chains by promoting clean energy initiatives and reducing emissions.

On 24 December 2024, the United States and Japan agreed to strengthen cooperation in the development and deployment of advanced clean energy technologies.[242] This includes floating offshore wind, clean hydrogen and derivatives such as ammonia and synthetic fuels, carbon capture and recycling and small modular reactors. Japan also committed to collaborate on resilient mineral supply chains and methane emission reductions in the Indo-Pacific. The United States and Japan also co-hosted a session involving private sector representatives to boost public-private collaboration in the energy transition. Participants exchanged views on emerging clean energy markets, including synthetic methane and hydrogen, to meet the growing demand for clean electricity in the digital age.

[239] Great British Energy funding boost for Scottish communities, Department for Energy Security and Net Zero (London) 14 May 2025. Access Date 23 June 2025. https://www.gov.uk/government/news/great-british-energy-funding-boost-for-scottish-communities

[240] UK and US announce first joint project in fusion energy innovation, Department for Energy Security and Net Zero (London) 9 December 2024. Access Date: 23 June 2025. https://www.gov.uk/government/news/uk-and-us-announce-first-joint-project-in-fusion-energy-innovation

[241] FACT SHEET: President Biden Sets 2035 Climate Target Aimed at Creating Good-Paying Union Jobs, Reducing Costs for All Americans, and Securing U.S. Leadership in the Clean Energy Economy of the Future, The White House (Washington D.C.) 19 December 2024. Access Date: 29 March 2025. https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/12/19/fact-sheet-president-biden-sets-2035-climate-target-aimed-at-creating-good-paying-union-jobs-reducing-costs-for-all-americans-and-securing-u-s-leadership-in-the-clean-energy-economy-of-the-future

[242] Results of the Japan-U.S. Clean Energy Partnership (JUCEP) Ministerial Meeting, Ministry of Economy, Trade and Industry (Tokyo) 24 December 2024. Access Date: 2 April 2025. https://www.meti.go.jp/english/press/2024/1224_001.html

On 3 January 2025, the Biden-Harris Administration awarded the Semiconductor Research Corporation Manufacturing Consortium USD285 million to establish a new CHIPS Manufacturing USA Institute for Digital Twins, headquartered in North Carolina.[243] This initiative aims to advance US leadership in semiconductor technology, enhancing the reliability and diversification of semiconductor supply chains critical for energy transition technologies.

On 16 January 2025, the Department of Energy announced an investment of nearly USD14 million in federal funding for four projects aimed at advancing the large-scale conversion of carbon dioxide emissions into valuable products.[244] These projects focus on developing technologies that transform carbon emissions into fuels, building materials and other carbon-based products, contributing to the sustainability and responsibility of energy transition supply chains by reducing greenhouse gas emissions and promoting innovative uses of captured carbon.

On 20 January 2025, President Donald Trump issued a memorandum temporarily withdrawing all areas on the Outer Continental Shelf from offshore wind leasing and initiating a review of the federal government's leasing and permitting practices for wind projects.[245]

On 20 January 2025, President Trump signed an executive order titled "Unleashing American Energy" which outlines policies to encourage energy exploration and production on federal lands and waters, including the Outer Continental Shelf.[246] The order emphasizes establishing the United States as a leading producer and processor of non-fuel minerals, including rare earth minerals, to create jobs, strengthen supply chains and reduce reliance on adversarial states. While this action could promote domestic production of critical minerals essential for energy transition technologies, it also intends to disrupt existing global critical minerals supply chains.

On 13 February 2025, President Trump hosted Indian Prime Minister Narendra Modi for an Official Working Visit in Washington D.C. where a Strategic Mineral Recovery initiative was launched. The initiative is a new US-India cooperative program to recover and process critical minerals including lithium, cobalt and rare earths from heavy industries like aluminum, coal mining and oil and gas.[247] President Trump and Prime Minister Modi also re-committed to the US-India Energy Security Partnership, including in oil, gas and civil nuclear energy.

On 13 February 2025, the US-India Transforming the Relationship Utilizing Strategic Technology Initiative was launched to build trusted and resilient supply chains for semiconductors and critical minerals.[248] This partnership will build on ongoing collaboration between the US National Science Foundation and several Indian science agencies to enable joint research in the areas of semiconductors.

[243] Biden-Harris Administration Awards Semiconductor Research Corporation Manufacturing Consortium $285M for New CHIPS Manufacturing USA Institute for Digital Twins, Headquartered in North Carolina, U.S. Department of Commerce (Washington D.C.) 3 January 2025. Access Date: 29 March 2025. https://www.commerce.gov/news/press-releases/2025/01/biden-harris-administration-awards-semiconductor-research-corporation

[244] DOE Invests Nearly $14 Million to Advance Technologies That Transform Carbon Emissions into Valuable Products, U.S. Department of Energy (Washington D.C.) 16 January 2025. Access Date: 29 March 2025. https://www.energy.gov/fecm/articles/doe-invests-nearly-14-million-advance-technologies-transform-carbon-emissions

[245] Temporary Withdrawal of All Areas on the Outer Continental Shelf from Offshore Wind Leasing and Review of the Federal Government's Leasing and Permitting Practices for Wind Projects, The White House (Washington D.C.) 20 January 2025. Access Date: 29 March 2025. https://www.whitehouse.gov/presidential-actions/2025/01/temporary-withdrawal-of-all-areas-on-the-outer-continental-shelf-from-offshore-wind-leasing-and-review-of-the-federal-governments-leasing-and-permitting-practices-for-wind-projects

[246] Unleashing American Energy, The White House (Washington D.C.) 20 January 2025. Access Date: 29 March 2025. https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy

[247] India-U.S. Bilateral Relations Brief, Embassy of India Washington D.C. (Washington D.C.) March 2025. Access Date: 19 May 2025. https://indianembassyusa.gov.in/pdf/menu/Brief_Bilateral_March_2025.pdf

[248] United States-India Joint Leaders' Statement, The White House (Washington D.C.) 13 February 2025. Access Date: 19 May 2025. https://www.whitehouse.gov/briefings-statements/2025/02/united-states-india-joint-leaders-statement/

On 24 March 2025, the Department of Energy re-issued a USD900 million solicitation to support the deployment of small modular reactors.[249] This will enable energy transition to cleaner alternatives to meet demand forecasts driven by AI data center growths.

On 8 April 2025, President Trump signed an Executive Order to designate coal as a mineral, lift barriers on coal mining and require agencies to rescind any policies that seek transition away from coal.[250] This action goes against the promotion of energy transition technologies and dilutes the importance placed to critical minerals as the Secretary of Energy is asked to review the inclusion of "steel."

On 22 April 2025, the Department of Energy released the third loan disbursement to Holtec for the reopening of the Palisades Nuclear Plant.[251] When completed, it is expected to provide 800 megawatts of affordable, reliable baseload power in Michigan.

On 13 May 2025, the Department of Energy and the Ministry of Industry and Mineral Resources in Saudi Arabia signed a Memorandum of Cooperation to collaborate on mining and mineral resources.[252] The investment will contribute to economic development and the diversification and resilience of critical mineral supply chains.

The United States has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. The United States has taken strong action towards the combined welfare target and to strengthen supply chains for energy transition technologies and semiconductors through strengthening domestic semiconductor supply chains, advance nuclear energy as a reliable energy transition technology and financing fusion energy projects.

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

Analyst: Ajay Gokul Sivanandam

African Union: 0

The African Union has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 5 December 2024, at the African Union's Specialized Technical Committee on Transport and Energy, African ministers from 39 countries approved the Climate Resilient and Smart Infrastructure Policy.[253] This policy ensures the promotion of Information Communication Technology industrialization, resilient energy, water and transportation development while ensuring the policies adaptivity to climate related changes.

[249] $900 Million Available to Unlock Commercial Deployment of American-Made Small Modular Reactors, U.S. Department of Energy (Washington D.C.) 24 March 2025. Access Date: 19 May 2025. https://www.energy.gov/ne/articles/900-million-available-unlock-commercial-deployment-american-made-small-modular-reactors

[250] Fact Sheet: President Donald J. Trump Reinvigorates America's Beautiful Clean Coal Industry, The White House (Washington D.C.) 8 April 2025. Access Date: 19 May 2025. https://www.whitehouse.gov/fact-sheets/2025/04/fact-sheet-president-donald-j-trump-reinvigorates-americas-beautiful-clean-coal-industry/

[251] DOE Approves Third Loan Disbursement to Reopen the Palisades Nuclear Plant, U.S. Department of Energy (Washington D.C.) 22 April 2025. Access Date: 19 May 2025. https://www.energy.gov/articles/doe-approves-third-loan-disbursement-reopen-palisades-nuclear-plant

[252] Fact Sheet: President Donald J. Trump Secures Historic $600 Billion Investment Commitment in Saudi Arabia, The White House (Washington D.C.) 13 May 2025. Access Date: 19 May 2025. https://www.whitehouse.gov/fact-sheets/2025/05/fact-sheet-president-donald-j-trump-secures-historic-600-billion-investment-commitment-in-saudi-arabia/

[253] African Ministers Endorse Landmark Strategies to Underpin Climate Resilience, Promote Alternative Fuels, African Union (Addis-Ababa), 5 December 2024, Access date: 17 April 2025. https://au.int/en/pressreleases/20241205/african-ministers-endorse-landmark-strategies-underpin-climate-resilience

On 20 January 2025, Commissioner for Infrastructure and Energy Amani Abou-Zeid emphasized the African Union's energy transition and its potential as a leader of this movement.[254] Through the "Pathways to Competitiveness: Setting the Industrial Policy Agenda" and "Powering Progress: Financing the Energy Transition" sessions, the Commissioner highlighted the need for private investment in clean energy within Africa and outside investment in the energy sector to develop Africa's gaps in energy access.

On 13 February 2025, the African Energy Commission and Denmark launched a project to enhance energy efficiency and sustainable development within the AU.[255] The project will focus on improving energy capacity and advancing sustainable and reliable supply chains in line with the energy transition.

On 16 February 2025, the African Union adopted the Continental Strategy for Sustainable Aviation Fuels, Low Carbon Aviation Fuels and the African Green Hydrogen Strategy at the 38th African Union summit.[256] The first and second strategy aims to decrease the carbon output of aviation through the creation of a sustainable aviation fuels industry providing aircrafts with non-carbon fuel sources. The third initiative verifies that financial and technical advancements in hydrogen are at the forefront of Africa's green hydrogen plan which is in line with ensuring energy security in the African Union.

On 21 March 2025, the African Forum on Mining offered a platform to discuss Africa's green energy potential due to its abundant mineral supply. [257] This meeting emphasized the African Mining vision and is expected to mitigate the challenges inhibiting the release of this environmental potential. Other expected outcomes of this forum are policy recommendations, a climate action roadmap for Africa's green energy transition and developing intra-African partnership frameworks.

On 25 March 2025, the fifth India–Africa Strategic Dialogue convened to explore synergies between India's Critical Minerals Mission and the African Green Minerals Strategy.[258] Building on momentum from India's G20 presidency and the African Union's inclusion as a permanent member, the dialogue emphasized the importance of equitable partnerships. One session highlighted the need for India and African nations to integrate social responsibility into critical mineral extraction.

The African Union has partially complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. The African Union has advanced the combined welfare target through a partnership with Denmark and has taken action to support supply chains for energy transitions through the partnership, Continental Strategy for Sustainable Aviation Fuels, Low Carbon Aviation Fuels and African Green Hydrogen Strategy and Climate Resilient and Smart Infrastructure Policy.

Thus, the African Union receives a score of 0.

Analyst: Simeon Karakolev

[254] African Union at the World Economic Forum, African Union (Davos) 22 January 2025. Access date: 17 April 2025. https://au.int/en/pressreleases/20250120/african-union-world-economic-forum

[255] AFREC and Denmark Launch "Efficiency First" programme to promote Energy Efficiency in Africa, African Energy Commission (Addis Ababa) 13 February 2025. Access Date: 23 June 2025. https://au-afrec.org/afrec-and-denmark-launch-efficiency-first-programme-promote-energy-efficiency-africa

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[257] The 3RD African Forum on Mining Under the theme "The Africa Mining Vision at 16: Achievements, Challenges and Opportunities," African Union (Addis Ababa) 21 March 2025. Access date: 5 April 2025. https://au.int/sw/node/44527

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European Union: +1

The European Union has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies.

On 5 December 2024, the European Union and Mercosur concluded negotiations on a new EU-Mercosur agreement which includes increasing support in renewable energy sectors, diversifying supply chains and securing raw materials for the green transition.[259]

On 14 January 2025, the European Commission published a report that suggests that EU states need to review outbound investments in key areas such as artificial intelligence, semiconductors and quantum technologies.[260] The report highlights the importance of economic security for the EU.

On 15 January 2025, the European Investment Bank (EIB) gave a EUR1 billion loan to NXP Semiconductors.[261] The loan will support NXP's semiconductor solutions and research in five EU member states and is part of broader investment by the EU into artificial intelligence, quantum computing and the digitalization of numerous industries.

On 16 January 2025, the EU and Mexico concluded negotiations on an updated Global Agreement which includes securing supply chains for raw materials.[262] The agreement also includes advancements towards net-zero and development in sectors like telecommunications and e-commerce.

On 1 February 2025, the European Commission allocated EUR645 million from the Connecting Europe Facility towards Denmark and Germany's offshore wind energy project.[263] The Bornholm Energy Island project aims to integrate 3 gigawatts of wind energy within the European electricity grid by the next decade. This will support energy efficiency, the renewable energy transition and energy security within Europe.

On 5 February 2025, the European Union, the French Development Agency, the Indonesian Ministry of Energy and Mineral Resources and the National Electricity Company launched the 2025-2030 Indonesia Energy Transition Facility, under the Just Energy Transition Partnership Framework.[264] This project will focus on developing and implementing renewable energy and transmission projects and ensuring appropriate public policies for the energy transition. The EU will provide EUR10.6 million and AFD will provide EUR4.1 million for this initiative.

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[264] La France et l'UE renforcent leur partenariat avec l'Indonésie pour accélérer la transition énergétique, Agence Française de Développement (Paris) 5 February 2025. Translation provided by Google Translate. Access Date: 23 June 2025. https://www.afd.fr/fr/actualites/communique-de-presse/la-france-et-lue-renforcent-leur-partenariat-avec-lindonesie-pour-accelerer-la-transition-energetique

On 23 February 2025, the European Commission approved a EUR227 million aid measure to support the construction of a wafer manufacturing facility in Austria.[265] The measure will strengthen Europe's security of supply, resilience and technological autonomy in semiconductor technologies.

On 27 February 2025, the EIB Bank loaned EUR430 million to Portugal for a renewable hydrogen project and a biofuels project.[266] The renewable hydrogen production unit project will be one of the first major operational hydrogen production units in the EU.

On 12 March 2025, President of the European Commission Ursula von der Leyen, President of the European Council António Costa and President of South Africa Cyril Ramaphosa signed a joint statement on various issues including supply chains and energy transition technologies.[267] The members agreed to launch negotiations for a "Clean Trade and Investment Partnership." This partnership will include investment in raw materials supply chains and renewable energy projects.

On 24 March 2025, the European Commission adopted 47 Strategic Projects from 13 EU member states, including a focus on strategic raw materials.[268] The raw materials include lithium, nickel, cobalt, manganese, tungsten, magnesium and graphite. These extraction, processing or recycling projects all meet the EU's environmental and social governance criteria.

On 27 March 2025, the European Commission invested EUR1 billion in artificial intelligence technologies.[269] The Commission aims to promote the adoption of artificial intelligence within the public and private sectors as well as the creation of a digital Earth to support climate adaption technologies.

On 28 March 2025, the EIB loaned EUR110 million to Banco del Estado de Chile for renewable energy investments and climate action.[270] The loan specifies that mining companies and providers of critical raw materials are eligible beneficiaries. The focus of the loan is on small and medium businesses to support the decarbonization of supply chains.

On 3 April 2025, the European Union, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan signed a joint declaration committing to further cooperation.[271] The declaration includes cooperation on sustainable and diversified critical raw materials and supply chains. The EU also declared its support of "regional cooperation within Central Asia," specifically for energy transition technologies and projects.

[265] Commission approves €227 million Austrian State aid measure to support ams Osram in setting up a new wafer manufacturing facility in Premstätten, European Commission (Brussels) 23 February 2025. Access Date: 29 March 2025. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_589

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[270] Chile: EIB to provide $110 million to finance energy efficiency and renewable energy investments, European Investment Bank (Luxembourg City) 28 March 2025. Access Date: 29 March 2025. https://www.eib.org/en/press/all/2025-160-eib-to-provide-usd110-million-to-finance-energy-efficiency-and-renewable-energy-investments-in-chile

[271] Joint Declaration following the First European Union-Central Asia Summit, European Commission (Samarkand) 3 April 2025. Access Date: 15 May 2025. https://ec.europa.eu/commission/presscorner/detail/en/statement_25_980

On 25 April 2025, the EIB and PGE Polska Grupa Energetyczna signed a EUR525 million loan agreement for Poland's energy transition.[272] The deal includes investments in photovoltaic installations and storage units. This supports Poland and the EU's energy transition.

On 11 May 2025, the European Union and Japan held the third Digital Partnership Council to reinforce their technology cooperation.[273] Both members agreed to collaborate on semiconductors, Artificial Intelligence and 5G/6G research. This will support both members diversification of responsible semiconductor supply chains.

The European Union has fully complied with its commitment to support reliable, diversified, sustainable and responsible supply chains for energy transitions, including for critical minerals and materials beneficiated at source, semiconductors and technologies. The EU's 47 Strategic Projects demonstrate investment in reliable, diversified and sustainable supply chains beneficiated at source. In addition, the EU has invested in multiple member states energy transition technologies, semiconductor research and facilities as well as critical minerals projects. The EU's projects and loans robust environmental and social criteria also help ensure responsible supply chains for energy transitions.

Thus, European Union receives a score of +1.

Analyst: Michelle Kim

[272] EIB extends over €525 million to Poland's top utility PGE for renewable energy production, European Investment Bank (Luxembourg) 25 April 2025. Access Date 15 May 2025. https://www.eib.org/en/press/all/2025-193-eib-extends-over-eur525-million-to-poland-s-top-utility-pge-for-renewable-energy-production

[273] EU and Japan reinforce tech and digital partnership, European Commission (Brussels) 11 May 2025. Access Date: 15 May 2025. http://ec.europa.eu/commission/presscorner/detail/en/ip_25_1185