

Outlook and Challenges of Climate Change Policies in 2020

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Key Points of this Report

- ✓ With the rulebook for the Paris Agreement mostly formulated in December 2018, the focus moved on to the update of the 2030 targets under the Agreement. The Parties are required to submit their NDCs at least 9 to 12 months in advance of COP26, which will be held in November 2020 in Glasgow, UK. However, at the Climate Action Summit held in September 2019 in New York, no major country including the EU, China, and India announced it will boost its 2030 target. It has therefore become less likely that any major country will raise its 2030 target in 2020.
- ✓ In terms of policy priority, climate actions are now the most important policy in the EU and among the Democrats in the US. Further, the link between climate policies and trade and financial policies is becoming stronger in the EU and the US. President von der Leyen of the EU Commission is considering introducing a carbon border adjustment mechanism, while in the US, both the Democratic and Republican Parties are considering imposing border carbon adjustments heading toward the presidential election. In the EU, discussions are under way on taxonomy, a classification system for economic activities that are deemed to be environmentally sustainable, aiming to promote the issuance of green bonds and financial products, and incorporate sustainability into prudential rules for banks and insurance companies. Meanwhile, there are moves in the US to restrain ESG finance, claiming that it may be hampering investment in energy infrastructure.
- ✓ To reduce GHG by 80% by 2050 while simultaneously achieving economic growth and addressing climate change, efforts at the global level and disruptive innovation in areas such as hydrogen as well as CCS and CCU/carbon recycling is indispensable. Challenges also include designating innovative and disruptive technologies as focus areas through the government's Progressive Environment Innovation Strategy, investing public and private finance in innovation, and promoting international joint researches.

Summary of Outcome of COP25

- With the rulebook for the Paris Agreement mostly formulated in December 2018, the focus moved on to the update of the 2030 targets under the Agreement.
- COP25 was convened in December 2019 in Madrid, Spain.

	Expectations	Outcomes
Rulebook for market mechanisms under Article 6 of the Agreement	<ul style="list-style-type: none"> • Discuss the guidance on cooperative approaches that involve the use of internationally transferred mitigation outcomes referred to in Article 6, paragraph 2, of the Paris Agreement, and the rules, modalities and procedures for the mechanism for mitigation activities established by Article 6, paragraph 4, of the Agreement, which had been carried over from COP24 	<ul style="list-style-type: none"> • Key points discussed: whether CERs can be used towards NDCs, the coverage and vintage of emission reductions for which a host Party shall apply a corresponding adjustment, how to deliver overall mitigation in global emissions, and baseline methodologies • The discussion will continue in June 2020, with a view to adopting decisions at COP26 scheduled for November 2020
Level of ambition for 2030	<ul style="list-style-type: none"> • The Parties are required to communicate or update by February 2020 their NDCs, but no agenda item on this matter at COP25 • Youth activism/movement, led by Greta Thunberg 	<ul style="list-style-type: none"> • Only recalled Article 4.3 of the Agreement (Each Party's successive nationally determined contribution (NDC) will represent a progression beyond the Party's then current NDC and reflect its highest possible ambition)
Pre-2020 implementation and ambition	<ul style="list-style-type: none"> • Convene a stocktake on pre-2020 implementation and ambition • Have one technical and one high-level panel discussion 	<ul style="list-style-type: none"> • Discussed establishing a two-year work programme on pre-2020 implementation and ambition in relation to the pre-2020 commitments of developed country Parties • Decided to hold, at COP26, a round-table on pre-2020 implementation and ambition

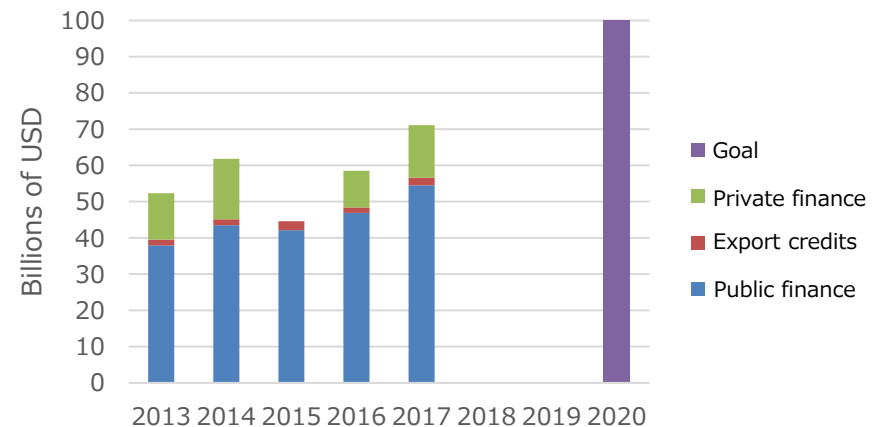
Global Developments (1/2)

- With the rulebook for the Paris Agreement mostly formulated in December 2018, the focus moved on to the update of the 2030 targets under the Agreement.
- Discussions will continue concerning the guidance on cooperative approaches that involve the use of internationally transferred mitigation outcomes referred to in Article 6, paragraph 2, of the Paris Agreement, and the rules, modalities and procedures for the mechanism for mitigation activities established by Article 6, paragraph 4, of the Agreement, which were carried over from COP25.
- The Parties are required to submit their nationally determined contributions (NDCs) at least 9 to 12 months in advance of COP26, which will be held in November 2020 in Glasgow, UK.
 - At the Climate Change Action Summit held in September 2019 in New York, no major country including the EU, China, and India announced it will boost its 2030 target.

Global Developments (2/2)

- The Doha Amendment to the Kyoto Protocol (Second Commitment Period from 2013 to 2020) may not become effective.
 - In 2012, 38 countries inscribed their emissions reduction commitments for the Second Commitment Period. Japan, New Zealand, and Russia did not inscribed commitments. Canada withdrew from the Protocol. U.S. was not a party to the Protocol.
 - 144 instruments of acceptance are required for the entry into force of the Amendment, but only 134 Parties have ratified it so far.
 - Belarus, Kazakhstan, Ukraine, Japan, and Russia have not ratified the Amendment.
- In the Copenhagen Accord of 2015, developed countries committed to a goal of mobilizing jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries.
 - USD 71.2 billion by 2017
 - The USD 100 billion goal unlikely to be met

Climate finance provided and mobilised by developed countries



Source: OECD, Climate Finance Provided and Mobilised by Developed Countries in 2013-2017, 2019

Note: Data for 2015 private finance not available

EU (1/2)

- Greener parties added seats in the European Parliament election in May 2019.
- European Commission President von der Leyen proposed a European Green Deal (December 2019)
 - Will propose the first European 'Climate Law,' which will enshrine the 2050 climate neutrality objective in legislation, by March 2020
 - Will present an impact assessed plan to increase the EU's greenhouse gas emission reductions target for 2030 from 40% towards 55% by summer 2020
 - Including a possible expansion of European emissions trading to new sectors
 - Will propose a carbon border adjustment mechanism, for selected sectors, to reduce the risk of carbon leakage, by 2021

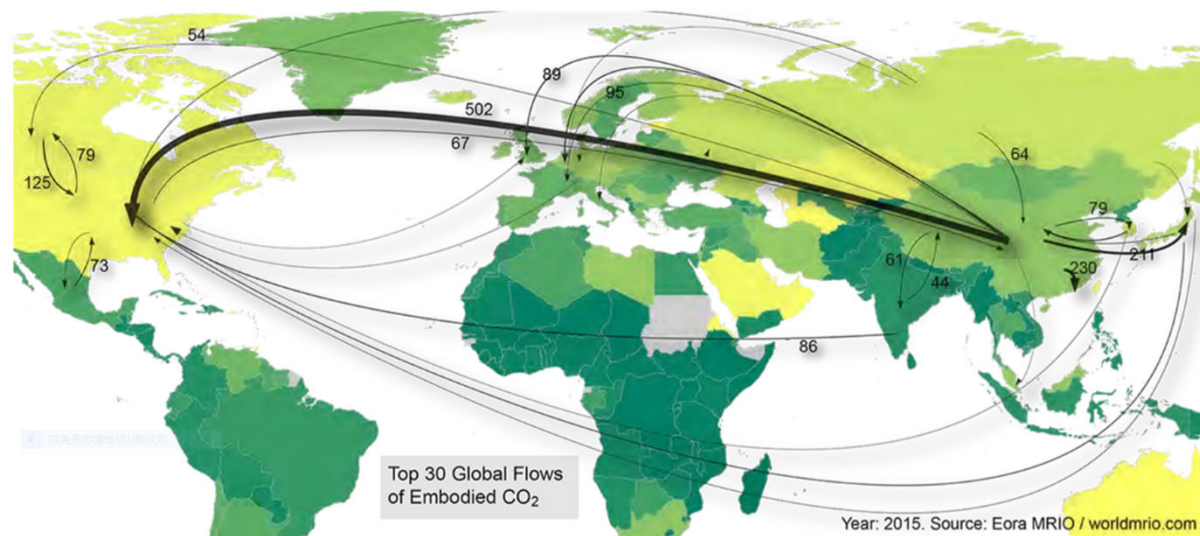


Figure Top international flows of embodied carbon (emissions associated with the production of goods)
Source: Moran et al., The Carbon Loophole in Climate Policy, 2018.

- Action plan on sustainable finance
 - Reorients capital flows from an unsustainable "brown" towards green investment
 - Competes with China in the standardization of financial products
- A classification system (taxonomy) for sustainable activities
 - Determines whether an economic activity is environmentally sustainable.
 - Will be used for (1) a green bond standard, (2) ecolabels for certain financial products, and (3) incorporating sustainability (climate risks) in prudential requirements for banks and insurance companies.
 - According to the report of the Technical Expert Group set up by the European Commission, (1) Gas-fired power plants operating at life cycle emissions lower than 100gCO₂e/kWh, declining to 0gCO₂e/kWh by 2050, are eligible, (2) coal-fired power plants are not in the list, and (3) nuclear energy is not recommended to be included in the taxonomy at this stage on the ground that no permanent, operational disposal site for high-level waste exists yet.
 - Eastern European countries are opposing the exclusion of coal-fired power, and France of nuclear power.
 - Based on the report of the Technical Expert Group, the Commission will adopt delegated act by the end of 2020 to establish technical screening criteria for determining under which conditions a specific economic activity is considered to contribute substantially to climate change mitigation.

United States (1/2)

- Presidential election, and the withdrawal from the Paris Agreement taking effect in November 2020
- Democratic Party
 - Climate actions is regarded as the top priority among the Democrats
 - Green New Deal (February 2019)
 - An introduced resolution which aims to achieve net-zero greenhouse gas emissions through a 10-year national mobilization, including meeting 100 percent of the power demand in the United States through clean, renewable, and zero-emission energy sources. It includes matters related to healthcare, employment, higher education, and housing.
 - Division between liberals and moderates
 - Climate platforms of presidential candidates (June 2019 onwards)
 - A federal investment of \$1.7 trillion in clean energy and environment over the next ten years etc.
- A Border Carbon Adjustment
 - Democratic Party
 - Former Vice President Biden
 - In June 2019, made a proposal to impose carbon adjustment fees or quotas on carbon-intensive goods
 - Senator Warren of Massachusetts
 - In July 2019, announced plans to impose a border carbon adjustment on carbon-intensive imported goods
 - Republican Party
 - Chief Strategist for the Minority Banks of the US House Select Committee on the Climate Crisis (former Special Assistant to the President)
 - In January 2019, argued that carbon tariffs could be imposed on dirtier products made abroad (including fossil fuels)

United States (2/2)

- Trump Administration

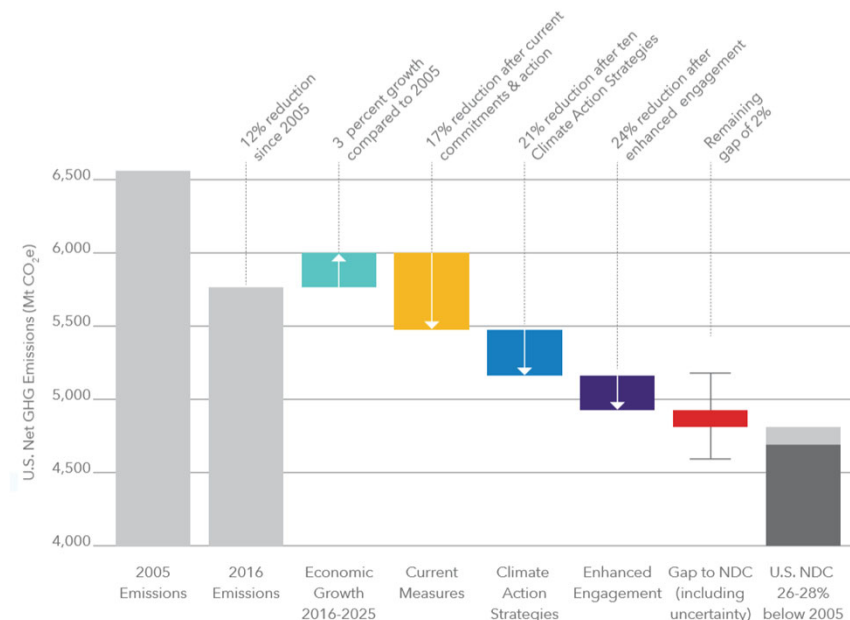
- [Executive Order on Promoting Energy Infrastructure and Economic Growth \(April 2019\)](#)
 - To advance the principles of objective materiality and fiduciary duty, and to promote private investment in the US energy infrastructure
 - The Secretary of Labor shall complete a review of retirement plans subject to the Employee Retirement Income Security Act of 1974 (ERISA) in order to identify whether there are discernible trends with respect to such plans' investments in the energy sector

- Motor vehicles

- A waiver granted to California for emission standards revoked?

- Sub-national and private sector efforts

- 17 states, 540 cities, 1,914 companies and so on are participating in "We Are Still In" and other coalitions and have committed to continue to act on climate change. They collectively account for 37% of U.S. GHG emissions.
- The current commitment and actions (RPS, etc.) by the states, cities, and companies would cut US emissions by 8% in 2025.



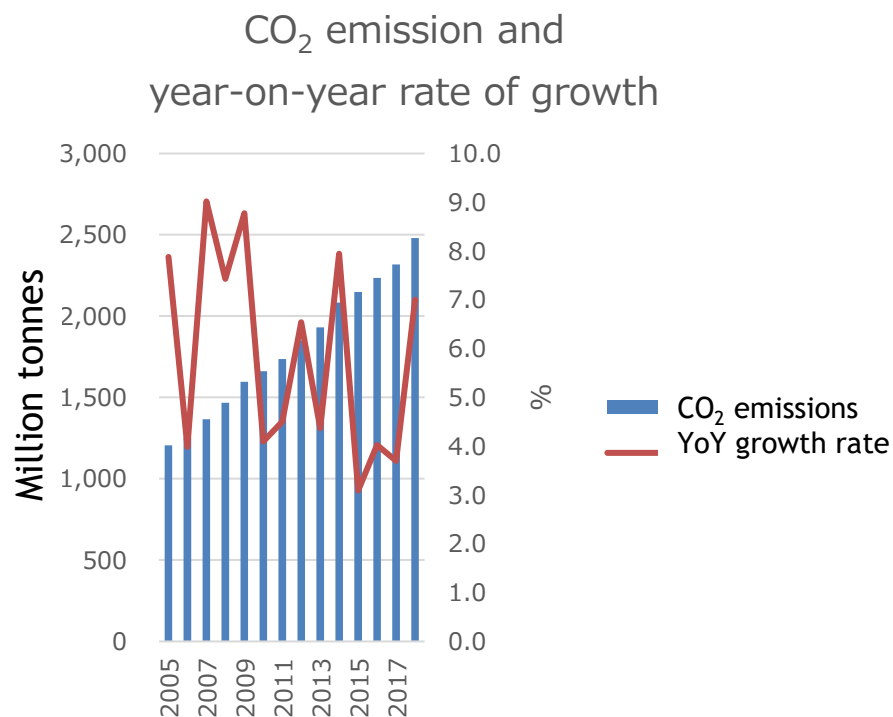
Source: Rocky Mountain Institute and University of Maryland, Fulfilling America's Pledge, 2018.

- 14th Five-Year Plan (2021-2025)
- Domestic Emissions Trading System (ETS)

Whether the Plan will:

- Include GHG in the target
- Address the peaking of GHG emissions by 2025
- Strengthen the reduction of CO₂ emission intensity
- Set an absolute indicator for the total amount of CO₂ emissions based on the current emission intensity indicator
- Raise the ratio of non-fossil energy
- Stipulate the target for 2050 or for net-zero carbon emissions
- Advance “nature-based solutions” such as reforestation

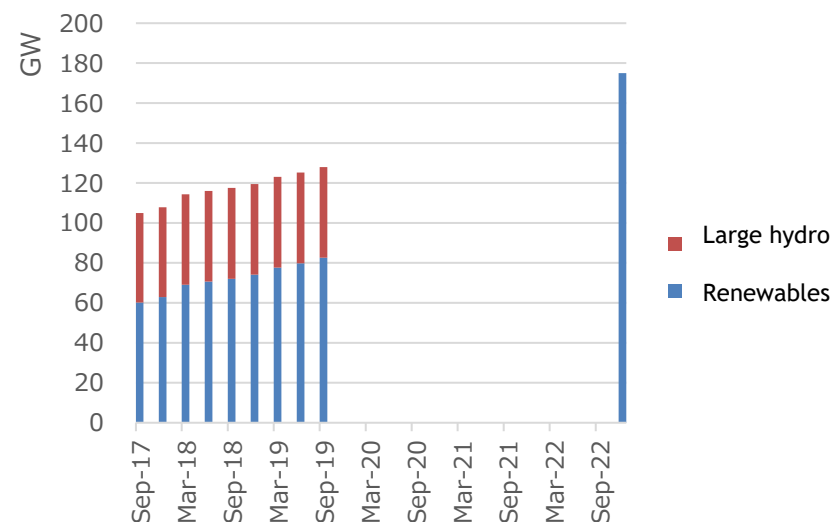
Development of the carbon trading market	
Identification of participating entities	In June 2019, the Ministry of Ecology and Environment (MEE) ordered local governments to prepare a list of power stations to be included in the national ETS.
Allocation of emission allowances	In October 2019, the MEE published a draft benchmark for calculating allocations for thermal power stations.
Simulation trading	Simulation trading was commenced.
Trading system	Trading system is mostly complete.
Expansion of covered sectors	In January 2019, the MEE ordered the emitters in eight major industries to report their 2018 emissions.



Source: BP Statistical Review of World Energy

- Some estimates indicate that India's rate of growth in CO₂ emissions declined in the first eight months of 2019 to 2% year-on-year

Historical installed capacity of renewable power stations and the target



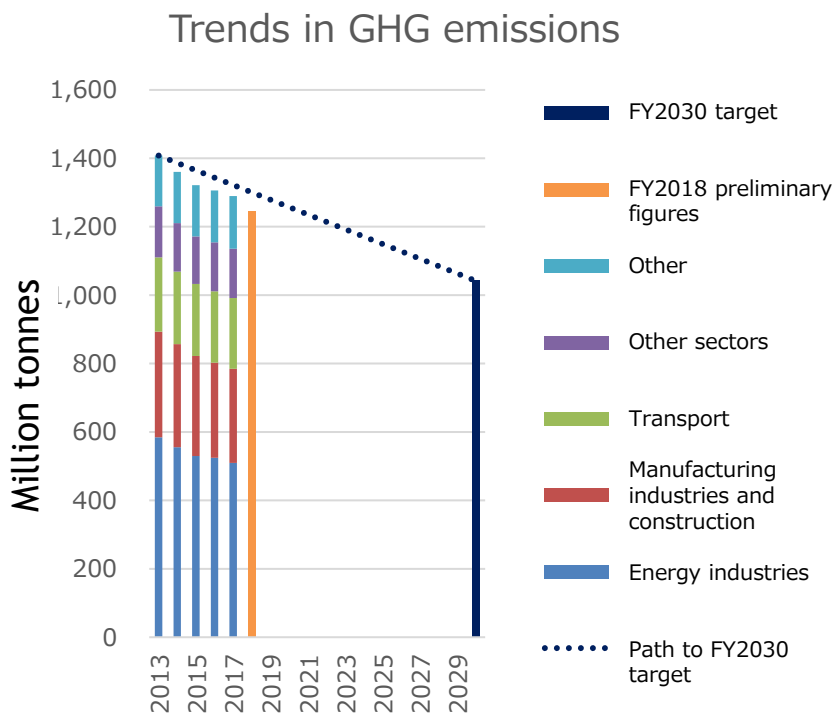
Source: Government of India, Installed Capacity Reports

- As of end-October 2019, capacity of 83 GW has been installed
- Some bids have been cancelled due to high bidding prices

International Aviation and Shipping

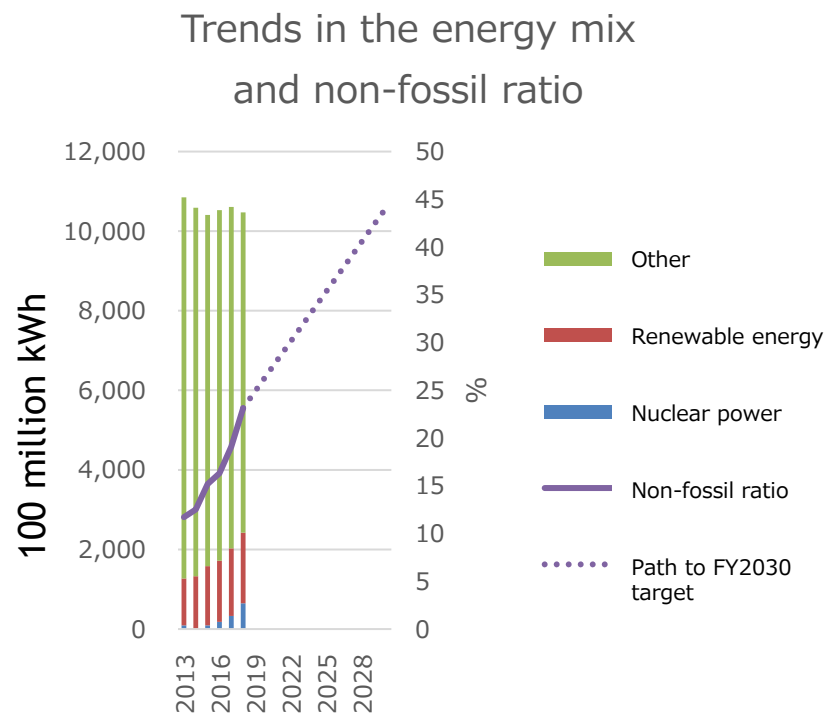
- International aviation
 - Carbon Offsetting and Reduction Scheme for International Aviation (CORSI) of the International Civil Aviation Organization (ICAO) (October 2016)
 - Airline operators will be required to offset any increase in their CO₂ emissions from 2020 levels by using credits, including ones generated from a mechanism established under the UNFCCC and the Paris Agreement.
 - 14 emissions unit programmes have applied for assessment against the CORSIA emissions unit criteria.
 - China, Russia, and India are opposing CORSIA itself, claiming that it disadvantages emerging economies.
- International shipping
 - Initial IMO (International Maritime Organization) Strategy on reduction of GHG emissions from ships (April 2018)
 - Reduce the carbon intensity of ship through the implementation of further phases of energy efficiency design index (fuel consumption standards) for new ships.
 - Reduce carbon intensity of international shipping by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008.
 - Peak GHG emissions from international shipping as soon as possible and reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as soon as possible in this century.
 - Discussing candidate mid-term measures, possibly including Market-based Measures.

Japan: Towards 2030



Source: UNFCCC: GHG Data Interface, Ministry of the Environment: FY2018 GHG emissions (preliminary)

- Japan is on track overall to meet the FY2030 emissions reduction target.
- However, the pace of CO₂ reduction is expected to slow in 2019 and 2020.

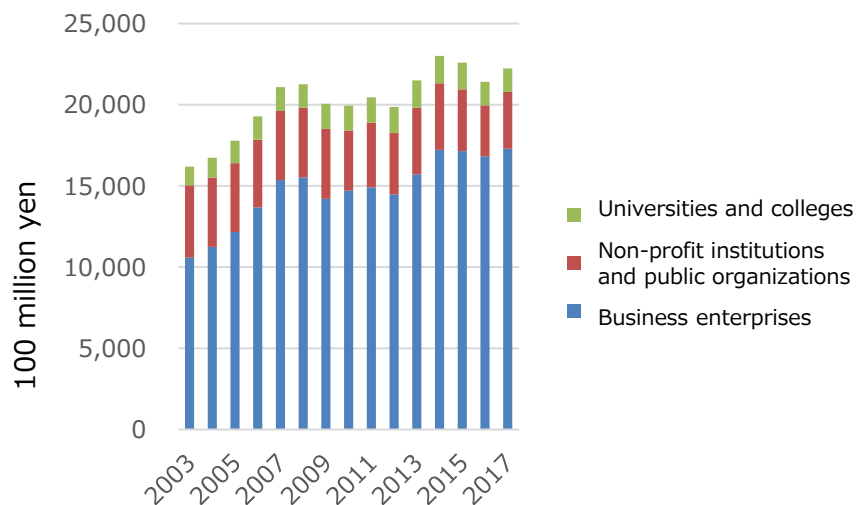


Source: General Energy Statistics of Japan

- There is not enough progress in restarting nuclear power plants.
- Renewable energy is steadily increasing, but it is necessary to lower its cost and address the increasing burden on households.

Japan: Towards 2050

R&D expenditure on environmental science and technology, and energy



Data: Survey of research and development

- Research and development expenditure by business enterprises, which covers most of the spending on environmental science and technology as well as energy, has ceased to grow.
- Work on innovation towards 2050 should immediately be started.

- June 2019 Long-Term Strategy

- Efforts at the global level and disruptive innovation in areas such as hydrogen, CCS, and CCU/carbon recycling are indispensable.

- December 2019 (scheduled) Progressive environment innovation strategy

- Challenges include designating innovative and disruptive technologies as focus areas through the government's Progressive Environment Innovation Strategy, investing public and private finance in innovation (public and private investment of 30 trillion yen in environment and energy R&D over 10 years), and promoting international joint researches.