

ISSUE BRIEF

THE ROAD FROM PARIS: JAPAN'S PROGRESS TOWARD ITS CLIMATE PLEDGE

On July 17, 2015, Japan submitted its Intended Nationally Determined Contribution (INDC), with unambitious plans to reduce its greenhouse gas (GHG) emissions by 26 percent from 2013 levels by 2030. Japan formally joined the Paris Agreement in November 2016. To cut its fair share of emissions, Japan needs to raise the ambition of its emissions reduction target and stop its rapid expansion of new coal power plants.

OVERVIEW OF NATIONAL CIRCUMSTANCES

With a population of more than 126 million in 2015, Japan is the 11th-most populous country in the world.¹ In 2015, Japan was responsible for 1,227 million metric tons of carbon emissions, emerging as the world's sixth-largest emitter.² Its natural hazards include seismic activity, typhoons, volcanoes, and tsunamis—the last of which led to the Fukushima nuclear incident in 2011. Japan has very few natural resources and depends largely on the import of fossil fuels for its energy supply, especially after Fukushima's nuclear reactors were shut down.³ As a result, Japanese policymakers are more concerned about energy security than climate change. In fact, members of Parliament—especially those from the ruling Liberal Democratic Party—do not include climate change in their agenda of priorities.⁴

JAPAN'S CLIMATE PLEDGE

Japan's Nationally Determined Contribution (NDC) pledges to reduce GHG emissions by 26 percent from 2013 levels by 2030. International and domestic analysts and environmental groups consider Japan's NDC unambitious.⁵ In addition, Japan's pledge to reduce GHG emission by 3.8% by 2020 is also very weak and it was already achieved in fiscal year 2015. Japan could meet its target with minimal additional effort, indicating the submission of an NDC that does not contribute a fair share to global efforts. If all countries had the same level of ambition, then global temperatures would be expected to rise 3 to 4 degrees Celsius by the end of the century.⁶ On overall climate policies, Climate Action Network–Europe and Germanwatch ranked Japan second to last among OECD member countries on its annual Climate Change Performance Index and the lowest in the G7 group.⁷



**JAPAN HAS
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LEVELS
BY 2030**



THE PARIS AGREEMENT

In late 2015, the 21st session of the Conference of the Parties (COP21) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris. The 196 nations that are part of the UNFCCC approved the Paris Agreement, which aims to limit global temperature rise to 2 degrees Celsius, and to make best efforts to keep it to 1.5 degrees. To that end, countries submitted intended nationally determined contributions (INDCs) detailing the level to which they planned to cut emissions and their plans to reach that goal. The Paris Agreement entered into force on November 4, 2016—and the INDCs are now formally enshrined as part of the Agreement—and hereafter referred to as nationally determined contributions (NDCs).

Furthermore, Japan has proposed a Japanese Crediting Mechanism through which it will support emissions reductions in other countries and count them as its own.

Along with credits for negative emissions from forest management and land use change and other activities, the mechanism could lower Japan's reduction target for all other activities to only 16 to 20 percent of 2013 levels by 2030.⁸

CLIMATE MITIGATION POLICY

Climate and Energy Policy Framework

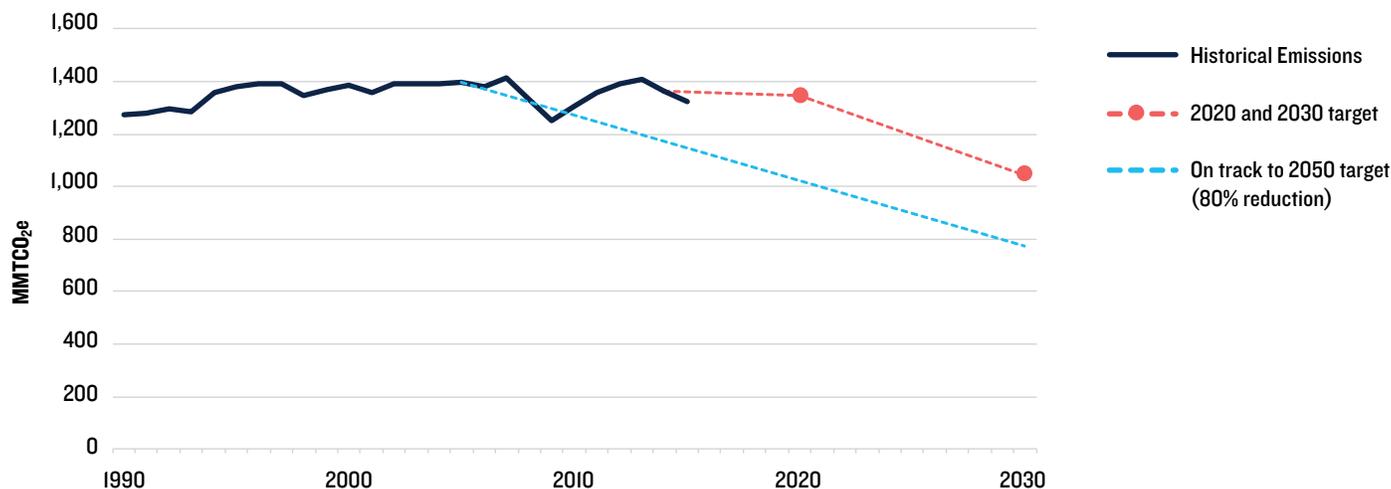
Japan's energy plans are developed by the Ministry of Economy, Trade, and Industry (METI). Every three years, METI develops the Basic Energy Plan. This includes the Long-Term Energy Supply and Demand Outlook, which sets the future energy mix targets for 2030. The Basic Energy Plan was developed by the Abe government in 2014, and the Outlook was updated in 2015.⁹ Because the Basic Energy Plan covers the energy sector, which accounts for 90 percent of Japan's emissions, its recommendations play an outsized role in determining Japan's future emissions.

Separate from METI's plan, the less influential Ministry of Environment (MOE) develops a Plan for Global Warming Countermeasures every three years. Unfortunately, the two agencies develop their plans through separate processes.

The Plan for Global Warming Countermeasures was not developed until May 2016, two years after METI's energy plan. As a result, the climate plan is largely a reflection of METI's Basic Energy Plan, which does not show a high level of climate ambition. Specifically, the Energy Plan includes the same proportion of energy use from fossil fuels in 2030 as in the 2000s—indicating very little effort to decarbonize the energy mix. Japanese environmental experts have pointed out that the 2030 goal from the Basic Energy Plan conflicts with the Paris Agreement's goal of reducing GHG emissions to net-zero by the second half of the century. In addition, the Plan includes 20 to 22 percent reliance on nuclear power, which is unrealistic given post-Fukushima opposition to nuclear energy.¹⁰

Japan's bureaucracy does not prioritize climate change mitigation. With a mandate to improve economic growth, METI is generally considered a pro-business organization. It has close relationships with the power companies and heavy industries that are responsible for the majority of Japan's

JAPAN'S GHG EMISSIONS



Source: Greenhouse Gas Inventory Office of Japan, National Institute for Environmental Studies, "The GHG Emissions Data of Japan (1990-2015)", April 14, 2017. <http://www.gio.nies.go.jp/index.html>.

emissions. MOE, a newer agency, is responsible for Japan's climate and emissions policies. While it is the regulator for nuclear safety and environmental assessments of coal power plants, MOE lacks the political clout of METI. Both ministries are guided by separate formal advisory committees that are made up mostly of interest groups that favor business. Both committees that advise MOE and METI include Keidanren (Japanese Business Federation), and the committee that advises METI includes many representatives from Japan's most energy-intensive industries. These representatives greatly contributed to the NDC's unambitious emissions reduction target and the high shares of nuclear and coal power slated for the 2030 energy mix.¹¹

Energy Efficiency and Industry

Japan is one of the leaders among developed countries when it comes to GHG emissions per unit of GDP and per capita. So policymakers have argued that further improvements in efficiency for Japan will have higher marginal costs because the low-hanging fruit in energy efficiency has already been picked.

Energy-related emissions are expected to fall 25 percent from 2013 levels by 2030. Measures to achieve this include improvements in the steel and iron industries, such as efficiency improvements for electricity consumption, new coke-making processes, higher power-generation efficiency, and new ironmaking processes. Energy efficiency improvements are also expected for chemical processes, paper production, factory energy use, and across many other sectors. In the residential sector, energy-saving standards for new homes can help reduce emissions, as can better thermal insulation, efficient water heaters and lighting, and other measures. In transportation, fuel efficiency and the promotion of public transport will help reduce emissions.¹²

Unfortunately, these reductions are all based on voluntary industrial actions. The Japanese government has not adopted sufficient energy efficiency regulations to mandate these reductions. Kiko Network, an environmental NGO, has pointed out that Japan's policies are neither consistent with the long-term target of reducing GHGs by 80 percent by 2050—as recommended by the Intergovernmental Panel on Climate Change—nor with the Paris Agreement.¹³

Feed-In Tariff and Carbon Tax

In November 2011, Japan introduced a feed-in tariff system for renewable electricity. It increased the share of renewable resources in the electricity supply from 10 percent in 2010 to 15 percent in 2015. This is despite the fact that the Liberal Democratic Party of Prime Minister Abe, after coming to power in December 2012, opened the door for more opposition to renewable energy, and allowed power companies to build new coal plants.¹⁴ Given the potential for increasing renewable energy installation, Japan could meet and even surpass its 2030 target for renewable energy.¹⁵

In 2012, Japan introduced a carbon tax that supports efforts to reduce emissions across various commercial and residential sectors.¹⁶ This measure incentivizes energy efficiency for public and commercial buildings and LED lighting installation.¹⁷ While rates have increased gradually, the tax has been criticized as too low and only marginally effective at reducing emissions.¹⁸

Coal Power

Japan's massive domestic and international coal expansion raises serious doubts about the government's commitment to tackling climate change. As other major developed nations retire their coal plants, Japan has increased the share of coal power in its electricity mix from 9.7 percent in 1990 to 31 percent in 2015. Today the nation has more than 90 coal power plants, more than half of which are less than 20 years old and could operate for many years to come. Forty-nine new coal plants have also been planned since 2012. To date, four of the plants were stopped, while three plants have started operations. If built, the remaining 42 plants would add another 20.5GW of coal capacity.¹⁹ These new plants alone would increase Japan's GHG emissions by 9 percent relative to 2015 levels. Unfortunately, the current set of coal projects in development would exceed the Basic Energy Plan's goal of 26 percent coal power in the energy mix by 2030. METI has issued new efficiency standards for new power plants and another set of standards for existing power plants. However, these standards are entirely voluntary. In addition, because the government's new voluntary efficiency standards for power plants do not apply to projects already under development, such projects could lead to a massive increase in emissions.

Heavy investment in new coal plants could create overcapacity in Japan's coal power sector. As the price of renewable resources falls, these coal resources will be far less desirable. Experts have calculated that Japan could be stuck with \$57 billion in stranded assets if it builds too many coal plants that will operate at a loss in the long run.²⁰

International Cooperation

Through the Japanese Credit Mechanism, Japan has plans with more than a dozen developing countries, such as Thailand, Chile and Saudi Arabia, to support emissions reductions. Japan will count those emissions reductions toward its own climate target.²¹ Though Japan deserves credit for some of its climate-focused international aid, it also deserves criticism for its investments in coal-fired power plants abroad. Japan justifies these plants as “climate finance” in service of the Paris Agreement on the grounds that these new, more efficient plants crowd out less efficient ones. Not only is this claim untrue, but these projects benefit Japanese export companies who manufacture equipment for the plants. Considering coal's significant health and environmental impacts, renewable energy is a much safer and cleaner alternative.

THE ROAD AHEAD

Japan can do more to ensure it is on track to meet and exceed its 2030 target and doing its part to limit global temperature rise to 1.5 or 2 degrees Celsius.²² Many of Japan's domestic emissions reduction programs are voluntary. On top of that, Japan's planned energy mix for 2030 includes an extremely high share of controversial

nuclear and coal power. Japan intends to count credits from its land use sector, other industries, and emissions reductions overseas—including the construction of more efficient coal plants—toward its emissions reduction goal. These credits mean that the 26 percent reduction target in Japan's NDC is less than meets the eye. More effort must be made domestically to reduce Japan's emissions.

KIKO NETWORK

Kiko Network, a Japanese non-profit environmental organization, conducts policy research, advocacy, communication and networking with experts and NGOs to tackle with climate change. Kiko Network, #305 Takakura Bldg. Takakura-dori, Shijo-agaru, Nakagyo-ku, Kyoto 604-8124, JAPAN, www.kikonet.org.

NRDC

The Natural Resources Defense Council is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. Visit us at nrdc.org.

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