



# Triple Renewables in Japan for a 1.5°C Pathway

## Following the Pledge to Triple Renewable Energy at COP28

At the ongoing COP28, more than 120 countries endorsed the pledge to triple the world's renewable energy capacity and double the global rate of energy efficiency by 2030. Japan also expressed its support for this goal in a speech given by Prime Minister Kishida at the site. The large endorsement of the pledge indicates a common global understanding of the critical importance of expanding renewable energy and improving energy efficiency in realizing the 1.5°C target.

In contrast, the only reported response from Japanese government officials regarding the expansion of renewable energy is that the pledge is a global goal, not a Japanese goal. It is true that endorsement of the pledge does not mean an immediate commitment to tripling the renewable energy capacity in each country. However, if we take a look at the current state of renewables in Japan, it is evident that we should take this opportunity to emphasize the need to take drastic measures to accelerate the deployment of renewables to achieve the 1.5°C target.

### At least 80% renewables ratio needed to achieve 60% reduction by 2035

The G7 Summit in May, chaired by Japan, accepted the urgency of the 60% GHG reduction by 2035 raised by the IPCC's 6th report and reaffirmed the commitment to "achieving a fully or predominantly decarbonized power sector by 2035" in order to realize the 1.5°C goal. In its April proposal, Renewable Energy Institute showed that in order to achieve a 60% reduction in Japan, more than 80% of the country's electricity must be converted to renewable energy sources by 2035<sup>1</sup>. The total installed capacity required to achieve this goal is more than 375 GW for all renewable power sources, including solar and wind, which is more than three times the actual amount in FY2021.

In other words, tripling the installed capacity of renewable energy in order to achieve the 1.5°C target is a goal that needs to be realized in Japan as well, as soon as possible, if not by 2030, then before 2035.

### Japan's pace of solar and wind expansion lags behind the world

In his speech at COP28, Prime Minister Kishida boasted, "We have a proven record as the world's third largest solar energy provider." While it is true that Japan was in third place as of the end of 2022, the increase during 2022 was 6.5 GW in Japan, while the increase in China, in first place, was 106 GW, an order of magnitude larger; the United States, in second place, had 18.6 GW, nearly three times that of Japan; India, in fourth place, had 18.1 GW, and is likely to replace Japan in third place sooner rather than later. Those countries that followed, Germany, Spain, and Brazil, also exceeded Japan in annual growth<sup>2</sup>.

As for wind power, which is driving the expansion of renewable energy worldwide along with solar, as of the end of 2022, the top three are China with 365 GW, the United States with 144 GW, and Germany with 67 GW, followed by India, the United Kingdom, Spain, Brazil, and France, all of which have installed over 20 GW. Japan has not even reached 5 GW<sup>3</sup>.

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<sup>1</sup> Renewable Energy Institute ["Proposal for the 2035 Energy Mix \(First Edition\): Toward Decarbonizing Electricity with Renewable Energy,"](#) April 2023

<sup>2</sup> REN21 "RENEWABLES 2023 GLOBAL STATUS REPORT," March 2023

<sup>3</sup> The Global Wind Energy Council "GLOBAL WIND REPORT 2023," March 2023

## Potential is ample

In a TV program following the announcement of the renewables tripling pledge, Environment Minister Shintaro Ito reportedly said, "I don't think [Japan] necessarily has the capacity to triple the amount of renewable energy." According to a potential study published by the Ministry of the Environment, however, the potential is as high as 4,174 GW<sup>4</sup>. Even taking current business feasibility into account, the potential is considered to be 347-1046 GW, which alone is three to ten times the current installed capacity. The potential is ample.

## The adherence to coal-fired power, including ammonia co-firing to be ceased

The current goal of the G7 nations, except Japan, and other developed countries, is to decarbonize all power sources by 2035. At COP28, the United States announced that it's joining the Powering Past Coal Alliance (PPCA), which aims to eliminate coal-fired power generation. In his speech, Prime Minister Kishida declared, "Japan will end new construction of domestic unabated coal power plants." Many new coal-fired power projects announced after the Great East Japan Earthquake of 2011, however, have all either been completed, under construction, or have been cancelled. It is difficult to find any practical meaning in the policy of ending construction of new coal-fired power plants at this point. What is being called for now is the phase-out of all the coal-fired power plants, including the existing ones as well, yet PM Kishida's speech did not mention anything on this point.

The Kishida administration is promoting coal-ammonia co-firing power generation. According to the IPCC's Sixth Assessment Report, emission reduction measures are considered to have been taken if they reduce emissions by 90% or more<sup>5</sup>. Coal-fired power plants with 20% or 50% ammonia co-firing are still considered unabated coal-fired power plants and subject to phase-out<sup>6</sup>. Japan is now the only G7 country not participating in the PPCA. The current Strategic Energy Plan calls for coal-fired power plants to supply about 19% of electricity as late as 2030. Japan should urgently renounce its adherence to coal-fired power generation, including ammonia co-firing, and accelerate the deployment of renewable energy.

## Every effort needed to expand renewable energy in Japan and the rest of Asia

Contrary to the government's claims, Japan and Southeast Asia, the target of Prime Minister Kishida's Asia Zero Emission Community (AZEC) initiative, have abundant renewable energy potential<sup>7</sup>. What is required of the government now is to implement the necessary regulatory reforms and accelerate support measures to realize an early tripling of renewable energy in Japan, including solar and wind, as well as strengthening the power grid. In Southeast Asia, the government should stop promoting inefficient decarbonization technologies such as coal-ammonia co-firing and thermal power generation with CCS, and support the growth and expansion of renewable energy.

This should precisely be the pathway "to achieve decarbonization and economic growth together," a promise that PM Kishida made at the end of his speech at COP28.

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<sup>4</sup> Ministry of the Environment, "Japan's Potential for the Introduction of Renewable Energy" April 2022

<sup>5</sup> IPCC "Climate Change 2023 Synthesis Report," March 2023

<sup>6</sup> Kae Takase ["Why Investments in Ammonia Co-firing to Coal Power are not Consistent with the 1.5°C Climate Goal,"](#) November 2023

<sup>7</sup> Renewable Energy Institute ["Renewable Energy: The Top-Priority for Southeast Asia to Fully Blossom,"](#) September 2023