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Report Highlights:

This report replaces and corrects the report published on August 11, 2021. The revision contains corrections to Figures 1 and 2 as the original report did not contain relative percentages represented by the different energy sources described in those Figures.
On July 21, 2021, Japan's Agency of Natural Resources and Energy (ANRE) published the first public draft of its 6th Strategic Energy Plan. As Japan looks to cut its greenhouse gas emissions by 46 percent by 2030, compared to 2013, ANRE aims to double the country's use of renewable energy for electricity generation from 2019 to 2030. ANRE proposes to significantly revise the 2030 energy mix target relative to its prior 2030 target published in 2018. The main focus of the Plan is on solar and wind, rather than biomass. The Plan does not set targets for transport biofuels.

General

On October 26. 2020, during his address at the Extraordinary Diet Session, Japanese Prime Minister Suga declared that Japan would become carbon neutral by 2050. On April 22, 2021, at the Leader's Summit on Climate hosted by the United States, Prime Minister Suga declared that Japan would aim to reduce its greenhouse gas (GHG) emissions by 46 percent in Japanese fiscal year (JFY: April-March) 2030 from JFY 2013 levels.

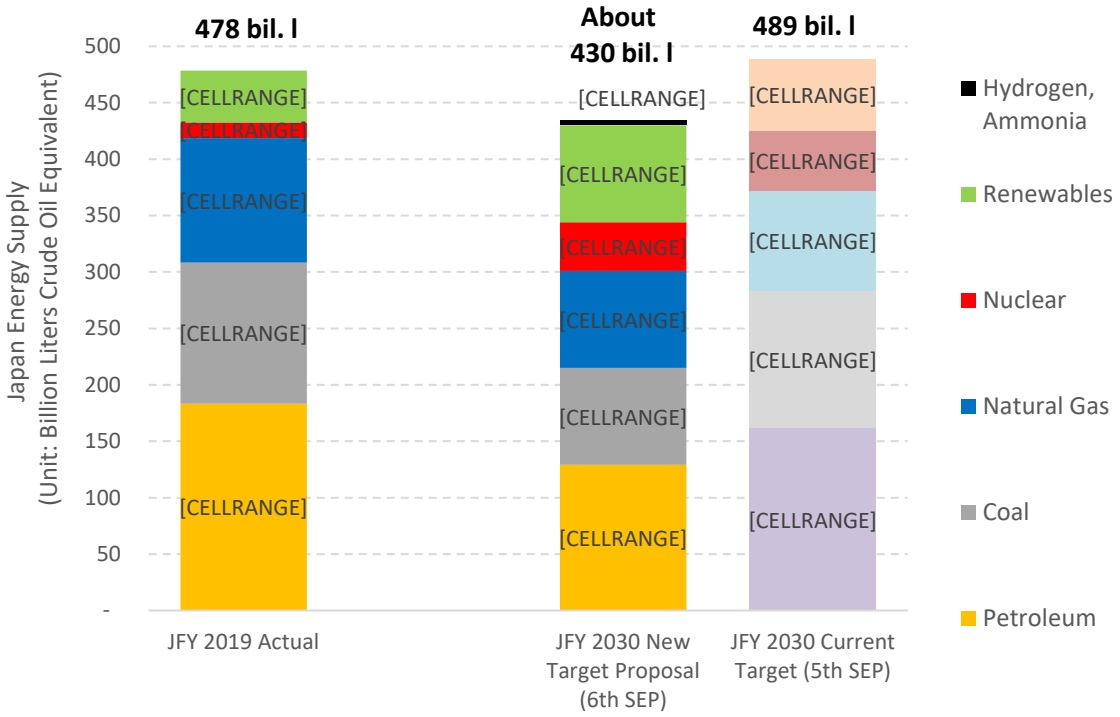
Strategic Energy Plan[1]

Every 3-4 years, the Agency of Natural Resources and Energy (ANRE) of the Ministry of Economy, Trade and Industry (METI) releases Japan's Strategic Energy Plan (SEP). The SEP, first published in 2003, presents the government's medium to long-term energy outlook. The current 5th Strategic Energy Plan was approved by the Cabinet on July 3, 2018 (for details about the 5th SEP, please see Japan Biofuels Annual). Since October 2020, ANRE's expert committee has been discussing the 6th SEP. According to ANRE, during the development of a new SEP, ANRE takes into account trends in global energy markets, environmental considerations and public opinion. Following reviews by an expert committee and a public comment period, the 6th SEP Plan will be finalized, provided Cabinet members do not object. Upon adoption of the new SEP, METI expects local governments and private sectors, such as utility companies and refineries, to integrate elements of the Plan into their operational plans.

On July 21, 2021, ANRE released the first draft of the new 6th Strategic Energy Plan. To achieve the Government of Japan's 46 percent GHG reduction target by JFY 2030, ANRE proposes to reduce the total primary energy generation to approximately 430 billion liters crude oil equivalent (COE) by JFY 2030 from the JFY 2030 target of 489 billion liters COE in the 5th Strategic Energy Plan (Figure 1). ANRE expects this reduction to occur through decreased demand due to improved energy efficiency and energy conservation. Several other key changes in JFY 2030 targets from the 5th SEP to the draft 6th SEP include (details in Figure 1): (i) increase in the use of renewables; (ii) reduction in reliance on petroleum and coal; and (iii) addition of hydrogen and ammonia to the list of energy sources.

[1] The literal translation from Japanese is "Energy Basic Plan," but the official English translation is Strategic Energy Plan.

Figure 1. Current and Target Primary Energy Production by Major Sources



Note: The JFY 2019 value in the chart does not include recycled heat, which would push Japan's total JFY 2019 energy supply to 524 billion liters COE.
1 gigajoule (GJ) = 0.0258 liters COE = 947,817 British thermal units (Btu)

Transportation Biofuels

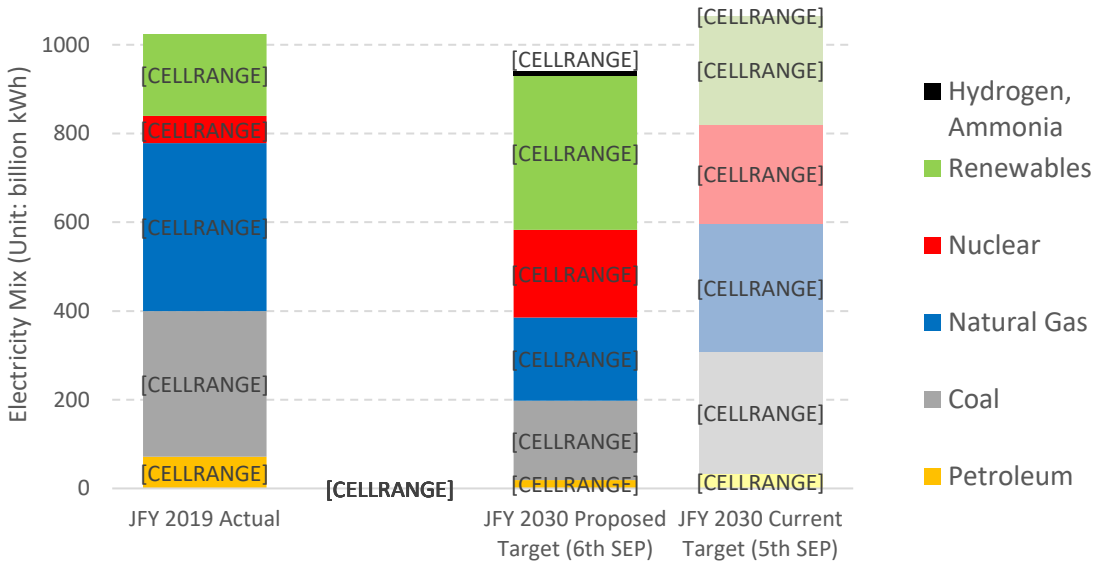
According to the draft 6th SEP, ANRE will continuously monitor international trends and domestic utilization related to bioethanol and biodiesel use. By 2035, Japan intends to ban new sales of non-hybrid cars with combustion engines. During the same time frame, Japan aims for vehicles with an electric propulsion system (e.g., hybrid electric tracks, fuel cell electric vehicles) to account for 20-30 percent of new sales of commercial vehicles weighing less than 8 tons.

In the near future, Japan also aims to commercially introduce sustainable aviation fuels (SAF) along with adopting International Civil Aviation Organization (ICAO) guidelines.

Electricity Generation

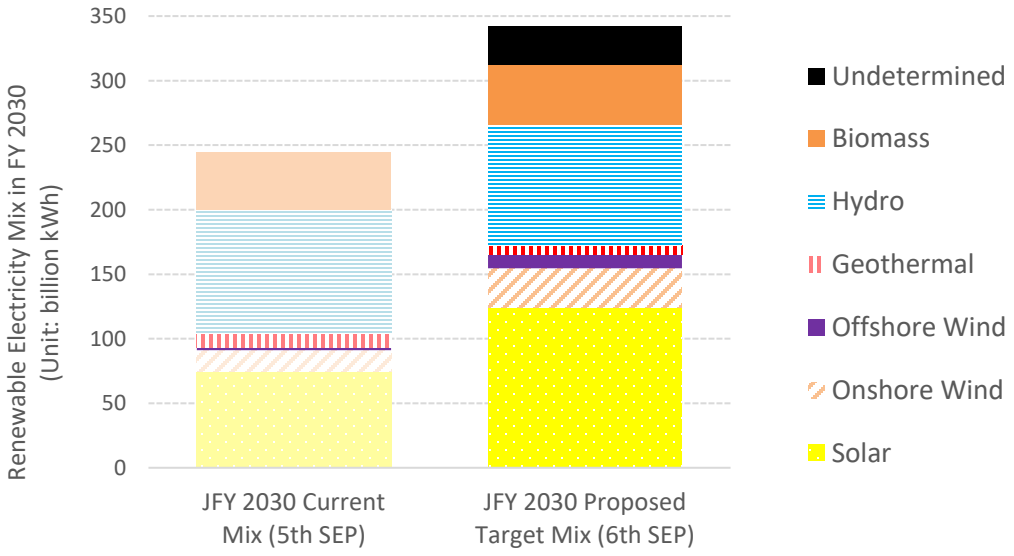
Compared to the 5th SEP, in the draft 6th SEP, ANRE aims to reduce the use of fossil fuels and boost the use of renewables in power generation (Figure 2). In JFY 2019, the latest data available, Japan derived 18 percent of its electricity from renewables. According to the draft 6th SEP, the share will increase to about 36-38 percent by JFY 2030.

Figure 2. Current and Target Distribution of Energy Sources for Electricity in Japan



The renewables targeted for increased energy generation include solar panels, onshore windmills and offshore windmills (Figure 3). The draft 6th SEP maintains the same JFY 2030 target for biomass utilization as the 5th SEP. Under the 5th SEP, Japan's biomass power capacity was expected to reach 6-7 GW (39.4-49.0 billion kWh) by JFY 2030. The new 6th Plan proposed to increase the biomass power capacity to 8 GW (approximately 47.1 billion kWh) by JFY 2030. In addition to specifying targets for different renewable types, the draft 6th SEP also aims to add 20-40 billion kWh from renewables, of yet to be determined sources (Figure 3).

Figure 3. Comparison of JFY 2030 targets for Renewables for Energy Generation



For information about Japan’s climate change targets related to the agricultural, forestry and fisheries sectors, please see Agriculture and Climate Change in Japan.

Attachments:

No Attachments.