

## Electric Power Industry Sets CO<sub>2</sub> Emission Reduction Target for FY2030

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The electric power industry has drafted a low-carbon society action plan<sup>1</sup>, setting a carbon dioxide emission reduction target calling for improving the electricity emission factor<sup>2</sup> by about 35% (from FY2013) by FY2030. Emissions reduction target by the electric power industry as a major source of CO<sub>2</sub> emissions is a step forward for Japan's climate change policy. If the target is achieved, it will make great contributions to Japan's Intended Nationally Determined Contributions (INDC). However, the strategy to create an effective plan remains as a challenge.

The main climate change policy for Japan's industry sector since 1997 has left each industry to voluntarily set and implement emission reduction targets. In the voluntary frameworks, voluntary action plans had been implemented partly for the purpose of achieving the emissions reduction target for Japan under the Kyoto Protocol until FY2012. Since FY2013, each industry has drafted a low-carbon society action plan through FY2020 or FY2030. The electric power industry had not set any emission reduction target since 2013 in its low-carbon society action plan in the absence of the government-fixed energy mix.

After the government decided the Long-term Energy Supply and Demand Outlook and the INDC, the electric power industry released its low-carbon society action plan on July 17, 2015. The low-carbon society action plan, unlike its predecessor, was drafted jointly by the 10 general electricity utilities, 23 power producer and supplier companies, Electric Power Development Co. and Japan Atomic Power Co., covering more than 99% of electricity sales in Japan. Its emissions reduction target calls for lowering the electricity emission factor in FY2030 by about 35% from FY2013 to 0.37 kilogram CO<sub>2</sub> equivalent per kilowatt-hour. Based on the target, the emissions reduction can be roughly estimated<sup>3</sup>. If the electricity emission factor level of 0.567 kg-CO<sub>2</sub>/kWh is maintained until FY2030, one may estimate CO<sub>2</sub> emissions in FY2030 at about 556 million t-CO<sub>2</sub> by multiplying electricity sales volume in the year by the electricity emission factor for FY2013. If the target of lowering the factor is achieved, CO<sub>2</sub> emissions may be estimated at about 363 million t-CO<sub>2</sub>, down about 193 million t-CO<sub>2</sub> from the scenario in which the factor will remain unchanged at the FY2013 level. The reduction amounts to 13.7% of Japan's CO<sub>2</sub> emissions in FY2013.

Given that the electric power industry's emission reduction target has a great impact on the Japanese target, how to secure the effectiveness of the low-carbon society action plan is important. *The summary of discussions at meetings of relevant bureau directors general on bids for fossil power*

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<sup>1</sup> Government official translation is "Commitment to a Low Carbon Society".

<sup>2</sup> The factor represents CO<sub>2</sub> emissions per electricity sales.

<sup>3</sup> All numbers hereinafter have been estimated from data in the Ministry of Economy, Trade and Industry (2015), "Long-term Energy Supply and Demand Outlook (relevant data)," and relevant documents.

*generation for power supply to Tokyo Electric Power Co.*, released by the Ministry of Economy, Trade and Industry, and the Ministry of the Environment on April 25, 2013, calls for a framework for effective climate change mitigation measures with emphasis on the following three points:

- The plan's consistency with government plans;
- Major power generators' participation;
- The clarification of responsible parties;
- The commitments to targets; and,
- The fair treatment of new power generators<sup>4</sup>.

The effectiveness of the plan will be assessed based on these criteria. Yet, the electricity industry is yet to address how to make get their plans in line with these factors and how to secure the plan's consistency with the electricity system reform and other factors. Although the plan covers a vast majority of power generation, how to secure major power generators' participation, the clarification of responsible parties and the fair treatment of new power generators to implement the plan is uncertain, with power generation market participants expected to increase due to the electricity system reform. In addition, how to ensure the plan's consistency with government plans and how to secure commitments to targets are also yet to be addressed. The target in the low-carbon society action plan is fully harmonized with the Long-term Energy Supply and Demand Outlook, maintaining its consistency with government plans. However, since the Long-term Energy Supply and Demand Outlook is based on very ambitious energy conservation measures and a low-carbon electricity mix, the target in the plan is difficult to achieve unless bold measures are implemented.

Anyway, the electric power industry continues to consider how to develop an effective framework. We will have to keep close watch on relevant future developments.

(Sources)

- [1] Ministry of Economy, Trade and Industry, and Ministry of the Environment (2013), "Summary of discussions at meetings of relevant bureau directors general on bids for fossil power generation for power supply to Tokyo Electric Power Co." <http://www.meti.go.jp/press/2013/04/20130426003/20130426003-3.pdf>
- [2] Ministry of Economy, Trade and Industry (2015), "Long-term Energy Supply and Demand Outlook" (relevant data) [http://www.enecho.meti.go.jp/committee/council/basic\\_policy\\_subcommittee/mitoshi/pdf/report\\_02.pdf](http://www.enecho.meti.go.jp/committee/council/basic_policy_subcommittee/mitoshi/pdf/report_02.pdf)
- [3] Global Warming Prevention Headquarters (2015), "Japan's Intended Nationally Determined Contributions" [https://www.kantei.go.jp/jp/singi/ondanka/kaisai/dai30/yakusoku\\_souan.pdf](https://www.kantei.go.jp/jp/singi/ondanka/kaisai/dai30/yakusoku_souan.pdf)
- [4] Federation of Electric Power Companies of Japan (2015), "Drafting a Low-carbon Society Action Plan in the Electric Power Industry" [http://www.fepec.or.jp/about\\_us/pr/sonota/\\_icsFiles/afieldfile/2015/07/17/20150717\\_CO2.pdf](http://www.fepec.or.jp/about_us/pr/sonota/_icsFiles/afieldfile/2015/07/17/20150717_CO2.pdf)

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<sup>4</sup> For correct wording, see Ministry of Economy, Trade and Industry, and Ministry of the Environment (2013), "Summary of discussions at meetings of relevant bureau directors general on bids for fossil power generation for power supply to Tokyo Electric Power Co."