

Energy Efficiency Policy Challenges for 2024
—Energy Efficiency Measures Required to Be Accelerated—
<Summary>

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2024 energy efficiency policy outlook

1. As the impact of global inflation on business activities and households becomes more serious, energy efficiency and demand-side measures that require additional costs have entered a short-term adjustment phase. At the 28th Conference of the Parties to the United Nations Framework Convention on Climate Change known as COP28, meanwhile, an agreement came to enhance global efforts to double the pace of improvement in energy intensity from the current level by 2030. In response, in 2024, each country will consider and formulate specific policies for enhancing domestic energy efficiency measures and for developed countries' support for developing countries, while taking into account burdens on consumers.
2. Regarding energy efficiency technologies that hold the key to achieving the carbon neutrality goal, the manufacturing industry is supported under industrial policy mainly in developed countries and will continue to be so in 2024. This point needs to be closely watched from the perspective of the Japanese manufacturing industry's international competitiveness.
3. For the residential sector, where direct regulation is difficult, European and other countries have taken an important step toward strengthening measures to decarbonize or carbon-neutralize heat demand. Developed countries will take the lead to continuously enhance comprehensive measures for the promotion of consumers' energy efficiency investment, including the development of national debate, appropriate information services for consumers, and subsidies.
4. Japan's support for Asian and other emerging market countries that have room to further improve energy efficiency, including financing for capital investment, energy management know-how transfers, and energy efficiency policy formulation, will remain important for achieving the goal of doubling the pace of improvement in energy intensity.

Background factors for energy efficiency sector

5. **Industry:** Energy efficiency investment was sluggish in 2022 due to soaring energy prices in Europe and other countries before recovering moderately in 2023.
6. **Transport:** In 2023, almost half of the road sector's global energy efficiency investment was related to electrification. In China, government subsidies for new energy vehicles (NEVs) (covering battery electric vehicles, plug-in hybrid vehicles, and fuel cell vehicles) were abolished in 2023. As the auto sales lineup expanded in response to tax incentives and NEV regulations, however, NEVs accounted for about 30% of passenger car sales.
7. **Buildings:** Rising borrowing costs, soaring building materials prices, and economic uncertainties were limiting growth in energy efficiency investment in 2023. In Germany, there are concerns about a slowdown in investment in residential buildings due to soaring materials prices and increasing borrowing costs.

Trends in major economies

8. **Europe:** The industry sector moderately increased energy efficiency investment in 2023. Regarding the carbon neutralization of the demand side (heating and hot water supply), Germany and other countries have taken an important step forward, such as requiring new heating equipment to operate with an electricity mix including a renewable energy share of at least 65% in newly developed areas from January 1, 2024. Amid a cost-of-living crisis, the challenge is to strike a balance between strengthening energy efficiency measures and mitigating their impact on the poor.
9. **U.S.:** Driven by tax credits, subsidies, and low-interest loans under the Inflation Reduction Act, industry, transport, and building sectors are materializing investment in energy efficiency and carbon neutralization. There are also moves to improve the efficiency of water heaters and boilers and tighten automobile fuel efficiency regulations. The carbon neutralization of heating and hot water supply equipment differs by region.
10. **Asia:** Asian countries are continuously strengthening energy conservation as a medium to long term measure. In 2023, Malaysia enacted an energy conservation law and Indonesia expanded the scope of energy management and reporting obligations in the industry sector. Thailand and the Philippines have implemented power-saving measures.
11. **Japan:** Under consideration for the demand side are (1) the carbon neutralization of water heaters, (2) the introduction of DR (demand response) -ready equipment, and (3) energy retailers' introduction of a pledge-and-review system for the demand side.

In order to achieve the energy conservation target of 62 million kL in FY2030 (a cut from FY2013) under the current Strategic Energy Plan, the government will provide energy conservation subsidies worth about 700 billion yen to the manufacturing industry over the next three years.

Implications for Japan

12. As the top priority towards long-term green growth, each country is enhancing support for the manufacturing industry regarding energy efficiency technologies under industrial policy. With a view to strengthening the international competitiveness of Japan's manufacturing industry, the government should commit and spread medium- to long-term support for energy efficiency and other private investments in domestic green transformation.
13. For the residential sector, where direct regulation is difficult, attention is being paid to the decarbonization or carbon neutralization of heat demand that is being promoted in Europe and other countries. In Japan, which aims to achieve carbon neutrality by 2050, it is important to steadily promote the carbon neutralization of the residential sector. In doing so, Japan should present a long-term path while taking into account region-by-region differences in climate and demand, as well as future cost reductions, and changing technology standards and diffusion targets over time.

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