ACEEE'S 2025 INTERNATIONAL ENERGY EFFICIENCY SCORECARD

JAPAN

RANK 8/25

POINTS 62.5/100

Notable Strengths

- Runs two national programs that provide energy efficiency for low-income or vulnerable households
- Has mandatory, comprehensive building codes for residential and commercial buildings
- 5th lowest energy intensity from the industrial sector
- 4th highest investment in industrial research and development (as a percentage of industrial GDP)

Actions To Take

- Publicize spending data on low-income energy efficiency programs
- Make labels for energy-efficient appliances mandatory
- Invest more in rail transit
- Pass more stringent fuel economy/emissions standards for heavy-duty vehicles

National Efforts

In the national efforts chapter, Japan tied for 10th place with Poland. Japan ranked 6th for its energy efficiency research and development spending, with a value of $3.49 (2023 U.S. dollar) per capita. Japan runs two programs that support low-income or vulnerable households: the Comprehensive Improvement Project for Public Housing Stock and the Childcare Green Housing Support Program. However, funding data for these programs is not publicly available. The country has an energy savings goal and a greenhouse gas reduction goal, and it offers tax incentives and loan programs to support EV and commercial businesses' investments in energy efficiency.

Buildings

Japan is one of the six countries studied that have mandatory residential and commercial building codes that fully address elements needed to maximize energy savings. Japan has categorical appliance and equipment labeling; research shows this label type is better understood than continuous labeling. Japan should more fully realize the benefits of such labels by making them mandatory rather than voluntary. Japan's existing building rating and disclosure policies are mandatory but only cover some buildings, so another step would be to expand the reach of these policies to additional building types.

Industry

Japan ranked 6th in the industry chapter. The country reported the 5th lowest industrial energy intensity at roughly 6.61 kBtus per 2023 U.S. dollar. In 2024, Japan dedicated 12.64% of industrial sector spending toward research and development, the fourth highest percentage of the countries studied. Japan has existing voluntary agreements with manufacturers, a mandate for energy managers, and mandatory energy audits. The country also has a national commitment to industrial decarbonization but does not have an electrification target.

Transportation

Japan has a goal of limiting emissions from passenger vehicles to 83 grams of carbon dioxide per kilometer by 2030. The country also has a goal of reducing carbon emissions from trucks by 4% by 2030. Given the polluting power of heavy-duty vehicles like trucks, Japan should consider aiming for a greater reduction in heavy-duty vehicle emissions. With 34.9% of travel in Japan by public transit, the country should also consider investing further in rail infrastructure. Currently, the national investment ratio for rail infrastructure to road infrastructure is 0.47 to 1.