ACEEE'S 2025 INTERNATIONAL ENERGY EFFICIENCY SCORECARD

SPAIN

RANK 5/25

POINTS 72.5/100

Notable Strengths

- Invested the greatest amount in per capita energy efficiency
- Has mandatory, comprehensive building energy codes for residential and commercial buildings
- Has national targets for industrial decarbonization and industrial electrification
- Has stringent fuel economy/emissions standards for passenger vehicles

Actions To Take

- Reduce transmission and distribution losses from electric power generation
- Require energy-efficiency upgrades for entire buildings, not just renovated parts of buildings
- Require large industrial facilities to employ onsite energy use or sustainability managers
- Encourage greater use of public transit

National Efforts

Spain has made significant investments in both national energy efficiency investments and energy efficiency research and development. It reported the highest energy efficiency investment ($216.38 U.S per capita) and the second highest for energy efficiency R&D spending ($8.35 U.S. per capita). The country has both an energy efficiency improvement goal and a greenhouse gas reduction goal. Spain faces 8.6% electric power transmission and distribution losses, and 52.4% of its electricity comes from renewable sources.

Buildings

Spain ranked 3rd in the buildings chapter. The country has mandatory building codes for both residential and commercial buildings, each covering five technical requirements (e.g., insulation, U-factor/shading, lighting, water heating, and heating and cooling). Spain has five key appliance groups that meet minimum energy performance standards along with mandatory, categorical labelling for 16 appliance categories and equipment; categorical labels have proven to be better understood and more motivating than continuous labels. Spain's national building codes require energy-efficiency upgrades for the renovated part of a building; requiring whole-building retrofits would help the country further reduce energy consumption.

Industry

Spain ranked 7th in the industry chapter. The country has voluntary agreements with manufacturers and provides financial incentives to help them make energy efficiency improvements. It also requires energy audits of large facilities and has stringent standards for electric motors and industrial fans. Spain should consider requiring large industrial facilities to employ onsite energy use or sustainability managers. Spain also has a national commitment to industrial decarbonization and an electrification target.

Transportation

Spain ranked 6th in the transportation chapter. Alongside the other European Union countries (Poland, France, Germany, and Italy) evaluated, Spain has a goal of limiting carbon dioxide emissions from passenger vehicles to 43 grams of carbon dioxide per kilometer and reducing carbon dioxide emissions from heavy-duty tractor trailer trucks by 43%, both by 2030. The country ranked 6th for its overall EV sales share scores across passenger EVs, commercial vans, commercial trucks, and buses. Spain had a rail to road infrastructure investment ratio of $0.53 to $1 in 2022. The country could do more to promote public transit use, as only 17.4% of travel occurred by public transit in 2022.