ENERGY INNOVATION
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ENERGY LEADERSHIP IN A TIME OF NEED: A BLUEPRINT FOR STATES

The passage of the One Big Beautiful Bill Act (OBBBA) has shocked the U.S. economy, which was experiencing record investments in new affordable energy projects, improving home and business access to efficient products, and supercharging domestic clean manufacturing. Energy Innovation projects the energy provisions in the OBBBA will cost American households and businesses $170 billion in higher energy bills, shrink U.S. GDP by $1.1 trillion, and cost 790,000 jobs by 2035.

This Blueprint for States provides a starting place for state policymakers to develop rapid responsive strategies lead where the Federal government has failed. Our Blueprint shows how, regardless of budgetary flexibility, states can take immediate action to continue attracting private-sector investments, deploying lower-cost clean energy, protecting U.S. households from rising costs, and restoring economic opportunities for their constituents.

NO-REGRETS ACTION 4: DOUBLE DOWN ON EFFICIENCY AND ELECTRIFICATION FOR BUILDINGS AND INDUSTRY

In today's era of growing energy demand and costs, policymakers should be laser-focused on actions that can quickly deploy more energy efficient equipment and built-in efficiency measures. Energy efficiency is a proven cost saving resource that can keep energy rates low, combat fossil fuel price inflation, and reduce pollution. Efficiency improvements have led to flat and declining U.S. energy consumption per capita since the late 1970s, despite increasing population and the rise of more energy-intensive products.

The best path to energy efficiency, safer buildings and factories, and cleaner air is using heat pumps, electric boilers, and other electric

heating equipment in factories. Residential heat pumps, which are also air conditioners, have outsold gas furnaces since 2021, now representing 56 percent of the U.S. market share for space heating equipment and approximately 43 percent for residential cooling. As this trend continues, policymakers, including utility regulators, should also develop strategies to ensure customers that still rely on gas have accessible pathways to avoid rising and volatile costs.

An overlooked and untapped opportunity is transitioning low-temperature heat (under 200 °C) in industry to efficient industrial electric heat pumps, which are two to four times more efficient than their fossil fueled counterparts. This is an actionable near-term strategy. Industrial heat pumps make up less than 2 percent of the heat pump market, though more industrial firms are deploying them.

The challenges to widespread energy efficiency and electrification are primarily economic and logistical in nature: building owners and industrial firms may lack the upfront capital for facility retrofits; on the other hand, the biggest concern for building and industrial owners to electrify their heat is higher electricity rates. Lack of space or electric upgrades may prevent technology adoption. Outdated building codes for new construction impede built-in efficiency that can result in consumers, businesses, and industries paying higher prices for energy over time and paying more for renovations.

Beyond addressing the most immediate barriers to electrification and efficiency, state policymakers should focus on underlying structural policies that allow utilities and their investors to avoid the risks and high costs of gas price volatility.

Policy Action	Policymaker	Impacts State Budget?
Adopt a combination of energy efficiency goals and emissions standards that compel the building and industrial sectors to consume less energy for the same level of performance, while also reducing harmful air pollutants.	Governor, legislature	No
Fund grants, rebates, or tax credits to help offset the costs of energy efficient electric technologies and any corresponding electric upgrades; residential and small commercial incentives should be offered at the point-of-sale or directed to distributors and manufacturers to reduce the upfront purchase price. Tax credits should be refundable and transferable for entities with low- to no-tax appetite.	Governor, legislature	Yes
Create revolving loans, loan guarantees, and other financing support (including supporting state green banks) to expand financing options for newer efficient technologies, while also leveraging private investment.	Governor, legislature state energy office, green bank or energy finance institution	Yes

Policy Action	Policymaker	Impacts State Budget?
Offer technical assistance and workforce training to help building owners and industrial firms evaluate and implement facility-level energy efficiency and electrification opportunities.	Governor, legislature, state energy office, institutions of higher education	Yes
Direct utilities to adopt a fuel cost risk-sharing mechanism with meaningful financial impacts.	Governor, legislature, utility regulators	No
Adopt modern energy codes, expanding energy efficiency and electrification provisions, or stretch codes that are more ambitious than base code.	Governor, legislature, local governments, state building code council, state energy office	No
Implement building performance standards aimed at reducing the impact of the built environment by requiring existing buildings meet energy and/or emissions-based targets.	Governor, legislature, local governments, state building code council, state energy office	No

Additional resources:

- Tool Kit: Stretch and Reach Codes (Building Decarbonization Coalition)
- Building Modernization Legislative Toolkit (Regulatory Assistance Project)
- New Buildings Institute: Building codes and relevant resources
- Building Decarbonization Strategies and Tools (Western Resource Advocates)
- Clean Industrial Heat Emissions Standard policy design brief (Energy Innovation)
- Energy Innovation Report on Decarbonizing Low-Temperature Industrial Heat in the U.S.
- Industrial Electrification Across the United States (ACEEE)
- Key Findings from the State Low-Emission Industrial Policy Playbook (Clean Air Task Force)
- Decarbonizing Industry Resource Toolkit (RMI)

Example policies:

- Buildings
  - Map: National Building Performance Standards Coalition Participating Jurisdictions (Institute for Market Transformation)
  - Colorado's SB22-051 - tax credits for purchasing heat pumps, electrical panel upgrades, and residential energy storage systems.
- Industry
  - California South Coast Air Quality Management District's limits on emissions of NOx from industrial boilers

- Minnesota's Industrial Process Equipment Rule limiting PM emissions from industrial equipment
- Colorado's Rules for Greenhouse Gas Emissions and Energy Management for Manufacturing Phase 2. (Energy Innovation Summary)
- Colorado's income tax credits for industrial clean energy
- New Belgium Brewing's (Colorado) heat pump system
- Washington's grants for hard-to-decarbonize sectors
- California's INDIGO (Industrial Decarbonization and Improvement of Grid Operations) program
- New York's Commercial & Industrial Carbon Challenge
- Mississippi's Industrial Energy Efficiency Program providing grants for industrial energy efficiency upgrades
- Maine's Commercial and Industrial Prescriptive Initiatives
- Maryland's Commercial, Industrial & Agricultural Grant Program
- Colorado's House Bill 23-1272 - tax credits for industrial and manufacturing facilities to reduce GHG emissions and via heat pumps and geothermal energy projects.
- New York State Flexible Technical Assistance Program (NYSERDA)
- Reducing Industrial Sector Emissions in Pennsylvania (RISE PA) program

Energy Innovation has policy experts to help state policymakers go deeper into which policies can best accomplish their state goals.

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