

FOCUS AREA 13: Transition to a Clean Energy Economy •

WHAT AND WHY Almost all commercial activity and modern home life in North Jersey is made possible by our energy infrastructure. Our use of electricity, natural gas, gasoline, and other energy sources has many economic, environmental, and political implications that directly affect the quality of life in the region. Currently, our energy infrastructure is heavily dependent on fossil fuels and is a significant contributor to greenhouse gas (GHG) emissions in the North Jersey region.

Fortunately, there are significant opportunities to improve how we generate and use energy. We can transition to a more sustainable energy infrastructure by using existing technologies, adopting new policies, and taking advantage of market mechanisms that are already known and proven. This will allow our region to benefit from cleaner, more affordable, more secure, and more reliable energy without the emissions that contribute to climate change, harm public health, and degrade the environment.

HOW Implementation of the following strategies can reduce overall energy consumption and replace the use of fossil fuels with more sustainable alternatives by increasing conservation and efficiency; modernizing energy infrastructure, including generation plants, high-voltage transmission lines, substations, and distribution lines and meters that connect individual customers; reducing fossil fuel consumption (via electrification and other measures) in the transportation sector, and pursuing large-scale building electrification.



STRATEGY 13.1: Reduce and optimize energy use through conservation, increased efficiency, and load management

The easiest way to reduce our energy use in North Jersey is to change how we use energy in our homes, offices, and cars. This applies to individuals and companies, government agencies, schools, local businesses, and any other organization that consumes energy. Our region should work with state officials and power utilities to expand and revamp the existing NJ Clean Energy Program and utility managed programs to offer more substantial and more effectively targeted rebates, low or no interest financing, and energy audits. In addition, municipalities can improve energy efficiency by incorporating more aggressive “green design” standards (such as LEED and Energy Star) into local codes and ordinances. Our region and state should also invest in creating a “clean energy economy” through training, workforce development, and job placement while pursuing innovative financing solutions that use public funds to leverage private dollars and build investor confidence.

STRATEGY 13.2: Transition to carbon-free electricity generation, including increased use of renewables

Today, much of our electricity is generated from fossil fuels, resulting in significant GHG (and other) emissions and making our region vulnerable to supply disruptions. Fortunately, North Jersey possesses vast renewable energy resources, in particular, solar, offshore wind (in the New York Bight and further offshore) and biomass, that have the potential to replace most of our fossil fuel use in North Jersey, and the state as a whole, helping to meet the state’s goal of 100% clean energy by 2050. We must take a wide range of actions to fully utilize renewable energy assets, resulting in a much cleaner, more affordable, less vulnerable supply of electricity. For example, our region should make greater use of distributed generation (energy produced on-site, such as solar panels). North Jersey should also implement changes in the energy market structure, including how energy is priced and sold to consumers, to make alternative generation more competitive.

STRATEGY 13.3: Modernize and upgrade the region’s power infrastructure

North Jersey’s current power grid—the generation plants that produce power, high-voltage transmission lines, substations, and distribution lines and meters that connect individual customers—is fairly traditional. North Jersey should prioritize quickly transitioning to a more sustainable, flexible, and reliable energy infrastructure to accommodate a growing mix of more sophisticated solutions, including energy efficiency technologies, renewable energy sources, and distributed generation. Our power grid must also be more resilient to weather events and flooding. Important improvements include improved electricity storage, more sophisticated control mechanisms that help manage electricity generation and consumption and revised regulatory frameworks that specifically enable this new “Grid 2.0” architecture. A key component of this strategy is fostering a New Jersey market for technological solutions that address electricity storage, resiliency, and smarter management controls.

STRATEGY 13.4: Decarbonize the transportation sector through electrification and VMT reduction

A significant proportion of our region’s energy use comes from the transportation sector (cars, trucks, buses, and trains). Today, transportation is heavily reliant on fossil fuels. There are many things our region must do to reduce petroleum use in the transportation sector. We should adopt policies, make investments, and provide incentives that: reduce congestion delays from roadway incidents, improve traffic flow with better highway access management, and reduce miles traveled driving alone by encouraging ridesharing. Our region should also work with state officials and the private sector to speed the adoption of new vehicle technologies, especially electric and other alternative fuel vehicles. This should be done by continuing to implement incentive programs, investments, and other measures to encourage the purchase and use of these vehicles by individuals and fleet owners and significantly expanding the number of public and private electric vehicle charging stations and alternative fuel vehicle refueling stations available in our region and statewide.

STRATEGY 13.5: Reduce building sector energy consumption and emissions through electrification and increased efficiency

Another significant source of energy use in our region comes from the building sector, which generally encompasses residential, commercial, industrial, and institutional uses. The major areas of energy consumption in buildings are heating, ventilation, and air conditioning (HVAC); lighting; major appliances; and miscellaneous areas. There are many things our region must do to reduce building sector energy consumption and emissions. We should adopt policies, enact appropriate regulations, and provide incentives that reduce building sector energy consumption and emissions through electrification and increased efficiency. In addition, the region should prioritize energy efficiency projects in environmental justice and low- and moderate-income communities.