Draft Pathways Analysis

New York State Energy Plan

NEW YORK STATE | New York State Energy Plan

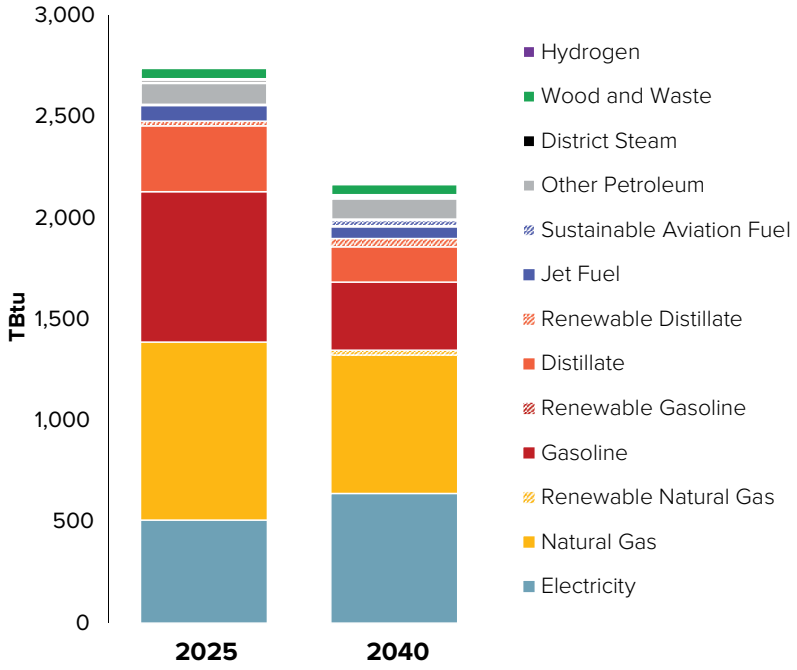
New York's State Energy Plan guides energy-related decision making to build an abundant, reliable, affordable, and clean energy system for all New Yorkers.

To support energy planning in a time of significant federal policy uncertainty, the State is evaluating multiple scenarios that show future energy pathways for New York — called the "Pathways Analysis." This analysis explores how the State's energy supply and delivery systems will meet forecasted energy needs through 2040 in a manner that advances multiple objectives of the State: reliable, clean, and affordable energy; economic development; equity; and a healthy environment.

The draft Pathways Analysis shows that New York State is prepared to meet future energy needs through planning that remains adaptable.

- **Future energy demand is uncertain** and dependent on factors such as economic trends, policy shifts, technology adoption rates, and consumer behavior.
- **Electricity use is expected to grow substantially** to power economic growth and expanded use of electric vehicles and heat pumps, even as energy efficiency lowers energy bills and reduces infrastructure costs. **Reliable electricity supply requires buildout of a diverse set of resources** (including wind, solar, energy storage, advanced nuclear, and repowering aging combustion power plants).
- **Households can lower their overall energy costs by making energy-saving choices** such as home weatherization, efficient appliances, fuel efficient and electric vehicles, and transit use. Policy action to reduce up-front costs and other barriers will make such choices more accessible and help energy efficiency continue to play a key role in lowering customer and system costs.
- **All major fuels used in New York today will continue to meaningfully contribute to the State's energy mix through 2040**, including electricity, natural gas, and petroleum fuels (Figure 1). Continued investment in all fuel systems is necessary to assure safe and reliable energy services, in particular to meet peak day needs and to increase resilience.

Figure 1. 2025 vs. 2040 Final Energy Demand by Fuel



New York will continue to make progress advancing a clean energy economy while balancing other long-term planning objectives.

- **In-state renewable electricity generation could increase by 80% or more between 2025 and 2035**, even in a scenario that models persistent headwinds to the pace of deployment. New York State will build on successes such as installing 6 gigawatts of distributed solar, completing South Fork Wind, breaking ground on the Champlain Hudson Power Express, Empire Wind 1, and Sunrise Wind, and the $1 billion Sustainable Future Program, the largest single State Budget commitment to climate and clean energy in New York's history.
- **Reliable and clean firm capacity is provided by existing nuclear and hydroelectric generators**. The State will build a **new zero-emission advanced nuclear facility**, as Governor Kathy Hochul has directed the New York Power Authority to construct in Upstate New York.
- **Accelerating adoption of more efficient and electrified vehicles and appliances will be bolstered by State actions** such as Advanced Clean Cars, Advanced Clean Trucks, all-electric new construction codes, and incentive programs. By 2040 in the planning scenarios, 17–24% of residential homes use heat pumps and 53–59% of light duty vehicles are zero-emission vehicles.
- **Modeling finds that State actions are laying the groundwork for further greenhouse emissions reductions** from power generation, transportation, buildings, and fugitive emissions. Due to external factors including supply chain disruptions, global economic inflation, and changes in energy policy from the federal administration — including the potential to cancel tax credits provided under the Inflation Reduction Act, planned denial of permits for wind generation, and attempts to remove state-based clean car and clean truck rules — there is considerable uncertainty in the timeline for achieving a 40% reduction in emissions.

Net societal benefits grow over time with greater adoption of clean energy.

- **Baseline system-wide spending is about $120 billion annually (in 2024$)** through 2040 to maintain and modernize existing energy infrastructure, replace aging equipment, and purchase fuels to meet energy needs.
- **Reallocating this anticipated spending from legacy energy sources and equipment to energy efficiency and clean alternatives** is expected to meet over 90% of investment needs each year in the core planning scenario.
- **Modeling finds that State policies yield net societal benefits.** In the core planning scenario, incremental spending of $3 billion secures about $5 billion in benefits in 2030; by 2040, incremental spending of $10 billion provides benefits of $25 billion. More than two-thirds of these benefits are associated with health improvements in communities statewide.

The draft Pathways Analysis is available for public review and comment as part of the Draft State Energy Plan.

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