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NEW JERSEY: AMBITIOUS GOALS MEET REALITY
THE CHALLENGE OF AN EFFICIENCY LEADER

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Progressive Policy Institute
January 2026

New Jersey's official narrative on climate action highlights "remarkable progress" toward the legislated goal of reducing greenhouse gas emissions by 80% by 2050. However, a closer inspection of the data reveals that the state's low per-capita emissions are fundamentally tied to its unique demographic and economic profile rather than a transition to a carbon-free energy grid.

New Jersey has some of the lowest emissions per person and relative to the size of its economy in the nation, according to data from the U.S. Energy Information Administration (EIA*) (see Fig. 1)*. The state is by far the most densely populated *(see Fig. 2),* transit use is high, and car use below average, limiting transport emissions. Coal-fired generation has been phased out, and nearly all electricity comes from gas and nuclear, cutting emissions from the power sector *(see Fig. 3).* Electricity and gas prices are well above average *(see Fig. 4),* but consumption is low, ensuring total energy spending is among the lowest in the country *(see Fig. 5).* But like other states in the PJM Interconnection, New Jersey's power prices have climbed significantly in 2024 and 2025 to the highest in real terms for six years, with further increases expected in 2026, driven by capacity shortages and growing demand from data centers.

Furthermore, the state's economic output is dominated by professional services and finance, sectors that are not energy-intensive compared to heavy manufacturing. New Jersey's emissions per $1 million of output (137 tons) are the seventh-lowest in the nation and 35% below the national average (*See Fig. 6*).

The state has been more successful than most in lowering emissions. Emissions were cut to 91 million metric tons in 2023 from 130 million in 2005. The decline was much faster (2.0% per year) than across the country as a whole (1.2% per year), as gas replaced coal and oil-fired generation and heating systems, while population growth has been slow.

Because of the successful coal generation phaseout and the demographic and economic efficiencies that are already in place, deeper emission reductions are inherently more challenging. The low-hanging fruit, in decarbonization terms, has already been picked. Accordingly, the state's mandated energy transition is now on a direct collision course with working families' need for affordable fuel and a reliable grid. Most critically, the transition is increasingly straining energy affordability for residents, as evidenced by a historic electricity rate

increase of nearly 20% in 2025, fueled by surging demand from data centers and a constrained regional power market.

A REPORT CARD ON MANDATED GOALS

Successes and Stagnation

New Jersey has achieved notable success in reducing emissions from specific sectors. The industrial sector, for example, saw its emissions decline from 14.1 million metric tons (MMT) of CO2 equivalent in 2005 to 8.9 MMT CO2e (CO2 equivalent) in 2022. This progress, along with the phase-out of coal-fired power plants, demonstrates a capacity for targeted decarbonization.

However, this success has not translated to a fundamental shift in the state's core energy supply. In 2024, natural gas and nuclear power still fueled over 90% of New Jersey's total electricity generation. Aside from nuclear power, New Jersey has little other low-emission generation from hydro, wind, or solar currently online to fill the gap left by retiring plants. Despite ambitious goals for renewables, the grid remains heavily dependent on these traditional, dispatchable sources, indicating that the most difficult part of meeting the mandate has yet to begin.

The Widening Gap

The chasm between New Jersey's current emissions profile and its ambitious 2050 mandates is stark, particularly in two energy-hungry sectors — buildings and utilities.

- **Buildings:** In 2022, emissions from residential and commercial buildings totaled 25.4 MMT CO2e. The state's 2050 goal is 4.6 MMT CO2e, requiring an 82% reduction from current levels.
- **Electricity Generation:** In 2022, electric generation emissions were 18.1 MMT CO2e. The 2050 goal is 6.8 MMT CO2e, requiring a further 62% reduction.

These figures demonstrate the monumental task ahead. Achieving these targets necessitates a complete transformation of how millions of homes are heated and how the entire state is powered, a challenge far exceeding the incremental gains made to date.

Trump's War on Offshore Wind: A Setback for a Core Strategy

Central to New Jersey's entire climate strategy is the planned development of 11 gigawatts (GW) of offshore wind capacity by 2040. This single initiative is the cornerstone upon which much of the state's decarbonization plan rests. While the state's plan projects this ambitious buildout, it simultaneously concedes "Recent challenges in this sector," including "economic and financial hurdles," "uncertain" federal policies, and how "supply chain reliability has impeded progress." Further complicating prospects for achieving this mandate, on December 22, 2025, the Trump administration suspended the federal leases of all five large-scale offshore wind

projects currently under construction on the East Coast, halting nearly 6 GW of planned generation.

This is not a temporary delay. It is a significant setback to the linchpin of the state's strategy. With no clear "Plan B," the state is left with a multi-gigawatt gap in its future supply, casting doubt on the feasibility of its entire transition timeline. These performance gaps are being dangerously magnified by a convergence of rising demand, shrinking supply, and surging costs.

THE LOOMING CRISIS

The challenges identified in New Jersey's progress report are not occurring in a vacuum. They are converging with powerful market and grid realities to create a looming crisis of skyrocketing demand, tightening supply, and surging costs that threaten the viability of the state's current path.

Demand Shock

New Jersey's climate strategy is predicated on electrifying sectors traditionally powered by fossil fuels. The aggressive promotion of electric vehicles (EVs) and the push for building electrification through heat pumps will inherently and dramatically increase the total load on the electricity grid. The state's own analysis warns that the electrification of the transportation and building sectors is projected to more than double total load, increasing from 75 GWh (current) to 167 GWh by 2050. This planned demand shock requires a massive and rapid build-out of new generation and grid infrastructure just to keep pace, let alone replace existing power sources.

Supply Constraints

As demand is set to rise, the supply side of the equation is becoming increasingly fragile. The state closed its last coal power plant in 2022, removing dispatchable power from the grid that must be replaced. The state's primary intended replacement, the 11 GW offshore wind initiative, is now beset by challenges and significant delays. Furthermore, while the state's plan includes 2 GW of new nuclear capacity, this is a long-term prospect not expected to come online until 2040 at the earliest. Compounding these generation challenges is the critical need for comprehensive grid modernization to handle new, intermittent resources, a complex and costly undertaking that presents another potential bottleneck in delivering new supply.

Cost Surge

Wholesale electricity costs across the PJM region surged by over 40% in the first nine months of 2025 compared to 2024, the fastest increase since the 2022 energy price spike. The collision of rising demand and constrained supply is inevitably leading to a surge in costs for consumers. This economic pressure is the most immediate and politically potent threat to the state's climate agenda. Stakeholder feedback captured in the state's report offers a stark warning from a community climate advocate:

"At the end of the day, people don't care about PJM, interconnection, or other reasons for why the costs are high. I am trying to make the case to people that we need renewables and that pollution is killing them, but their pockets are killing them."

It's hard to fault New Jersey's working families for recoiling from the prospect of even higher fuel bills. Existing financial incentives for electrification are "inadequate to cover the high upfront costs." This portends rising energy prices that disproportionately burden low- and moderate-income households. This cost surge is not an abstract problem; it is a direct threat to the specific, overburdened communities the state claims to be protecting, such as those in Atlantic County, where 13% of the population lives below the poverty line. This is not merely a technical or economic problem; it is rapidly becoming a political one, threatening the public consensus required for action against climate change.

THE POLITICAL IMPLICATION: THE ACTIVIST TAX

Between 2018 and 2021, there was successful pressure from environmental activists through projects like the Sierra Club's "Ready for 100 Campaign," and Sunrise Movement's "Green New Deal" campaign, resulting in 13 Democratic-led states introducing or enacting significant climate mandates. The high-priced mandates of this period strike today's voters as tone deaf to the realities of the high cost of living that they now face. Any energy transition plan that loses public support is destined to fail, regardless of its technical merits or environmental goals.

The stakeholder feedback presented within New Jersey's own climate planning documents reveals a deep and growing disconnect between state-level policy ambitions and the grassroots concerns of its communities. If unaddressed, this gap makes the state's current path politically unsustainable.

The most powerful and consistent message from the public is that cost is a non-negotiable issue. As one participant stated bluntly, "If we can't make clean energy affordable, then we can't make the case to make renewables happen."

A policy-induced affordability crisis is a recipe for a voter-led revolt against any progress on reducing emissions. Voters are demanding a pragmatic approach to climate policy. Policies that exert upward pressures on energy prices undermine voter confidence in political leadership. They constitute an **"Activist Tax"** that everyone pays. This tax is imposed by activists from the left and the right who put ideological dogmatism or personal idiosyncrasies ahead of good policy that delivers affordable and reliable energy.

- **Trump anti-renewable activism:** On December 22, 2025, alone, the Trump Administration halted 6 GW of planned wind generation on the East Coast, further constricting regional energy supplies in a high-demand market. The solar industry identified nearly 117 GW of solar and storage projects threatened by Trump's anti-renewable policies. Artificially restricting capacity as demand spikes only serves to drive up the Activist Tax on every American.

- **Retiring generating capacity without replacement:** On Gov. Phil Murphy's watch, New Jersey saw a net loss of 1.5 GW of generating capacity due to retiring nuclear and natural gas generation facilities without equivalent new capacity to replace them. The all-in wager on wind generation with the goal of abolishing fossil fuel generation has cost NJ.
- **High-cost consumer mandates:** State laws push Garden State residents into buying expensive heat pumps and electric cars they may not be able to afford without forgoing other necessities. These mandates also add more demand to the grid, further increasing energy costs.
- **Climate Superfund:** Policies like the proposed Climate Superfund Act would raise the cost of producing energy through penalizing companies for past carbon emissions, further adding upward price pressures.
- **Technology-specific mandates:** Mandates that ignore innovations, supply-chain disruptions, political disruptions, and costs only exacerbate the difficulties of reducing emissions affordably. The all-in strategy for offshore wind is a prime example of how this can backfire.

To regain political viability and build the durable consensus needed for this decades-long project, New Jersey must pivot from rigid technological mandates and other dogma-driven policies that impose a growing "Activist Tax" to a more pragmatic, flexible, and responsive set of policies that directly address reducing emissions and prices by making certain that supplies can meet demand through clean-firm baseload generation supporting and increasing the amount renewable generation.

A POLICY PIVOT POINT: PRAGMATIC RECOMMENDATIONS

In New Jersey, ever-rising energy costs threaten to stall the state's progress on emissions reductions and erode public support for the energy transition. A pragmatic pivot, however, can salvage some of the state's climate goals by aligning them with economic, physical, and political reality. The following recommendations are derived from opportunities and needs identified within the state's own planning documents, offering a path to recalibrate its approach for sustainable success.

Prioritize Flexible, Outcome-Based Policies.

Instead of focusing exclusively on technology-specific megawatt targets, e.g., NJ's mandate for 11 GW of offshore wind by 2040, that are vulnerable to supply chain disruptions and financial hurdles, the state should prioritize market-based mechanisms that are technology-agnostic and focus on emissions outcomes. New Jersey's participation in the Regional Greenhouse Gas Initiative (RGGI) is a prime example of a flexible policy that guarantees emissions reductions while providing revenue for state programs. Making RGGI and similar performance-based standards the central pillar of its strategy would provide a more resilient and economically efficient path to decarbonization. Furthermore, by earmarking more of the RGGI revenue to

protect vulnerable ratepayers from rising costs, the state can help neutralize the regressive effects of aggressive climate policies.

Elevate Clean-Firm Power as a Core Strategy for Reliability.

Any climate plan that compromises grid stability is a path to failure. New Jersey's plan implicitly recognizes the critical importance of reliable, dispatchable clean-firm power. Firm power is a generation that is guaranteed to be delivered at all times (24/7), even during peak demand or adverse conditions. Its Measure 4 promises to "Support continued availability of existing resources." However, this pragmatic necessity is buried beneath more aspirational and currently faltering strategies. The state must elevate this measure from a secondary consideration to a primary pillar of its transition strategy. This means actively pursuing nuclear power plant relicensing and supporting the "transition of combined-cycle natural gas resources to a new operational role on the grid," as outlined in the state's plan. Framing this not as a step backward, but as an essential and acknowledged measure to ensure the lights stay on, is crucial for maintaining public confidence.

Address the Affordability Mandate Head-On.

The state must treat ratepayer protection as a primary objective, not an afterthought. This requires creating robust, well-funded programs to insulate residents, particularly low- and moderate-income households, from the inevitable costs of these policies. Programs like the NJ COOL pilot, which helps upgrade refrigerant systems in low-income communities, should be expanded and used as a model for shielding households from the upfront costs of electrification. Making the transition equitable is the only way to make it politically durable.

A CALL FOR RADICAL PRAGMATISM

New Jersey's ambitious climate goals are on a collision course with the unyielding realities of grid reliability, supply chain constraints, and — most importantly — ratepayer affordability and political sustainability. The state's current strategy, heavily reliant on a handful of large-scale projects facing significant headwinds, risks failure if it does not adapt. The path forward must be one of radical pragmatism.

This means honestly acknowledging the setbacks with offshore wind and building contingency into the state's energy plan. It means valuing the reliability provided by its existing nuclear and natural gas fleet as critical to a clean energy future. Above all, it means treating affordability not as an inconvenient side effect, but as a core requirement for success. The concerns of residents whose "pockets are killing them" must be accorded the same level of importance as emissions targets.

APPENDIX: ENERGY CONSUMPTION AND EMISSIONS

New Jersey has some of the lowest emissions per person and relative to the size of its economy in the nation, according to data from the U.S. Energy Information Administration (EIA)[1]. The state is by far the most densely populated, transit use is high, and car use is below average, limiting transport emissions. Coal-fired generation has been phased out, and nearly all electricity comes from gas and nuclear, cutting emissions from the power sector. Electricity and gas prices are well above average, but consumption is low, ensuring total energy spending is among the lowest in the country. But like other states in the PJM Interconnection, New Jersey's power prices have climbed significantly in 2024 and 2025 to the highest in real terms for six years, with further increases expected in 2026, driven by capacity shortages and growing demand from data centers.

New Jersey's total emissions rank lower (17th) than its population (11th) or its economy (10th). The state has been more successful than most in lowering them further. Emissions were cut to 91 million metric tons in 2023 from 130 million in 2005. The decline was much faster (2.0% per year) than across the national average (1.2% per year), as gas replaced coal and oil-fired generation and heating systems, while population growth has been slow.

Emissions per person are among the lowest in the country and continue to fall. Per capita emissions were reduced to 10 tons in 2023 from 15 tons in 2005. Emissions per person were the ninth-lowest in the country, narrowly behind Washington and New Hampshire, and more than 30% below the national average (14 tons), though still higher than Germany (7 tons) or Japan (8 tons).[2]

Emissions are low given the size of the economy. New Jersey's major economic activities, such as finance, real estate, and professional services, are not energy-intensive. The state emitted 137 tons for every $1 million of output produced in 2023, down from 239 tons in 2005, after adjusting for inflation. Emissions per $1 million of output are the seventh-lowest and 35% below the national average (211 tons).

The state has made limited progress in reducing the carbon-intensity of its energy system. Fossil fuels accounted for 80% of primary energy consumption in 2023, down from 85% in 2005. As a result, New Jersey emitted 48.5 tons of CO_2 for every 1 billion British thermal units of energy supplied in 2023, well above low-carbon leaders such as Vermont (38 tons), New Hampshire (39 tons), and South Carolina (40 tons), and only slightly below the national average (51 tons).

Fossil fuels accounted for 49% of electricity generated, and the proportion has actually increased slightly from 46% in 2005. Coal-fired generation has been replaced by gas. The last two coal-fired plants shut down in 2022. New Jersey was one of nine states that did not have any utility-scale coal generation by 2023. But nuclear generation has fallen following the permanent shutdown of the Oyster Creek power plant in 2018. The state has little other low-emission generation from hydro, wind, or solar. The result has been a small increase in both the

share and the absolute amount of fossil generation, albeit from lower-emission gas rather than coal.

Given slow progress in decarbonizing the electricity system, New Jersey's relatively low emissions stem from its high energy efficiency and low energy use. Energy consumption per person (211 million British thermal units) was 24% below the national average (278 million BTUs) in 2023. Consumption per $1 million of output (2.99 billion BTU) was almost 28% below the national average (4.13 billion BTU). Consumption per unit of output has declined significantly faster (2.7% per year) than in the country as a whole (2.2% per year).

The state is highly urbanized. Population density is the highest in the country, with more than 13 times as many inhabitants per square mile (1263) as the national average (94). Just over half of housing units are single-family detached homes (53%), well below the national average (62%). Only New York (40%), Massachusetts (51%), and Maryland (53%) have similar or smaller shares of single-family detached homes. Smaller dwellings use less energy for heating, cooling, lighting, and power.

Residential electricity consumption per person has declined by an average of 0.7% per year since 2005. Residential use was the seventh-lowest in the country (3,029 kilowatt-hours per person) and 30% below the average (4,305 kWh per person) in 2023. Gas consumption by all sectors, including electricity generation (77 million BTU per person) has been steady or increasing, but was also 23% below average (100 BTU per person) in 2023.

New Jersey lies on the heavily travelled East Coast transportation corridor and has more miles of road per square mile of land area than any other state except Rhode Island. Many residents commute to work in New York and Philadelphia, and the state has some of the longest average commuting times. But it also has the third-highest transit use in the country after New York and California.

State highways recorded 78 billion vehicle-miles travelled in 2023 (ranking 15th). But the volume of driving (8,317 vehicle-miles per person) was 14% below the national average (9,640) because of urban density and transit use. As a result, state residents consumed much less oil (16 barrels per person per year) than the U.S. average (22 barrels per person).

New Jersey's energy and climate policies have not so far contributed to higher prices for gas, electricity, and gasoline. State gasoline prices (including taxes) were slightly below the national average in 2023. Prices were above average for both electricity (20%) and gas (16%). But electricity prices have been above the average throughout the last 25 years, and the premium has narrowed in recent years.

New Jersey's higher-than-average prices for gas and electricity have been more than offset by its relatively low consumption. Residents spend less on gas, electricity, and petroleum than almost anyone else. New Jersey residents spent just over $3,900 per person on energy in 2023 (46th in the country), well below the national average of over $4,600. As a result, energy

expenditure accounted for just 4.6% of state output (47th in the country) compared with a national average of 5.7%.

Recent developments in electricity prices (2019-2024)

Since 2019, New Jersey's electricity prices have increased more slowly than in the country as a whole, but that is now changing. Retail prices for residential customers increased by 22% between 2019 and 2024. Nearly all the increase was attributable to inflation, with the consumer price index excluding volatile food and energy items up by 21%. In real terms, residential prices increased by just 0.1% per year compared with a national average rise of 0.9% per year. Power prices have risen much more slowly than in neighboring New York, where prices were up by more than 2.4% per year in real terms.

But New Jersey is served by the PJM wholesale electricity market, where prices have surged this year as a result of increased demand from data centers. Wholesale electricity costs across the region soared by more than 40% in the first nine months of 2025 compared with the same period in 2024, the fastest increase since Russia's invasion of Ukraine caused gas prices to spike in 2022.

In real terms, wholesale costs in PJM averaged more than $79 per megawatt-hour in the first nine months of 2025, up from an average of $57 in the whole of 2024. Higher energy costs accounted for two-thirds of the total increase, mostly reflecting the rebound in fuel costs for gas-fired generators from record lows in 2024. But the fastest rise was in capacity charges, which tripled compared with a year earlier, as load additions outstripped extra generation capacity.[3]

Rising wholesale costs are already filtering through to higher residential rates. New Jersey experienced some of the fastest price increases of all PJM states during the summer of 2025. The average electricity customer is expected to see bill increases of $20 per month in 2025/26, with state regulators blaming rising capacity charges for escalating bills.[4]

1 Unless stated otherwise, all the data and rankings in this profile are taken from the most recent online edition of the State Energy Data System (SEDS) published by the U.S. Energy Information Administration and cover energy consumption and emissions through 2023. Emissions are restricted to carbon dioxide (CO_2) from combustion of fossil fuels, excluding fugitive methane, other greenhouse gases, and emissions from land use, land-use change, and forestry.

2 International comparisons are taken from the Emissions Database for Global Atmospheric Research (EDGAR) published by the Joint Research Centre of the European Union.

3 PJM State of the Market Report (Monitoring Analytics LLC, 13 November 2025).

4 New Jersey's Annual Electricity Supply Auction (New Jersey Board of Public Utilities, 12 February 2025).

Figure 1: State-level energy consumption in 2023
million British thermal units per capita

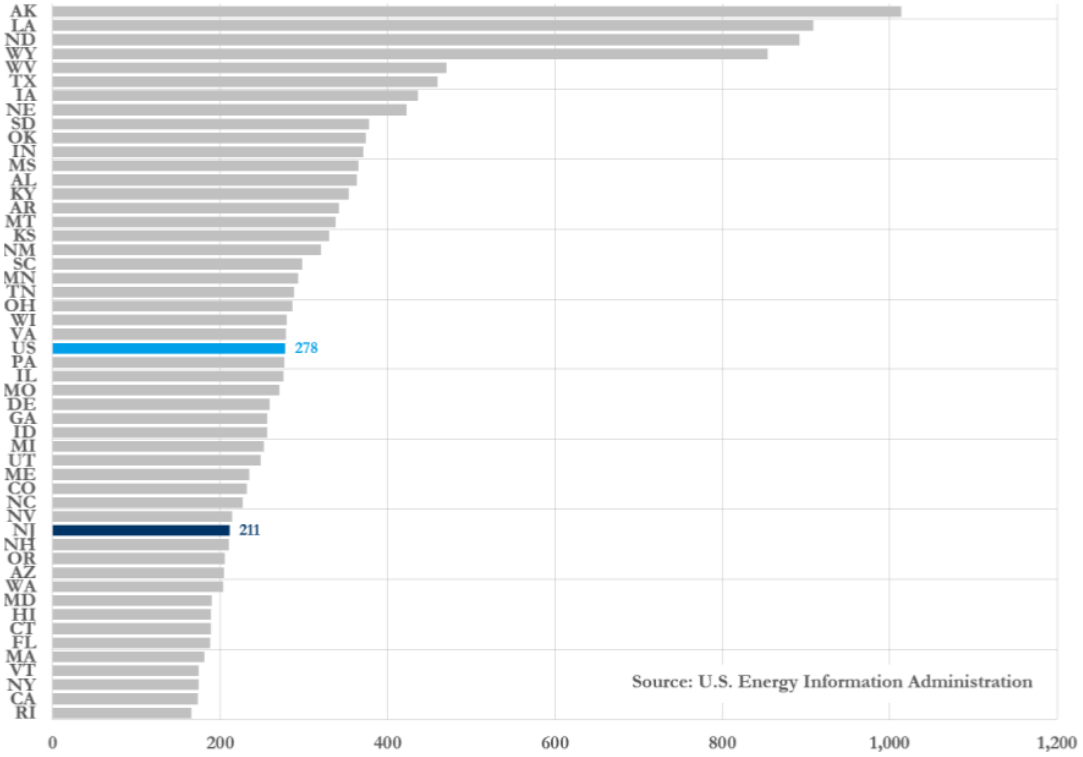


Figure 2: U.S. state population density, 2020
population per square mile

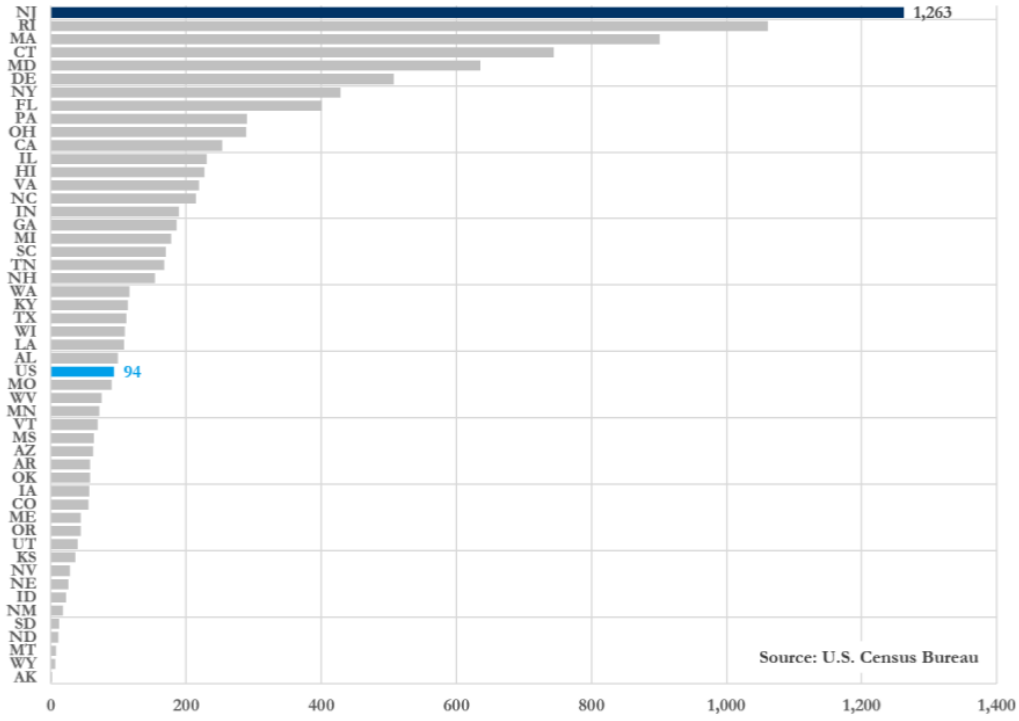
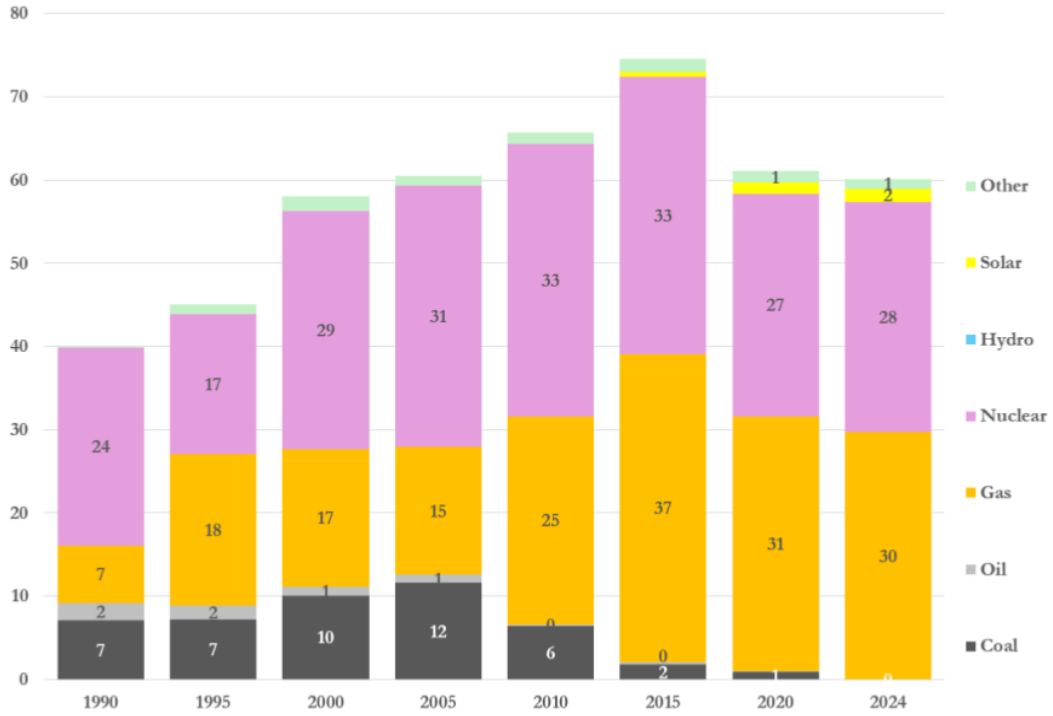


Figure 3: New Jersey state electricity generation, 1990-2024

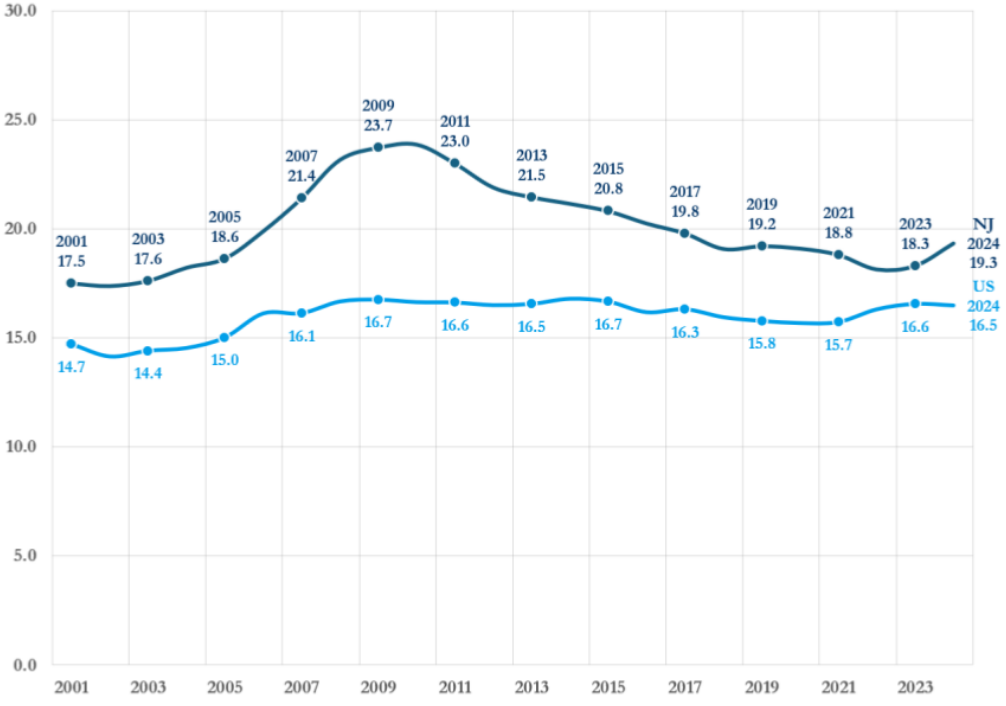
billion kilowatt-hours (TWh), annual



Source: Electric Power Annual (U.S. Energy Information Administration, 2025)

Figure 4: New Jersey state real electricity price for residential users, 2001-2024

U.S. cents (2024) per kilowatt-hour, annual average, adjusted for inflation



Sources: U.S. Energy Information Administration and U.S. Bureau of Labor Statistics @JKempEnergy

Figure 5: State energy spending per capita in 2023

U.S.$ (2023) annual expenditure on petroleum fuels, gas and electricity

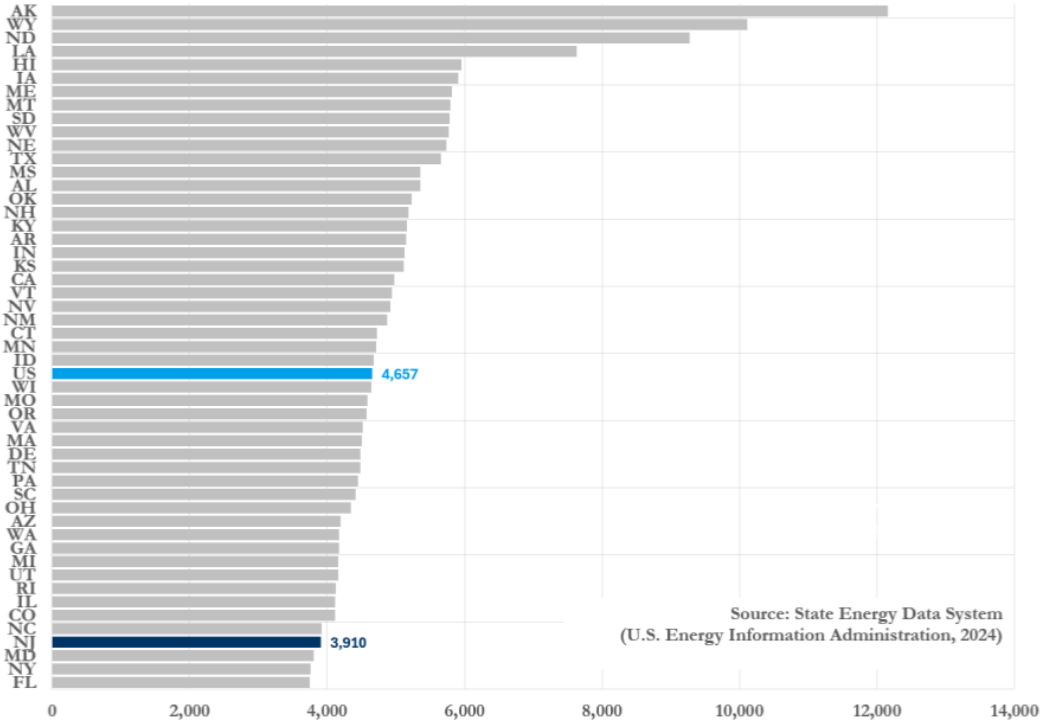
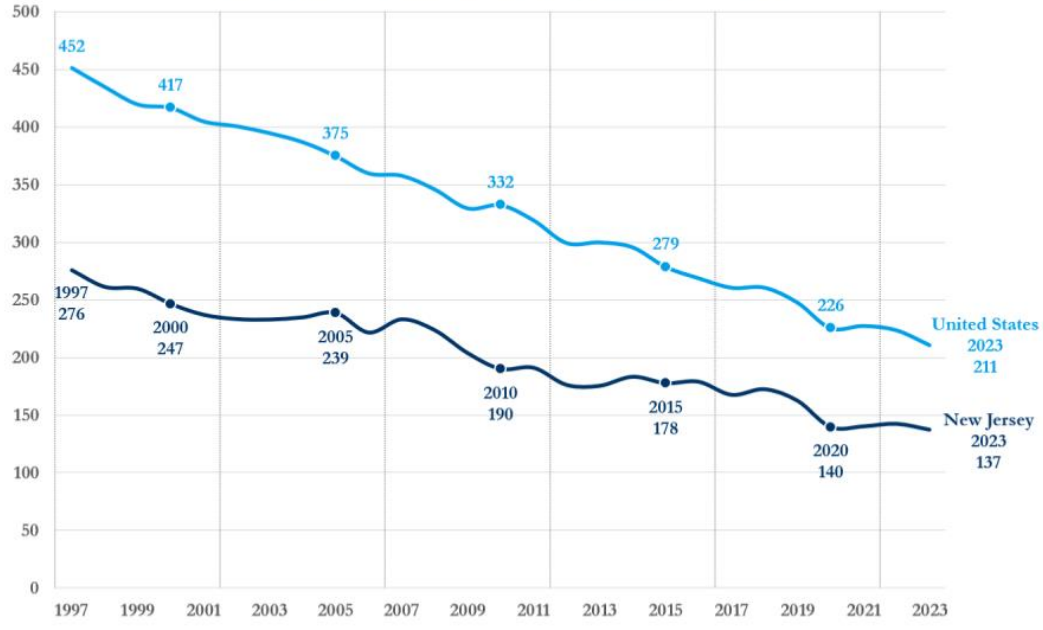


Figure 6: New Jersey state emissions-intensity of GDP, 1997-2023

metric tonnes of carbon dioxide per $1 million (real) of GDP



Source: State Energy Data System (U.S. Energy Information Administration, 2024)

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