

State of New Jersey  
Energy Master Plan

Comments  
of the  
Natural Resources Defense Council



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## Overview

The Energy Master Plan should set forth specific goals and provide a blueprint with specific policy recommendations as well as guiding principles that will enable state policy makers to achieve those goals.

### Goals

The Energy Master Plan goals should include:

- Reducing carbon pollution at least cost, on the scale and timeframe required by the Global Warming Response Act;
- Improving air quality and public health, especially in overburdened communities;
- Ensuring safe, reliable, affordable and clean energy services;
- Ensuring that the benefits of a clean energy economy are enjoyed by all;
- Avoiding investment in new fossil fuel infrastructure;
- Creating high-quality jobs, driving economic growth and improving the state's competitiveness; and
- Leading the nation by demonstrating how to align economic and environmental performance.

### Blueprint

Governor Murphy's Executive Order calls for a comprehensive blueprint for transitioning New Jersey to clean energy by 2050. Such a blueprint should include:

- Analysis – Analysis that identifies the major components of such a transition (including energy efficiency, renewable energy, and electrification of buildings and transportation); considers state action in the context of the regional energy markets in which New Jersey resides; and assesses the cost and benefits of different approaches, especially the benefits of keeping energy dollars in-state and creating thousands of new jobs;
- Policies – Identification of the primary policies needed to achieve the goals, including foundational climate policies that will guarantee emission reductions in the power and transportation sectors; a regulatory framework for utilities that aligns the interests of customers and shareholders with the goals of the Energy Master Plan, and a comprehensive set of policies to drive investment in all cost-effective energy efficiency; scale renewables and expedite the timeframe in which they become least-cost resources; and electrify the transportation sector.
- Implementation and Evaluation Plan – A timeline for implementation of such policies, performance metrics and an evaluation and reporting plan that will enable policymakers to make timely adjustments, facilitate shared and continuous learning and help hold state officials and regulated entities accountable for implementing the plan.

## Guiding Principles

The Energy Master Plan should establish principles to guide policy-makers as they develop and implement policies needed to achieve the state's goals. These should include:

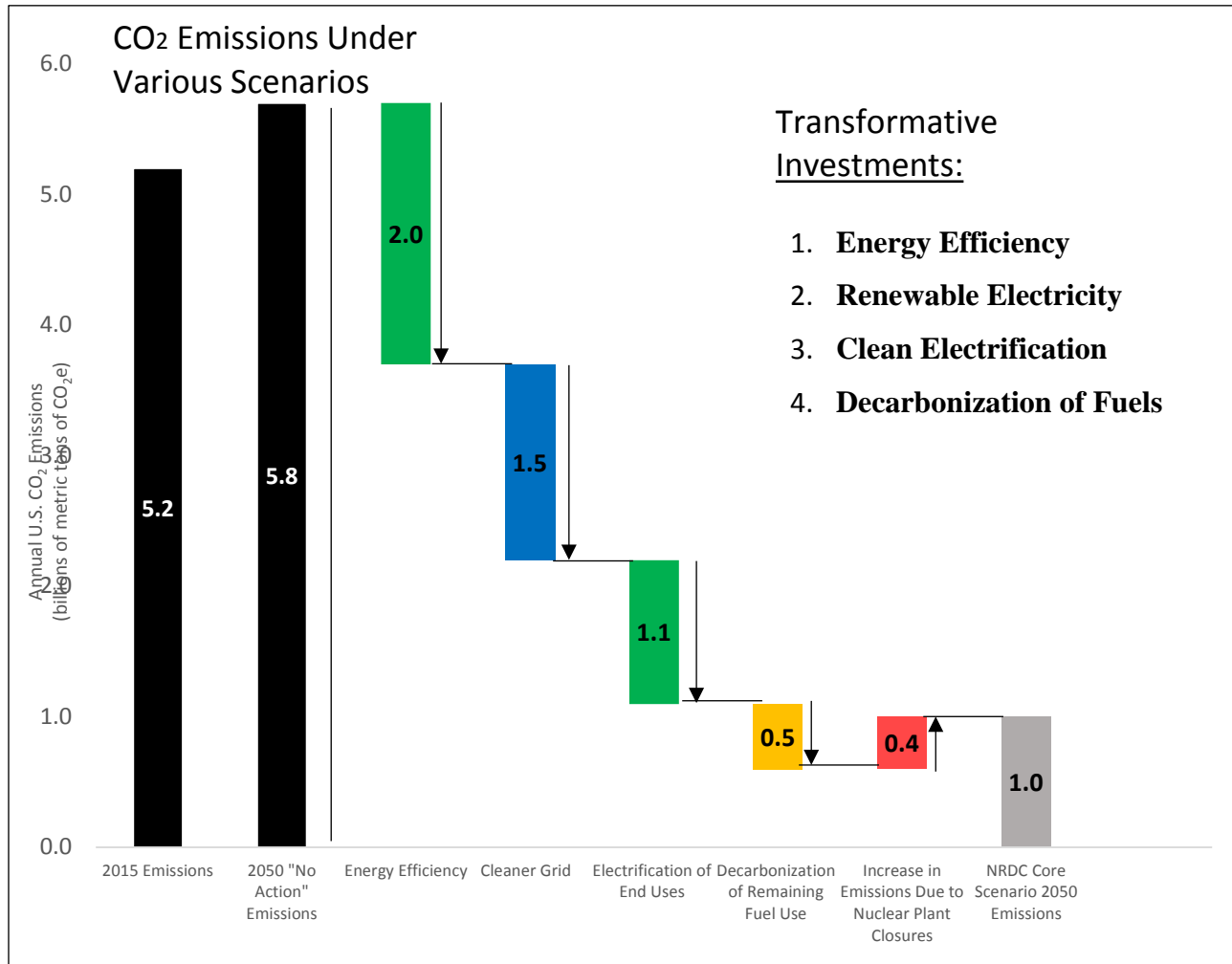
- Focus on a small number of transformative efforts;
- Create efficient and transparent processes;
- Design policy and hold regulated entities accountable based on objective criteria;
- Understand the incentives that regulation and policy create and adjust them as needed to align with goals;
- Prioritize benefits for low-income and over-burdened communities;
- Adopt technology-neutral, market-based mechanisms wherever possible to achieve goals at least cost, recognizing that technology- and location-specific policies may be needed to overcome market failures and maximize benefits for over-burdened or underserved communities;
- Learn from states that are already achieving New Jersey's goals.

## Analysis and Transformative Solutions

Analysis shows that scaling investment in energy efficiency, renewable energy and electrification of buildings and transportation will enable New Jersey to transform its energy economy and meet its Energy Master Plan goals.

NRDC's 2017 report, [\*America's Clean Energy Frontier: The Pathway to a Safer Climate Future\*](#), shows that we can reduce economy-wide emissions 80% by 2050 with enormous economic and public health benefits. A nationwide deep decarbonization path costs only 1% more than business as usual (\$22bn) and delivers environmental and health benefits more than 7 times greater than that incremental cost (over \$154 billion).

## Four Main Drivers of Decarbonization



The 2017 study, [A Clean Energy Pathway for New Jersey](#), commissioned by New Jersey Conservation Foundation, produced similar results, finding that a dramatic increase in energy efficiency and offshore wind could enable New Jersey to reduce electric sector emissions 80% by 2050 while producing environmental, health and economic benefits that more than outweigh the minimal marginal investment costs.

## Generation Mix: Clean Energy Scenario vs BAU

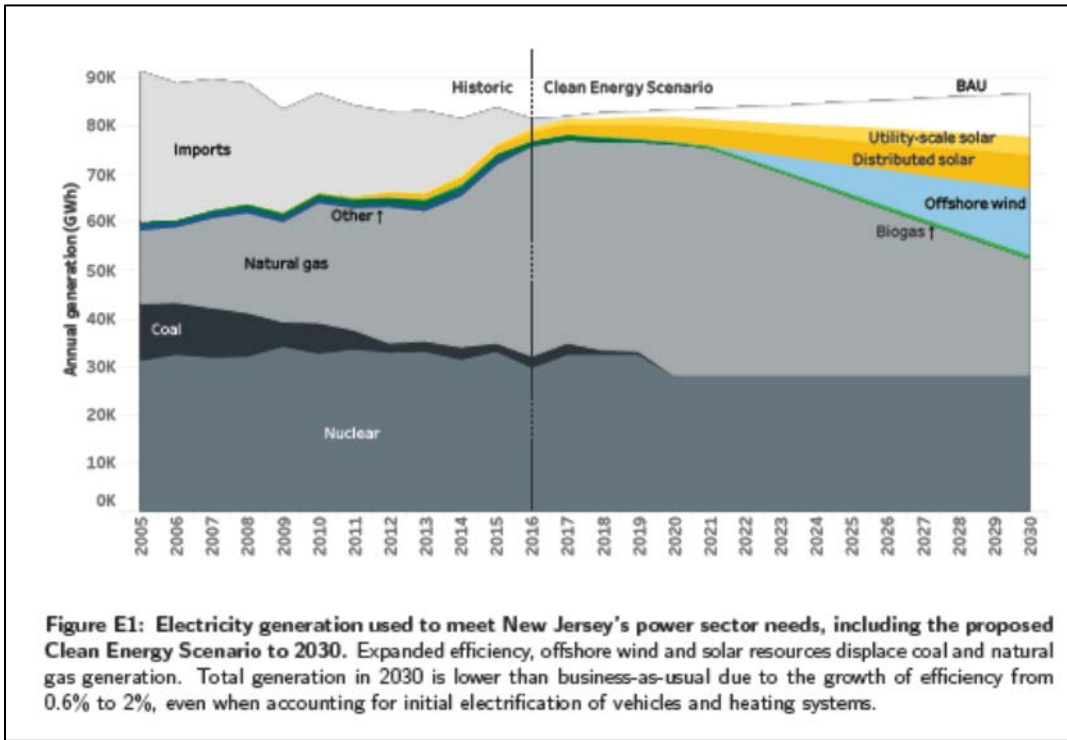


Figure E1: Electricity generation used to meet New Jersey's power sector needs, including the proposed Clean Energy Scenario to 2030. Expanded efficiency, offshore wind and solar resources displace coal and natural gas generation. Total generation in 2030 is lower than business-as-usual due to the growth of efficiency from 0.6% to 2%, even when accounting for initial electrification of vehicles and heating systems.

## Total Costs: Clean Energy Scenario vs BAU

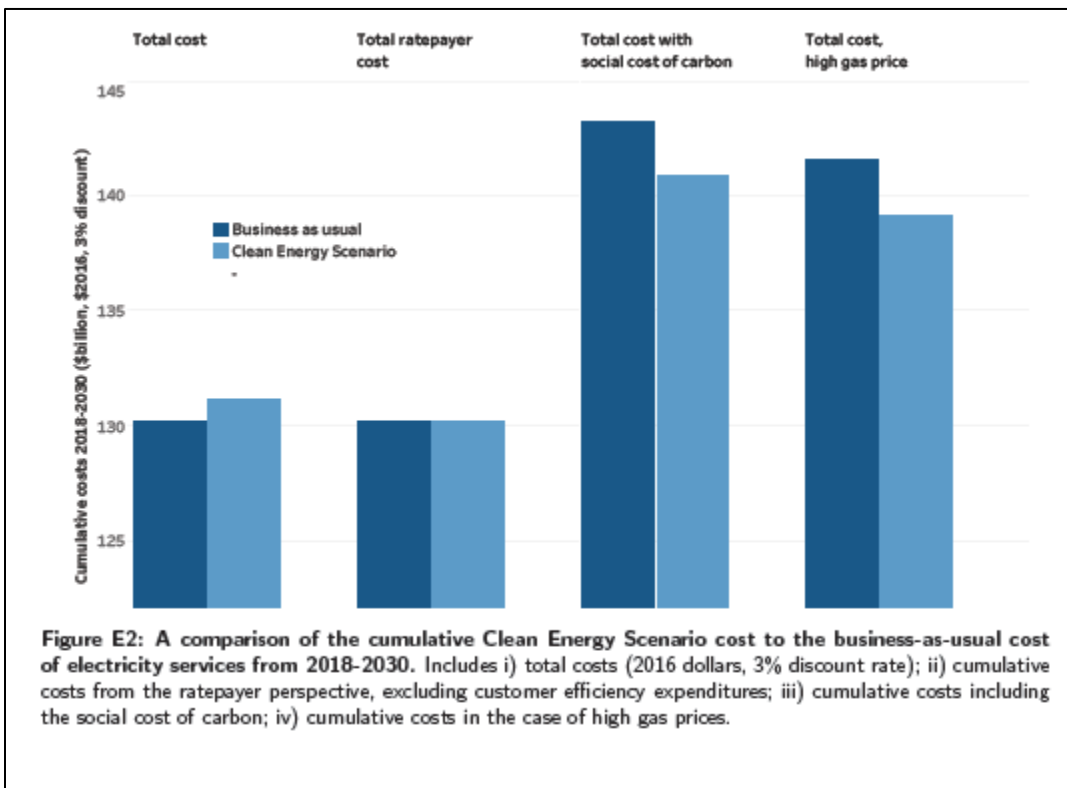
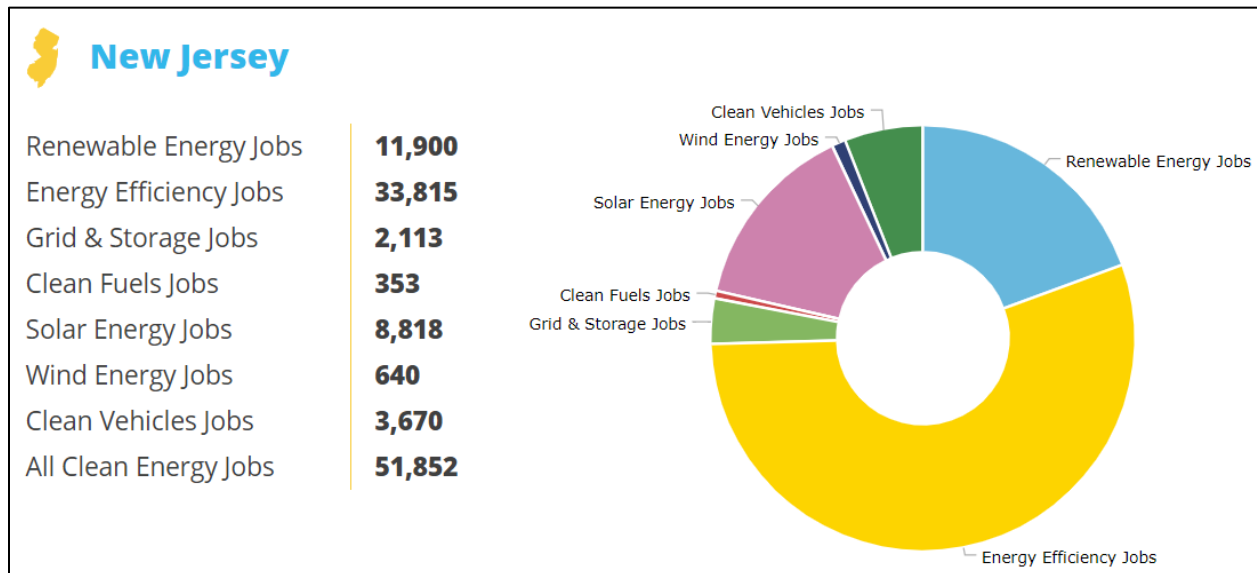


Figure E2: A comparison of the cumulative Clean Energy Scenario cost to the business-as-usual cost of electricity services from 2018-2030. Includes i) total costs (2016 dollars, 3% discount rate); ii) cumulative costs from the ratepayer perspective, excluding customer efficiency expenditures; iii) cumulative costs including the social cost of carbon; iv) cumulative costs in the case of high gas prices.

Currently almost every dollar New Jersey spends on fuel for electric power, heat and transportation goes out of state. Shifting to a clean energy pathway will enable New Jersey to keep millions of those dollars in the state, creating jobs and supporting local economic development Environmental Entrepreneurs’ (E2) 2018 analysis [Clean Energy Jobs America](#) details job growth in a variety of clean energy sectors, based on the [US Energy and Employment Report](#).

## New Jersey Clean Energy Jobs



With over 50,000 people employed, New Jersey’s clean energy sector already surpasses fossil fuels by a factor of 10. The Energy Master Plan should assess the dramatic job growth that is likely to accompany its implementation.

## State & Regional Climate Policies

The Regional Greenhouse Gas Initiative (RGGI) and the Transportation Climate Initiative (TCI) provide the opportunity for New Jersey to adopt mandatory pollution caps that guarantee it will meet its emission reduction goals for the power and transportation sectors. In this respect, each effort provides an umbrella that ensures that the suite of efficiency, renewable energy and transportation policies that New Jersey adopts to overcome market barriers, scale investment and reduce costs, will collectively meet emission targets. Both can also provide a revenue stream that New Jersey should use to expedite the transition to clean energy, lower the cost of compliance and provide disproportionate benefits to over-burdened and underserved communities.

New Jersey has already committed to rejoin RGGI and has re-engaged with neighboring states on TCI. The Energy Master Plan should direct state agencies to take a leadership role in both, to ensure they maximize collateral benefits while reducing emissions at least cost. It should also recommend measures that can ensure New Jersey stays the course through future gubernatorial administrations.

New Jersey's energy markets are regional; the Energy Master Plan should recognize that and propose policies and solutions that will have regional impact. RGGI and TCI are regional efforts, but the state can also have a regional impact in the design of energy efficiency programs and policies, in its approach to the emerging offshore wind industry, with things like regional planning for transmission infrastructure, and in its engagement with PJM and FERC, all of which are discussed further below.

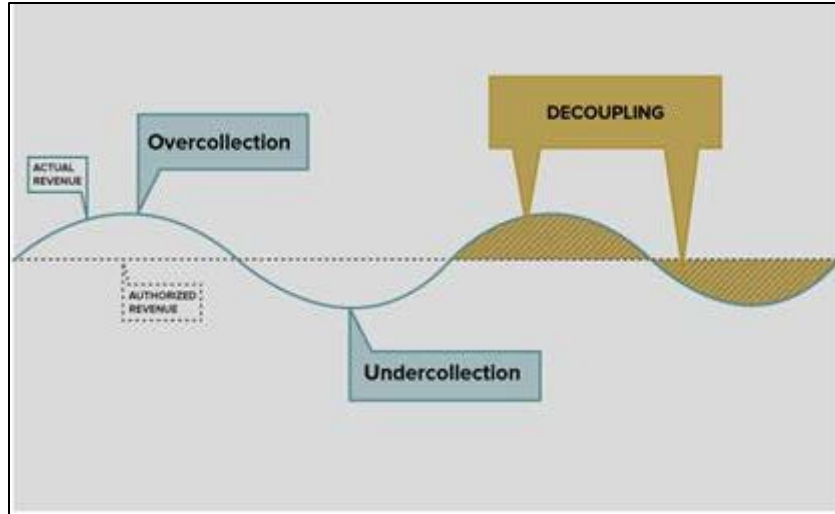
## The Utility Business Model

New Jersey should adopt a regulatory framework that aligns consumer and utility interests with the goals of the Energy Master Plan. Such a framework should be performance-based, rewarding utilities for delivering reliable energy services to customers at least cost over the long-term with minimal environmental impact and penalizing them if they fail to do so.

Under current regulation, utility financial health and profitability are tied to sales: the more kwh of electricity and therms of gas they sell, the more they earn for their shareholders. This framework stems from the time that states wanted to incent utilities to electrify the country and has no place in a modern energy system. If New Jersey wants to modernize the grid and grow the clean energy economy it must adopt a regulatory framework that is aligned with those goals.

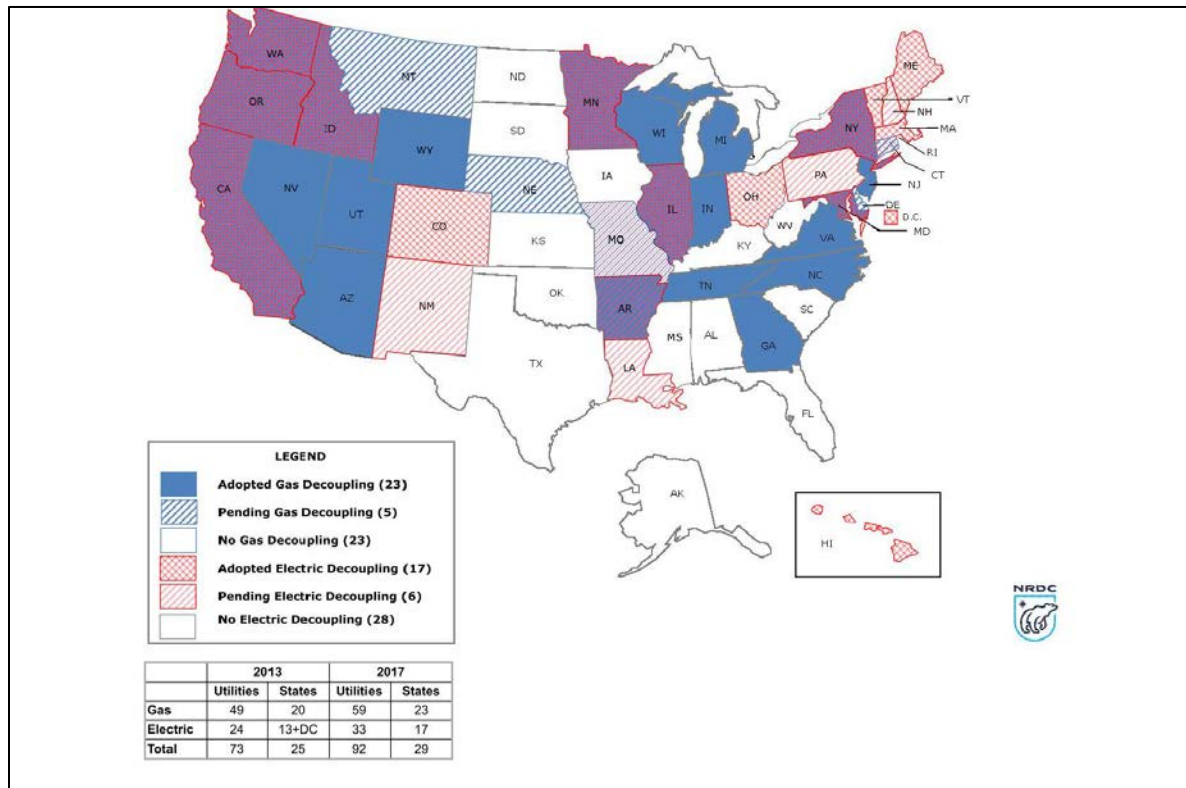
Revenue decoupling is a critical component of such a framework. Decoupling completely breaks the link between revenue recovery and sales volume, eliminating the disincentive to promoting energy efficiency and distributed resources such as solar power and energy storage. With decoupling, the Board of Public Utilities can instead tie utility profitability to how well the utility meets performance metrics set by the Board, within any approved revenue requirement. Decoupling enables utilities to collect the revenue that the BPU has already approved, it does not have any impact on the *amount* of the approved revenue. Through modest true-ups, decoupling avoids over *and* under collection; current regulation and lost revenue adjustment mechanisms do NOT protect customers from over-recovery



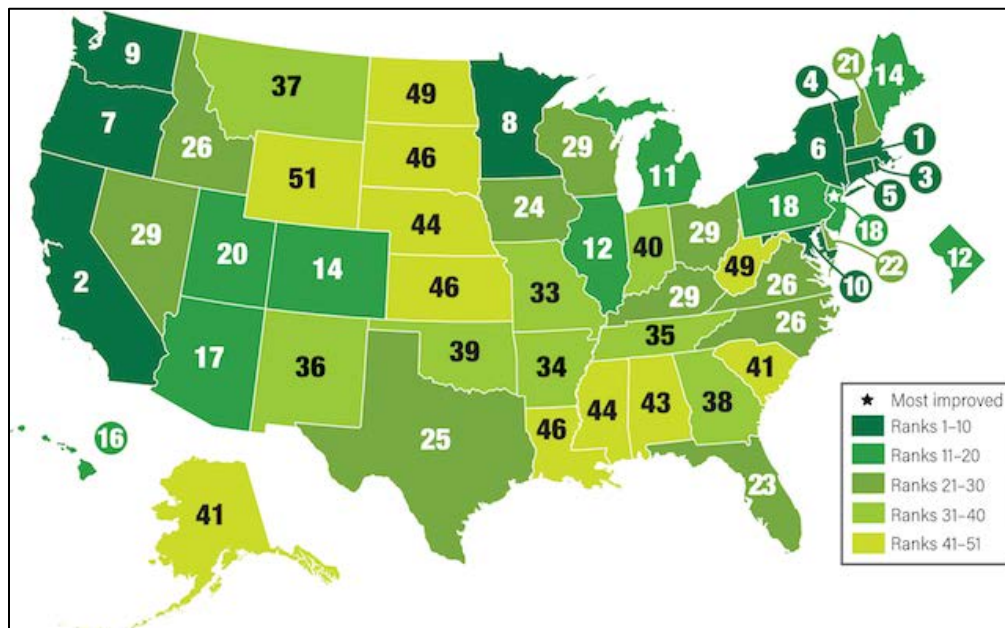


Energy efficiency experts nationwide, including the [Regulatory Assistance Project](#), ACEEE, NRDC and EDF have identified decoupling as a foundational policy for states interested in scaling energy efficiency. The ACEEE scorecard top 10 states have all adopted decoupling and the below maps show the correlation between decoupling and top performance as assessed by ACEEE.

## Electric & Gas Decoupling



## ACEEE Scorecard State Rankings



### Energy Efficiency

Improving energy efficiency is the cleanest, cheapest, fastest way to reduce pollution, lower energy bills and create high quality jobs. The energy we are not using can be hard to visualize, so energy efficiency is not always front-of-mind in people's vision for a clean energy future. But as the analyses noted above make clear, it is the single largest component of a clean energy economy. And diverting energy dollars currently spent importing fuel to electricians, plumbers, building contractors, architects and engineers to upgrade homes and businesses across the state is one of the most powerful things New Jersey can do to create jobs and drive local economic development.

The Energy Master Plan should identify the components of a comprehensive package of efficiency policies and direct state agencies to work with stakeholders and, where necessary, the state legislature, to advance energy efficiency programs as well as appliance standards and building codes.

### Energy Efficiency Programs

The [Clean Energy Law](#), enacted in June, already directs the utilities to invest in all cost-effective energy efficiency and, at a minimum, meet 2% of statewide demand for electricity with efficiency every year. The Energy Master Plan should provide guidance for doing this in the smartest, least cost way. NRDC's [Energy Efficiency Policy Fact Sheet](#) is an excellent resource to inform such guidance.

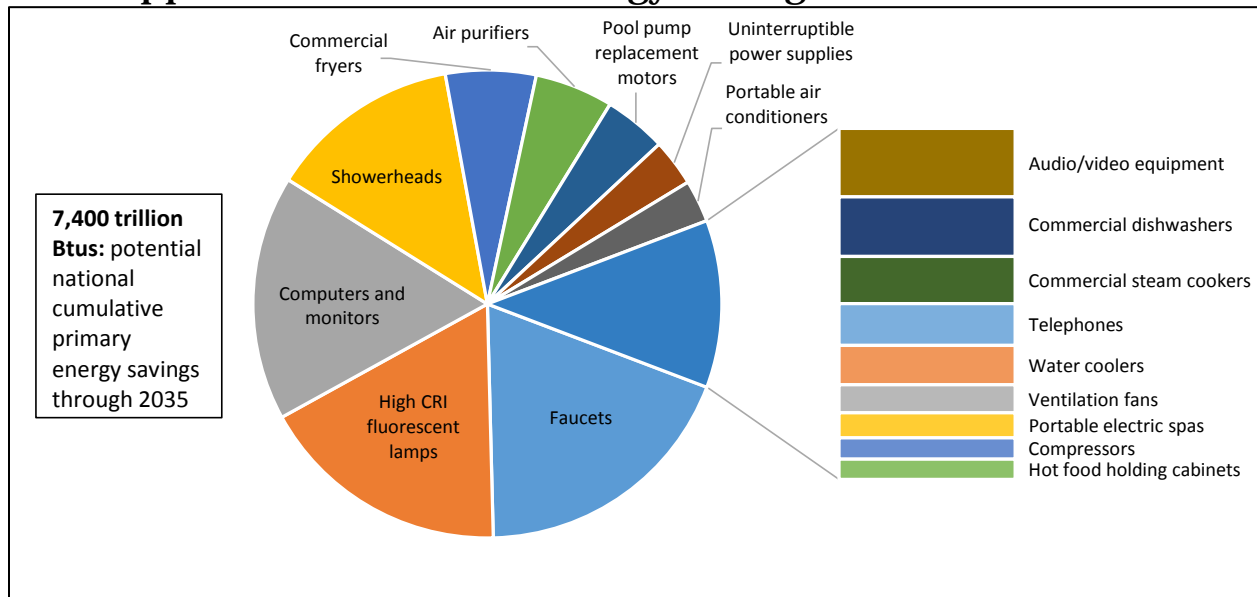
As described in the annual [ACEEE State Energy Efficiency Scorecard](#), the highest performing states are delivering over 3% annual savings from energy efficiency programs alone, and, as mentioned above, all of the top 10 states have adopted revenue decoupling.

Delivering a high level of savings requires investment. The Energy Master Plan should put this investment in context: it is not a subsidy for an uneconomical resource. By definition, “cost-effective” energy efficiency is the lowest cost way of meeting the state’s energy needs. Every dollar invested in efficiency represents a dollar that is no longer invested in more expensive electricity from a power plant.

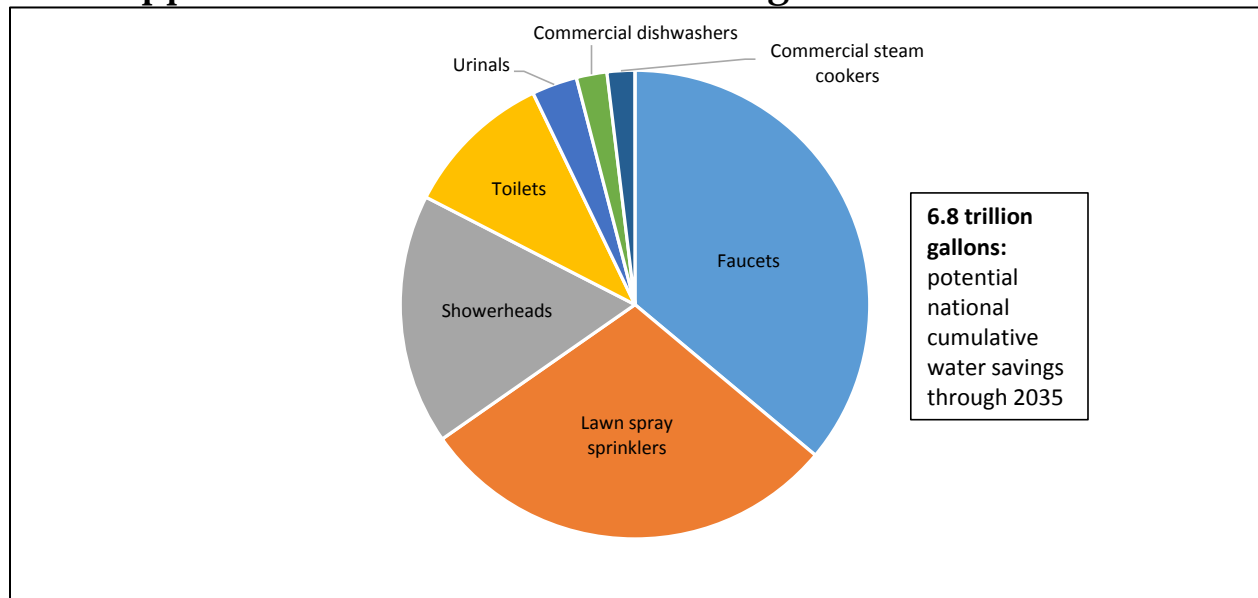
### Appliance Standards

State appliance standards set minimum energy performance requirements for appliances and equipment that are not governed by federal standards, such as portable air conditioners, computers and commercial dishwashers. The Appliance Standards Awareness Project has determined that if New Jersey adopted model state standards it would save customers over \$3 billion on their energy bills and deliver 1.5% annual energy savings statewide. State standards can also save New Jersey over 8 billion gallons of water every year.

## State Appliance Standards: Energy Savings Potential



## State Appliance Standards: Water Savings Potential



### Building Codes

The 2018 International Energy Conservation Code (IECC), and 90.1-2016 ASHRAE were recently released. A number of states, including Maryland, Massachusetts, and Illinois, are statutorily obligated to adopt the newest version of the IECC within one year of publication. New Jersey should also consider this type of “automatic” update, which ensures predictability for builders and helps drive even higher levels of efficiency. Vermont, D.C. and Delaware are also considering code upgrades. New Jersey should adopt the new code with strengthening amendments that will advance zero-energy, solar-ready buildings and standards that help accelerate electric vehicle deployment and carbon reduction. The Energy Master Plan should direct New Jersey’s [Uniform Construction Code Advisory Board](#) to consider such revisions to the code.

New Jersey can adopt various strategies to advance building codes, including establishing a plan for zero-energy building codes, expanding code compliance infrastructure, allowing local governments to implement codes that are more stringent than the state and allowing utility program administrators to claim savings for code compliance support activities. Northeast Energy Efficiency Partnership’s recently published report, [Building Energy Codes for a Carbon Constrained Era: A Toolkit of Strategies and Examples](#), explains how these strategies can enable New Jersey to adopt zero-energy buildings codes within the next 15 to 25 years;

Improved building codes lower utility bills, increase building durability, and help create healthier working, learning, and living conditions in both new and renovated buildings. Advancing energy codes over time to make buildings more efficient is one of the most cost-effective and impactful strategies for reducing the state’s energy use and carbon emissions.

## Building Benchmarking

Building energy benchmarking is a critical tool for scaling up energy efficiency in New Jersey's buildings. At its simplest, benchmarking is the process of determining the total energy usage in a building using metrics (such as energy use per square foot) and obtaining a score that shows how that usage compares to other buildings of a similar size and type. The value of energy benchmarking is widely documented and validated, and it is a high value and low-cost intervention. As the foundation of effective building energy management, benchmarking increases the adoption of efficiency investments and results in benefits for key stakeholders.<sup>1</sup> It increases demand for energy efficiency programs and provides utilities with useful information to prioritize program design and identify and engage potential program participants. It also provides building owners with an energy performance baseline, helps them to target their efficiency investments, and allows them to verify savings.

The Clean Energy Law requires building energy benchmarking, but it does not make clear how the state can use this information to improve efficiency. The Energy Master Plan should direct BPU to adopt policies that facilitate benchmarking, ensuring that building owners can obtain the usage information they need to measure, benchmark, and manage the energy usage in their buildings, including requiring utilities to provide whole-building aggregated data to building owners and implement systems that allow for the automatic upload of data to systems such as EPA Portfolio Manager.

## Integrating Energy and Water Efficiency

As noted above, appliance standards deliver both energy and water savings. The Energy Master Plan should direct agencies to integrate water efficiency into all energy efficiency efforts, including energy efficiency programs. Retrofits and efficiency standards for hot water-using fixtures and appliances are low-hanging fruit. These interventions simultaneously reduce water and energy usage, creating a double-benefit for both consumers (reducing water and energy utility bills) and the environment (reducing carbon emissions and conserving water resources). Especially in the context of low-income households, combining water with energy efficiency can have a major benefit on the affordability of utility bills. Low-income households tend to have older plumbing, with many opportunities to improve efficiency and reduce water bills. Reducing customer water demand also reduces the throughput in drinking water and water treatment systems, thereby reducing the water and sewer utilities' significant energy demands. Additional savings are available through energy efficiency improvements at water and wastewater treatment plants.

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<sup>1</sup> There are many resources demonstrating the benefits of benchmarking. See "The Benefits of Benchmarking Building Performance," Institute for Market Transformation (December 2015) (available at [http://www.imt.org/uploads/resources/files/PCC\\_Benefits\\_of\\_Benchmarking.pdf](http://www.imt.org/uploads/resources/files/PCC_Benefits_of_Benchmarking.pdf)), as well as "Creating Value from Benchmarking: A Utility Perspective" (August 2014) (available at [http://www.imt.org/uploads/resources/files/Creating\\_Value\\_From\\_Benchmarking\\_IMT.pdf](http://www.imt.org/uploads/resources/files/Creating_Value_From_Benchmarking_IMT.pdf)). DOE's Energy Data Accelerator has many additional resources, as well (<https://www1.eere.energy.gov/buildings/betterbuildings/accelerators/energy.html>).

## Building Decarbonization

To meet New Jersey's carbon reduction goals the state must identify all cost-effective opportunities to replace fossil-fuel space and water heating with renewable electricity or other carbon-free energy sources, for example by scaling investment in highly efficient [electric heat pumps](#). In addition to slashing greenhouse gas emissions, avoiding burning fossil fuels onsite eliminates combustion exhaust from buildings, improving both indoor and urban air quality. Beneficial electrification can also save consumers money and foster a more robust and resilient grid.

Efficient electric heating and cooling technologies are making rapid strides, and—with the right policy support—could soon be widely adopted to replace gas and oil boilers, furnaces, and inefficient air conditioning.

To realize these benefits, the state must adopt a comprehensive clean heating strategy, including specific energy savings targets that count savings achieved across all fuels (including reductions in total energy used from electricity, gas, and oil), and utility programs that will work directly with customers to advance clean alternatives to space and water heating.

## Renewable Energy

The Clean Energy Act established 50% RPS, mandated the development of a new approach to solar incentives that will drive investment in much more solar power at a much lower cost, and codified the Governor's goal of procuring 3500 MW of offshore wind. The Energy Master Plan should provide guidance to implement these policies in a way that maximizes benefits, minimizes costs and puts the state on a path to 100% clean energy by 2050. Specifically, the Plan should direct the BPU to take the steps needed to manage costs below the legislated cost cap in order to ensure that New Jersey meets the mandated 50% target.

The Plan's guidance must recognize that New Jersey exists within the regional PJM power grid. The state must ensure that its policies and practice drive new investments that displace fossil generation in PJM and deliver meaningful environmental and public health benefits to New Jersey.

### Solar Power

The Clean Energy Act directs the Board to transition from the volatile and expensive SREC mechanism to a more comprehensive approach that includes utility-scale and community solar. The Energy Master Plan should provide guidance to ensure that future incentives are customized to drive maximum investment at least cost in the distinct rooftop, community and utility-scale markets. Specific guidance on program design should be informed by the success of the [Massachusetts](#) and [New York](#) experience with declining incentives that adjust downward as solar

installation goals are achieved, with distinct blocks for different size systems, and include provisions to ensure equitable access to all customers and siting criteria to minimize impacts to New Jersey's open space.

### Offshore Wind

New Jersey has already set the wheels in motion to meet Governor Murphy's ambitious goal of deploying 3500 MW of offshore wind power. The Energy Master Plan should make clear that New Jersey can realize this goal in an environmentally sound manner that safeguards our ocean resources.

Offshore wind energy can and must advance in an environmentally responsible manner, safeguarding valuable and vulnerable ocean habitat and wildlife while providing critically needed clean energy to power our nation. New Jersey must scale up responsibly developed offshore wind, using precautionary, science-based measures to avoid, reduce, and mitigate development impacts on coastal and marine species; engaging stakeholders throughout; and supporting peer-reviewed research focused on delineating impacts and their mitigation.

New York and New Jersey are on course to produce considerable amounts of responsibly developed offshore energy by 2030. New York understands that to succeed in its offshore wind goals – 2,400 megawatts of offshore wind by 2030 – offshore wind projects must be planned “smart from the start.” The state's forward-thinking and constructive *New York State Offshore Wind Master Plan* process to determine the most favorable areas for potential wind development in the New York Bight conducted several years of science and stakeholder outreach and factored environmental considerations into identification of its final Area for Consideration.

New Jersey has wisely built from NYSERDA's outreach and has joined New York in discussions on how to advance offshore wind, including by participating in NYSERDA working groups like the Environmental Technical Working Group (E-TWG) on which NRDC participates. It is essential for both states to continue this kind of interstate coordination; the Energy Master Plan should factor in opportunities for increased coordination between the states, particularly New York, to not only learn from their work, but to move ahead together and leverage resources to ensure each state's goals are achieved by the most efficient and cost-effective means.

New Jersey's offshore wind funding mechanism should take an approach similar to New York by including a requirement that projects submit Fisheries Mitigation and Environmental Mitigation Plans as part of their proposals. Several E-TWG members recently submitted comments to NYSERDA re: their [Draft Request for Proposals \(RFP\) to procure Offshore Wind Renewable Energy Certificates \(ORECs\)](#) that encourage the commitments made as part of proposers' Environmental Mitigation Plans be based on best available science, as well as

advancements in mitigation practices, and are carried forward into all relevant state and federal permits for the projects. The comments urge NYSERDA to expeditiously incorporate comments on the draft RFP and release a final RFP by the end of 2018. New Jersey should adopt similar requirements.

The Energy Master Plan should also minimize cost and environmental impact in the planning of transmission infrastructure for offshore wind. New Jersey should promote competitive bidding and a systems approach to offshore transmission, and explore opportunities for shared transmission and interconnection across multiple generation projects. In addition, separating ownership of transmission and generation creates the opportunity for lower-cost financing of transmission and for competitive bidding when generation facilities need to be replaced.

## The Grid

As noted above, New Jersey is part of the PJM regional electricity market and the Energy Master Plan must provide guidance to state policymakers in that context.

### Wholesale Markets

New Jersey's wholesale electricity market is currently governed by PJM. PJM's governance process is dominated by incumbent industry players and does not serve state public policy interests. Recent PJM proposals threaten New Jersey's ability to set state energy policy and meet Governor Murphy's clean energy goals.

New Jersey should lead a regional effort among states to develop new approaches and market rules and frameworks that support rather than undermine state public policy goals. In the immediate term that means defeating proposals that threaten current state policies, but over the medium and long-term New Jersey should explore opportunities to advance rules within PJM that improve wholesale markets by internalizing the cost of carbon and other environmental harms caused by generating resources that are currently able to externalize some or all of those costs.

Current PJM capacity market rules drive investment in fossil and nuclear resources and away from efficiency and renewable resources based on outdated criteria that value baseload over flexibility, and that are not well-suited to a smart, modern grid. Proposed rules at PJM and FERC would exacerbate these problems.

### Grid Modernization.

Grid modernization and expansion are vital to support renewable growth and electrification of buildings and vehicles. New Jersey should adopt rules that will drive investment in grid modernization at least cost. Unfortunately, current regulation provides a return on dollars invested, which drives utilities to focus on large capital projects which often fail to provide the



flexibility and resiliency necessary for grid modernization. Instead, the Board should adopt regulations that reward performance in achieving consumer and public policy benefits and drive investment in technologies that will improve reliability *and* resiliency, lower system costs, ensure efficient use of the system, and create more open networks that enable access to data for both customers and third parties. This would create accountability for utility investment in smart grid (including grid sensors and smart meters) and encourage them to develop dynamic pricing schemes that will maximize cost-effective investment in efficiency, distributed generation, energy storage and all manner of smart appliances and equipment. The Board should (i) approve performance-based rate plans for grid modernization investments, including AMI; (ii) require utilities to incorporate non-wires alternatives into integrated resource planning for their distribution systems; and (iii) develop rules requiring utilities to provide access to energy usage data for customers and third parties using Green Button Connect.

## Clean and Reliable Transportation

NRDC commends the BPU for the inclusion of Clean and Reliable Transportation as a focus area in the EMP. Reducing emissions from the transportation sector is a vital component of reducing New Jersey's overall carbon footprint, and we support the Governor's vision to accelerate the deployment of new, cleaner technologies that benefit New Jerseyans, the electricity grid, and the environment. We address the BPU's discussion points below:

**What is the most significant obstacle that the state will face in implementing a clean transportation plan by 2050? What are some solutions to these challenges?**

It is critical to recognize that petroleum products comprise 92 percent of transportation energy sources nationwide, and that figure is likely representative of New Jersey's transportation energy source mix.<sup>2</sup> Moreover, petroleum fuel use is generally more emission intensive and much less efficient than other transportation fuels – especially electricity.<sup>3</sup>

The central challenge and goal that the state should prioritize in the development of a clean transportation plan is a) reducing overall petroleum consumption and emissions and b) shifting the mix of transportation fuels towards cleaner, more efficient sources. New Jersey has already demonstrated leadership in transitioning its power sector toward zero emission energy resources such as energy efficiency and renewables with the passage of Senate Bill S2314 into law.<sup>4</sup> New

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<sup>2</sup> [https://www.ase.org/sites/ase.org/files/ase-50x50-full\\_policyreport-final.pdf](https://www.ase.org/sites/ase.org/files/ase-50x50-full_policyreport-final.pdf)

<sup>3</sup> Using the U.S. Department of Energy's GREET model, the Alliance to Save Energy found that a battery electric vehicle running on today's electricity mix is 70 percent *more efficient* than a comparable diesel car.

[https://www.ase.org/sites/ase.org/files/ase-50x50-full\\_policyreport-final.pdf](https://www.ase.org/sites/ase.org/files/ase-50x50-full_policyreport-final.pdf)

<sup>4</sup> <https://www.nrdc.org/experts/dale-bryk/catapulting-new-jersey-clean-energy-future>

Jersey now has a similar opportunity to decarbonize and modernize its transportation sector to the benefit of all New Jerseyans.

## What are the regulatory or statutory barriers to the expansion of low- and zero-emission vehicles?

Before considering regulatory and statutory barriers, it is important to consider what barriers low- and zero-emission vehicles face today. For the purposes of these comments, we focus on electric vehicles (EVs), which include plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs). EVs encompass not only light-duty vehicles, but also medium- and heavy-duty vehicles (e.g. transit buses and heavy trucks) and off-road vehicles (e.g. port equipment).

Three primary, high-level barriers are limiting EV market development and challenging the New Jersey's ability to achieve the goals of the Zero Emission Vehicle (ZEV) Program<sup>5</sup> and the Global Warming Response Act<sup>6</sup>. First, while the number of models and types of EVs is growing rapidly and a used EV market is beginning to develop, upfront vehicle cost considerations remain a barrier for some consumers and fleet operators. Second, a lack of education and awareness of EVs persists among consumers and auto dealerships alike. Third, concerns about access to convenient charging remain a major impediment to EV purchases, particularly for individuals who lack the capacity to install charging equipment where they live. These barriers are identified in the foundational National Research Council of the National Academies' report, *Overcoming Barriers to the Deployment of Plug-In Electric Vehicles*.<sup>7</sup> We encourage the BPU to consider all regulatory and statutory policy solutions that directly – or indirectly – address these barriers.

For example, it is not immediately clear that owners and operators of electric vehicle supply equipment (EVSE), or charging stations, are exempt from utility regulation. Non-utility owners and operators of EVSE that provide EV charging service should not be regulated as electric utilities, regardless of whether the stations are publicly available and payment is required for service. There is no public policy need for the BPU to grant such entities exclusive service territories or to regulate such entities as public utilities. One of the benefits of this clarification is that charging station operators may charge for EV charging services on a kilowatt-hour (kWh) basis without risk of being regulated as a utility.

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<sup>5</sup> New Jersey adopted California's Clean Car Program for vehicle emissions and EVs in 2004, which includes a requirement that auto manufacturers produce a certain percentage of EVs for sale out to 2025. Governor Murphy recently signed the ZEV Memorandum of Understanding and joined the ZEV Task Force, a coalition of states which seeks to accelerate the deployment of EVs in a manner consistent with the goals of the ZEV program.

<https://www.nescaum.org/documents/multi-state-zev-action-plan.pdf/>

<sup>6</sup> [ftp://www.njleg.state.nj.us/20062007/A3500/3301\\_R2.HTM](ftp://www.njleg.state.nj.us/20062007/A3500/3301_R2.HTM)

<sup>7</sup> <https://www.nap.edu/catalog/21725/overcoming-barriers-to-deployment-of-plug-in-electric-vehicles>

New Jersey defines the term “public utility” in N.J.S.A. 48:2-13a, which includes any entity that owns, operates, manages, or controls “electricity distribution in the state.” While it is possible to interpret this statute so as to confer jurisdiction over independent entities offering public EV charging services for a fee, there is little public policy rationale for doing so and there is little evidence of a “natural monopoly” that could warrant the grant of an exclusive service territory and corresponding regulation. Many public utilities commissions, including Maryland, New York, and Massachusetts, have already clarified that owners and operators of charging stations shall not be regulated as utilities.

However, if regulated public utilities propose to deploy or support EV charging infrastructure and receive approval for cost recovery, the proposals should be subject to BPU review and approval to ensure they maximize benefits to utility customers, the grid, and the environment. Likewise, independent EVSE service providers and customers who voluntarily participate in such utility programs will be subject to the terms and conditions of those programs.

**What actions can the state take with its own fleet to demonstrate clean transportation leadership? How would these actions affect service reliability?**

New Jersey government can and should lead by example in the transition to a clean, modern transportation future. The *Multi-State ZEV Action Plan 2018-2021*, developed by the ZEV Task Force<sup>8</sup> provides specific guidance for states to demonstrate this leadership:

*“States should advance electrification of public fleets by: setting state-specific near- and long-term electrification goals and procurement policies; including ZEVs in statewide motor vehicle procurement contracts; conducting fleet-wide inventories of vehicles that could be replaced with ZEVs; quantifying potential fuel and maintenance cost savings and encouraging vehicle selection based on total cost of ownership; and assessing opportunities to secure the benefit of the federal electric vehicle tax credit through leasing or other means.”<sup>9</sup>*

The ZEV Task Force also recommends that states offer financial incentives to state and local fleets, ensure that fleet operators have access to cost tools and data to support fleet transition, use visible decals and other types of branding that raises awareness, and explore EVSE cost sharing arrangements with other public or private entities.

Pursuant to the Volkswagen Settlement Appendix D Environmental Mitigation Trust, New Jersey can use a portion of the eligible \$72.2 million in its Beneficiary Mitigation Plan to replace medium and heavy duty (MHD) diesel vehicles with cleaner technologies. NRDC recommends

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<sup>8</sup> New Jersey is a member of the ZEV Task Force.

<sup>9</sup> <https://www.nescaum.org/documents/2018-zev-action-plan.pdf> at 29-30

leverage a percentage of these funds to retire MHD vehicles in state fleets and replace them with their cleaner, electrified counterparts.

### What actions can the state take to help promote clean and reliable transportation at the state's ports?

Reducing emissions from New Jersey's ports is essential for creating an equitable transportation future. Ports are significant sources of local and regional criteria pollutant emissions from diesel engines, and these emissions adversely impact the health and quality of life of residents in surrounding communities. As noted in the Coalition for Healthy Ports *Gubernatorial Ports Briefing*, most goods leaving the ports are transported by 14,000 daily drayage truck trips.<sup>10</sup> The state should develop a comprehensive emissions reductions plan and identify funding to support the emissions reduction strategies therein. The state should also seek to adopt port emissions reduction policies that other leading states have implemented – including California. Moreover, the state should seek to leverage VW Settlement funding in its Beneficiary Mitigation Plan to reduce nitrogen oxide (NOx) and other harmful air pollutant emissions at ports. We recommend New Jersey consider allocating funding to replace old, polluting drayage trucks with new, cleaner models that dramatically reduce NOx emissions, enable ocean going vessel shorepower to reduce idling emissions, invest in new, electrified port cargo handling equipment, and replace older, polluting tugs with newer, more efficient ones.

On September 26, PSE&G submitted its Clean Energy Future filing at the BPU – which includes a \$364 million program proposal to accelerate transportation electrification in PSE&G's service area.<sup>11</sup> Within the proposed transportation electrification subprogram, PSE&G included a \$45 million Vehicle Innovation subprogram, which includes funding for custom transportation electrification projects at northern New Jersey ports. Such a program can complement and stretch limited Volkswagen Settlement funding and deepen the air pollution emission reductions needed to improve the health and quality of life of New Jerseyans in nearby communities.

### What role should utilities play in clean transportation?

New Jersey's electric utilities have a critical role to play in the transition toward clean transportation. There is a growing consensus that utilities have an important role to play in managing EV charging where feasible, facilitating the deployment of EVSE to support the EV market, and helping to address education and outreach gaps.<sup>12</sup> Specifically, we urge the BPU to

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<sup>10</sup> [https://www.cleanwateraction.org/sites/default/files/Gubernatorial%20Briefing%20Book.CHP\\_.final\\_.June%2027%202017.pdf](https://www.cleanwateraction.org/sites/default/files/Gubernatorial%20Briefing%20Book.CHP_.final_.June%2027%202017.pdf)

<sup>11</sup> <https://nj.pseg.com/aboutpseg/regulatorypage/-/media/C8EE6C85B67F47B099863E89C4382625.ashx>

<sup>12</sup> Over 120 vehicle manufacturers, technology companies, labor groups, environmental and health organizations, business associations, and other groups have endorsed the Transportation Electrification Accord, which outlines

identify three discrete roles for utilities: (1) utilities should implement programs and improve rate structures to maximize customer savings and promote effective management of new EV load; (2) utilities should help to accelerate strategic deployment of EV charging infrastructure needed to support widespread EV adoption, particularly through enabling third-party investment and expanding access to the benefits of electrified transportation for underserved market segments including low- and moderate-income customers; (3) utilities should engage in education and outreach regarding the benefits of vehicle electrification. These roles are essential to achieving New Jersey's ZEV goals and ensuring that all ratepayers benefit from New Jersey's EV market development.

In addition, a growing number of states have approved utility programs that include support for charging infrastructure, education and outreach, and load management components:

- California: The California Public Utilities Commission has approved multiple rounds of charging infrastructure proposals by the state's three investor owned utilities amounting to approximately \$1 billion of recoverable investment in EV charging infrastructure.<sup>13</sup> The recently approved proposals are wide-ranging and build on smaller-scale utility-sponsored EV programs now underway,<sup>14</sup> with the programs recently approved for Pacific Gas & Electric and Southern California Edison concentrating on charging infrastructure for electric trucks, buses and heavy-duty equipment.<sup>15</sup> The approved filing also included new commercial rate structures for DC fast chargers (DCFC) in Southern California Edison territory and a requirement that Pacific Gas & Electric file their own commercial rate. Another notable program in the filing is a "make ready" program for DC fast charging in Pacific Gas & Electric territory, which includes a robust rebate for charging infrastructure in disadvantaged communities.
- Florida: The Florida Public Service Commission has approved an \$8 million program by Duke Energy to deploy 530 Level 2 (L2) EV charging stations at multi-unit dwellings (MUDs), workplaces, public long-dwell time locations, and highway and depot DC fast charging stations, and to fund customer education and outreach.<sup>16</sup>
- Massachusetts: The Department of Public Utilities (DPU) has approved utility proposals from the largest two distribution utilities in Massachusetts. In 2017, the DPU approved a

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how utilities and public utilities commissions can accelerate transportation electrification to the benefit of all utility customers and the grid. See <https://www.theevaccord.com/about/>

<sup>13</sup> <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442457944> ;

[http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/Utilities\\_and\\_Industries/Energy/Energy\\_Programs/Infrastructure/RDD\\_and\\_Emerging\\_Programs/Alternative\\_Fuel\\_Vehicles/IOUInfrastructurePrograms.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Infrastructure/RDD_and_Emerging_Programs/Alternative_Fuel_Vehicles/IOUInfrastructurePrograms.pdf)

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> <https://www.prnewswire.com/news-releases/duke-energy-florida-launches-park-and-plug-ev-charging-station-pilot-to-encourage-clean-transportation-300723728.html>

\$45 million proposal by Eversource to facilitate the installation of almost 4,000 public charging ports in multi-unit dwellings, in workplaces, and in other public long-dwell-time locations in Massachusetts by installing and owning the make-ready infrastructure, and in some cases rebating the cost of the chargers as well.<sup>17</sup> In 2018, the DPU approved a second similar \$24 million proposal from National Grid that would support the deployment of approximately 1,200 public L2 charging ports and 80 DCFCs in its service territory.<sup>18</sup>

- Nevada: The Nevada Public Utilities Commission approved a \$15 million program by NV Energy to offer incentives for the purchase and installation of DCFCs and L2 EV chargers, including engagement by NV Energy on customer education and awareness of vehicle electrification benefits.<sup>19</sup>
- Ohio: The Public Utilities Commission of Ohio recently approved a \$10 million EV charging plan by American Electric Power that includes rebates for the hardware, network services, and installation of up to 300 L2 chargers and 75 DCFCs including target percentage L2 deployments at public, workplace and multi-unit dwelling locations, and with 10 percent of both L2 and DCFCs to be located in low-income areas.<sup>20</sup>
- Oregon: the Oregon Public Utility Commission recently approved pilots by both Portland General Electric (“PGE”) and PacifiCorp that include EV charging infrastructure components.<sup>21</sup> PGE’s pilot includes \$2.6 million for the company to install and own up to

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<sup>17</sup> Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each doing business as Eversource Energy, Pursuant to G.L. c. 164, § 94 and 220 CMR 5.00 et seq., for Approval of General Increases in Base Distribution Rates for Electric Service and a Performance Based Ratemaking Mechanism, Mass. Dept. of Pub. Utils. Dkt. No. 17-05, Order Establishing Eversource’s Revenue Requirement (Nov. 30, 2017), at 471-73

<sup>18</sup> Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid for PreApproval of Electric Vehicle Market Development Program, and of Electric Vehicle Program Provision, Mass. Dept. of Pub. Utils. Dkt. No. 17-13, Revised Pre-filed Direct Testimony of Karsten A. Barde and Brian J. Cronin (Feb. 13, 2017), at 30.

<sup>19</sup> Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval of annual plans for the Solar Energy Systems Incentive Program, the Wind Energy Systems Demonstration Program, the Waterpower Energy Systems Demonstration Program, the Energy Storage and Low Income components of the Solar Program, and the Electric Vehicle Infrastructure Demonstration Program for Program Year 2018-2019, Order, Nevada Pub. Utils. Comm’n Dkt. No. 18-02002 (June 29, 2018).

<sup>20</sup> I/M/O Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan, Pub. Utils. Comm’n of Ohio Case No. 16-1852-EL-SSO (Apr. 25, 2018), at 26-32

<sup>21</sup> In the Matter of Portland General Electric Company, Application for Transportation Electrification Programs, Ore. Pub. Util. Comm’n UM 1811, Order 18-054 (Feb. 16, 2018); In the Matter of PacifiCorp, dba Pacific Power, Application for Transportation Electrification Programs, Ore. Pub. Util. Comm’n UM 1810, Order 18-075 (Feb. 27, 2018).

24 DC fast chargers.<sup>22</sup> PacifiCorp's pilot includes up to \$1.85 million for the company to construct and own up to seven charging sites, with each site featuring up to four dual standard DCFCs and at least one Level 2 port.<sup>23</sup>

- Rhode Island: The Rhode Island Public Utilities Commission recently approved an approximately \$10 million proposal by National Grid to support the development of 320 Level 2 charging ports and 50 DCFC ports in a range of public and semi-public settings.<sup>24</sup>
- Utah: The Utah Public Service Commission has authorized PacifiCorp to spend up to \$2 million per year for five years and includes EV charging equipment incentives for nonresidential and multi-family Level 2, DCFCs, and grant-based custom projects and partnerships.<sup>25</sup>
- Washington: In 2016, the Washington Utilities and Transportation Commission approved a pilot by Avista Utilities to install 265 Level 2 chargers in residential single-family homes, at workplace, fleet, and multi-unit dwelling locations, and at public locations, as well as DCFCs at seven locations.<sup>25</sup>

Utilities are well-positioned to modify and improve electric rates to encourage EV charging that benefits utility customers and the electricity system at large. EV charging, if managed to respond to grid conditions, can simultaneously 1) maximize fuel cost savings relative to gasoline powered vehicles; 2) lower the cost of electricity service for all utility customers through greater utilization of existing grid assets; 3) avoid or defer grid upgrades; and 4) further reduce emissions by aligning charging with renewable energy generation.<sup>26</sup> Rate structures – specifically, time of use (TOU) rates – are one important tool for encouraging the management of new EV load. However, we urge the BPU and utilities to explore how technology-facilitated managed charging can support a flexible, more reliable electricity system.

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22 Order 18-054, at 4-5.

23 Order 18-075, at 3.

24 See Application of The Narragansett Electric Company d/b/a National Grid for Approval of a Change in Electric and Gas Base Distribution Rates; The Narragansett Electric Company d/b/a National Grid Proposed Power Sector Transformation Vision and Implementation Plan, Compliance Filing, Rhode Island Pub. Utils. Comm'n Dkt. Nos. 4770 & 4780 (Aug. 16, 2018) (approved without written order on Aug. 24, 2018).<sup>25</sup> I/M/O Application of Rocky Mountain Power to Implement Programs Authorized by the Sustainable Transportation and Energy Plan Act, Pub. Serv. Comm'n of Utah Dkt. No. 16-035-36, Phase Three Report and Order (June 28, 2017), at 3-4.

25 Wash. Utils. & Transp. Comm'n v. Avista Corp., Wash. Utils. & Transp. Comm'n Dkt. UE-160082, Order 01: Order Allowing Tariff Revisions to Become Effective Subject to Conditions (Apr. 28, 2016), at 1-2.

26 By spreading fixed distribution system costs over a greater amount of energy (kWh) sales delivered at low to no marginal costs, utilities can effectively lower the cost of electricity service for all customers, regardless of whether they drive EVs. A recent report by M.J. Bradley & Associates finds that in a scenario where New York achieves

The level of charging infrastructure deployment today is nowhere near sufficient to support the state's goal of 330,000 light duty EVs by 2025. According to the Department of Energy's Alternative Fuels Data Center, New Jersey has 452 public L2 plugs and 76 non-Tesla DCFC plugs.<sup>27</sup> In order to support 330,000 light duty EVs, the National Renewable Energy Laboratory's EVI-PRO Lite estimates that approximately 8,000 public L2 plugs and 1,500 public DCFC plugs will be needed as well as 12,000 workplace L2 stations.<sup>28</sup> This number does not include charging stations needed at residences nor for MHD vehicles. Given the magnitude of the gap between current and optimal EVSE deployment, utilities have a role to play in seeding the market and providing greater opportunities for market development and competition among EV charging service providers.

We also support a proactive role for utilities in customer outreach and education. These education and outreach efforts should be coordinated with those undertaken by other relevant stakeholders, including state agencies. Utility education and outreach materials should compile and provide useful information regarding availability of federal, state, local, automaker, and utility incentives for EVs and EVSE. Materials should also include information regarding the benefits of electrified transportation, including the potential for fuel savings using relevant electric rates, information about lower maintenance and repair costs for EVs, and the public health and environmental benefits of switching to EVs.

### What strategies could be implemented to allow for disproportionately impacted communities to have access to clean transportation options?

Clean transportation needs to work for all New Jerseyans, and the benefits of transportation electrification should be accessible in all communities. These benefits not only include improved health, reduced exposure to harmful criteria pollutants, and reduced risk of climate change impacts, but also access to clean, quiet, and modern mobility options. Residents in low-income communities are generally less likely to own or purchase new vehicles; however, increasing access to electric transit, electric carsharing and ride-hailing initiatives, electric bikeshare and other last-mile mobility applications can help make the benefits of transportation electrification more tangible for these communities and provide greater access to jobs, health care, and other public services. Members of these communities should be at the table to provide input on how various strategies meet their mobility needs and inform program outcomes.

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<sup>27</sup> We exclude Tesla stations because they employ proprietary charging technology that is only accessible to Tesla vehicles.

<sup>28</sup> <https://www.afdc.energy.gov/evi-pro-lite> Assumes default vehicle mix, partial PHEV support, and 80 percent of drivers have access to home charging.