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# ISSUE BRIEF:

## ENERGY EFFICIENCY IN NEW JERSEY

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Potential changes at the federal level could increase the burden on states to promote policies related to energy efficiency, which the Lawrence Berkeley National Laboratory simply defines as “using less energy to provide the same service.”<sup>1</sup> A look at New Jersey’s current energy-efficiency profile reveals room for improvement. While ranking as a nationwide leader in reducing pollution, with the fifth-lowest level of CO<sub>2</sub> emissions in the country,<sup>2</sup> the state has failed to manage optimally its clean-energy funds or establish long-term energy-efficiency programs, creating market instability in the space. With robust energy-efficiency plans resulting in far-reaching, demonstrable benefits for the environment, the economy and society, New Jersey should intensify its efforts on this front, possibly through utility decoupling and by expanding consumer incentives.

### Key Points

- While consistently ranking as a nationwide leader in reducing pollution, New Jersey has failed to manage optimally its clean-energy funds or establish long-term energy-efficiency programs, creating market instability in the space.
- New Jersey should intensify its energy-efficiency efforts, possibly through utility decoupling and by expanding consumer incentives.
- In searching for examples of model energy-efficiency practices, New Jersey should look to the national leader, Massachusetts, which appears to have incentivized properly both companies and consumers, with decoupling for the former and rebates for the latter.

In the previous administration, the federal government adopted an aggressive stance on energy efficiency, launching initiatives such as Clean Energy Savings for All, which targets low-income households.<sup>3</sup> A report by the Appliance Standards Awareness Project states that the Obama Administration “completed 18 more standards than any prior administration,” which could “save 44 quads of energy (and) consumers and businesses \$540 billion on their utility bills through 2030.”<sup>4</sup>

A focus on energy efficiency intends to unlock multiple economic and social assets within a diverse, complex economy. The Alliance to Save Energy (ASE) claims energy-efficiency measures saved the country over \$500 billion and accounted for 830,000 jobs in a single year,<sup>5</sup> while the American Council for an Energy-Efficient Economy (ACEEE) has found that the average job in the energy sector pays \$4,900 more than the average national wage.<sup>6</sup> The ACEEE also notes how lower energy costs fuel economic growth, as consumers and businesses can redirect their savings elsewhere, including to the expansion of the workforce.<sup>7</sup>

In addition, energy efficiency produces widespread advantages for the environment and public health. A study by the ASE concluded the United States uses 56 percent less energy today than it otherwise would absent energy-efficiency actions.<sup>8</sup> The ACEEE further indicates that reducing air pollutants can improve the health of the respiratory, circulatory and nervous systems, including reducing the risk of cancer, respiratory diseases, heart disease and strokes.<sup>9</sup>

The ACEEE currently ranks New Jersey 24<sup>th</sup> in the nation in terms of energy efficiency,<sup>10</sup> – having registered in the top-ten as recently as 2008<sup>11</sup> – with the state hampered by high costs and, in some cases, weak infrastructure. New Jersey recorded the nation’s 10<sup>th</sup> highest electricity costs in 2015<sup>12</sup> and exceeded national average energy costs in the residential (25.74 percent), commercial (23.27 percent) and industrial (49.52 percent) sectors as of mid-2016.<sup>13</sup> Furthermore, the American Society of Civil Engineers graded New Jersey’s energy infrastructure as a “C+” and cited Superstorm Sandy’s vastly negative impact in 2012 as a consequence of failing and obsolete infrastructure.<sup>14</sup>

Some criticism of the state’s performance with respect to energy efficiency has fallen to the New Jersey Board of Public Utilities (NJBPU), which established the New Jersey Clean Energy Program (NJCEP). Perhaps most significantly, the NJBPU consistently has failed to expend annual dollars budgeted for the NJCEP, redirecting balances to the General Fund and carrying over large sums to the following year. Furthermore, although the state has set energy-efficiency goals, no plan exists to develop, fund, administer or measure progress toward the targets. As an alternative, New Jersey could assign responsibility for program development, funding and administration to the utilities, with oversight and evaluation by the NJCEP.

In searching for examples of model energy-efficiency practices, New Jersey should look to the national leader, Massachusetts. Ranked first by the ACEEE for six consecutive years, Massachusetts appears to have incentivized both companies and consumers properly, with decoupling for the former and rebates for the latter.

In the traditional regulatory construct for utilities, the more gas or electricity sold, the higher the profits, which, by design, discourages companies from promoting energy efficiency. Decoupling eliminates this correlation between sales and profit, removing the incentive for firms to sell as much energy as possible, thereby encouraging utilities to boost energy-efficient equipment, tools and measures to their customers.

In New Jersey, two natural gas utilities have been decoupled for over a decade, with positive results. The state has considered electricity decoupling in recent years, but the lack of consensus among advocates, consumer groups and the electric utilities, themselves, has impeded its implementation.<sup>15</sup> During the same period, Massachusetts has advanced the decoupling of energy distribution companies, charging customers a fixed rate, i.e., predetermined revenue per customer. In turn, through the combination of decoupling and effective energy-efficiency incentives, the state has engaged utilities and aimed to protect customers.

If New Jersey pursues decoupling for electric utilities, the state also should provide enhanced incentives for consumers. A 2015 independent review of the NJCEP recommended the majority of the state's energy-efficiency incentive programs undergo alterations.<sup>16</sup> In contrast, Massachusetts's initiative, Mass Save, has been described by former EPA Administrator Gina McCarthy as "a leader in ENERGY STAR program implementation," which has "helped transform the energy efficiency market".<sup>17</sup>

From 2013-2015, Massachusetts reports savings of nearly four million annual megawatt-hours of electricity and almost 80 million annual therms of natural gas due to Mass Save, in addition to over \$9 billion in overall savings (or \$4.69 per every dollar spent).<sup>18</sup>

Mass Save offers the residential consumer four main programs:

- no-cost home energy assessments, including a program that helps low-income households access discounted utility rates and otherwise expensive energy-efficiency services;
- lighting and appliance rebates for products that meet energy-efficiency standards, such as refrigerators (up to a \$200 rebate), clothes washers (up to a \$400 rebate), light bulbs and other appliances;
- heating and cooling programs, such as high incentives for super insulation of walls and large rebates on energy-efficient certified heating and cooling systems; and

- financial incentives and rebates for houses built according to energy-efficient designs.

For the commercial customer, Mass Save includes a variety of financial incentives and technical assistance to businesses that wish to build or renovate new facilities, add capacity or replace/upgrade their equipment, with a requirement to do so according to the state's prescribed energy-efficiency standards. This approach could prove helpful to New Jersey's energy market, which has been described as including overly complicated mechanisms and instructions on how to meet specific energy-efficiency targets.

New Jersey could travel several routes toward enhanced energy efficiency. Borrowing a map drawn by a successful peer, the state could decouple electric and gas utilities, while establishing a stable, innovative incentive program that not only meets, but sets industry standards, significantly reduces consumption, protects the environment and bolsters the economy.

### Notes

<sup>1</sup> Lawrence Berkeley National Laboratory, "What's Energy Efficiency?" (Berkeley, CA: Lawrence Berkeley National Laboratory, 2017), <https://eetd.lbl.gov/ee/ee-1.html>.

<sup>2</sup> New Jersey Board of Public Utilities, *New Jersey Energy Master Plan: Update* (Newark, NJ: New Jersey Board of Public Utilities, 2015).

<sup>3</sup> The White House, "Fact Sheet: Obama Administration Announces New Actions to Bring Clean Energy Savings to All Americans" (Washington, DC: The White House, 2016), <https://obamawhitehouse.archives.gov/the-press-office/2016/11/18/fact-sheet-obama-administration-announces-new-actions-bring-clean-energy>.

<sup>4</sup> Andrew de Laski, Joanna Mauer, Jennifer Amann, Michael McGaraghan, Bijit Kundu, Sameer Kwatra and James E. McMahon, "Next Generation Standards: How the National Energy Efficiency Standards Program Can Continue to Drive Energy, Economic, and Environmental Benefits" (Washington, DC: Appliance Standards Awareness Project and American Council for an Energy-Efficient Economy, 2016).

<sup>5</sup> Alliance to Save Energy, "Top 5 Reasons To Be Energy Efficient" (Washington, DC: Alliance To Save Energy, 2012), <http://www.ase.org/resources/top-5-reasons-be-energy-efficient>.

<sup>6</sup> Eric Mackres, "Energy Efficiency and Economic Opportunity" (Washington, DC: American Council for an Energy-Efficient Economy, 2012), <http://aceee.org/blog/2012/09/energy-efficiency-and-economic-opport>.

<sup>7</sup> Ibid.

<sup>8</sup> Alliance to Save Energy.

<sup>9</sup> American Council for an Energy-Efficient Economy, "Energy Efficiency and Health" (Washington, DC: ACEEE, 2015), <http://aceee.org/sites/default/files/ee-health-1008.pdf>.

<sup>10</sup> Weston Berg, Seth Nowak, Meegan Kelly, Shruti Vaidyanathan, Mary Shoemaker, Anna Chittum, Marianne DiMascio and Chetana Kallakuri, “The State Energy Efficiency Scorecard” (Washington, DC: American Council for an Energy-Efficient Economy, 2016).

<sup>11</sup> Maggie Eldridge, Max Neubauer, Dan York, Shruti Vaidyanathan, Anna Chittum and Steve Nadel, “The 2008 State Energy Efficiency Scorecard” (Washington, DC: American Council for an Energy-Efficient Economy, 2008).

<sup>12</sup> United States Energy Information Administration, “New Jersey: State Profile and Energy Estimates (Washington, DC: United States Energy Information Administration, 2016), <https://www.eia.gov/state/analysis.php?sid=NJ#65>.

<sup>13</sup> Ibid.

<sup>14</sup> American Society of Civil Engineers, “Report Card for New Jersey’s Infrastructure” (Washington, DC: ASCE, 2016), <http://www.infrastructurereportcard.org/wp-content/uploads/2013/02/ASCE-Report-Card-for-NJ-Infrastructure-6.16.16.compressed.pdf>.

<sup>15</sup> Stefanie Brand, “Decoupling Working Group,” letter to Senate Environment and Energy Committee, June 18, 2014, <http://mseia.net/site/wp-content/uploads/2014/08/Rate-Counsels-Decoupling-Comments.pdf>.

<sup>16</sup> Energy & Resource Solutions, “Review & Benchmarking of the New Jersey Clean Energy Program prepared for the New Jersey Board of Public Utilities” (North Andover, MA; Energy & Resource Solutions, 2015), [http://www.njcleanenergy.com/files/file/Library/ERS%20Benchmark%20and%20Program%20Review\\_v3.pdf](http://www.njcleanenergy.com/files/file/Library/ERS%20Benchmark%20and%20Program%20Review_v3.pdf).

<sup>17</sup> Mass Save, “EPA Recognizes Mass Save as a 2016 ENERGY STAR Partner of the Year,” Press release, March 28, 2016, <http://www.masssave.com/en/news-and-events/news-releases/2016/march/28/mass-save-partner-of-the-year>.

<sup>18</sup> Mass Save, “Massachusetts Energy Efficiency Efforts Providing Unprecedented Savings to Customers,” Press release, August 9, 2016, <http://www.masssave.com/en/news-and-events/news-releases/2016/august/09/massachusetts-energy-efficiency-efforts-providing-unprecedented-savings#disclosures>.