

Utility Energy Efficiency and Building Electrification Portfolios Through 2025

A Brief on the New York Public Service Commission's Recent Order

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Key Takeaways

Following years of sustained efforts by advocates to advance energy efficiency in New York State, the New York Public Service Commission's (PSC) January 16, 2020 Order in Case 18-M-0084 (the Order) **represents a major win on energy savings targets.**

The PSC's adoption of ambitious energy efficiency savings targets is **on par with states leading in energy efficiency achievement** and represents a shift in PSC energy efficiency policy: It clearly recognizes the importance of energy efficiency as a critical resource for achieving the state's climate and energy goals.

As a key component in a strategy to reduce fossil fuel use in buildings, this Order establishes **targets for heat pumps** and adopts a novel framework to **promote building electrification** and set future heat pump targets.

It also establishes several **collaborative processes** and formalizes a process and mechanism for **course correction in the middle of the program period.**

Summary and Analysis

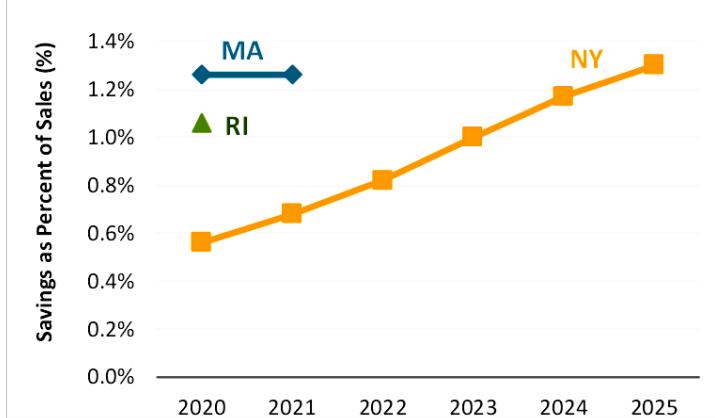
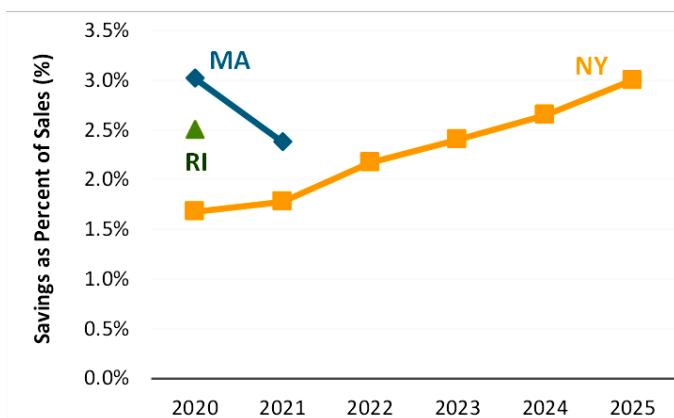
Targets and budgets

The incremental targets set in the Order amount to 35.8 TBtu of energy savings through 2025, including achievements by investor-owned utilities and NYSERDA but excluding savings by LIPA and NYPA.

The Order would put the state on a path to saving 3 percent of electricity sales by 2025. These targets are consistent with previous recommendations by Natural Resources Defense Council and other energy efficiency advocates and with levels in states leading in electric energy efficiency achievement, as shown in the figure below on the left.

The Order also adopts natural gas savings targets equivalent to 1.3 percent of sales. This is a dramatic increase relative to the targets set in the PSC's December 2018 Order in this case (a 108 percent increase) and to the targets proposed by the utilities (an 84 percent increase). It also places New York among the states with the highest natural gas energy efficiency savings targets, as shown in the figure below on the right.

Planned savings as a percent of sales for electricity (left) and natural gas (right) in leading states



Sources: NY: NY PSC January 2020 Order, Appendix B; MA: Mass Save Data, available at <http://masssavedata.com/Public/Home>; RI: National Grid 2020 Energy Efficiency and System Reliability Procurement Plan.

Further, recognizing the importance of heat pumps in meeting climate goals, the Order adopts for the investor-owned utilities a heat pump savings target of 3.6 TBtu and an associated funding level of \$454 million.¹ The separate target, one of the few goals for heat pumps in the country, represents a very positive step and a firm commitment to reducing carbon emissions through building electrification.

New York's heat pump target is expected to increase residential heat pump penetration to 4 to 5 percent of homes by 2025² —lagging behind Maine's current residential penetration of 7 percent. And, while the Order's heat pump savings target was established based on the residential market potential, all customer sectors will be eligible for heat pump incentives under the new heat pump incentive framework—regardless of existing heating fuel. In light of the considerable achievements elsewhere and the conservative assumptions used to develop the target in New York, there is likely substantial room for increasing heat pump targets beyond the 3.6 TBtu target.³ Recognizing the limitations of the estimates underlying the target, the Order states that the target represents “a minimum level of achievement, based primarily on data available for residential applications.” The Order then established a mid-term review process for 2022 to allow the target to be adjusted upwards “if further cost-effective potential is identified, also taking into account the additional experience gained in the non-residential market” (Order, p. 57). With the mid-term review, the state can build upon progress to date to achieve even higher penetration levels.

Low and Moderate Income

Half a year after the PSC set preliminary targets for energy efficiency in the state in Docket 18-M-0084, Governor Cuomo signed the July 2019 Climate Leadership and Community Protection Act (CPCLA) into law. CPCLA requires that a portion of residential energy efficiency funding be earmarked

for disadvantaged communities. Recognizing the need for a definition of, and more data on, disadvantaged communities, the Order dedicates 20 percent of the new energy efficiency funding in this order to low- and moderate-income customers (LMI) (Order, p. 103). To ensure compliance with CLCPA requirements, the PSC will revisit and may adjust the LMI spending level when the CLCPA's Climate Action Council

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develops its recommendations (Order, p. 4). Further, the PSC directs NYSERDA to (a) track and report data on spending on LMI customers and (b) develop and update its tracking mechanism as its ability to identify disadvantaged communities improves (Order, p. 104).

Importantly, LMI programs will be delivered consistently under a statewide brand with local marketing and customer outreach (p. 98). The PSC calls for NYSERDA and the utilities to develop a Customer Hub to streamline and improve access to initiatives among LMI customers and affordable-property owners (Order, 113). NYSERDA and the utilities will investigate the feasibility of using the hub as an entryway into other low-income services, such as the Weatherization Assistance Program (Order, p. 98).

Acknowledging the lack of detail in the utilities' LMI proposals, the Order charges NYSERDA and the utilities to jointly file a statewide LMI Portfolio Implementation Plan. Further, the Order directs NYSERDA and the utilities to implement stakeholder processes to obtain input on the best ways to serve these communities in general and on the statewide LMI Portfolio Implementation Plan in particular (Order, p. 102).

¹ The target excludes any future heat pump installations or targets in LIPA's jurisdiction (p. 57).

² The current penetration level is approximately 2 percent based on VEIC (2018) *Ramping Up Heat Pump Adoption in New York State Targets and Programs to Accelerate Savings*. The incremental penetration is approximately 2 to 3 percent based on two data sources: (a) the total technical potential in the state without Long Island from NYSERDA (2019) *New Efficiency: New York Analysis of*

Residential Heat Pump Potential and Economics, (b) a heat pump penetration assumption per 1 Tbtu savings from VEIC (2018).

³ The target is based solely on the market potential of small residential heat pump applications for space heating. The potential estimate underlying the target excludes additional savings from large residential and commercial buildings and all heat pump water applications (Order, p. 56).

Heat Pumps

Under the collaborative framework established by the Order, utilities take responsibility for administering the Statewide Heat Pump program, while NYSERDA will focus on initiatives to address non-financial market barriers (e.g., workforce constraints, lack of consumer awareness in the technology, supply chain development). The Order also institutes a joint management committee to establish, develop, and maintain a uniform, statewide heat pump program (Order, p. 84). The Order directs the electric utilities and NYSERDA to jointly file a single Statewide Heat Pump Program Implementation Plan that includes the program goals and implementation strategies, along with a market-facing Program Manual. Minimum filing guidelines for that plan cover customer eligibility, technology eligibility, incentive structure, building envelope upgrades, quality assurance and quality control protocols, and the process for making ongoing changes (Order, p. 86-90). A statewide evaluation of heat pump activities, to be directed by Staff in consultation with the Utilities, NYSERDA, and stakeholders, will be completed by June 1, 2022 (Order, p. 55-56).

Heat pump incentives will primarily take the form of one-time rebate payments. While the Order anticipates reducing rebate amounts per customer over time, it does not set a schedule for this decline (Order, p. 86-88). The Order directs NYSERDA to allocate \$30 million to develop and offer heat pump solutions in the LMI market, where consumer protections and energy affordability needs are paramount.

Interim review process

The Order calls for an interim 2022 review of the newly established programs, budgets, and targets—to be considered by the PSC in 2023 (p. 116). To inform this review, NYSERDA (in consultation with the utilities, PSC Staff, and LIPA) will initiate a statewide, multi-fuel potential study. This study will encompass both energy efficiency and electrification potential. The potential study will be issued first in 2022, with subsequent updates at least once every four years (Order, p. 77-78).

About Synapse

Synapse Energy Economics, Inc. is a research and consulting firm specializing in energy, economic, and environmental topics. Energy efficiency and electrification constitute a core area of Synapse's expertise. Synapse works on three fronts--the national, state, and utility program administrator levels--to make data more interconnected and transparent, promote policies and practices that support energy efficiency, and advocate for best practice energy efficiency program designs.

The Order does not adequately resolve issues related to cost effectiveness, including Benefit-Cost Analysis (BCA) calculations and support for all cost-effective efficiency. Nonetheless, there is an opportunity to make progress in these areas starting now. The PSC should clarify that the Interim Review will incorporate improvements to the BCA framework. Also, target-setting should reflect all cost-effective savings potential, while budgetary issues should be considered in a more detailed planning process following target-setting.

Greater statewide coordination

The Order recognizes the need for improved collaboration among NYSERDA and the utilities, both broadly and in specific circumstances. Increasing the need for data sharing between NYSERDA and the utilities, customer income verification to determine eligibility for LMI services will be centralized and housed with NYSERDA (Order, p. 100). The PSC also calls for collaborating on future energy efficiency potential studies, including the multi-fuel potential study mentioned previously (Order, p. 77). With respect to the technical reference manual process, the Order calls for improving the transparency of the manual revision process and directs the utilities to consider input from stakeholders (including NYSERDA, outside stakeholders, and industry professionals) on areas for improvement (Order, p. 109).

The Order neglected to address how gas expansion fits into the state's climate and energy goals, and thus the State's direction in this regard is not clear. Also, the PSC indicated that the current practice for developing earnings adjustment mechanisms (EAMs), i.e., "to shape EAMs in individual cases, while maintaining uniformity and continuity to the extent possible" "will be continued at this time" (Order, p. 107). As a result, much critical decision-making will continue to occur in disparate, time-intensive rate cases. These are open issues that will require more focus and stakeholder engagement in the future.