



Case No. 18-M-0084
In the Matter of a Comprehensive Energy Efficiency Initiative
Comments on the August 8, 2018
New York State Register Notice Proposed Rulemaking
October 9, 2018

Introduction

The undersigned organizations, representing the residential building energy efficiency industry, appreciate the opportunity to provide comment on the proposed rulemaking issued in the NYS Register on August 8, 2018. In July, our ad hoc coalition provided comments (see Appendix A) regarding the *New Efficiency: New York White Paper* (NENY White Paper) and PSC Case 18-M-0084. Our July 2018 comments highlighted six critical policy areas summarized below and our comments today focus on new developments since July 2018 and a set forth the Near-Term, Mid-Term and Long-Term activities needed to achieve these recommendations.

1. **Targets and Funding**, including:
 - adopting a no-regrets strategy that authorizes increased ETIP spending,
 - direction on the valuation of energy efficiency that will support energy efficiency investments in residential markets,
 - establishing clear direction for the utilities on near-term ramp up rates
 - coordination and use of various funding sources, and
 - continuation of established incentives and programs (with improvements to lower implementation costs) during the transition to full implementation of replacement programs and funding.
2. **Fuel Neutrality/Equitable Access/Beneficial Electrification**, including:
 - planned coordination among the utilities and NYSERDA,
 - directing the utilities to develop fuel neutral approaches to address the needs of customers using unregulated heating fuels, and
 - support for strategic electrification and other innovative strategies.
3. **Data and Metrics**, including:
 - use of open data protocols and source code, and
 - transparent and accessible statewide progress reporting.
4. **Cost-Effectiveness Testing Reforms**, including:
 - application of the National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources,
 - updating of antiquated energy savings calculation methodologies in the state's Technical Reference Manual, and

- ensuring symmetry in the benefit-cost analysis.
5. **Workforce Development**, including:
- capitalize on prior workforce development investments,
 - address the demand side challenges inherent in the residential sector, and
 - focus on strategies to not only train workers but also promote successful job placement.
6. **Statewide Coordination and Stakeholder Input**, including use of an advisory group or management council structure to:
- foster coordination and collaboration, not competition, between NYSERDA and the utilities;
 - establish regular and consistent procedures for stakeholder input; and
 - standard procedures to review emerging program strategies and assess new technology opportunities.

In addition, our coalition notes that others filing comments on July 16, 2018, shared in our concerns and call to action and we, in turn, support theirs. Specifically, these include comments filed by the coalitions and member organizations of ACE NY/AEEI, the Environmental Advocates (filed by NRDC), and Energy Efficiency for All New York. Notably, these groups stressed the need for near term action on targets, funding and cost recovery assurances, as well as the need for an advisory council and continued support for existing utility and NYSERDA programs during the market transition process.

[New Comments \(since July 2018\)](#)

We appreciate DPS and NYSERDA's commitment to engage stakeholders in an on-going dialogue, in particular, the series of topic-specific technical conferences hosted over the summer and early fall. However, we remain concerned that the topics addressed to date fall short in addressing the specific needs of the residential market including multifamily housing, representing more than 8 million households and 41% of the non-transportation energy consumed in the state. Absent a plan designed to specifically and aggressively pursue the energy savings and GHG reductions represented by this sector, the state will not meet its energy efficiency or environmental goals and will lose job creation opportunities. Topics that must be addressed to successfully engage the residential market include demand-creation, programs designed to overcome market barriers at all points along the supply chain, and strategies targeting reductions in unregulated fuel use in residential buildings.

While our initial set of comments submitted on July 16, 2018 remain unchanged (see **Appendix A**), we also urge NYSERDA and DPS to immediately establish a timeline for key actions to ensure the implementation of a robust set of energy efficiency strategies across the state without further delay. A concrete timeline will also provide assurances to market participants that the state is serious about creating opportunities for businesses to thrive.

Since submitting comments in July, a series of issues related to the current design and application of the state's Technical Reference Manual (TRM) and Benefit Cost Analysis (BCA) framework have become apparent (through our own work and shown in the September 14th forum on valuing EE). Reforming and modernizing both the TRM and the BCA framework to incorporate the New Efficiency, New York (NENY) and REV energy efficiency goals is a prerequisite for achieving these goals. Realizing the full value of efficiency and achieving the NENY and REV goals cannot be achieved without reforming and modernizing the TRM and BCA framework.

The Benefit Cost Analysis framework (BCA, in particular how the Societal Cost Test is developed), needs review to be consistent with the BCA Order and appropriate evaluation of efficiency. In our view participant costs are not ratepayer costs but conversely represent non-energy benefits valued by the participants. There should be symmetry between costs and benefits to avoid skewing results, as well as a reconsideration of wholesale price suppression effects, which are currently unfairly excluded as a 'transfer.' The National Standard Practice Manual offers important principles for robust and equitable cost-benefit analysis that should be adopted by New York.

The current design of the TRM is out of date, inherently limits the types of improvements that can be eligible for utility programs and will hinder the market innovations needed to realize wide-scale adoption of energy efficiency in residential retrofit applications. Our coalition members have a deep knowledge and extensive experience in the application of energy savings calculations and benefit-cost testing in many states. As has been demonstrated in NY in the past, the application of these models can support good program design or thwart it. For example, under the System Benefits Charge (SBC), NY was recognized as a national leader in innovative, market-based residential program design. The adoption of the TRM under the EEPS policy structure, the basis of which remains unchanged despite on-going incremental updates, undermined the progress achieved under SBC in the residential sector. If we are to meet the state's aggressive environmental and energy efficiency goals, we need policies that will support all viable implementation strategies.

We offer the following recommendations to modernizing the state's approach to the TRM and align the application of the TRM with the societal cost test described in the BCA Order. A revised TRM and BCA framework will be particularly valuable to the modernization of the grid, including distributed energy resources and potentially decarbonization. These recommendations include:

- adding transparency to the process of reviewing and updating the TRM, including improving access to underlying models and assumptions,
- development of energy models using a modern energy simulation engine like Energy Plus (the simulations currently being used date back to 2002 using a simulation engine (DOE2.2) that the Department of Energy has not supported for over 15 years),

- incorporating valid load shapes that provide system confidence in temporal and locational demand impacts from energy efficiency for both winter and summer peaks,
- reducing the overhead for calculations of packages of measures to support the alignment of utility incentives for grid modernization with optimal customer value,
- more granular weather locations representative of the entire state,
- ensuring symmetry in the benefit cost test (e.g., for participant costs and benefits, see above), and
- providing guidance to utilities to apply the TRM effectively in the context of the portfolio level cost-effectiveness screening called for in the BCA order to avoid unnecessarily limiting energy efficiency investments only to activities that screen on an individual measure level.

Summary of Recommended Actions

Utility Procurement

We support the state's on-going commitments, stated in the New Efficiency New York Whitepaper, to:

- Establish utility specific targets and funding authorization. These should be set as expeditiously as possible to help utilities and market participants understand the opportunities that will be available and should not be left entirely to rate cases. Targets can be adjusted once additional work has been done to develop methodologies to account for electrification and fuel neutrality. Establish the baseline policy that energy efficiency savings cannot be achieved by markets acting alone without funding from the public/utility sector to overcome entrenched market barriers.
- Enable utilities to earn a return/incentives on EE investments. Utilities should be assured cost recovery and an opportunity to align new utility business models with state energy and environmental goals. We suggest the Commission provide clarity that utilities will have such opportunities while allowing for different approaches given the needs of each utility and the incentives/shared savings already agreed upon in rate cases. In particular, these should be structured to support investments in longer-lived efficiency opportunities, which will drive market transition and innovation. In other words, utility investments in efficiency should be as attractive as investments in T&D.
- Allocate at least 20% of new money for LMI market. We support allocation of at least 20 percent of new funding to programs that serve low and moderate income households and the buildings in which they reside. Addressing energy use of buildings helps ensure energy and housing affordability and helps provide safe and healthy homes. In multifamily buildings, this funding should support both common space and in-unit efficiency to provide the greatest opportunities for benefits.
- Reiterate collaboration, not competition, between NYSERDA and utilities. The need for collaboration should be paramount. NYSERDA should continue to play a

critical role in coordinating evaluation, review, and communication among all parties. In addition, NYSERDA can support data tracking statewide, expediting evaluation and adoption of new technologies and identifying best practices nationally.

Roadmap and Timeline

We urge NYSERDA and DPS to develop an implementation roadmap identifying short, medium, and long-term goals, including the following key actions:

Timing for Recommended Actions	Targets & Funding	Cost-Effectiveness and Evaluation Models	Phased Program Design	Coordination
Near Term Actions (before end of 2018)	<p>Develop path for utility targets outside of rate cases</p> <p>Authorize expenditures with cost recovery</p> <p>Direct utilities to design programs for all rate classes, building types, customer types; ensure existing opportunities/programs continue until newly designed ones are in place</p>	<p>Understanding the limitations of the current NY TRM for program delivery and valuation of EE and establishing a plan to address these issues</p>	<p>Continue to encourage pilots/demos for scaling market transformation to accompany and complement sound program design</p> <p>Establish a “no regrets” path forward to enable rapid-launch programs that can be modified over time</p>	<p>Establish a statewide advisory council or similar structure</p>
Mid-Term Actions (before 2nd quarter of 2019)	<p>Provide additional guidance on LMI expenditures, program design and metrics (including possibility of accepting lower threshold for cost effectiveness)</p>	<p>Conduct additional work on how to account for beneficial electrification (in methodologies, metrics and program design)</p>	<p>Support path forward on all fuels approach including addressing: gas efficiency, beneficial electrification, dual fuel buildings, and unregulated, delivered fuels</p>	<p>Establish methods for tracking statewide progress toward goals via a centralized system overseen by NYSERDA</p>
Long-Term Actions (ongoing and before third quarter of 2019)	<p>Ensure long-term funding commitments to support achievement of statewide goals</p>	<p>Establish updated methods and statewide consistency in TRM approach</p>	<p>Fully utilize AMI implementation in considering rate design changes, including time variant pricing</p> <p>Reconcile value approaches for energy efficiency and other DER (DG)</p>	<p>Establish standardized progress reporting for advisory council and DPS review</p>

Conclusion

In conclusion, we thank the Commission for the opportunity to comment and look forward to a 2018 Commission Order implementing the first steps necessary to realize the goals of *New Efficiency New York*.

Appendix A – see attached
Copy of July 16th Letter



**Comments on the New Efficiency: New York White Paper and
PSC Case 18-M-0084
July 16, 2018**

I. Introduction

The undersigned organizations, representing the residential building energy efficiency industry, appreciate the opportunity to provide comment on New York’s newly announced energy efficiency initiative and the *New Efficiency: New York White Paper* (NENY White Paper) issued by the New York State Energy Research and Development Authority (NYSERDA) and the Department of Public Service (DPS). Our ad hoc coalition represents a broad spectrum of companies with decades of experience in the development and implementation of energy efficiency policy and programs in New York and nationally. We are also providers of the products and services supporting residential energy efficiency and are keenly aware of the challenges associated with meeting aggressive energy savings goals and the specific needs of the residential sector. We applaud the site-based energy savings target to reduce consumption by 185 trillion British thermal units (TBtu) by 2025 and the accompanying electric utility target of three percent annual savings of retail sales by 2025. These targets bring New York into better alignment with the performance of neighboring states, and an aggressive yet achievable energy efficiency goal is essential for meeting the state’s carbon reduction and renewable energy goals. Energy efficiency jobs also play a vital role in the state’s economic development, representing the largest component of clean energy jobs in New York, numbering well over 110,000 out of 146,000 clean energy jobs¹ with great potential for growth.

The approaches outlined in the NENY White Paper are a combination of enhancements to accelerate existing efforts under New York’s existing *Reforming the Energy Vision* (REV) policy or market transformation approaches that will take time to materialize. New York’s stellar past achievements in energy efficiency originating under New York’s System Benefits Charge (SBC) initiative have already suffered, as indicated by the State’s drop in standing for policy and utility programs from number three in 2013 to number seven in 2017, based on the American Council for an Energy Efficient Economy’s (ACEEE) annual energy scorecard,² and are at risk of further decline without aggressive and timely action. We, therefore, deeply appreciate the commitment to accelerate investment in energy efficiency and to facilitate faster and broader market transformation. We respectfully suggest that to do so, interim targets for utility achievements and clear funding mechanisms must be determined this year for implementation

¹ NYSERDA, *2017 NY Clean Energy Industry Report* (2017)

² See <http://aceee.org/state-policy/scorecard> and also <https://e4thefuture.org/blog/how-to-return-ny-to-top-three-for-energy-efficiency/>

no later than 2019. The existing framework of REV coupled with the new energy initiative outlined in the NENY White Paper provide a path for early “no regrets” decision making for near term acceleration of energy savings.

The goals for utilities should be designed to avoid a “lowest common denominator” situation by raising the bar across the board while acknowledging those that have made the most progress and strongest commitments already. Goals should include ramp rates and targets by sector to ensure equity across customer and building types, and appropriate indicators should be used in reporting to track success in addition to energy savings and carbon reductions (e.g., training and job creation, sales).

The residential market is non-homogeneous, disperse, fragmented, and defined by relatively small transactions. Market barriers vary by customer conditions such as lack of knowledge of savings opportunities; the need for short term payback due to uncertain length of occupancy; lack of capital and competing investments; landlord-tenant split incentives or decision-making ability; and building condition barriers such as roof leaks, asbestos, and structural limitations. Successful program design strategies will require the incorporation of mechanisms to overcome these market barriers and imperfections, which means that top-down market-based strategies will not achieve efficiency goals without significant public or utility sector intervention and funding to overcome those barriers.

Toward those ends, we suggest the following key recommendations as described in further detail in the text that follows:

- In the recent NENY technical conferences staff indicated additional stakeholder sessions are planned to focus on topics including: heat pumps, value of EE, data issues, and EAMs. We support deeper dive sessions on those important topics and suggest staff **consider additional sessions covering issues related to unregulated fuels/fuel neutrality and driving demand for efficiency.**
- **NYSERDA should continue and expand its regular stakeholder involvement and adopt an advisory committee process.** Achievement of the Governor’s energy efficiency targets and carbon reduction goals will necessitate addressing sectors that have traditionally been hard to reach by utility programs and will be dependent on NYSERDA and utility cooperation not competition. This collaborative relationship can best be achieved with stakeholder input and the use of an advisory committee structure.
- **Establish clear direction to the utilities for near-term ramp up expectations,** including in the context of unregulated fuels.
- **We recommend the use of various funding sources** including increased Clean Energy Fund (CEF) investment, earmarking of New York Green Bank (NYGB) funding for energy efficiency specifically, cost recovery assurances plus incentives for utilities, and creating a pool of funds allocated to utilities based on their relative contribution toward the State’s energy efficiency goals.
- **Immediately implement “no regrets” strategies including authorization for increased ETIP budgets and direction to appropriately value efficiency** and procure it as supply and capacity resource.

- We recommend **NYSERDA work with the utilities to develop a fuel neutral approach that address the needs of customers using unregulated heating fuels, strategic electrification and other innovative strategies.**
- **There should be transparent and ongoing tracking of expenditures and progress** with “lumpiness” reserved for long-term approaches such as codes and standards, not programs and NYSERDA funded initiatives.
- **We encourage the use of open data protocols/source code** (e.g. publicly accessible Application Programming Interfaces (API’s)) for broader connectivity and to promote innovation in the market and incorporation of smart home systems into NYSERDA and utility pilots and programs.
- We support the use of pilots, such as Pay for Performance but **suggest pilot results be used to inform larger-scale procurements that include multiple service providers to drive marketplace transformation and scale.**
- We encourage further refinements to New York’s cost effectiveness testing approaches based on the guidance offered by the National Efficiency Screening Project (NESP).
- We urge NYSERDA to **continue to support prior workforce development investments (such as BPI) and to pursue and implement strategies that not only train workers but also promote successful job placement and responsiveness to market demand** for applicable services.
- **We suggest a renewed focus on the residential retrofit market using the Industry Partnership Approach to develop program strategies that will capitalize on prior workforce development investments and address the demand side challenges** inherent in the residential sector.
- **We encourage NYSERDA to pursue multiple strategies supporting training and expanded opportunities for employment** in energy efficient home improvement trades by expanding current vocational school initiatives under the Clean Energy Fund and the leveraging of private sector resources to spur business growth and local job creation.

II. Targets and Funding

The establishment of clear and measurable energy reduction targets signals a renewed commitment on the part of the state to pursue energy savings as a key component of our clean energy future. We are encouraged by the on-site energy use reduction target and sub-target for electric efficiency but clear direction to the utilities is needed to establish near-term ramp up expectations, including in the context of unregulated fuels. In addition, there must be clear signals to encourage businesses to support these efforts or the state will fall short of meeting its goals. As indicated in recent research³, the Lead By Example, codes & standards, pilot demonstrations and already authorized expenditures will be insufficient to hit the stated targets.

As significant new funding will be needed, we recommend the use of various funding sources including increased Clean Energy Fund (CEF) investment, earmarking of New York Green Bank (NYGB) funding for energy efficiency specifically, and most importantly, cost recovery

³ Synapse Energy Economics, Inc., "Synapse Energy Economics, Inc., Current Energy Efficiency Efforts in New York Relative to Governor Cuomo's Goals. (July 2018)."

assurances plus incentives for utilities as part of supply side and distribution system planning. We also suggest creating a pool of funds allocated to utilities based on their relative contribution toward the State's energy efficiency goals. There also need to be incentive mechanisms such as EAM's that are linked to current and future goals.

Decisions and guidelines should be adopted and implemented outside of rate cases. An expeditious ramp up will require facilitated and expedited regulatory proceedings to either approve or modify existing regulatory and rate case decisions that are limiting utility investment levels below what is necessary to meet the newly announced targets. If rate case changes are necessary, the PSC should use rate case reopeners, as staff indicated was feasible at the recent technical conferences.

We support NYSERDA continuing to play a critical role in advancing clean energy in New York and believe NYSERDA will need to do more than ever to help the state meet the new targets. Therefore, NYSERDA and the PSC should identify new sources of funding for an expanded CEF or otherwise demonstrate how goals can be achieved without such expansion. Dependence upon reducing the cost of efficiency measures and market transformation alone will be insufficient. While these market-driven goals are laudable, they are unlikely to occur on the timelines needed to remove market barriers and meet the goals.

We also support the prioritization of underserved sectors (e.g., LMI, residential, multifamily) and the planned minimum 20% set-aside funding earmarked for LMI customers. In addition to these efforts, we suggest NYSERDA explore targeted NY Green Bank efforts for these sectors and populations.

The utilities are, appropriately, expected to deliver the bulk of the additional energy efficiency needed to meet the state's 185 Tbtu target. This will also require clear near-term ramp-up targets and increased expenditures to allow the full capture of efficiency benefits. Innovation and market transformation, including time and location-based approaches to valuing efficiency, can be supported by utility actions but cannot substitute for additional authorization for cost recovery and EAM incentives. To ensure no more time is lost, early "no regrets" strategies must include immediate authorization for increased ETIP budgets and direction to appropriately value efficiency and procure it as supply and capacity resource.

There has been much discussion of the need to establish the value of energy efficiency but little definition has been provided describing what that means and from whose perspective value is to be determined. To facilitate what is likely to be a prolonged process, the utilities should be instructed to determine a base value for energy efficiency, which can initially be based on the Benefit Cost Analysis (BCA) handbooks and related filings. The utilities can supplement this base value with location-specific values for areas where there are additional or critical load reduction needs (as in the Non-Wire Alternative areas). The values can be updated based on changes in market conditions, utility needs, and policy developments and should, in our view, include non-energy benefits. Additional suggested approaches to establish the value of energy efficiency are included the discussion of the *National Standard Practices Manual* in Section V below.

In the single family and small multifamily residential markets, consumers are rarely persuaded to make energy efficiency investments based solely on the economics of the energy savings. More often, consumers make these decisions based on attendant co-benefits like improved comfort, easier maintenance, and higher resale value. Larger multifamily buildings may often find the energy savings and subsequent reduced operating and maintenance costs compelling, but these are also accompanied by important improvements in tenant health and comfort and reduced apartment turnover rates. Similarly, energy efficiency can also drive non-energy benefits that can be captured by program administrators and the state including economic development (business and job creation and retention), environmental, consumer health, and market sustainability benefits. However, capturing these benefits requires driving increased demand for products and services that supply-side incentives alone will not provide.

III. Fuel Neutrality/Equitable Access/Beneficial Electrification

To fulfill the promise of a fuel neutral approach and its attendant benefits, utilities need to clearly establish a joint delivery of efficiency products and services between electric and natural gas utilities when they are not the same utility, or even when they are the same utility, to avoid consumer confusion. In addition, utility programs need to work with NYSERDA to develop a fuel neutral approach that is consistent with the Governor's goals that include strategic electrification and other innovative strategies.

Achieving environmental, affordability and equity goals will also require addressing unregulated, delivered fuels such as oil and propane directly, particularly for the residential market. The U.S. Energy Information Administration estimates more than 2 Million New York households use oil or propane as a primary heating fuel at a rate of approximately 112 TBtu in annual heating consumption alone. Many of those homes exist in regions where access to gas distribution lines is limited or non-existent. The current REV EAMS structure is focused primarily on energy savings associated with electricity and natural gas, potentially leaving behind the 25% of New York residents who heat their homes and fuel their appliances with oil and propane. In addition, many urban multifamily buildings are either oil heated or equipped with dual fuel heating equipment, designed to enable building operators to switch between oil and gas as conditions and price signals require. While these buildings were once served under the SBC-funded low-income programs led by NYSERDA in the early 2000s, they were excluded from eligibility for energy efficiency services and incentives under both EEPS and current REV programs. This has resulted in lost opportunities for efficiency upgrades for affordable housing as well as market rate buildings. This needs to be changed to allow for savings in these buildings. Other barriers created by existing or future policies need to be identified and corrected.

In addition to providing efficiency solutions for oil and propane heated homes, programs will also need to address the importance of electrification as a longer-term strategy and acknowledge the benefits of electrification in meeting climate goals. Working this strategy into utility revenue models comes with its own set of challenges and NYSERDA is well-positioned as a fuel-neutral energy efficiency advocate to play a key role in the successful deployment of market intervention strategies in coordination with the utilities' energy efficiency programs.

We suggest a focused topical forum or series of stakeholder meetings to tackle fuel-neutrality issues, including those described above. This should also include a review of past NYSERDA efforts where programs with SBC funding were truly fuel neutral. Options should be considered to re-engage in formerly proven strategies to address the whole building including dual fuel buildings and reduce energy consumption of unregulated fuels.

IV. Data & Metrics

During the technical conferences, staff expectations of “lumpy reporting” of progress on indirect benefits did not inspire confidence that NYSERDA would be pushing for the immediate ramp up needed to build demand and achieve the state’s goals. There should be transparent and ongoing tracking of expenditures and progress with “lumpiness” reserved for long-term approaches such as codes and standards, not utility programs and NYSERDA funded initiatives. Consistent and regular EM&V using the latest technical approaches should be implemented to provide real time or at least near time feedback on results and impact to provide input to program development and improvement.

For data collection, management, analytics and reporting, we encourage the use of open protocols/source code (e.g. publicly accessible Application Programming Interfaces (API’s)) for broader connectivity and to promote innovation in the market and incorporation of smart home systems into NYSERDA and utility pilots and programs.

We agree with the NENY White Paper that effective valuation of energy efficiency must consider the time and locational value of the energy being saved while maintaining transparency and addressing privacy concerns. Data standards, along with new technologies (e.g. connected devices) and services (e.g. energy efficiency aggregators and P4P models) will play an important role in framing the delivery of energy efficiency as a monetized supply-side commodity. The REV proceedings including those on DER and distribution system planning and the role of utilities will be central to facilitating this market transformation and participation by the emerging products and services industries will be critical. This is even more important for markets built upon large volumes of smaller transactions, such as the single family homes market which will require aggregation of benefits in order to be visible in the supply side markets.

Pilots, including Pay-for-Performance (P4P) can provide helpful illustration of concepts and provide important data sets for moving to scale providing there is transparency and sharing of results, while respecting proprietary information and personal data. Reliance on pilots, particularly for P4P, risks creating new market impediments and barriers to entry if not designed properly. We support the use of pilots but suggest results be used to inform larger-scale procurements that include multiple service providers to drive marketplace transformation and scale.

The development of data access (Green Button Connect, AMI data, etc.) and management protocols should emphasize transparency while maintaining privacy standards, including the continuing review of recent decisions to protect tenant data in aggregated building data.

The process of measuring results through an improved and standardized EM&V process is underway through multi-state collaboration but needs to be open source, public, and established as soon as possible.

V. Cost Effectiveness Testing Reforms

Continued attention to cost-effectiveness testing reforms will be a critical component of New York's ability to meet its energy efficiency goals. For example, one lesson learned through the implementation of the NY Energy Efficiency Portfolio Standard (EEPS) initiative was that the application of stringent "total resource cost" test at the measure level left substantial energy savings on the table and added significant administrative costs that hindered efficient implementation. We salute New York's recent reforms to cost effectiveness testing and encourage more attention to this critical policy area.

We support the Public Service Commission's (PSC) recent decision to adopt a new cost effectiveness test construct that incorporates societal costs and benefits to evaluate all utility investments, including energy efficiency at the portfolio level. While this change of policy will help overcome artificial barriers introduced under EEPS when a Total Resource Cost test at the measure level was adopted, we encourage further refinements to New York's cost effectiveness testing approaches. We recommend the guidance offered by the National Efficiency Screening Project (NESP) in their [National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources \(NSPM\)](https://nationalefficiencyscreening.org/national-standard-practice-manual/)⁴ which provides cost effectiveness testing methods that are updated to better address today's market and program designs, and is intended to supplant the legacy California Standard Practice Manual often referenced by state regulatory agencies.

The NSPM includes a step-by-step process to apply a valuation methodology to energy efficiency using the Resource Value Framework. The guide presents accounting procedures for applicable hard-to-monetize costs and benefits, with guidance on a wide range of fundamental aspects of cost-effectiveness analyses including methods to assess the cost-effectiveness of DERs. Effective accounting within the DER proceedings should consider all relevant costs and benefits for both the utility system and the non-utility system (see Part 2 "Developing Inputs for Cost Effectiveness Tests" and Appendix B of the NSPM). These tools may also be useful in establishing standards for BCA models.

VI. Workforce

We are encouraged by the state's commitment to establish a trained clean energy workforce and the additional funding authorized for workforce development. In addition to providing training opportunities, it will be equally important to foster demand for products and services to ensure employment opportunities are available and to establish linkages between employers and potential employees. Past efforts, such as the training programs launched under ARRA, were highly successful at building training capacity and delivering training

⁴ <https://nationalefficiencyscreening.org/national-standard-practice-manual/>

services, however, the jobs that were promised were often short-lived or non-existent, particularly in the residential sector. Prior to ARRA, New York State invested in the development of training and credentialing programs for home performance contractors serving both the single and multifamily sectors under the Building Performance Institute (BPI). Thanks to those investments, BPI now stands as a national leader in providing certifications for workers in trades associated with making residential buildings more energy efficient. We urge NYSERDA to continue to support those prior investments and to pursue and implement strategies that not only train workers but also promote successful job placement and responsiveness to market demand for applicable services.

We support NYSERDA's Industry Partnership Approach and suggest a renewed focus on the residential retrofit market using the Industry Partnership Approach to develop program strategies that will capitalize on prior workforce development investments and address the demand side challenges inherent in the residential sector. The renewable energy and higher tech products that have been the recent focus of REV are best when accompanied by products and services that address the basic energy efficiency needs of typical New York State households. The building operations and maintenance market segment initially targeted by NYSERDA represents an often overlooked and key component of the workforce responsible for ensuring energy savings are realized and persist over time. But that is only part of the puzzle. The efficiency of building operations is fundamentally limited by the efficiency of the building itself and the equipment within. Meanwhile, the construction trades are also facing a qualified workforce shortage resulting from the generational shift away from blue collar jobs. NYSERDA's assistance is needed to help overcome these challenges.

While qualified workers are certainly needed to support the clean technology industries targeted by NYSERDA's proposed Clean Technology and Energy Efficiency Talent Pipeline, additional support is needed for the development of adequately funded training and credentialing strategies to address the business needs of the many smaller home improvement contractors. These businesses will ultimately be expected to hire and retain workers at a scale sufficient to support energy efficiency renovations in the 7 million existing households⁵ in the state. Feeding a pipeline of qualified workers for these jobs will require collaborative efforts led by NYSERDA that incorporate the direct engagement of public and private education sectors, including at the high school level, and the NYS Department of Labor. Targeted subsidies supporting education, recruitment, certification and hiring will be necessary. We look forward to helping NYSERDA craft a strategy that meets the needs of the workers and the employers to ensure well-paying, sustainable, career path jobs.

Training alone is insufficient and needs to be coupled with efforts to connect employers to qualified workers. On-the-Job (OJT) training is a proven tactic to prepare an individual for the workforce, allow existing businesses to remain productive while new workers gain skills, and establishes a direct connection between skills development and job placement. For trades with apprenticeship paths, employer-sponsored apprenticeship programs leverage private sector investments in the training of new and existing workers. By aligning training programs with

⁵ U.S. Energy Information Administration, Residential Energy Consumption Survey 2009

NYSERDA and utility energy efficiency programs, businesses will be able to connect to an incoming trained workforce.

We encourage NYSERDA to pursue multiple strategies supporting training and expanded opportunities for employment in energy efficient home improvement trades by expanding current vocational school initiatives under the Clean Energy Fund and the leveraging of private sector resources to spur business growth and local job creation. To advance training opportunities for energy efficiency workers at all stages in their career paths, we recommend strategies inclusive of Secondary Vocational and Post-Secondary Technical Education, Apprenticeships and OJT, and Instructor Training in addition to job placement.

Some specific recommendations include:

- **Secondary Vocational and Post-Secondary Technical Education**
 - Provide more students a direct and well-structured path from school-to-work in construction and trades tied to relevant curricula and certifications.
 - Provide supporting career advice and guidance for teacher externships, youth employability skills and OJT work experience to connect secondary education students and teachers to the world of energy efficiency and sustainability work.
 - Support school districts to establish agreements with post-secondary education providers such as construction academies, community colleges and 4-year institutions as a means of supporting technical careers paths for students. Develop a model to increase awareness and interest in construction and trades by connecting potential employers and personnel certification bodies with secondary and post-secondary facilities to prop up training and messaging campaigns.
 - Conduct an assessment of the number of existing post-secondary public and private training institutions and courses available and their capacity to support the trades and energy efficiency industry. Fund post-secondary training centers to create and support partnerships with employers for providing OJT and establishing registered apprenticeship programs. Funding should support private training providers as well.
 - Support coordination with State Education Department to support secondary and post-secondary vocational training opportunities.

- **Apprenticeships and On-The-Job Training**
 - Provide funding to support the development of credentialing, apprenticeship, and OJT programs throughout New York State.
 - Develop a single point of contact and OJT and apprenticeship coordinators in one-stop career centers, secondary, and post-secondary vocational schools to provide information to the incoming students, public, jobseekers and employers about this resource.
 - Provide funding for OJT training to upgrade existing trade workforce skills and help new workers gain work experience.
 - Provide funding to leverage the use of cost effective training strategies such as employer sponsored apprenticeship in which the private sector invests in the training of existing and new workers.

- **Instructor Development**

- Increase the number of qualified vocational education teachers and industry trainers in New York and provide a path to build the skills of existing teachers and trainers to meet today's technical requirements.
- Address some of the critical barriers to increasing the number of new skilled vocational education teachers and industry trainers by developing teacher certification training and externships.
- Provide incentives to address the wage discrepancy between technical vocational teachers and the construction industry itself. Vocational teachers typically earn a fraction of the wages earned by construction and trades workers creating a disincentive for people to become teachers. Increasing the number of qualified teachers is dependent upon a quality training system and the incentives to become a teacher.

VII. Statewide Coordination and Stakeholder Input

NYSERDA and the utilities must align their approaches and collaborate without competing or causing confusion in the consumer market. Close collaboration should facilitate and expedite technology assessment, pilot evaluation and introduction of new technologies into utility programs furthering the necessary market transformation. Utilities should use diverse procurement methods including competitive procurement and direct incentive programs, depending on the needs within their territories and customer segments. Utilities should have programs specifically targeting residential, multifamily, rural and urban, and low and moderate-income sectors in collaboration with NYSERDA to ensure equitable access to efficiency among ratepayers.

NYSERDA and DPS should ensure there are pathways for dialogue and stakeholder involvement in the development of the components outlined in the NENY White Paper. We also suggest that New York use a strong representative advisory group to help coordinate and oversee energy efficiency efforts by NYSERDA and the utilities. An advisory group or management council structure would provide consistent stakeholder input and procedures to review program strategies and new technology opportunities. It would also support models of coordination and collaboration, not competition, between NYSERDA and the utilities, including ongoing communication during program planning.

The System Benefits Charge (SBC) Advisory Group model used by New York in the past can serve as a starting point for the development of a more centralized planning and evaluation approach. NY's SBC Advisory Group operated for many years with ACEEE as an advisor and moderator and utilized subgroups addressing technical issues such as EM&V, when necessary. A reconstituted Advisory group could have subgroups to address specific sectors or sets of programs (e.g., residential, multifamily, C&I, workforce, data). Another, preferable, approach would be a Council with the authority to establish policy and budget parameters that provide certainty and consistency without micromanagement of programs. The states of Massachusetts, Connecticut, Rhode Island and Vermont offer good models of the council

approach.

The NENY White Paper posits the need for legislation to enable certain actions needed to meet the stated goals. These include building codes, appliance standards, and building benchmarking requirements. We support these efforts and suggest that, despite jurisdiction residing with the state legislature, NYSERDA and DPS can assist by facilitating early discussion among stakeholders. Dialogue and early agreement will smooth early passage of the needed statutory changes in an open and transparent process.

While the state has established a strong commitment to advancing building codes and moving toward a net zero energy future, enforcement remains a critical challenge. Promoting training and certification for code enforcement officials is a start, but municipal and county building departments are sorely understaffed and overburdened. Code officials are often faced with the need to prioritize life-safety issues over energy efficiency as they simply do not have the capacity needed to meet the increasing demands of the Energy Conservation Construction Codes. We encourage NYSERDA to work with the Department of State to ensure building departments have adequate capacity to support enforcement of energy codes and explore alternative options (e.g. technology enabled commissioning of mechanical systems, third-party testing, etc.) to ensure that builders and building departments have the support and resources needed to adequately address energy efficiency in new construction and retrofit projects.

Similarly, we encourage NYSERDA to coordinate with the Department of Labor on reforming regulations governing the identification and mitigation of asbestos and mold in existing single-family homes in the context of energy efficiency improvements. Single-family residential buildings are currently subject to the same survey and abatement requirements as commercial buildings, the costs of which create a prohibitive barrier to energy efficiency investments by homeowners. Without relief from these burdens, including a de minimis standard, less costly methods of addressing vermiculite in homes, and a regulatory construct more appropriate to single family homes, it will be impossible to meet the state's energy efficiency goals.

VIII. Conclusion

We appreciate the opportunity to provide input and feedback on the state's emerging energy efficiency plan. Based on the recent evolution of the regulatory orders, white papers, and stakeholder meetings, we are encouraged that DPS and NYSERDA are not only asking the right questions but also listening to stakeholder concerns and recommendations. We look forward to continued engagement in the process as it moves forward and helping DPS and NYSERDA create robust and effective programs and initiatives to drive us to the clean energy future we all hope to achieve.

Respectfully signed,

Association for Energy Affordability, Inc.

Building Performance Institute (BPI)

Building Performance Contractors Association of New York State

Dick Kornbluth, LLC
E4TheFuture
Efficiency First
Home Performance Coalition
Performance Systems Development
Seek More LLC
True Energy Solutions