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Via Email to NewEfficiencyNY@nyserda.ny.gov

Ms. Alicia Barton
President/CEO
New York State Energy Research and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

Re: New Efficiency, New York - Comments for Case Number: 18-M-0084

Dear Ms. Barton:

Home Performance Coalition (HPC) appreciates the opportunity to provide comments on the New Efficiency: New York White Paper (NENY White Paper) issued by the New York State Energy Research & Development Authority (NYSERDA) and the Department of Public Service (DPS). We are pleased to submit the following specific comments on two areas of HPC policy expertise – data standards and cost effectiveness testing. These suggestions supplement our general comments on the NENY White Paper submitted today as part of two NY non-profit organization coalitions.

I. Introduction – Data Standards

We applaud the NENY White Paper's site-based energy target of reducing consumption by 185 trillion British thermal units (TBtu) by 2025 and the accompanying electric utility target of three percent annual savings by 2025. An aggressive yet achievable energy efficiency goal is essential for meeting the state's carbon reduction, renewable energy, and economic development targets.

We also recognize the progress made under New York's Reforming the Energy Vision (REV) as NYSERDA and the state's utility companies have made significant investments in developing market-based strategies that frame the delivery of energy efficiency as a monetized supply-side commodity. We are particularly encouraged by NYSERDA's efforts under REV to streamline some of its whole-house energy efficiency programs through the adoption of national open data standards such as the Home Performance Extensible Markup Language (HPXML) published by the Building Performance Institute (BPI). HPXML is part of a family of data standards supported and leveraged by the U.S. Department of Energy.

NYSERDA's leadership on data standards and other fundamental policy energy efficiency policy areas has been, and will continue to be, crucial for building a robust residential energy efficiency market in New York. NYSERDA has the unique ability to act as a reliable, coordinating force between the state utilities, industry and homeowners. NYSERDA's broad policy reach can allow it to set open data standards like HPXML and drive residential energy efficiency policy in home improvement and utility planning forward to meet the NENY White Paper's targets and goals.

II. Using HPXML Data Standards to Transform Programs and Markets

Open data standards, like HPXML, are a powerful solution to some of the most intractable problems facing the residential energy efficiency industry. Data standards are crucial in enabling the consistent quantification of energy savings that result from energy efficiency upgrades that in turn allow for savings guarantees, low-cost consumer finance, and the sale of energy efficiency into energy, capacity, and carbon markets. Data standards are crucial for ensuring that energy efficiency improvements in homes are properly valued in real estate transactions. Finally, data standards are crucial for supporting ongoing research into the best methods for making homes energy efficient because the aggregation of standardized data supports comparability and comprehensive analysis of program and contractor performance. Additional background information on HPXML standards and benefits associated with HPXML adoption is available at: [Using HPXML to Deliver More Value at a Lower Cost.](#)

Data standards are necessary for promoting open and transparent energy efficiency markets. Data that complies with a national data standard such as HPXML is consistent, exchangeable, and useful outside of the organization or person that created the data. As new technologies (e.g. connected devices) and services (e.g. energy efficiency aggregators and P4P models) are piloted in the New York market that both generate and leverage a large amount of data, data standardization will play a greater role in helping build a self-sustaining home energy efficiency market. We believe that NYSERDA should expand its use of HPXML to its low- and moderate-income residential programs and support the use of HPXML by its program partners (e.g., contractors, utility companies). NYSERDA should also develop programs and tools to bring value to the data generated by the state's home performance contractors as we outline in Sections III – V below.

III. Reduce Transactional Costs for Program Participants

Consistent, high-quality data is needed to support program administration and evaluation. The use of HPXML can reduce costs associated with project review, incentive processing, reporting, and quality assurance (QA) because the data standard enables access to the same well-understood terms and data structures that are used for data retrieval, driving economies of scale in the administration, finance, and evaluation of energy efficiency programs. The use of HPXML has also enabled NYSERDA to give contractors the choice of energy audit software.

But differences in data collection requirements across NYSERDA programs and complex measure validation design have limited the benefits of data standardization and continue to make project submission by contractors complicated and prone to failure. Additionally, over the last several

years, energy audit tools have been repurposed by NYSERDA programs as data collection tools with the addition of fields required to support program evaluation that are outside the standard scope of audits and customer facing savings calculations. Software developers have been absorbing the costs associated with coding and debugging unique measure validation rules for NYSERDA. Data variation has also created a financial burden for contractors because duplicative and burdensome reporting requirements drive up labor costs for contractors and reduce profit margins. Costs typically increase for contractors working in areas covered by several programs because they have to collect and report different datasets, using different data collection tools.

We recommend that NYSERDA continue to streamline program reporting to ensure that the data collected by contractors is required for savings calculations (e.g., “need to have” rather than “nice to have”). Evaluation of the cost of data collection to the participating contractors should be a part of the process. We also recommend that NYSERDA work with the HPXML Working Group to standardize measure validation design so that its programs are more closely aligned with other programs in the country.

NYSERDA should also expand the use of HPXML to its low-income residential program so that data requirements can be standardized across programs. By collecting similar datasets across NYSERDA residential programs, data processing costs could be reduced significantly. Software vendors would be able to use the same reporting template, with only minor modifications, for multiple programs. Standard reporting also would greatly facilitate cross-program comparisons, support research, and the accurate quantification of energy savings.

IV. Invest in Data Infrastructure to Build a Market for Residential Energy Efficiency

There are now more than 15 software companies using HPXML, with an additional three companies expected to adopt the standard by 2020. Increased use of the standard, in large part due to NYSERDA’s early support of this data standard, is enabling the development of common data platforms and reporting tools that NYSERDA can leverage to create infrastructure (e.g., Application Program Interfaces (APIs) to access third party data services or statewide data repository) that support market actors’ (e.g., contractors, homeowners, manufacturers, utility companies) access to data.

For example, the U.S. Department of Energy’s (DOE) Standard Energy Efficiency Data Platform (SEED) can import and export HPXML files. This platform is open-source and can be used to support the aggregation of data and increase the industry’s access to building data.

The National Association of State Energy Offices (NASEO) is also leading a project known as [EMPRESS](#) to advance large-scale home energy labeling and harmonize the calculations behind Home Energy Score and the Home Energy Rating Systems (HERS) to better support the market valuation of energy efficient homes. The National Renewable Energy Laboratory (NREL) is developing an open-source common EnergyPlus-based modeling tool (online platform) that will support the centralized calculations for these scores and for the DOE’s Weatherization Assistance

Program. This model will dramatically reduce the cost for software vendors to generate standardized energy calculations, which would increase the number of scores in the market.

NYSERDA should consider leveraging the standard calculation model to evaluate and credential the performance of market-based software tools. Using a common calculation that has been vetted nationally can reduce NYSERDA's costs of evaluating third party software tools as well as reduce the costs to software vendors of providing credentialed calculations for New York's efficiency programs.

V. Support Contractors' Internal Operational Analysis

Energy efficiency contractors in New York have not yet realized the benefits of HPXML adoption. If contractors have access to high-quality project and performance data prior to the close of sale, they may be able to more precisely target customers likely to invest in energy efficiency improvements. In addition, HPXML can be used to integrate energy-modeling tools into other operational systems and processes, reducing the amount of paperwork and headache.

We recommend that NYSERDA work with contractors to help them benefit from the use of HPXML. This can include working with software vendors to support the development of APIs that allow contractors to import HPXML files into their management software (currently, contractors use energy modeling tools that allow for HPXML export to NYSERDA's software system but not import of HPXML files). NYSERDA can also help contractors use their own data to help improve operations and marketing. NYSERDA should also consider developing a statewide data repository that aggregates building and energy performance data. NYSERDA can leverage SEED or other open source platforms to create a repository that allows access large datasets for business purposes. DOE's Building Performance Database is an example of this application of aggregated data. For additional background and recommendations on HPXML data standards, please

VI. National Standard Practices Manual

We applaud the New York Public Service Commission's recent decision to adopt a new benefit cost effectiveness test - one that incorporates societal costs and benefits - to evaluate all utility investments, including energy efficiency. We encourage further refinements to New York's cost effectiveness testing approaches by reviewing the guidance offered by the [National Efficiency Screening Project](#) (NESP) in their [National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency Resources \(NSPM\)](#).

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. Effective accounting in New York Public Service Commission proceedings should consider all relevant costs and benefits for both the utility system and the non-utility system. The NSPM tools may also be useful in establishing standards for New York Benefit Cost Analysis (BCA Handbook) models.

Reforming and Modernizing Cost Effectiveness Testing in New York

Attention to cost effectiveness testing reforms will be a critical component of New York’s ability to meet its NENY goals. For example, one lesson learned through the through the implementation of the NY Energy Efficiency Portfolio Standard (EEPS) initiative was that the application of stringent “total resource cost” test left some energy savings on the table. We salute the recent reforms to New York’s cost effectiveness testing and encourage more attention to this critical policy area.

The NSPM builds and expands upon the decades old California Standard Practice Manual and provides current experience and best practices with: 1) Guidance on how to develop a jurisdiction’s primary cost-effectiveness test that meets its applicable policy goals; and 2) Information on the inputs and considerations associated with selecting the appropriate costs and benefits to include in a cost-effectiveness test and accounting for applicable hard-to-monetize costs and benefits. The NSPM sets forth broad principles for accomplishing these goals:

National Standard Practice Manual Principles

Efficiency as a Resource	EE is one of many resources that can be deployed to meet customers’ needs, and therefore should be compared with other energy resources (both supply-side and demand-side) in a consistent and comprehensive manner.
Policy Goals	A jurisdiction’s primary cost-effectiveness test should account for its energy and other applicable policy goals and objectives. These goals and objectives may be articulated in legislation, commission orders, regulations, advisory board decisions, guidelines, etc., and are often dynamic and evolving.
Hard-to-Quantify Impacts	Cost-effectiveness practices should account for all relevant, substantive impacts (as identified based on policy goals,) even those that are difficult to quantify and monetize. Using best-available information, proxies, alternative thresholds, or qualitative considerations to approximate hard-to-monetize impacts is preferable to assuming those costs and benefits do not exist or have no value.
Symmetry	Cost-effectiveness practices should be symmetrical, where both costs and benefits are included for each relevant type of impact.
Forward-Looking Analysis	Analysis of the impacts of resource investments should be forward- looking, capturing the difference between costs and benefits that would occur over the life of the subject resources as compared to the costs and benefits that would occur absent the resource investments.
Transparency	Cost-effectiveness practices should be completely transparent, and should fully document all relevant inputs, assumptions, methodologies, and results.

Incorporation of the NSPM in Other States

Since the release of the NSPM in May 2017, the [National Efficiency Screening Project](https://nationalefficiencyscreening.org) has worked with numerous states to provide briefings, host webinars and conduct workshops to examine ways to incorporate the NSPM principles and a related step by step planning process into existing state approaches towards cost effectiveness testing. Arkansas, Washington and Rhode Island are three examples of states that have incorporated, or are in the process of reviewing, aspects of the NSPM into their state planning and regulatory review processes on cost-effectiveness. Brief descriptions of those references and testimony submitted on the NSPM in state proceedings appear at: <https://nationalefficiencyscreening.org/state-references/>.

As New York continues its planning and implementation process for the New Efficiency, New York initiative, we offer to schedule an NSPM briefing with the appropriate senior staff of NYSERDA and DPS which may assist New York energy efficiency policymakers to step back, reflect on the state's own policy goals and objectives for energy efficiency investments. This will help New York "test its test" for cost effectiveness testing as it proceeds with the implementation of energy efficiency programs and policies related the New Efficiency, New York initiative.

VII. Conclusion

HPC hopes to work with the NYSERDA and DPS on: 1) the use of data standards to transform energy efficiency programs and markets; and 2) reforms of cost effectiveness testing approaches. Please feel free to contact us at JCaracino@homeperformance.org or JCullen@homeperformance.org should you have any questions about the policy issues described in these comments.

Sincerely,



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Background on the Home Performance Coalition

HPC is a leading advocate for residential energy efficiency in Washington, DC and the states. We are closely engaged with key decision makers in the Congress, state agencies and public utility commissions. We work to educate stakeholders on the importance of home performance, the obstacles facing the home performance industry, and the policies that can break down barriers and advance home performance at the federal, state and local levels.