



Via electronic mail: [info@nyenergyhighway.com](mailto:info@nyenergyhighway.com)  
May 30, 2012

Gil C. Quiniones  
Co-Chair, Energy Highway Task Force  
President and Chief Executive Officer  
New York Power Authority  
123 Main Street, 16th Floor  
White Plains, N.Y. 10601-3170

Dear Mr. Quiniones,

Enclosed please find a submission to the New York Energy Highway Request for Information. This response has been jointly prepared and submitted by a coalition of non-profit organizations which, in partnership, work on issues related to advancing energy efficiency and clean energy in New York State. The coalition partners ("Partners") include: Northeast Energy Efficiency Partnerships (NEEP), Conservation Services Group (CSG) and The Pace Energy and Climate Center.

As you will see in the ensuing pages, our coalition is proposing a "non-transmission alternative" to reducing strain on New York state's electric power infrastructure while cost-effectively meeting customer demand for energy. Energy efficiency is proven as a clean, reliable and expedient way to increase capacity without the siting and permitting hurdles and costs associated with traditional power generation and transmission. It is readily deployable, and has multiple benefits to the macro-economy, including reducing overall and peak demand, creating jobs that cannot be exported, and keeping more energy dollars circulating in-state. Energy efficiency benefits program participants and ultimately all rate-classes, while improving the environment and public health.

While the proposal does not involve constructing visible, and often contentious power plants or transmission projects, the potential positive effects on the state's power infrastructure are quite real. We urge you to give this response your serious consideration, and welcome any opportunity to address questions or concerns of the Energy Highway Task Force.

Sincerely,

A handwritten signature in cursive script that reads "James O'Reilly".

James O'Reilly, Director of Public Policy  
Northeast Energy Efficiency Partnerships (NEEP)

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# Response to the New York Energy Highway

## Request for Information

Submitted by:



Northeast Energy Efficiency Partnerships

Northeast Energy Efficiency Partnerships (NEEP)



Conservation Services Group (CSG)



Pace Energy and Climate Center

May 30, 2012

This response to the New York Energy Highway Request for Information (RFI) has been prepared and submitted by a coalition of non-profit organizations which, in Partnership, work on issues related to advancing energy efficiency and clean energy in New York State. The coalition Partners (“Partners”) include:

### **Northeast Energy Efficiency Partnerships (NEEP)**

Founded in 1996, NEEP is a regional nonprofit organization that works to accelerate the efficient use of energy in homes, buildings and industry in the Northeast. NEEP brings together a broad range of stakeholders as part of regional Partnerships that leverage knowledge, capability, learning and funding to increase the impacts of individual state efforts. This work has fostered the region as a role model for energy efficiency nationally. NEEP’s work focuses on regional strategies to maximize the effectiveness of ratepayer-funded energy efficiency programs; policy solutions for enhancing the reach of energy efficiency efforts in the region; and a unique Partnership among state utility regulators and energy offices to develop and adopt common protocols for the evaluation, measurement and verification of energy efficiency.

Contact: Jim O’Reilly  
Director of Public Policy  
Northeast Energy Efficiency Partnerships (NEEP)  
91 Hartwell Avenue  
Lexington, MA 02421  
Email: [joreilly@neep.org](mailto:joreilly@neep.org)  
Phone: 781-860-9177, ext. 118  
[www.neep.org](http://www.neep.org)

### **Conservation Services Group (CSG)**

Founded in 1984, CSG is an energy services and solutions provider that serves a range of clients from utilities and public agencies to homeowners and local communities. CSG’s mission is to increase energy efficiency throughout the U.S. and invest in clean energy technologies to support environmental protection. CSG conducts nearly a half million home energy assessments annually for utilities and energy efficiency organizations nationwide and has reached more than 2 million homes in its 25-year history.

Contact: Elizabeth Weiner  
Policy Director, Mid-Atlantic Region  
Conservation Services Group  
16 Court Street, Suite 1801  
Brooklyn, NY 11241  
Email: [Elizabeth.Weiner@csggrp.com](mailto:Elizabeth.Weiner@csggrp.com)  
Phone: 347-442-3942  
[www.csggrp.com](http://www.csggrp.com)

### **The Pace Energy and Climate Center**

Based at Pace Law School in White Plains, NY, Pace is a non-profit organization with a 25-year track record of analyzing and addressing environmental interests in the production and use of energy. Within this focus, Pace promotes energy efficiency, renewable energy and clean distributed generation technologies—options that are cost effective means to reduce the negative climate, air, water, land and human health impacts

from current patterns of electricity production and consumption. Using research, education, and negotiation, we work with individuals, institutions and governments involved in energy decision making. Pace participates in regulatory proceedings, engage policymakers, and works with a diverse community of business, labor, consumer and environmental stakeholders to support the advancement of cost-effective clean energy technologies. The Pace team has been active in utility regulatory matters throughout the region, including work related to the Regional Greenhouse Gas Initiative (RGGI), the New York State Independent System Operator (NYISO), the New York Public Service Commission's energy efficiency efforts, Green Jobs-Green New York, and the New York City Energy Policy Task Force.

Contact: Jackson Morris  
Director of Strategic Engagement  
Pace Energy and Climate Center  
744 Broadway  
Albany, NY 12207  
Email: [jmorris@law.pace.edu](mailto:jmorris@law.pace.edu)  
Phone: (914) 539-1985  
<http://www.pace.edu/school-of-law/centers-and-special-programs/centers/energy-and-climate-center>

## Project Description

This response to the New York Energy Highway Request for Information proposes a 'non-transmission alternative' to traditional generation and transmission solutions for meeting New York's future energy needs. The Partners propose this solution be modeled as an option for creating a market value for energy efficiency resources in the New York Independent System Operator (NYISO) transmission territory. A principle affirmed by the Federal Energy Regulatory Commission in 2007, and currently in practice in ISO New England and PJM Interconnection regional transmission organization territories, energy efficiency participating as a resource in a capacity market can help New York meet its resource adequacy needs by tapping existing resources such as energy efficiency, demand response, and distributed generation.

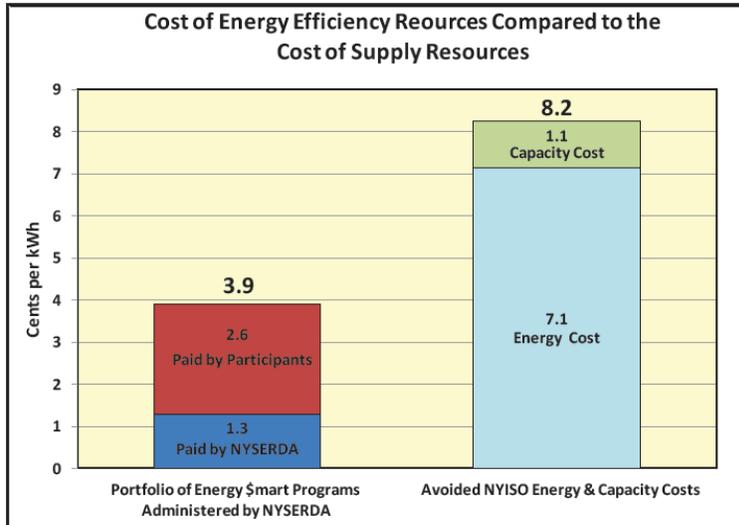
These demand-side resources have proven to be the lowest-cost and cleanest energy sources that can help New York State defer more costly investment in new electricity generation while lowering related environmental emissions and meeting economic development and other statewide priorities. In this proposal, we recommend that energy efficiency (which in the near term consists of 26,000 GWh of cost-effective demand reduction, or approximately 14 percent of forecasted electricity demand in 2015) be treated on a par with generation assets and permitted to compete directly with supply-side power resources in the NYISO capacity market. Such a market development would result in a number of benefits, including lowering the price of power delivery, reducing congestion, improving reliability, cost-effectively reducing long-term demand, and lowering throughput on the bulk power grid as a whole and within the resource portfolio of power suppliers.

## Energy efficiency potential

Under the most recent assessment done as part of the 2009 New York State Energy Plan, NYSERDA and NYISO data showed that energy efficiency resources can be implemented at a substantially lower cost than supply resources. Through 2007, New York Energy Smart programs were implemented at an overall portfolio cost of 3.9 cents per kWh, including program costs paid by NYSERDA and on-site costs paid by participating customers, compared to avoided supply costs of 8.2 cents per kWh, which included energy and capacity costs.

Moreover, as the following graphic illustrates, a significant share of the avoided cost from energy efficiency programs is represented by avoided capacity costs, underscoring the value energy efficiency can play in the NYISO capacity markets.

**Figure 2. Cost of Energy Efficiency Resources Compared to the Cost of Supply Resources**



Source: NYSERDA, NYISO

The most recent energy efficiency potential study performed for New York by Optimal Energy in 2008 confirmed that a 14 percent reduction in projected levels of electricity use, over and above what can be realized from compliance with expected updates in energy efficiency codes and appliance standards, could be “achievable” by 2015 with well designed, fully funded statewide energy efficiency programs.<sup>1</sup> The state is currently in the process of updating its technical potential study for energy efficiency, and, while it is not expected to be released for several more weeks, there is every reason to anticipate that there remain considerable opportunities for large-scale energy savings in New York through existing energy efficiency programs.

**Proposed project location**

The Partners submit that bidding energy efficiency into the NYISO year-ahead market requires no particular location. However, load pockets or NYISO zones with particular capacity constraints could be targeted with local demand-side resources, generating increased revenues for meeting demand in those higher-priced zones. If adopted, the same logic would hold for the New Super Capacity Zone currently under consideration at the NYISO.

**Fuel source and availability of fuel/infrastructure**

Opportunities for energy efficiency in New York are “extensive and inexpensive compared with supply options,” according to the 2008 Optimal Report cited above. Results of the study estimated the state’s achievable energy efficiency potential through 2015 to be about 26,000 GWh, representing a reduction of approximately 14 percent from the forecast of electricity demand in 2015. Availability of energy efficiency as a resource could be increased rapidly through a series of policy actions, including adopting an all-cost-effective energy efficiency approach.

<sup>1</sup> [http://www.nysenergyplan.com/final/Energy\\_Efficiency.pdf](http://www.nysenergyplan.com/final/Energy_Efficiency.pdf)

Since the introduction of energy efficiency programs in the state – dating back at least to 2001 and significantly expanded over the past decade through the implementation of the Systems Benefit Charge and the Energy Efficiency Portfolio Standard – a complex infrastructure has emerged. This statewide energy efficiency infrastructure includes program administration and services, technical skills training, contractor business development, and retail, wholesale, and manufacturing supply chain development. New York's ratepayers and taxpayers have already invested millions of dollars in this existing network, and many institutions, including higher education research centers, community colleges, and workforce development programs have adapted to serve this network. It is currently poised to support any expansion in the demand for energy efficiency across all building sectors and would require little additional investment.

### **Projected operational date**

One of the unique advantages of energy efficiency – as opposed to traditional energy supply resources – is how quickly it can be deployed. A set of energy efficiency capacity market resources can be “operational” as soon as applicable administrative and regulatory requirements for adjusting the NYISO one-year market are met. Establishing a Forward Capacity Market (FCM) in New York to acquire capacity three years in advance of the delivery period would require a more complex regulatory and stakeholder process. However, while an FCM is likely the most logical means to incorporating efficiency, there are market designs that would permit energy efficiency to bid into the market without a multiple-year structure, including valuing the energy efficiency for the life of the participating measures, subject to strict evaluation, measurement and verification (EM&V) standards.

### **Experience, market availability and suitability of project technology**

The expertise involved in creating a market that treats energy efficiency, demand response, and distributed generation as equivalent to traditional electricity generation is readily available. In the independent system operator regions immediately contiguous to New York – ISO-New England to the east and the PJM Interconnection to the south and west – well-developed market designs have now been in effect for four years. The lessons learned and experiences gained in the development and implementation of these respective capacity markets can easily be accessed and expanded to serve new markets in New York. The state can adopt aspects of those markets that have functioned well, while avoiding aspects that have not.

### **Project justification**

Energy efficiency is among the cleanest, lowest-cost energy sources, for which its full social and economic value is not currently reflected in the market. Inclusion of energy efficiency in NYISO's capacity market would finally compensate the value it provides to the grid, correcting for what is currently a market failure and generating revenue for utilities and other entities while simultaneously lowering the cost of energy. What's more, the full inclusion of energy efficiency in the state's resource mix would help meet an array of state priorities, including climate change mitigation, the shift to a low-carbon economy, job creation and economic development associated with increased contractor and other energy services activity, improved indoor air quality and the lower health costs associated with that improvement, health and safety impacts in homes, increased comfort, and asset valuation as building performance metrics increasingly become part of the real estate proposition.

Specifically, the Energy Highway Task Force set out a series of objectives, all of which can be met effectively under the Partners' proposal for allowing and valuing the inclusion of energy efficiency resources in the New York capacity market:

**Objective: Reduce constraints on the flow of electricity to, and within, the downstate area; and expand the diversity of power generation sources supplying downstate.**

Energy efficiency reduces demand on transmission-constrained sections of the NYISO grid and does so in a way that lowers financial exposure of New York ratepayers.

**Objective: Assure that long-term reliability of the electric system is maintained in the face of major system uncertainties.**

Permitting capacity needs to be met through cost-effective energy efficiency would lead to better information and time to more thoroughly and appropriately plan for electric system infrastructure upgrades or improvements that wouldn't be hastened by an overburdened distribution system.

**Objective: Encourage development of utility-scale renewable generation resources throughout the State**

The Partners strongly agree that the large-scale development of renewable generation resources is a policy priority for the state of New York. However, given price considerations of some currently available renewable technologies, broader deployment of the efficiency resource can effectively "buy down" the cost of those renewable resources, providing a cost-effective bridge to the renewable energy future. By first reducing our electric needs to levels identified in the state energy plan efficiency assessment, policymakers can be assured that they're also planning for the appropriate amount of renewable energy. Moreover, whereas many new energy efficiency practices and technologies are now coupled with building integrated or small scale renewable generation sources, it is most appropriate to link the pursuit of greater amounts of renewable resources to market mechanisms that value and allow the deployment of an increased level of efficiency resources.

**Objective: Increase efficiency of power generation, particularly in densely populated urban areas.**

Just as transmission infrastructure constraints can be alleviated by energy efficiency, so it is the case with power generation. By first realizing the full potential of energy efficiency to meet the power needs of New Yorkers, more deliberate planning of supply-side projects can be undertaken, including an appropriate assessment of whether new generation might be needed in densely populated urban areas.

**Objective: Create jobs and opportunities for New Yorkers.**

Energy efficiency – as part of the broader clean energy sector – represents one of the fastest-growing job sectors of the Northeast. Good jobs are being realized daily – particularly among the unemployed and underemployed members of the construction and buildings sectors who have suffered during the recent economic crisis – as a result of retraining and redeployment of such professionals to deliver energy efficiency products and services.

**Objective: Contribute to an environmentally sustainable future for New York State.**

Since energy efficiency is a non-polluting energy resource, it has the least environmental impact of any energy resource the Task Force may consider as part of the New York Energy Highway.

**Objective: Apply advanced technologies that benefit system performance and operations.**

Smart Grid technologies are being effectively tied to greater deployment of energy efficiency resources across the country. Features such as advanced two-way communications channels on high efficiency commercial HVAC equipment, for example, allow new technologies that save energy overall to be enhanced

by cycling down energy use on an as-needed basis. This is especially relevant in a capacity market in which efficiency resources are needed to reduce both the frequency and magnitude of peak demand events.

**Objective: Maximize New York State electric ratepayer value in the operation of the electric grid.**

The least-cost energy resource available to New Yorkers is energy efficiency, costing far less than capital intensive poles-and-wires delivery infrastructure would, with a much shorter deployment horizon and no environmental cost considerations.

**Objective: Adhere to market rules and procedures, and make recommendations for improvement as appropriate.**

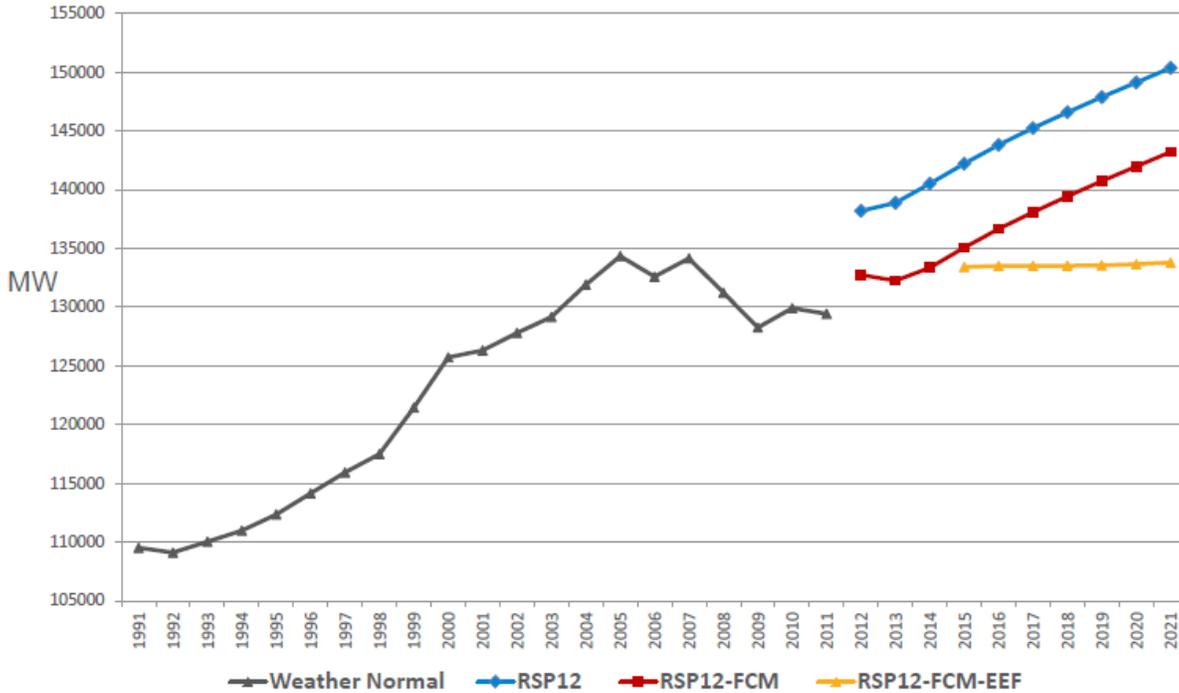
The experience of the energy efficiency being valued in the ISO New England forward capacity market is incontrovertible: Absent the inclusion of energy efficiency in the forward capacity market, and not accounting for the new policy commitments to capture more energy efficiency that have been made by the New England states, historical trends would point to energy use for the region rising from approximately 130,000 GWh in 2011 to approximately 150,000 GWh by 2021 (with data normalized for weather). However, the presence of increasing amounts of energy efficiency in New England is now forecasted to slow demand so considerably that ISO NE's weather normalized forecast for 2021 is instead approximately 134,000 GWh.

As the following charts from ISO New England illustrates, annual energy demand for the region will be reduced considerably as forecast for the period 2012-2021.<sup>2</sup> This is due to enhanced energy efficiency public policies, including the introduction of efficiency and other demand resources into the system's forward capacity market.

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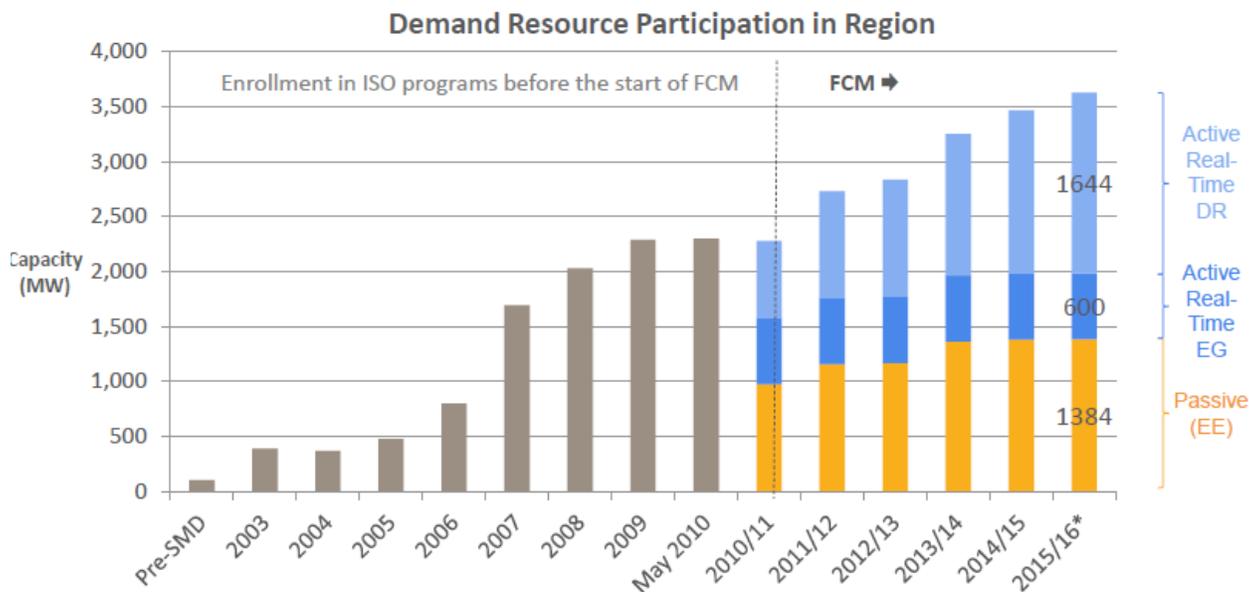
<sup>2</sup> Presentation by Eric Winker of ISO-NE on the Energy Efficiency Forecast given at the Restructuring Roundtable, April 13, 2012 - slide 4 [http://www.raabassociates.org/Articles/Winkler\\_4.13.12.pdf](http://www.raabassociates.org/Articles/Winkler_4.13.12.pdf)

**ISO-NE Annual Energy**  
Weather-Normal History 1991–2011 & Forecast 2012–2021



The second chart illustrates further how much demand resources have grown in the six-state New England region since the advent of the forward capacity market:

## Demand Resources Growing in New England



2010/11–2014/15: Total DR cleared in FCAs #1 – #5; real-time emergency generation capped at 600 MW

\* Results for FCA #6 are preliminary and subject to certification by ISO New England and its auction contractor Power Auctions LLC

## Financial

The systemic treatment of energy efficiency as a resource will greatly expand the clean energy industry in New York. As a result, state or utility sponsored efficiency programs will be able to increasingly leverage public (ratepayer) funds in the market place as customers' contributions grow and more energy efficiency is achieved. This is the ultimate public-private partnership. In addition, as the efficiency market matures, private capital will increasingly participate in revolving loan funds and other investment opportunities that arise as a result of the gradual acceptance and confidence in the return on energy efficiency in the form of energy and bill savings. This will further leverage public funds in the private markets.

Depending upon the rules and procedures established by policymakers and NYISO, efficiency resources bid into a forward capacity market can create an additional funding mechanism if the proceeds of those market proceedings are then reinvested in more cost effective energy efficiency. A model to consider is the ISO New England states' commitments to crediting efficiency proceeds from FCM markets to the efficiency program administrators, on behalf of the state's ratepayers, thus ensuring that those FCM proceeds flow back into the efficiency program budgets, leveraging ratepayer funding and providing a perpetual revenue stream.

## Permit/approval process

Unlike poles-and-wires transmission infrastructure or new generation plants, energy efficiency requires no federal, state or local permits. Policies would need to be established by state officials, and market rules established by the NYISO, but none of the permitting hurdles associated with traditional energy infrastructure would need to be overcome to achieve the expanded energy efficiency market scenario proposed herein.

## Other considerations, if applicable

For energy efficiency to participate in the capacity markets, there will need to be strict performance requirements to ensure that the promised resources can be delivered. ISO New England and PJM Interconnection both have experiences New York can draw from to help NYISO develop its own rigorous evaluation, measurement and verification procedures.

## Additional Information:

### Property

Property issues associated with energy efficiency competing in the New York capacity market would differ greatly from issues of ownership associated with traditional poles-and-wires infrastructure. Again, experiences from other jurisdictions can help provide some lessons – good and not so good – for New York to learn from. Principally, ownership of the rights to energy savings achieved by the state and utility sponsored programs would need to be apportioned in a fair and equitable way, details of which could be resolved at the PSC and in the NYISO stakeholder process.

One example is the Massachusetts model, where customer energy savings resulting from energy efficiency programs are aggregated and bid into the forward capacity market. The proceeds from those market auctions are then returned to the energy efficiency fund pools administered by the state's distribution utilities and municipal aggregator, reducing the overall amounts customers pay for programs in that state to achieve "all cost-effective energy efficiency," as mandated by Massachusetts state law.

## **Projected in-service date and project schedule; interconnection; technical**

Timing of delivery of energy efficiency resources is dependent principally upon the policy decisions of the state and market administrators. But because energy efficiency is an inherently local resource, with significant amounts of capital, manpower, and revenue already invested, delivery of efficiency resources into a capacity market can be achieved more quickly than new supply-side resources. Similarly, issues of interconnection and technical capacity are rendered largely moot should energy efficiency be allowed to compete and be valued in NYISO capacity markets.

## **Construction**

As the energy efficiency industry expands in response to the increased demand, the market for building supplies, contractor crews, high efficiency HVAC equipment and other goods and services associated with a thriving building retrofit and equipment replacement marketplace will expand. As noted previously, the construction sector, decimated during the recent recession, will be poised and eager to meet that demand. Further, existing green jobs infrastructure, much of it established with federal ARRA funding and distributed across the state, can be tapped to provide workers newly trained or re-trained in energy saving and energy performance techniques and practices.

Energy efficiency represents myriad cost-effective “decommissioning” opportunities, as projects often involve the removal of inefficient appliances and equipment from homes and businesses and their replacement with high efficiency equipment. Businesses offering de-manufacturing services and disposal of old equipment, including handling of toxic materials such as used refrigerant from obsolete coolers and refrigerators, will be bolstered by scaled-up energy efficiency across the state, demonstrating a secondary economic benefit of this policy.

## **Operational**

The projected availability and/or production of energy efficiency in the capacity market is an almost infinite calculation. As technologies advance, new energy savings opportunities for products and buildings are continually realized. As efficiency values in a forward capacity market represent future delivery of an energy resource, with proceeds being reinvested in efficiency programs, this funding and associated savings opportunities can continue unabated for generations to come.

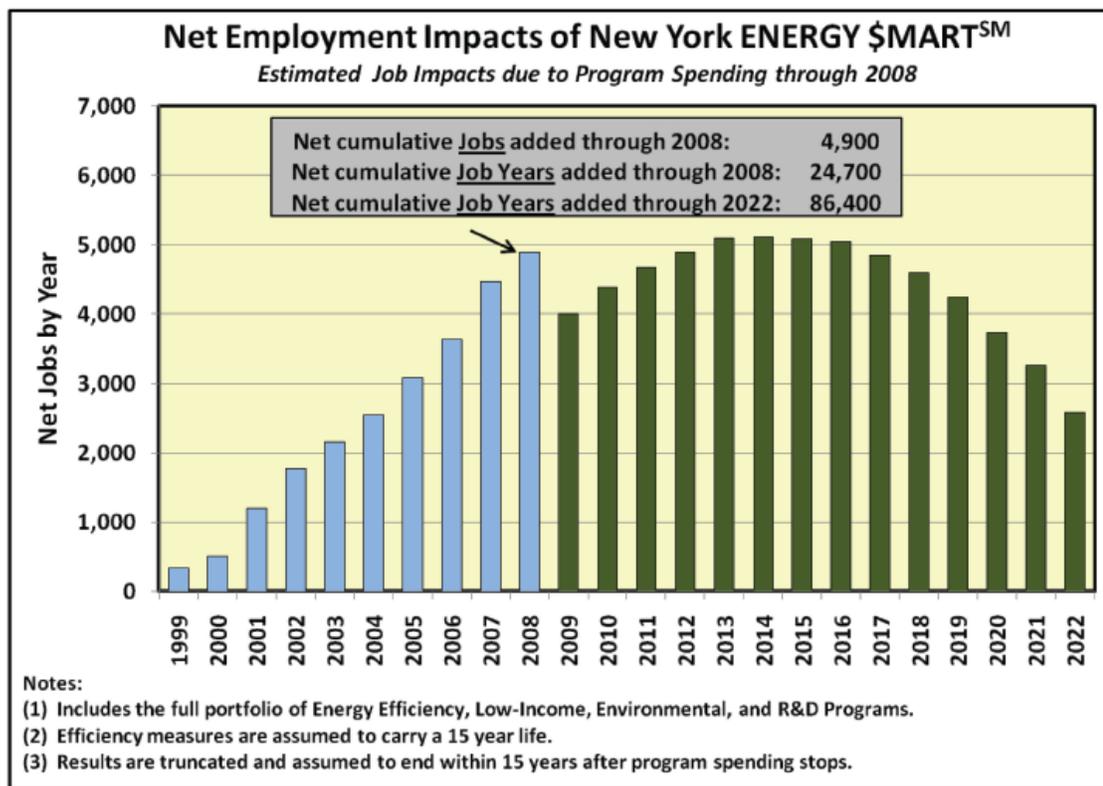
In terms of safety and emergency considerations, energy efficiency represents a far cleaner and safer alternative to traditional supply-side and/or transmission systems. The upstream costs associated with traditional energy resources – both generation and transmission/distribution – can be extensive, as fossil fuels, minerals, chemicals and other materials are manufactured or mined. Efficiency carries with it the added societal benefit of being clean and safe and thus less expensive in terms of public health and safety impacts when compared to large, centralized generation plants.

## **Socio-economic benefits**

The increased penetration of energy efficiency in buildings that would result if these resources were permitted to bid into the NYISO capacity markets would drive substantial economic benefits for New York. Most importantly, energy efficiency programs and the projects they stimulate lead to immediate job creation. Home and building improvement contractors hire locally sourced labor, often from the devastated construction sector. They also purchase supplies locally, while homeowners and building owners, with more disposable income after their energy bills are lowered, are able to spend more locally.

Again, calculations drawn from the energy efficiency assessment in the 2009 state energy plan show that net benefits to the New York economy from realizing all cost effective energy efficiency in the state would total \$12.8 billion through 2015. Moreover, the benefit-cost ratio of the electric efficiency measures is estimated to be 2.60, which means that the New York economy would capture approximately \$2.60 in benefits for every dollar invested in efficiency. Those savings can then be reinvested by New York businesses and consumers, further multiplying the economic benefits of energy efficiency.

In addition, job impact figures from the most recent energy efficiency potential analysis for New York bear out contentions that increased deployment of energy efficiency results in substantial socio-economic benefits. Macroeconomic analyses of the New York Energy \$mart programs showed that expenditures and energy savings produced by energy efficiency programs create a “ripple effect” that touches many economic sectors. Further, the chart below illustrates that assessing macroeconomic impacts over the following 14 years of program implementation – through 2022 – shows 86,400 cumulative net job years added to the New York economy as a result of the NYSERDA energy efficiency programs. And, in addition to creating jobs, in 2008 alone, the programs were estimated to increase personal income by \$293 million and Gross State Product by \$644 million.



Source: NYSERDA

Further, according to the Analysis Group,<sup>3</sup> which analyzed the impact of investments in energy efficiency as part of a recent study of the Regional Greenhouse Gas Initiative (RGGI), New York’s RGGI proceeds over the 2009-11 period have led to programs producing 4,600 job years (or 4,600 jobs saved or created). Still

<sup>3</sup> Hibbard, Tierney, Okie, and Darling, page 42, "The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States, Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period," November 15, 2011

another study, just released in May, by Next 10 Group, was commissioned to analyze the best use of revenue generated by the upcoming California cap-and-trade auctions. Among its main conclusions:

- **The most pro-growth options invest auction revenue in expanded household-level energy efficiency and renewable technology diffusion, and all these generate additional new state revenue.**
- Allocations that merely offset existing fiscal commitments, while still fostering some growth, do not yield benefits comparable to committing new revenues to efficiency measures.
- Household efficiency promotion is **the most employment-intensive allocation strategy.**

Other economic benefits of increased energy efficiency include:

- Reduce regional electrical demand, power prices, and consumer payments for electricity.
- All consumers benefit from downward pressure on wholesale prices.
- Lower payments to out-of-state energy suppliers.
- Increased local spending or savings.
- Long-term health improvements due to lower emissions and improved indoor air quality in buildings.

New York's leadership on efficiency to date has been admirable, but until this valuable resource can participate in the NYISO capacity markets and thus be compensated for the service it provides to the electric system, significant reservoirs of efficiency will remain untapped. If implemented, this proposal would begin to fill that void in the state's energy policy and market structure, thereby expanding the significant socio-economic benefits described above.

### **Potential impacts on real estate and property values**

Energy infrastructure siting, regardless of jurisdiction, has often proven to be highly contentious and politically difficult. But because energy efficiency does not involve the traditional "poles and wires" approach to meeting energy system needs, property values are not only rendered immune from negative impacts but are actually enhanced, as a more efficient building stock finds increasing value in real estate markets. This value will only be enhanced as energy performance metrics are adopted in the state's real estate industry and appraisal methods begin to allow for valuation of energy efficient measures installed in a home or commercial building. The penetration of these policies will likely occur first in the commercial sector, where appraisals typically account for operating costs, so that energy savings' impact on a building's income will more naturally affect its market value. Residential building stock is more difficult to assess through the filter of its energy performance, although various efforts are underway to develop valuation methodologies and share comparable data. One promising metric is time-on-market for energy efficient properties, which is expected to be reduced, favorably affecting financing for building owners.

### **Impact on jobs, such as retention, creation of new jobs**

As noted above, energy efficiency installation work involves rapid job creation opportunities, as local contractors staff up their insulation, air sealing, HVAC installation, and other crews to meet growing demand.

Because energy efficiency work requires high quality installation to ensure the delivery of energy savings, employment opportunities also emerge in the inspection and verification fields, as well. Both crew and inspection positions require rigorous training in building science, materials handling, and installation, which in turn creates demand for instructors and training professionals. Fortunately, New York State enjoys a well-established, statewide network of training institutions and programs, established over the years with the support of NYSERDA and other programs. A growing energy efficiency market – driven via efficiency's inclusion in the NYISO capacity market – could tap into the existing infrastructure and help that sector expand further.

## Public safety concerns

As previously cited, not only are there no public safety concerns associated with increased energy efficiency, there are actually increased benefits. The most comprehensive energy efficiency treatments of buildings require health and safety testing and inspections of furnaces and other equipment for back-drafting, CO<sub>2</sub> leaks, mold and asbestos monitoring, and other procedures. These are required by the protocols of the industry and supported by the Building Performance Institute, the nation's largest certification group (headquartered in Malta, New York).

## Environmental justice and other factors

The Partners do not anticipate any negative impacts regarding tourism or aesthetics. As mentioned, a positive impact of real estate and property values is likely under an expanded energy efficiency scenario.

Energy efficiency also provides socio-economic benefits in the area of environmental justice.

Energy efficiency is particularly important for low-income populations, which make up a large part of the market for low-cost appliances and often live in rental housing and other older buildings, which are generally less energy efficient. This population would benefit if baselines for energy efficiency were raised, and financing for efficiency improvements were to be more accessible. Greater deployment of energy efficiency resources also helps to address issues “split incentives,” where building tenants often live with and pay for inefficient structures or appliances/systems, giving the owner no incentive to upgrade those buildings or products.

In addition, communities offered access to affordable housing are often those impacted disproportionately by energy generation in the form of exposure to greater amounts of harmful emissions and related health effects, including childhood asthma. By lowering the need for energy generation through policies that encourage greater energy efficiency, central power generation emissions are also lowered, directly creating public health benefits for those communities, particularly in poorer, urban areas. Indoor air quality is also improved via the installation of insulation, higher efficiency equipment, and other improvements to buildings and homes, resulting in better health conditions.

## Financial

Any financial plan that would allow for a forward capacity market for energy efficiency resources would be dependent upon the policy decisions deriving from this RFI process. But precedents in both the ISO New England and PJM capacity markets can help inform New York's efforts in this regard.

The financial participants under such a scenario would include multiple stakeholders, ranging from the energy efficiency program administrators to individual cities and towns to merchant energy services companies.

The amount of energy and capacity to be delivered under this proposal would be directly related to the energy efficiency savings identified by the soon-to-be-completed energy efficiency technical potential study for New York as part of the 2013 State Energy Plan.

As previously cited, project revenues would be reflected by the policies and procedures set for inclusion of efficiency in a forward capacity market auction or payment system, with state policymakers and stakeholders determining to what extent realized revenues are reinvested on behalf of ratepayers in additional efficiency programs. Additionally, whether the proposal could be expected to be in a New York

State Public Service Commission (PSC) proceeding, or whether it would require a power purchase agreement with a creditworthy counterparty, or would rely on power merchant sales, will determine further revenue forecasts.

The projected range of pricing for project products will be determined by the market rules and procedures as would be required for establishment by NYISO, following state policy directives.

### **Further financial benefit: the DRIPE effect on wholesale energy prices**

A further macroeconomic benefit of expanded energy efficiency programs and inclusion in market valuation opportunities has been chronicled in New England and identified as the so-called Demand Reduction Induced Price Effect (DRIPE). This is a market effect realized when energy efficiency is implemented on a broad scale, resulting in reduced overall energy demand, which in turn causes a related drop in wholesale market clearing prices for electricity. As analyzed by Synapse Energy Economics, DRIPE has the potential to drive energy costs down for energy efficiency program participants and non-participants alike.<sup>4</sup> While there is some disagreement about how to most accurately model and quantify this effect, it is undeniable that increased efficiency saves all consumers money through reduced wholesale prices—a benefit that should be fully considered when reviewing this proposal.

### **Environmental**

The environmental benefits of energy efficiency are well known and have been extensively quantified. But, for reference and to reinforce the point, the Partners point out that the 2008 energy efficiency assessment for the state energy plan concluded that, through 2008, the energy savings resulting from the New York Energy Smart portfolio translated to some 2.2 million tons of annual carbon dioxide (CO<sub>2</sub>) emission reductions, equivalent to removing 435,000 automobiles from New York's roads. In addition, the programs also delivered approximately 2,800 tons of annual nitrogen oxides (NO<sub>x</sub>) emission reductions and some 5,120 tons of annual sulfur dioxide (SO<sub>2</sub>) emission reductions.

More recently, NYSERDA reported in April of this year that its Energy Efficiency Portfolio Standard programs cumulatively had reduced carbon emissions by 713,025 tons by the end of 2011.

All of these emissions savings come with the added environmental benefit of being realized without any intrusions upon wetlands, streams, forests or other natural areas that would otherwise be disturbed by traditional poles-and-wire generation, transmission or distribution infrastructure projects.

### **Project contract/request for proposal status**

This proposal has not been submitted to any New York State agency or authority in response to a Request for Proposals ("RFP").

### **Public outreach and stakeholder engagement**

It is anticipated that a great many stakeholder groups and affected individuals would be made part of any public outreach and stakeholder engagement regarding plans to include energy efficiency in any kind of NYISO forward capacity market mechanism (or the inclusion of efficiency in the existing one-year NYISO capacity market construct). Such engagement should be encouraged, as the potential benefits to such a proposal positively touch a great many stakeholders, ranging from ratepayer and consumer advocates,

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<sup>4</sup> See: AESC/ Synapse study - <http://www.synapse-energy.com/Downloads/SynapseReport.2011-07.AESC.AESC-Study-2011.11-014.pdf>

environmental stewards, utility regulators, energy office staff, authorities and other public agencies, municipalities, low income advocates, business and economic development agencies and interest groups and others.

### **Conclusion**

We appreciate this opportunity to respond to the RFI. We urge the Task Force to fully consider energy efficiency and other non-traditional solutions, and we look forward to further discussions regarding the value of incorporating energy efficiency into New York's capacity market.