NEW YORK STATE

PUBLIC SERVICE COMISSION

Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard — **Case 07-M-0548**

Answers of the Long Island Power Authority to the New York Public Service Commission Staff's Questions Dated June 13, 2007

Introduction

The Long Island Power Authority (LIPA) hereby submits it responses to the New York Public Commission Staff's Questions to the Parties dated June 13, 2007. While LIPA is not subject to Public Service Commission jurisdiction,[1] LIPA supports the Commission's effort to develop and implement an energy efficiency portfolio standard (EPS) and will voluntarily participate in the program ultimately adopted by the Commission.

Background

On April 19, 2007, Governor Spitzer announced a goal to decrease electricity use 15% from a baseline level by 2015 through increased energy efficiency as part of a comprehensive plan for reducing energy costs and curbing pollution in New York State ("15 x 15 Goal"). In response to the 15 x 15 Goal, the New York Public Service Commission ("PSC") has initiated this proceeding with the objective to: "balance cost impacts, resource diversity, and environmental effects by decreasing the State's energy use through increased conservation and efficiency."[2]

LIPA has provided energy efficiency measures to its customers through its Clean Energy Initiative ("CEI") since shortly after it acquired the LILCO system in 1998. Since CEI is expiring at the end of 2008, LIPA has been working for the past 18 months on designing a comprehensive energy efficiency program currently called Efficiency Long Island ("ELI Base Program") that is intended to succeed and expand CEI. The ELI Base Program is designed to be highly cost effective with the largest benefit of any resource option LIPA has studied to date as part of its Energy Plan.

LIPA wholeheartedly supports the objectives of the 15 x 15 Goal as well as the PSC's stated objectives and is actively participating in the PSC proceeding to design an Energy Efficiency

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[1] See, Public Authorities Law, Section 1020-s.

[2] See, Order Instituting Proceeding issued May 16, 2007, Case 07-M-0548, Proceeding on Motion of the Commission regarding an Energy Efficiency Portfolio Standard, p.6.

Portfolio Standard ("EPS") to achieve the Governor's goal in a cost effective manner while achieving the Governor's other goals of reducing emissions and enhancing economic development and job growth. Achieving these goals presents a formidable challenge due in part to the success of LIPA's existing CEI program which has already harvested a significant amount of the cost effective energy efficiency potential in LIPA's service territory. However, LIPA is committed to work with the PSC and other stakeholders in this proceeding to develop a framework that will achieve the Governor's goals and the PSC objectives.

Questions and Responses

1. **What approaches hold the greatest potential to contribute to New York achieving the overall target of 15% electricity consumption reduction by 2015? Are there any energy consuming sectors and markets that are currently underserved by the existing available portfolio of energy efficiency programs and services in New York State? How should those deficiencies be addressed in implementation initiatives?**

   Response:
   General Overview:
   Achieving the 15 x 15 Goal will require the commitment and involvement of the highest levels of New York State government. While the goal itself is focused on electricity, the entities that will be required to take actions to effectuate the goal will go far beyond the regulatory reach of the PSC. Additionally, while energy efficiency "programs" in both traditional and expanded consumer sectors will be necessary to meet the majority of the goal, it will also be necessary to enact new state-wide legislation, adopt stricter building and appliance codes and requirements, and incorporate the concept of energy efficiency into the daily activities and practices of virtually all State agencies and departments as well as the public sectors they serve. New York's local governments will also need to adopt energy efficiency standards, especially in the areas of building and zoning codes. Achieving the goal will require that energy efficiency be addressed at a grassroots level rather than as simply another set of programs and goals amongst many.

   LIPA's success with respect to energy efficiency programs will require program refinement and development of new approaches based upon actively managing, monitoring and evaluating program performance and making necessary adjustments along the way to maintain program cost effectiveness.

   Critical success factors include:

   - Multiple initiatives and approaches – LIPA's existing programs provide a solid foundation, however, additional initiatives and new approaches will be needed;
   - State must provide assistance –the State and local governments should provide assistance through the enactment of more stringent building and appliance standards;
   - Rigorous performance metrics and monitoring – a constant and ongoing evaluation is needed to measure actual progress relative to each program's goals and costs; and

- Flexibility – the ability to quickly implement program adjustments as necessary to meet performance goals and manage costs is required.

Underserved Segments: The current portfolio of energy efficiency programs addresses virtually all market segments. Unfortunately, participation rates in many segments are very low. For example, there are several new construction programs, including NYSERDA's residential new construction program, which have received national awards. However, only a fraction of new construction is built to these standards. In order to achieve success, expansion of current penetration levels is needed.

Emerging Technologies: Most energy efficiency programs are promoting technologies that have been around for decades. However, a number of emerging energy efficiency technologies could potentially provide substantial energy savings at lower costs. The 15 x 15 program should include some resources for the development and commercialization of the most promising emerging energy efficiency technologies. For example, there are a number of technologies (e.g., radiant furnace tube inserts, laundry water recycle, high efficiency commercial dishwashers) that have been deployed commercially (i.e., are past the RD&D stage), but have minimal market presence. The more rapid commercialization of emerging technologies could provide tremendous energy, economic, and environmental benefits to New York.

Sectors with low penetration levels that could be radically improved relatively simply include new construction and the public sector. These could be addressed through initiatives such as:

- **Building codes** – Since buildings last for 50 or more years, adopting stricter building codes (and regularly revising them to keep them current) requiring specified energy efficiency measures be implemented at the time of construction would provide savings for many years. The PSC could also allow utilities to establish electrical connection fees based upon the energy efficiency of the building.

- **Public sector** – Minimum performance requirements for leased space, requiring that all new construction meet Leadership in Energy and Environmental Design ("LEED") gold or equivalent, and revised procurement requiring that all appliances be at least Energy Star rated is needed. The public sector needs to lead by example in the implementation of these energy efficiency measures; however, initial cost considerations and entrenched processes often perpetuate business as usual behavior.

Low penetration levels are also of concern in the small business, leased space, rental properties, and residential sectors. New program approaches will be required to address these sectors. Time-of-sale standards could be used to more rapidly upgrade the efficiency of existing buildings. Furthermore, additional attention needs to be placed on low-income, workforce and affordable owner occupied housing stock where all too often first cost considerations prevent the implementation of efficiency measures,

notwithstanding the fact that the occupants are spending a much higher percentage of their income on monthly utility bills than they would have spent on slightly increased mortgage payments with the energy efficiency measures installed.

In addition, leased or rented properties which pass-through utility costs to occupants are unique situations because neither the owner nor occupant has an incentive to install energy efficiency measures. In order to correct this situation and to boost participation/penetration, additional incentives will be needed to promote the implementation of efficiency measures in rental and leased units.

Cost Effectiveness:
It is important that programs which are developed to meet the 15 x 15 Goal save energy in a cost-effective manner. One way to help achieve this goal is to take into account the effects such programs have on the utility's load factor. Load serving entities such as LIPA with rapidly growing summer peak demands can achieve far better cost-effectiveness implementing programs that provide on-peak kilowatthour reductions than with the same off-peak kilowatthour reductions. This is the reason that the new energy efficiency program that LIPA is in the process of developing focuses on reductions to LIPA's peak demand rather than merely energy savings. LIPA's analysis shows that this program is more cost effective than any other resource option LIPA has studied due in large part to this focus.

2. **What is a reasonable goal for natural gas energy efficiency programs?**

Response:
LIPA refrains from answering this question as LIPA is not a natural gas utility.

3. **What are the most appropriate methods and processes for establishing program specific goals and for measuring progress towards long term goals (including program monitoring, measurement, and evaluation)?**

Response:
Individual program goals to achieve the 15 x 15 Goal for LIPA's system are being developed based on an analysis of the opportunities and requirements of the plans needed to reach them. The existing efficiency potential studies provide a good foundation for this work.

In order to maximize the effective of its programs, LIPA plans to utilize flexibility in developing programs and shift resources among programs over time in order to reach the overall target. This allows for mid-course corrections and allocation of resources most efficiently.

Progress toward meeting established goals need to be monitored, measured, and evaluated on an on-going basis. As the implementer of its own programs, LIPA is best situated to

manage these activities. An appropriate role for the PSC would be in compiling statewide data and monitoring the progress of achieving established goals. As described in greater detail in our response to Question 4, an appropriate baseline forecast needs to be established. Efficiency gains can then be measured on an ongoing basis by calculating the differential between the baseline forecast and actual results. Furthermore, each program's savings estimate should be developed in a transparent and objective fashion, based on clear methods and assumptions. While overall program effectiveness can be easily measured, individual programs require defined methods to determine their respective contribution to overall savings. In addition, these savings estimates should be verified and refined over time with rigorous third party impact evaluations. Sufficient funding needs to be included in programs to allow for such measurement and verification.

Provisions also need to be made to allow measurement of programs that focus on areas other than end-use efficiency gains. Some such programs being considered by LIPA for implementation as part of the 15 x 15 program include:

a. **Lost and Unaccounted for Energy** – Reductions in lost and unaccounted for energy that are a result of energy efficiency improvements should be counted as part of the 15 x 15 Goal reduction.

b. **Generator Ancillary Services Efficiency Gains** – Reductions in generator ancillary services use (especially during hours when the unit is not producing energy) should also be counted as an efficiency gain for the 15 x 15 program.

c. **T&D Transmission Loss Reductions** – LIPA has programs and is considering additional programs that will reduce losses on the Transmission and Distribution system. The savings occurring after 2006 from existing programs and savings from new programs should be counted toward the 15 x 15 Goal.

d. **Transmission Induced Generator Efficiency Recovery** – Transmission constraints can lead to out-of-merit dispatch of the generation system. Out-of-merit dispatch can lead to lower efficiency of the generation fleet. Removing these constrains can reduce the out-of-merit dispatch and improve the efficiency of the generation fleet operations. The 15 x 15 energy efficiency credit from the removal of transmission constraints should be calculated by multiplying the percentage reduction in system average heat rate by the fraction of energy supplied by the generation fleet.

4. What load forecasting models and methodologies should be used in developing and refining the objectives of the EPS Proceeding?

Response:

The load forecasting models and methodologies should be based on realistic and reliable methods and data, in order for the multiple parties in the proceeding to have confidence in the initiatives being quantified and analyzed. The models that have been developed by

each of the Transmission Owners for submission to the NYISO should be considered the most reliable basis for projecting future loads and energy requirements, subject to the comments below and any specific issues or comments that may surface in the course of this proceeding.

It is expected that the load forecasts used in this proceeding will serve four purposes:

a. to establish the baseline of future usage for developing the targeted level of energy efficiency savings in 2015;

b. to quantify the amount of demand side management (or energy savings) that each utility anticipates, assuming current levels of demand side management initiatives;

c. to provide the baseline for calculating any estimated cost savings that might be associated with proposed energy efficiency portfolio standards; and

d. to measure the cost and bill impacts on participants and non-participants in each of the utility's customer segments or rate classes.

Given these requirements and the short time frame for this proceeding, existing utility forecasts should serve as the basis for comparisons and computed impacts of the programs and measures that are considered, subject to the following:

- A common forecast year should be used by all participants. Load forecasts developed in calendar year 2006 are recommended for use by all utilities.

- Forecasts should be adjusted to remove the effects of all planned energy efficiency programs implemented by NYSERDA, NYPA, LIPA and other transmission owners that are planned to or have reduced energy consumption since January 1, 2007. Failure to do so will penalize the utilities that were already planning energy efficiency programs in their respective forecasts prior to the announcement of the 15 x 15 program. The 2007 effects of measures installed in 2006 or earlier should not be counted in the baseline forecast.

- The effects of natural conservation and free ridership for 2007 and beyond should also be removed from the forecasts to establish a pre-efficiency baseline.

- Load forecast should be measured at the requirements level (metered usage plus losses). Any utility or third party programs that lower requirements (e.g., T&D improvements (regardless of the impact on load at the customer's meter) should be considered as contributing to the 15% savings by 2015.

- Load impacts associated with all 15 x 15 program components should incorporate reasonable and realistic estimates of measure life, persistence (declining performance over time), adverse customer behavior, and free ridership. Market transformation activities that contribute to the 15% performance estimates should

be specific and quantifiable, and include a verifiable baseline estimate of what the market penetration of specific appliances or end uses would be absent the utility-sponsored transformation of the market.

- Finally, there should be provisions to include the net energy savings effects of efficient electro-technologies in future load growth.[3]

5. **What other national, state, and municipal government and private initiatives would help New York meet the objectives of the EPS Proceeding? In what ways can we leverage the impact of these initiatives to help us meet the objectives of the EPS Proceeding? How should the impact of these initiatives be counted and measured?**

Response:

There are numerous other initiatives that can help New York reach its goals, and they should be integrated with, and leveraged by, New York's efforts whenever feasible and practicable. These include, but are not limited to: Federal efforts like EPA Energy star, Federal Energy Management Program ("FEMP"), tax incentives; New York City's efforts including PlaNYC; Long Island efforts such as the towns of Brookhaven and Babylon which have adopted Energy Star home compliance as part of their building codes with LIPA's assistance; aggressive planned spending on municipal facility upgrades; and new private initiatives like that of the Clinton Foundation.

From an information and outreach perspective, the New York State Board of Regents should incorporate a segment for energy efficiency/sustainable energy use in it course requirements at both the elementary and secondary levels.

MTA should develop and implement electric traction efficiency programs.

NYPA should consider enhancing and expanding its programs for helping county and municipal governments implement energy efficiency programs. State government (legislative and executive) should encourage and/or provide incentives for participation in NYPA or other programs.

Since methodologies either exist or can readily be developed for measuring results from these kinds of initiatives, the impact of each should be measured and counted towards achievement of the 15 x 15 Goal. Not counting the results from such initiatives will reduce the attention paid to these types of measures and may lead to the demise of otherwise viable programs.

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[3] An example of this is the rechargeable hybrid vehicle, whose increased penetration would result in an increase in electrical energy usage from recharging, but a larger energy and air emission reductions via decreases in gasoline consumption. In order to increase and encourage the use of such efficient technologies, it is necessary to develop a mechanism such that the load serving entity is credited for the overall energy savings from the implementation of such efficient electro-technologies. In order to accomplish this goal, an organization such as NYSERDA could develop a list of approved efficient technologies and then appropriate credits for the use of these technologies could be given to load serving entities so that no such penalty ensues.

6. **The Commission instituted a pilot natural gas efficiency program within Consolidated Edison Company of New York, Inc.'s (Con Edison) service territory. As part of that pilot program, the Commission directed the New York State Energy Research and Development Authority (NYSERDA) to prepare a study of the natural gas energy efficiency potential within Con Edison's service territory. NYSERDA filed that study on June 22, 2006, and it was then issued for comment. Subsequently, NYSERDA prepared a study entitled "Natural Gas Efficiency Programs Resource Development Potential in New York," which was issued on October 31, 2006 and is available on both the Commission's and NYSERDA's web sites. In considering issues associated with a Con Edison electric efficiency/demand management program, the Commission specified how the total resource cost test should be applied to measure the cost effectiveness of measures under that program. In the statewide study, NYSERDA used a different benefit/cost approach to measure cost effectiveness.**

   a. **Please comment on the appropriateness of the approach used in the statewide study.**
   b. **If a different test of cost effectiveness should be used (i.e., other than the total resource cost test), what test should be adopted and why?**

   If you have not already commented on this previously, please provide your observations, critiques, and other comments on the data, assumptions, methodologies, and analyses used to develop the estimated potential savings and benefits in the statewide study.

   Response:
   LIPA refrains from answering this question as LIPA is not a natural gas utility.

7. **What role should building codes and appliance standards play in reaching New York's energy efficiency goals and should such standards vary by geographical area (i.e., metropolitan New York City versus upstate)?**

   Response:
   New York is expecting to implement its new commercial energy code in August of this year. This new code is based upon the 2003 International Energy Conservation Code ("IECC") with New York amendments. New York is also committing to quickly consider the 2006 IECC standards and to revise the code again within two years. Following through on this effort is critical. Recent changes in other codes – particularly the American Society of Heating, Refrigeration, and Air Conditioning Engineers ("ASHRAE") 90.1-2004 standard – establish far higher levels of energy efficiency in new construction, particularly with regard to lighting efficiency.

   New York could also follow the lead of a number of communities on Long Island in adopting the Federal ENERGY STAR label as a requirement for residential new

construction. The ENERGY STAR label would be more stringent than the 2004 IECC with New York amendments, New York's current baseline for residential new construction.[4]

Additionally, New York's promotion of higher energy efficiency requirements has resulted in higher Federal standards, to be phased in within the next five years. The State of New York should monitor the U.S. Department of Energy's progress in meeting their required timeframes. There are a number of appliances over which the Federal Department of Energy does not have jurisdiction for which the State of New York could establish new efficiency standards (e.g., pool pumps).

Energy savings resulting from the codes and standards not yet adopted as of January 1, 2007 should be counted toward the 15 x 15 Goal. This is particularly important for future efficiency requirements because the level is likely not yet determined and in determining it, the 15 x 15 Goal is very likely to play a role.

8. **What role should outreach and education play in an enhanced energy efficiency effort and what changes in approach should be made in various demographic or market segments from the methods now being used?**

Response:

While 15 x15 is an overarching goal for New York State, each utility is individually responsible to help meet the 15 x 15 Goal through the implementation of its own unique energy efficiency programs. Therefore, education and outreach efforts are best left to each individual utility to inform its own customers with regards to the specifics of the energy efficiency programs and incentives available to them. The State could provide assistance in this area by providing statewide curricula for training/education for the trades.

LIPA has thus far been successful in meeting the goals of its Clean Energy Initiative program ("CEI") through its current education and outreach programs. To meet the 15 x 15 Goal, LIPA intends to expand its current efforts – augmenting its existing relationships with contractors, manufacturers, retailers, and architects.

9. **What role could innovative rate design play in enabling greater penetration of energy efficiency and how might this vary by market segment? Should energy tariffs recognize and differentiate between the relative level of energy efficiency designed into new buildings?**

Response:

[4] Both of these standards would vary by climate zone, as established in both standards (e.g., User's Manual for ANSI/ASHRAE/IESNA Standard 90.1-2004,Figure 5-E).

LIPA refrains from answering this question as LIPA's rates are set by its Board of Trustees.

10. What programmatic and outreach efforts, within and beyond the current scope of the Commission's jurisdiction, that have not been generally considered as energy efficiency programs, should be integrated into overall strategies and plans to reach energy usage reduction targets?

Response:

Achieving the 15 x 15 Goal will likely require a mix of both mandatory and incentive programs. It will also require changing policies while respecting traditional jurisdictional boundaries. Policies, programmatic, and outreach activities that should be considered include, but should not be limited to, the following:

- **State and local building codes**– the PSC working along with the NYS Office of General Services should strive to have stronger building efficiency requirements in the state building code enacted. Utility programs can then work with local regulatory bodies to enact higher efficiency standards in their locales.

- **Time-of-sale standards** – require cost-effective measures to be implemented at the time-of-sale of commercial properties.

- **Public sector leadership** – the public sector often lags in the implementation of energy efficiency. Too often, energy efficiency is cut to bring construction budgets down. Outdated purchasing specifications result in lost opportunities to acquire more efficient equipment. Public agencies lease a large amount of floor space, but the lease criteria and terms favor low initial costs over energy efficiency. Revised purchase criteria and lease practices could be a very important strategy.

- **Leadership recognition and awards** – publicly recognize companies/owners (as well as building managers) that achieve a minimum of 20% efficiency improvements relative to defined baselines.

- **Electric system improvements** – an improved transmission and distribution system could lower line losses, and improve the average efficiency of electricity generation through more efficient dispatch of the electric system.

- **Overall efficiency perspective** – traditional energy efficiency programs have skirted the issues regarding the efficiency opportunities from fuel conversions. There are opportunities where electro-technologies can reduce the overall energy requirements. Similarly, there are instances where direct use of gas is the most efficient approach. Performance metrics should be designed to value all energy savings and not just the savings of one type of energy. An example

of this is the rechargeable hybrid vehicle, whose increased penetration would result in an increase in electrical energy usage from recharging, but a larger energy reduction via decreases in gasoline consumption. In order to increase and encourage the use of such efficient technologies, it is necessary to develop a mechanism such that any new electrical load resulting from the use of such efficient technologies would not be counted in the 15 x 15 Goal calculations. In order to accomplish this goal, an organization such as NYSERDA could develop a list of approved efficient technologies and then appropriate credits for the new load associated with the use of these technologies could be given to load serving entities so that no such penalty ensues.

- **Golden Carrot Type Programs:** Just as the original Golden Carrot program was instrumental in spawning a dramatic improvement in refrigerator efficiency (Department of Energy Report: The Super Efficient Refrigerator Program: Case Study of a Golden Carrot Program (NREL/TP-461-7281)), there are good opportunities for other appliances, especially residential dishwashers, gas water heaters, and home appliance power supplies.

- **Encourage and Reward Corporate Responsibility:** Many corporations such as Google, PG&E, Microsoft, Boeing, and GE have made corporate commitments to minimize their carbon footprint and are aggressively implementing energy efficiency in their facilities. These efforts should be recognized and rewarded. California publicly recognizes corporations for their commitments. For New York, an annual event where the Governor presents awards for outstanding achievements would strongly reinforce the current corporate responsibility trend.

11. Should customers of natural gas utilities served under value of service or market-based rates, such as interruptible customers, be included in the overall efficiency program? If so, what types of programs are appropriate for these customers? In what ways would a natural gas efficiency program affect the oil and propane competitive markets and what steps could be taken to eliminate or minimize such impacts (e.g., limiting the program to non-dual fuel customers)?

Response:
LIPA refrains from answering this question as LIPA is not a natural gas utility

12. What role should a) distributed generation, b) demand response, and c) combined heat and power play in reaching New York's energy efficiency goals?

Response:
(a) Customer-sited renewable distributed generation should be considered in the 15 x 15 reduction although it should be noted that such generation does not always reduce green house gases or other air pollutants. While there are some issues with the cost

effectiveness of using renewable technologies to reduce system load compared to other energy reduction scenarios, we believe they should be considered as their costs are projected to come down within the 2015 horizon. LIPA has supported and will continue to support photovoltaic installations for its customers as a means to diversify supply and reduce green house gas emissions.

(b) LIPA believes that demand response should be considered as a critical component to the fulfillment of New York State's energy efficiency goals. Demand response, or more appropriately, interactive pricing coupled with Smart Metering, provides for a more comprehensive and effective approach to the efficient delivery and utilization of energy. It significantly enhances the opportunity for improved asset management for both the utility and the consumer, and provides consumers with more choice in how and when they make energy purchasing decisions, particularly as smarter appliances continue to enter the marketplace. Many utilities and Commissions across the country are rapidly launching large scale Smart Meter/interactive pricing initiatives and this Commission has already opened a proceeding to more fully explore the viability of a program in New York State. LIPA is already assessing Smart Metering as one of its programs in fulfilling the 15 x 15 Goal, and believes that the results of the Commission proceeding should be incorporated directly into the State's energy efficiency plan.

(c) Generally, combined heat and power opportunities are found in industrial settings where process operations requiring both electrical and thermal energy are nearly simultaneous and quite often constant in duration. Given its customer base, LIPA does not expect combined heat and power to play a significant role in meeting the 15 x 15 Goal because cost effective opportunities have already been largely realized. Nevertheless, should a reliable, economical and low maintenance technology become available which could be easily sited and serve either the residential or commercial customer base, we believe it would be appropriate for including it as part of a utility offered program.

13. How can gas efficiency programs best complement electric efficiency programs? Similarly, how can electric efficiency programs be adapted to serve the needs of gas customers?

Response:

LIPA believes that gas efficiency programs complement electric efficiency programs. Electricity is only one source of energy in the typical Long Island/New York home or business – efficiency savings cross all energy sources. Many of the efficiency measures already included in LIPA's programs save fossil fuels. For example, upgraded insulation affects electricity consumption for air conditioning, but saves the majority of its energy from fossil fuels used for heating. Since LIPA believes that a gas efficiency component could be easily added to its existing offerings so long as an appropriate cost sharing mechanism is adopted among the impacted utilities, LIPA plans to fund and implement its electric energy efficiency programs and would then work with the relevant gas utility(ies) to bring in the gas component as applicable.

14. What could be an appropriate role for utilities with respect to the delivery of energy efficiency programs within their service territories? How might that role vary by market segment?

Response:

Since Long Island is a discrete territory, LIPA is the proper entity to deliver all efficiency programs, including both market transformation and resource acquisition strategies. Some of our present and future strategies do require the cooperation of other state and regional entities and we would continue our work with them. LIPA suggests continuing its work with Energy Star, Northeast Energy Efficiency Partnerships, Consortium for Energy Efficiency, NYSERDA, NYPA, and other regional and national initiatives. LIPA has seen a benefit in both terms of customer access and customer trust arising from its utility status in offering efficiency programs. Furthermore, as we have seen in the past, customer usage, load factor and consumption habits vary greatly and argue for targeted and comprehensive approaches rather than "one-size-fits-all" approaches.

While it is important to have a uniform set of building codes and appliance standards across the State, different markets may require different strategies and it is important that LIPA have responsibility for program implementation and delivery in its service territory.

15. What role should key stakeholders play in an enhanced energy efficiency effort (e.g., Staff, Departments of State and Environmental Conservation, utilities, NYSERDA, Division of Housing and Community Renewal, NYPA, LIPA, NYISO, and energy service companies), and how should they coordinate their efforts? What factors should be taken into account in determining how the implementation of various program elements should be managed and monitored?

Response:

Although not subject to PSC regulation, LIPA is actively participating in the PSC's Energy Efficiency Portfolio ("EPS") proceeding and is working in a cooperative manner with the PSC and stakeholders to develop and implement a 15 x 15 program in its service territory that is consistent with the Governor's goal. LIPA recognizes that it does not have all of the answers or ideas and welcomes input from other stakeholders during the program design process. LIPA has also discussed key roles for stakeholders in its answers to Questions 1, 5, and 7 above.

LIPA's experience with the Retrofit Energy and Capacity Program ("RECAP") indicates that open-ended contractor based programs are not effective for several reasons. First, the contractors do not appear to be as effective in marketing to customers as are electric utilities. Second, the contracts tend to harvest only the easiest and most cost effective measures to implement. Once they have done their job, it becomes much more difficult to convince customers to invest in a second set of energy efficiency measures, which are still cost effective, but have a longer payback.

Ultimately, energy efficiency implementation is successful because it recognizes the diversity in the market, makes economic sense to the customer, and removes the majority of administrative barriers to participation. The customer must find the resulting offerings as easy to use as possible. For this reason, we believe the local utility is best positioned to provide the customized and comprehensive solutions to customers within their service territories.

Notwithstanding the need for program implementation and delivery by LIPA in its service territory, we support the notion of coordination and a continuing role for stakeholders following program design. The stakeholders' roles following program implementation, should be orchestrated through a cooperative arrangement such as a working group that reviews progress of the utilities' programs on a regular basis and allows for the passing on of "best practices" and "lessons learned" information to the utilities.

Many of the stakeholders mentioned in the above question have responsibilities in their own facilities that will ultimately contribute, and as importantly serve as an example to others in achieving the Governor's goal. Each stakeholder has a role whether it be by changing rules for procurement, employing lifecycle costing, establishing energy efficiency bonding, or by creating an available pool of funding so that the capital expenditures can be made.

Each of the entities mentioned also has a role in supporting outreach; providing incentive support, financing, and installation services; and accounting for the array of benefits that accrue from saving energy.

16. What role should the private sector (e.g., financing and educational institutions) play in program development and implementation? How should these efforts be coordinated with utility and government entities' programs? Are there additional incentives (or tax relief) that could be provided by Federal, State, and local governments which would enable greater penetration of energy efficiency initiatives?

Response:

Private sector companies will undoubtedly play a vital role in the actual field deployment and implementation for the resulting programs as well as in their planning and evaluation. However, care should be taken to avoid implementing programs that allow "cream skimming" of the must lucrative efficiency improvements. (See response to Question 15.

It will be important for those private sector firms who will be the eventual conduits to the customers (i.e., architects, electricians, HVAC contractors, builders and building trades, supply houses, lighting and appliance retailers and all of their associated trade associations) to be a true partner in this effort rather than view the programs as being forced upon them. There will also be a need for private sector companies to develop new and innovative financing approaches and instruments which could allow for the marrying up of new tax incentives with funding sources capable of fully utilizing such tax incentives – this may require some level of assignability. Federal and/or State tax

incentives could be particularly helpful in greatly increasing participation and increasing energy efficiency savings. For example, a State energy efficiency tax credit similar to the solar tax credit or the State's waiver of the sales tax on energy efficiency equipment could enhance program participation.

However, care should be taken to not place over reliance on purely market forces. While a certain segment of activity will occur with nothing more than proper incentives, the depth of penetration required to meet the 15 x 15 Goal at a reasonable cost will require activities and risk/reward structures that would not likely be palatable to purely market based independent entities.

17. Should utilities (or other entities) receive incentives for implementing successful energy efficiency programs? If so, what is the appropriate level and form that these incentives should take and should such incentives be performance based?

Response:
LIPA believes that the utilities or other entities developing and implementing the energy efficiency programs should be kept financially whole for their costs incurred for such development and implementation and that no cross subsidization should be allowed across service territories or among implementing entities.

18. What are the best methods for ensuring that low income customers have access to efficiency programs?

Response:
Since the inception of LIPA's Clean Energy Initiative in 1999, LIPA has dedicated spending and outreach to its low income customers. We have coordinated our efforts with weatherization and other low income advocacy groups to identify and reach as many of our low income customers as possible. We recommend that this kind of effort be continued with a promise that less fortunate New Yorkers always have access to energy efficiency to reduce their bills and increase their comfort. This is why our energy efficiency programs will include a low income customer element in order to ensure that such customers can actively participate.

19. How should environmental justice be considered in program design?

Response:
Programs offered in LIPA's service territory are designed to be equally available to all of its customers and assistance to qualified customers is available through low income programs designed to remove potential barriers to participation.

20. How should existing gas utility efficiency programs, and those under development in rate proceedings, be integrated into an overall energy efficiency effort?

Response:
See response to Questions 13.

21. Are there any modifications or adjustments that could be made in the current Systems Benefit Charge portfolio that would achieve higher levels of energy efficiency market penetration and saturation?

Response:
Since LIPA directly funds its own programs and is not subject to the Systems Benefit Charge, LIPA refrains from answering this question.

22. How should the expected benefits and costs of various design options be measured and compared? What externalities should be characterized as transfer payments and perhaps excluded from the analysis? Why?

Response:
As discussed in the answer to Question 25, LIPA believes that programs comprising the 15 x 15 Goal should be evaluated on the same basis as any other resource available to LIPA to serve its customers' needs. Consequently, in determining the cost effectiveness of various design options, LIPA assesses the direct costs and benefits of each option and the effect an option has on LIPA's total costs to serve its customers compared to the total costs of other resource alternatives (e.g., a new generator). Such assessment includes the cost of emissions for each option and alternative studied. In its analysis, LIPA has considered total rate impacts on its customers by including direct costs and the effects of lost revenues.

Since LIPA believes that energy efficiency should be treated as another resource available to the utility and that it should be evaluated on a comparable basis with other resource alternatives, including renewable resources, LIPA recommends that the PSC consider integrating the RPS and the EPS concepts so that, depending upon ratepayer economics, compliance can shift from renewables to energy efficiency and vice versa.

23. What are the best methods for ensuring transparent and technically sound methods for evaluation of program energy savings (gross and net), non-energy benefits (e.g., economic, environmental) and program performance and administration?

Response:
The evaluation discipline is reasonably mature and various methods to estimate impacts and effectiveness exist. It is not appropriate to specify these at this point, because monitoring and evaluation ("M&E") plan development is an extensive undertaking that

should be done as the parameters of administration are established and program plans are developed.

New York should use experts in the M&E field to develop and implement independent assessments of program impacts (energy and non-energy), and administrative performance.

24. How should customer satisfaction and program design efficacy be assessed?

Response:
Customer satisfaction and program efficacy are two distinct and separate types of program measurements, yet should be looked at collectively as an overall measure of program results. Customer satisfaction is a measure of customer perception, can be readily quantified, and is an important measure of product design, delivery and value. LIPA already conducts a comprehensive Customer Satisfaction program to assess its performance in the key areas of delivery service, customer service, pricing and value, programs and services, corporate image and communications. Continual customer surveying around these key drivers enables us to assess trends in overall customer satisfaction with LIPA and to help identify areas where improvements can be made to fulfill customer needs and expectations.

Program efficacy on the other hand, can be easily measured against carefully planned quantifiable goals within each customer segment and sub-segment. Whether it is from a measured energy savings impact in a particular customer segment or stocking levels of certain appliances at a distributor from a market transformation standpoint, we believe that the means to assess overall program efficacy are available through the services of various private sector firms as part of the overall evaluation process. The key, however, to assessing program efficacy is to have good baseline measurements and to establish reasonable periods by which measurable changes can be confidently obtained within the marketplace.

25. What constitutes a reasonable level of funding for the electric and gas energy efficiency programs? How, and from whom, should the various program costs be funded, allocated and recovered?

Response:
Each electric and gas energy efficiency program should be treated as a resource available to a service territory and evaluated on a comparable basis with all other resources available to such service territory. The most cost-effective resources from those alternatives should then be selected to meet the identified need as determined by the application of the appropriate cost methodology (see discussion in the answer to Question 22 above). Using this approach, the level of funding required would be the overall costs of such programs, and program funding would be expected to ramp up or ramp down in the future in response to the utility's needs and the costs of its other alternatives.

Funding for efficiency programs should come from two sources. First, funds raised from the State's auction of CO_2 allowances for the RGGI program should be allocated on an energy weighted pro-rata basis to each service territory. This allocation should be used to offset the direct costs of implementing a program. The utility should receive no more than the direct costs of implementing a program. To the degree that not all of the RGGI revenues are used in a given year, the funds should be saved for use by the same utility in future years. If after using the RGGI funds, there are additional costs not recovered by the utility, then the utility should be allowed to recover additional costs in a manner appropriate to its service territory requirements. One reasonable approach would be for the utility to recover its costs for end-use efficiency programs from transmission ratepayers within the service territory through an energy efficiency charge. For other LIPA programs (e.g., T&D efficiency, advanced metering, generation efficiency), one reasonable approach would be to recover costs through the capital budget process or other similar mechanism.

In designing its programs, LIPA will employ a cost recovery mechanism that is ultimately approved by its Board of Trustees. While a definitive cost recovery mechanism has not been proposed at this time, some reasonable criteria for such rate recovery are as follows:

a. Programs should be funded at the service territory level, with no transfer of funding among or between or service territories.

b. Residential programs should be funded by all residential customers, commercial programs should be funded by all commercial customers, and industrial programs should be funded by all industrial customers. Programs that support multiple segments should be organized so that the benefits and costs to individual sectors can be identified to the greatest extent possible. Allocation of costs (as opposed to direct assignments at an appropriate level of detail) should be minimized and discouraged.

c. Program costs should be recovered on a pay-as-you-go basis.

d. Lost revenues (not otherwise mitigated by changes in distribution rate design) should automatically be included in any energy efficiency program cost recovery mechanism for the service territory.