New York Power Authority
Report on Strategic Alternatives
for Long Island Power Authority

Executive summary

- This report summarizes NYPA's findings regarding LIPA's ownership and operating structure, rate levels, and power supply arrangements. This review began after Superstorm Sandy. It also presents recommendations for restructuring LIPA to achieve goals articulated by the Governor.
- NYPA staff, together with its consultants, reviewed in detail the major strategic alternatives for restructuring LIPA, including
  - A sale of the transmission and distribution (T&D) system ("privatization")
  - Full public ownership and operation of the system ("municipalization"), and
  - A hybrid model of public ownership and private operation under a management contract
- NYPA found that the expected electric rates to consumers under each option would be approximately the same, with substantial additional risks associated with both privatization and municipalization. NYPA therefore believes that the hybrid model is likely to result in the best outcome for ratepayers.
- Public ownership with outsourced private operation is the recommended approach, assuming certain key enhancements of the contract with PSEG scheduled to go into effect on January 1, 2014
- NYPA found that LIPA's power supply practices have been prudent, with limited opportunities for short-term improvement. However, over the longer term, cost reduction is possible by taking advantage of contract options and expirations to replace older capacity with more efficient, cleaner generation.

NYPA review

- NYPA was asked, in the aftermath of Superstorm Sandy, to assist in the review of LIPA's operations and make recommendations in the following areas:
  - Options for restructuring LIPA to make it more effective
  - Power supply contracts and strategy
- NYPA undertook an in-depth analytical process designed to review all prior consulting reports and the Moreland Commission Interim Report, and add new work to produce a report on the strategic options available to the state regarding LIPA.
  - NYPA hired the investment banking firm of Lazard to analyze the strategic options available, including privatization (full private ownership and operation), municipalization (full public ownership and operation), and any hybrid or other options they may identify
  - NYPA hired the consulting firm of Booz & Company to analyze the operating, capital, and power supply cost implications of privatization (a.k.a. "synergies), an area of specialization in which Booz is the leading consultant in the US utilities mergers and acquisitions market
  - NYPA assigned Public Financial Management (PFM), a leading public-sector financial advisory firm, to analyze and recommend alternatives for restructuring LIPA's outstanding debt to reduce costs and enable debt reduction over time
  - NYPA power supply staff, together with its utility consultant CCN Management Counsel and the law firm of Holland & Knight, reviewed in detail every long-term LIPA power supply and HVDC transmission contract for opportunities to lower costs and improve flexibility for the benefit of LIPA ratepayers

Background – history led to current problems

- LIPA was created to acquire, then retire, dismantle, and decommission, the Shoreham nuclear power plant along with the electric T&D assets and associated debts of the Long Island Lighting Company (LILCO).
  - LIPA assumed over $3 billion of debt that LILCO incurred to build the Shoreham plant. LIPA still has about $7 billion in debt but only roughly $4 billion of T&D assets.
- LILCO's power generating plants and gas transmission and distribution assets were sold to KeySpan, later acquired by National Grid, and the power supply from those plants was contracted by LIPA pursuant to a long-term Power Supply Agreement
  - LIPA was responsible for payment of property taxes and PILOTs to communities in which the plants were located, and those taxes and PILOTs have increased on average by 10.6% per year from 2008 to 2013. They now represent about 16.2% of customer rates.
- Due to the factors above, plus the costs associated with providing reliable power supply on an island, rates have been and continue to be among the highest in the country. This situation in turn has led to pressure to cut or defer needed investments in operations and plant as well as in debt reduction, contributing over time to a situation in which neither service nor LIPA's financial picture has improved.

Current LIPA situation

- LIPA has a dedicated staff of approximately 90 employees, competitive O&M costs for T&D operations relative to its size, high operational reliability (as measured by standard electric utility reliability measures such as SAIDI, SAIFI, and CAIDI which measure the frequency and duration of customer outages) in normal (non-storm) conditions
- Customer satisfaction is the lowest in the US according to J.D. Power surveys
- Rates are among the highest in the US
- The manner in which LIPA addressed emergency planning, preparedness, and storm response in its service area leading to Sandy was found by the Moreland Commission to be "ineffective"
- Huge overhang of debt ($7 Billion) in excess of assets ($4 Billion) limits financial flexibility
- Extremely limited financial reserves
- No excess cash flow to use toward service improvement or debt reduction
- Track record of missing its annual $75 million net revenue target, further suppressing planned cash flow
- Bond rating lowered recently (now a Moody's Baa1 with a negative outlook) and likely in further danger of downgrade
- LIPA is in the midst of a very challenging transition from one outsourced operations services provider, National Grid, to another, PSEG. About 2,000 employees will move from National Grid to PSEG-LI, and systems and physical facilities must be reassigned, all while maintaining and improving customer service and preparing for the storm season

Primary objectives set by Governor Cuomo

- Early in the process, Governor Cuomo established five criteria for assessing each of the strategic options:
  1. Short-term and long-term rate stability
  2. Short-term and long-term property tax stability
  3. Improved customer service
  4. Storm preparation
  5. Storm response
- NYPA applied these criteria in evaluating the options

Policy considerations

- In addition to the five primary criteria established by the Governor, NYPA identified several additional policy objectives that it recommends be met by any option for restructuring LIPA
  - Need to drive investment in system hardening – plans should be developed for major and ongoing investments to make the T&D system more resistant to storm damage and resilient in recovering after major storms
  - More effective governance and transparency in the rate process is needed to give LIPA customers confidence in that process
  - Any option should take into account the need for near-term stability of management and operations during and after the challenging transition from National Grid to PSEG
  - Structure must ensure that the provider of utility service on Long Island can anticipate and respond to major changes expected to take place in the energy marketplace:
    - Technology changes such as smart grid, low-cost distributed generation such as solar and cogeneration, on-site energy storage, and electric vehicles, which may allow customers to reduce their energy costs and carbon footprint – and in some cases operate independently from the grid
    - Policy actions in response to climate change, such as accelerating renewables investment, carbon mitigation, energy efficiency and peak demand reduction
    - Low and stable natural gas prices that could lead to changes in the generation mix and reduce overall power costs

Relevant prior studies of LIPA

- Moreland Commission findings
  - The Commission concluded: “that LIPA’s bifurcated management structure fails to work not only during weather emergencies, but also during “blue sky” conditions, reinforcing the Commission’s initial conclusion that LIPA, in its current state, should no longer exist”
- Prior Studies by consultants to LIPA
  - Prior studies by Brattle Group, Lazard, and Navigant each added new and useful information, but suffered from limited scope, or incorrect or outdated assumptions
    - Brattle report (2010) – As presented in detail in Lazard’s 2013 analysis, Brattle made an error resulting in an overstatement of the cost of privatization by roughly $3.5 billion in net present value. In addition, several assumptions, while correct when made in 2010, have changed significantly in a way that would benefit the economics of privatization. The securitization option was also not studied in depth.
    - Lazard (2010) – LIPA asked Lazard in 2010 to perform a review of LIPA’s options to purchase from National Grid certain power plants from which LIPA was receiving power pursuant to its Power Supply Agreement with National Grid. The scope was limited to that issue, and did not include a review or recommendation on broader strategic options.
    - Navigant (2011) – Navigant performed a high-level preliminary review of LIPA’s strategic options, but did not do a rigorous analysis of the quantitative or qualitative issues, including operating costs and synergies. It found that “The privatization scenarios have higher revenue requirement than the status quo scenario. This is due to several reasons, of which the main reasons are higher capital costs and being subject to state and federal income taxes.”

Summary of 2013 Lazard analysis

- Lazard produced an extensive analysis of LIPA's strategic alternatives. Key summary pages from the presentation of their results are included in the appendix to this report. However, these excerpts are not intended to substitute for the complete presentation of their work.
- Lazard analyzed several alternatives, focusing on
  1) Privatization – the sale of the T&D System to a new owner;
  2) Municipalization – the assumption of full management and operational responsibility for the T&D system by LIPA; and
  3) A "fully-outsourced solution" – shifting all or nearly all management and operational decision-making to a contract service provider, subject to PSC oversight
- Recommended the privatization of LIPA via a sale of the T&D system as the best available strategic organizational alternative, and the "fully-outsourced solution" as the best contingency plan
- Lazard found that the long-term net present value of customer rates were projected to decrease by 2.2% over ten years versus the expected path of rates in the status quo. This result is based largely on projected cost reductions ("synergies") that Lazard believes an acquirer would obtain by combining with LIPA
- Lazard expressed the opinion that privatization would provide qualitative benefits in the form of improved customer service and storm preparation and response

Summary of Lazard conclusions (cont'd)

- Municipalization would not address key objectives for the T&D System and would likely increase rates for LIPA customers.
  - Difficult and costly to build out a full management and operations staff for the utility
  - Inability to capture synergies, economies of scale, or other cost efficiencies from combining operations or management with another company
  - Long process of upgrading systems and processes to improve service – with uncertain results
- Fully outsourced solution found to be best contingency plan
  - Privatize operations by moving all operational responsibility to a private contractor
  - Retain public ownership and financing to preserve tax-exemption
  - Add PSC oversight and regulation
  - Shrink LIPA staffing to "holding company" for debt management only
  - Fully refinance all outstanding LIPA debt to enable PSC regulation without violating bond covenants
  - Found to be higher cost due to lack of synergies that would derive from integrating operations with another company

Booz and Co. report on potential synergies

- **NYPA requested that Booz & Company estimate the potential synergies levels from an acquisition of LIPA by a hypothetical investor-owned utility**

Transaction Assumptions

- LIPA to merge with / be acquired by an investor-owned utility
  - Specific utility not identified, but multiple potential acquirers based on proximity (likely a Northeast utility)
- Detailed analysis of other strategic alternatives under private ownership (e.g. IPO) or government ownership (e.g., municipalization, NYPA/LIPA merger, remaining under the existing ServCo model) not within Booz scope
- Specific considerations relevant to a transaction with LIPA factored into analysis – for example, existence of third party T&D and generation operator and existing fuel and capacity contracts

Overall Synergies Approach

- In order to capture range of synergies across potential acquisitions, indicative "composite" acquirer developed based on characteristics of several northeast regional entities
  - Developed baseline O&M, capital, and headcount ranges based on non-fuel O&M spends and customer bases, varied power supply model approaches, varied business mixes, and degree of proximity
  - Publically available data used for composite baseline development
  - Estimated low and high savings levels based on composite ranges
- Booz previous utility M&A experience and synergy modeling approach leveraged to develop estimate of potential synergies and costs to achieve

Summary of Booz & Company findings

- Booz & Company concluded that potential cost synergy savings would be available in the event LIPA were to be acquired by a private utility similar to the hypothetical ones modeled. Their range of savings estimates in the third year after the transaction (once all major changes have occurred), as well as the cost to achieve those savings, is summarized below.
- Booz & Company estimated total annual cost synergies to range from $90 million in the low case to $190 million in the high case, with upfront (non-recurring) costs to achieve of $185 million and $271 million, respectively

Transaction Savings Comparison[1]
Year 3 – $ MM

	Low	High
Corporate Labor	$20	$30
Field Labor	$15	$25
Information Services	$5	$10
Corporate Programs	$25	$30
Supply Chain	$20	$25
MSA Margin Elimination	$0	$32
Energy Efficiency	$5	$25
Fuel & Purchased Power	$0	$12
Gross Annual Savings	**$90**	**$190**
	$70 (O&M) *$0 (Fuel & PP)* *$15 (Cap)*	*$152 (O&M)* *$12 (Fuel & PP)* *$25 (Cap)*

Total Costs to Achieve	**($185)**	**($271)**

1) Excludes IT avoided capital savings

Summary of PFM analysis

- The public-sector financial advisory firm of PFM performed an analysis of the estimated costs and savings that could be derived from various strategies for dealing with LIPA's outstanding debt in each of the major strategic alternatives
- PFM provided input to Lazard's analysis, particularly in looking at the refinancing of all of LIPA's debt that would be required in the event of a private sale of the T&D system
- PFM also analyzed options for using the securitization approach in the two alternatives (municipalization and outsourced operations) in which the public retains ownership of the T&D system. They analyzed two potential structures for amortizing the new debt: one producing level annual savings versus the refunded debt, and the other producing level overall debt service when added to the non-refunded LIPA debt.
- PFM performed these analyses using interest rates as of the date of the analyses: March 2013
- Interest rates have generally risen since the date of the analyses, so benefits may be overstated (and costs understated). Any savings produced could be used to help stabilize electric rates for LIPA customers

	Level Annual Savings (≈ $15MM/year)	Level Overall Debt Service
Securitization principal amount	$3.3 Billion	$3.7 Billion
Net Present Value of savings	$253 Million	$173 Million
Retired LIPA bonds principal amount	$2.9 Billion	$3.2 Billion
New bonds interest costs (TIC)	3.13%	3.42%

NYPA findings and recommendations

Summary of issues with Lazard analysis

- Lazard chose not to fully incorporate the analyses of Booz & Company and PFM, but instead substituted their own opinions in certain key aspects
- One of the key assumptions is the amount of cost synergies that would be achievable in a privatization. NYPA hired the leading expert in utility M&A synergies analysis, Booz & Co., to study this question. Lazard instead used a range of assumptions for four different scenarios. Lazard's "Base Case" annual savings were similar to Booz's "High Case", but did not include the "costs to achieve" of $271 million in Booz's "High Case". Lazard's assumptions for synergies compared to Booz's findings are summarized in the table below.
- If a conservative approach is taken to the synergies using Booz's "low case" findings, Lazard's results would have been equivalent to their "Breakeven" case (in fact even worse if the "costs to achieve" are included).

(amounts in millions of dollars)	Lazard				Booz	
	Breakeven	Base	Additional Fuel & Purchased Power Savings	Additional Fuel & Purchased Power and O&M Savings	Booz low case	Booz high case
Operating & Maintenance (annual)	62	125	125	175	70	152
Fuel & Purchased Power (annual)	5	25	125	125	0	12
Capital expenditures (annual)	15	30	30	30	15	25
Total (annual)	**82**	**180**	**280**	**330**	**85**	**189**
Costs to Achieve (one time)	**0**	**0**	**0**	**0**	**(185)**	**(271)**

Summary of issues with Lazard analysis (cont'd)

- Quantitative results are very sensitive to certain other assumptions and opinions that NYPA believes should be further analyzed and refined, for example:
  - Interest rates for long-term investor-owned utility (IOU) debt is assumed to be 3.5%, which is at the low end of the range of recent transactions
  - All of LIPA's debt is assumed to be refinanced in the fully-outsourced option, even though PSC oversight does not need to erode the right and obligation of LIPA's board to set rates and invest in the system. This assumption resulted in several hundred million dollars in unnecessary financing costs
  - No operating efficiencies were assumed in the fully-outsourced case, even though they could be gained if the private operator is given broader responsibility for managing the system
- Quantitative results for privatization and the fully-outsourced solution should therefore be viewed as essentially equal
- The privatization approach carries with it some significant risks:
  - Among the most important is the fact that a private company would not be eligible for substantial FEMA reimbursement of major storm costs and opportunities for funding mitigation and hardening projects.
  - Projections regarding future electric rates are highly sensitive to interest rates that will not be determined until the sale is complete, after a process of roughly one year. Interest rates would only have to increase slightly to change the privatization outcome to negative compared to the status quo.
- Contrary to the presentation in the Lazard analysis, LIPA's power supply practices were found by NYPA and its consultants to be reasonable and prudent

Recommendation: “Enhanced Public-Private Partnership”

- NYPA recommends an enhanced version of the fully-outsourced solution identified in the Lazard analysis be implemented. This public-private partnership (“P3”) would have the following elements:
  - Privatize operations through a management contract
  - Retain public ownership, tax-exempt financing and FEMA eligibility
  - Provide for oversight of LIPA, but utilize DPS in a “review and report” role, with LIPA’s board retaining authority to set rates and determine the level of system investment. This role will avoid conflict with LIPA’s bond covenants, and therefore avoid the need to refinance all of LIPA’s debt.
  - Greatly shrink LIPA staffing levels, move functions to PSEG to unify management responsibilities
- NYPA further recommends the following modifications to better align with Governor Cuomo’s policy objectives:
  - Change PSEG contract as follows:
    - Take advantage of potential operating efficiencies with PSEG, such as utilizing PSEG’s outage management system, Customer Information System (CIS), and its financial management systems to save as much as $100 million total
    - Revise PSEG incentives to better align interests and reflect additional responsibilities while continuing to meet IRS Qualified Management Contract rules (avoid jeopardizing tax-exempt bonds)
  - Do a partial refinancing (securitization) of only LIPA’s higher cost, callable debt. This will eliminate the potential losses estimated in Lazard’s analysis associated with refinancing all $7 billion in debt, while enabling an amount equivalent to the excess Shoreham-legacy debt to be “walled off” through the securitization mechanism.
  - Shrink the LIPA board to make it more efficient and effective, and establish minimum qualifications for members

Advantages of recommended approach

- Takes full advantage of high-quality customer service and operating “best practices” of the private operator PSEG
- Better aligns management and control of the operation of the T&D system
- Largely eliminates the inefficient double-layer of management in the original PSEG arrangement
- Can potentially increase coordination with other state policies by virtue of DPS review and consultation
- Preserves the benefits of tax exemption on LIPA debt
- Preserves eligibility for FEMA reimbursement, reducing financial risk of major storms by about 80%, and FEMA funding for mitigation and hardening
- Retaining public ownership enables greater ability to exercise desired policies such as renewables, efficiency, smart grid, and other investments. LIPA board, after consultation with DPS, would have final say on resource allocation.
- Securitization can be used to ensure improved long-term debt management
- Preserves option to privatize at a later date if circumstances are advantageous

Potential Issues with Enhanced P3 approach

Issue	Recommended Solutions
Doesn't completely eliminate separation of ownership and management	Contract with PSEG can be modified to better align public and private interests and reduce overlap
Need to ensure tax exemption is maintained	Compensation of PSEG must remain largely fixed in order to meet IRS qualified management contract rules
Need to ensure that newly-created oversight of LIPA does not create bond rating agency and bondholder objections *	Oversight must be done by DPS and advisory in nature, with LIPA board retaining ultimate authority over rates and system investments
Need to ensure adequate LIPA oversight capabilities	LIPA staff should be supplemented by expertise from DPS and other state entities such as NYSERDA and NYPA; especially, for major long-term commitments such as new power supply agreements

* It is also possible that DPS oversight could be viewed more positively if it serves to provide independent verification of the periodic need for LIPA's board to increase rates due to factors outside of its control, such as the need for storm hardening, system replacements, and increased fuel costs.

LIPA power generation review

- Long Island is disadvantaged with respect to bulk power supply costs because of 1) a scarcity of suitable sites for new generation facilities, 2) geographical impediments to stronger transmission ties to other utilities, and 3) longer distances from natural gas sources. One of LIPA's primary strategic thrusts over the past decade has been the development of submarine HVDC cables to tap lower-cost capacity and energy supplies in New England and the Mid-Atlantic (PJM) regions
- There appears to be very limited opportunity for an acquirer or successor to extract synergies or benefits by managing the contracts differently in the short run (next 2 to 4 years). All of the contracts are constructed carefully and no reopeners or restructuring opportunities were noted
- Over the long run, however, there will be opportunities to reconfigure LIPA's portfolio because
  - Contracts for most of the smaller resources known as the "fast track units" which were installed on an expedited and relatively higher cost basis in the 2001-2004 period will be expiring over the next 5 to 7 years. LIPA may be able to renew certain of the contracts at lower cost or simply let the resource "go merchant" forcing the owners to derive revenue in the NYISO capacity and energy markets. LIPA has done this in the past with Calpine and Edgewood
  - The renegotiated PSA with National Grid Generation LLC affords LIPA with the ability to direct National Grid to repower certain blocks of capacity or retire older peaking units. In effect, LIPA will be able to start displacing and/or replacing a significant amount of this old capacity in an orderly fashion over the next 15 years
  - LIPA's 2010 RFP will likely result in a large state-of-the art combined cycle facility installed on the Island by 2018 which will provide superior thermal efficiency and reduce air emissions
  - Directed energy efficiency, demand response, summer rate re-design and T&D investments will enable LIPA to reduce the adverse effect of peak summer demand in certain "load pockets" which force LIPA to operate certain units out of merit order during periods of high demand

Summary of recommendations

- NYPA recommends an enhanced version of the fully-outsourced solution be implemented. This option is most likely to achieve Governor Cuomo's stated objectives of rate and property tax stabilization, improved customer service, and improved storm preparation and response.
- This enhanced public-private partnership would have the following elements:
  - Privatize operations through a management contract
  - Retain public ownership, tax-exempt financing, and eligibility for FEMA funding
  - Provide for oversight of LIPA through the Dept. of Public Service (DPS)
  - Greatly shrink LIPA staffing levels, move functions to PSEG to unify management responsibilities
- NYPA further recommends the following modifications to better align with Governor Cuomo's policy objectives:
  - Change PSEG contract as follows:
    - Take advantage of potential operating efficiencies with PSEG
    - Revise PSEG incentives (within IRS rules) to better align interests and reflect additional responsibilities
  - Refinance (securitize) LIPA's higher cost, callable debt
  - Shrink the LIPA board to make it more efficient and effective, and establish minimum qualifications for members
- NYPA also recommends that LIPA take full advantage of all of its contractual opportunities to improve the efficiency and cleanliness of its power generating fleet.