

# CREDIT OPINION

13 October 2017

# Pre-Sale

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# **Estimated Closing Date**

November 2017

# Contacts

Arti Mattu 212-553-4082
Associate Analyst
arti.mattu@moodys.com

Sanjay Wahi +1.212.553.7828

VP-Sr Credit Officer
sanjay.wahi@moodys.com

Jian Hu 212-553-7855
MD-Structured
Finance
jian.hu@moodys.com

#### **CLIENT SERVICES**

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
FMFA	44-20-7772-5454

# Utility Debt Securitization Authority Restructuring Bonds, Series 2017

Pre-Sale - Long Island Power Authority-sponsored utility cost recovery bonds

# Capital structure

Exhibit 1

Provisional (P) ratings\*

Series	<b>Provisional Ratings</b>	Expected Amount	Tax Status	Coupon	Payment Frequency	<b>Expected Maturity</b>	Legal Maturity**
2017	(P) Aaa (sf)	\$369,375,000	Tax-Exempt	Fixed	Semi-annual	12/15/2039	12/15/2041

The ratings address the expected loss posed to investors by the legal final maturity. In our opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Our ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.

- \* Principal amounts and legal maturity dates are preliminary and subject to change
- \*\* Reflects the latest legal maturity date among the tranches in the series

  Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017,

#### Summary

and Moody's Investors Service

We have assigned provisional ratings to the single series of bonds (Series 2017 bonds, or the bonds) that Utility Debt Securitization Authority (the issuer) will issue. New York State legislation formed the issuer to securitize a special charge (the restructuring charge) imposed on Long Island Power Authority's (the Authority and transaction sponsor) customers' utility bills. The Authority will use the proceeds of the securitization to retire a portion of its outstanding debt. The Series 2017 bonds will be the fifth issuance of and final utility cost recovery bonds sponsored by the Authority since 2013 under the LIPA Reform Act.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation and the irrevocable financing order authorizing the creation of the restructuring property; (2) the size, stability and diversity of the service area's ratepayer base; (3) the ability and experience of the servicer; and (4) the credit enhancement in the form of

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 12 October 2017. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

a mandatory uncapped true-up mechanism, a non-declining operating reserve account and a debt service reserve account.

# **Credit strengths**

Strength of legislation and financing order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on October 20, 2017, permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other utility cost recovery charge securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order (the state pledge). In addition, the securitization and financing order contain the typical true-sale and security interest provisions.

The Authority's irrevocable financing order authorizes the Authority to recover specified costs of retiring its corporate debt by collecting restructuring charges. The restructuring property grants the issuer the irrevocable right to impose, bill and collect irrevocable, nonbypassable restructuring charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. Nonbypassable refers to the requirement that the charges be levied on all of the Authority's existing and future retail electric customers receiving transmission and distribution services in its service area, including customers of any Authority successor or assignee.

**True-up adjustment mechanism:** The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually and, if necessary, semiannually, to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments at any time if the servicer deems necessary to ensure timely bond payments. The servicer may also elect to perform a voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). This voluntary mid-year adjustment helps reduce the volatility of the restructuring charge to customers. The inclusion of an operating reserve account and a debt service account provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between true-ups.

**Affluent ratepayer base:** The size, economic stability and diversity of the ratepayer base in the Authority's service area are credit strengths. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (55% by revenue) and commercial customers (43% by revenue).

**Experienced servicer:** LIPA has considerable prior servicing experience with restructuring charges, including acting as servicer for the Authority's four outstanding utility cost recovery charge securitizations.

Although LIPA is the named servicer for this securitization, PSEG Long Island LLC (PSEG-LI, unrated), a subsidiary of Public Service Enterprise Group Incorporated (Baa1, Stable), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others. PSEG-LI currently performs these same functions for the three outstanding utility cost recovery charge securitizations sponsored by the Authority. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

# **Credit challenges**

**Challenges to securitization law and financing order:** Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the restructuring property. However, we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

the securitization law, or for the Authority to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered. Several past challenges to securitization laws such as this in other jurisdictions have been unsuccessful.

**Potential for insufficient collections:** Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. The Authority's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, by which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments are required to occur annually and can occur semi-annually and at the discretion of the servicer on an interim basis as needed.

Relatively high restructuring charge: The Authority expects the securitization's initial restructuring charge to represent around 0.61% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in the Authority's service area will receive as of June 15, 2017. The initial restructuring charge for the 2017 transaction, combined with the current restructuring charge for the 2013, 2015, 2016A and 2016B transactions, is expected to represent approximately 9.64% of a 1,000 kWh residential customer's bill. This percentage charge is relatively high compared to charges in other utility cost recovery bond transactions. For context, the three most recent utility cost recovery bond issuances we rated, Duke Energy Florida Project Finance, LLC, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 2.5%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively. A high cumulative recovery charge could incentivize a legal challenge to the restructuring charges or the securitization law, or could increase political pressure to rescind or change the securitization law through legislation. This concern is mitigated by the Authority's securitization offset rider, which reduces the Authority's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

# **Key characteristics**

#### Exhibit 2

Asset characteristics (as of 31 August 2017)

Asset characteristics (as of 51 August 2017)	
Assets:	Restructuring property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or
Service Area:	distribution service from the Authority or its successors or assignees  The Authority's service area covers approximately 1.1 million residential,
Screen near	commercial customers in Nassau and Suffolk counties* and the Rockaway Peninsula

 $<sup>\</sup>hbox{*Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport}$ 

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017, and Moody's Investors Service

#### Exhibit 3

## Securitization structure characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	\$369,375,000*
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Collection Account and Debt Service Reserve Account
Sponsor/Seller/Initial Servicer:	Long Island Power Authority (A3 stable)
Issuer:	Utility Debt Securitization Authority
Operations Agent:	PSEG-Long Island (Unrated)
Trustee:	Bank of New York Mellon (Aa1/Aa2 stable, a1)**

<sup>\*</sup>Preliminary and subject to change based on market conditions

<sup>\*\*</sup>The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017, and Moody's Investors Service

# **Asset description**

The collateral for this pool is the restructuring property, consisting of the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area. New York State legislation, along with an irrevocable financing order adopted by the Authority on July 26, 2017, authorizes the creation of the restructuring property.

The bonds are also secured by funds on deposit in the collection account, including the debt service reserve subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds with respect to the pledged collateral.

#### The securitization law

The purpose of the securitization law is to create the issuer and allow the Authority to finance the retirement of a portion of its outstanding debt through the issuance of restructuring bonds by the issuer, resulting in savings to the Authority's customers on a net present value basis. The securitization law gives the Authority the right to impose restructuring charges, which is the key asset backing this securitization.

The securitization law, coupled with the adoption of additional financing orders, authorizes the Authority to create additional restructuring property as collateral for the issuance of bonds. The Authority will use this issuance to retire a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds. The securitization law allows for an aggregate amount not to exceed \$4.5 billion (inclusive of the previously-issued bonds: \$2,022,324,000 in 2013, \$1,002,115,100 in 2015 and \$1,106,090,000 in 2016). The Series 2017 issuance will be the last under the current authorization.

Similar to other utility cost recovery charge securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that is incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

## The financing order

On July 26, 2017, the Authority adopted Financing Order No. 5 (the financing order), together with Financing Order No. 2, Financing Order No. 3 and Financing Order No. 4; all of which were approved by the New York Public Authorities Control Board on September 20th, 2017. On October 20, 2017, the financing orders became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the Series 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, the Series 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property, the Series 2016A restructuring bonds that the issuer issued pursuant to Financing Order No. 3 are secured by the 2016A restructuring property and the Series 2016B restructuring bonds that the issuer issued pursuant to Financing Order No. 4 are secured by the 2016B restructuring property.

The issuer is issuing the bonds pursuant to the financing order, which authorizes: 1) the creation of the restructuring property; 2) the Authority to sell the restructuring property to the issuer under the financing order (the restructuring property is created simultaneous with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the restructuring property from the Authority and pay upfront financing costs; and 6) the Authority to use the proceeds of the sale of the restructuring property to retire a portion of its outstanding debt.

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with the Authority setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of the Authority to review and approve the

issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

# The state pledge

The securitization law includes a pledge from the State of New York to the bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order.

Any action of the New York legislature adversely affecting the restructuring charges or the ability to impose, charge or collect the restructuring charges would likely require the State of New York to pay just compensation under the "takings clause" of the United States and State of New York Constitutions.

The state pledge provides protection to bondholders. To the extent the Authority or the State of New York have obligations under the financing order (e.g. to file for true-up adjustments), the securitization law provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

## The restructuring charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and nonbypassable restructuring charges from all of the Authority's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism. This is designed to ensure the expected collection of amounts sufficient to timely pay the amounts specified above. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from the Authority's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the New York Public Service Commission.

The restructuring charges are nonbypassable; "nonbypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (the Authority's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if the Authority no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

# The service area

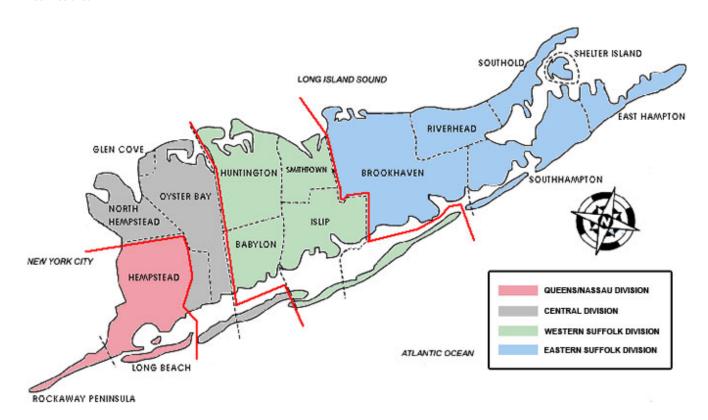
The Authority provides electric T&D services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which the Authority provided electric T&D services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2016, the service area included approximately 1.1 million customers. In 2016, retail electric usage was 48.3% residential, 48.9% commercial, 0.7% street lighting and 2.2% other public authorities. Exhibit 4 below shows the service area.

Exhibit 4

LIPA service area



Source: PSEG-LI website

## Statutory uncapped true-up adjustment mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's trueup mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

- 1. Initial true-up adjustment to the restructuring charges will be made on November 15, 2018
- 2. Standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs
- 3. Mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
- 4. Voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

5. More frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

6. After the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

## Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, the Authority, or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

Although LIPA is the named servicer for this securitization, PSEG-LI, a subsidiary of Public Service Enterprise Group Incorporated (PSEG, Baa1 Stable), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting the restructuring charges, meter reading and forecasting electricity usage, among others. PSEG is a publicly traded energy and energy services company. As of December 31, 2016, it had total assets of approximately \$40.1 billion, total annual revenues of approximately \$9.1 billion; and employed approximately 13,100 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company, New Jersey's largest regulated electric and gas T&D utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets.

## **Billing**

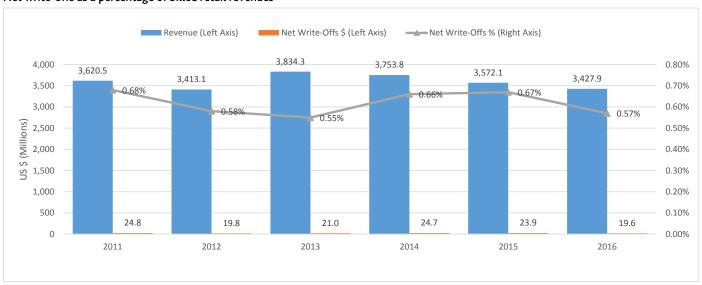
PSEG-LI will perform LIPA's duties of billing and collecting the restructuring charges, meter reading and forecasting electricity usage. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor servicer, and any owner of the T&D system assets will take steps to ensure nonbypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor servicer will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Exhibit 5 below shows net write-offs since 2011, which have ranged from a low of 55bps of billed revenue in 2013 to a peak of 68bps in 2011.

Exhibit 5
Net write-offs as a percentage of billed retail revenues



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016; Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017, and Moody's Investors Service

Exhibit 6 below shows LIPA customer delinquency data since 2011.

Exhibit 6
Average monthly delinquencies as a percentage of total billed revenues

	2011	2012	2013	2014	2015	2016
30-59 days	1.46%	1.48%	1.54%	1.34%	1.20%	1.10%
60-89 days	0.80%	0.82%	0.84%	0.67%	0.59%	0.52%
90+ days	2.82%	3.42%	3.54%	2.31%	2.46%	2.33%
Total	5.08%	5.72%	5.93%	4.31%	4.25%	3.95%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016; Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017, and Moody's Investors Service

# **Asset analysis**

## Legal analysis

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

New York does not have a referendum or initiative process by which the securitization law may be challenged. Therefore, the only way for the securitization law to be changed would be through a legislative action which would be subject to the state pledge.

Bondholders (or the trustee acting on their behalf) could challenge under the Contract Clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would likely be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The financing order provides that the restructuring property may be pledged to secure the payment of the bonds, financing costs, and other amounts owed. The securitization law provides that a valid and enforceable security interest in the restructuring propery will attach and be perfected at the time the pledge is made. The lien and security interest attach without any physical delivery of collateral or other act. The securitization law provides that the pledge is continuously perfected and has priority over any other lien created by the operation of law or otherwise that may be created subsequently.

## Strong service area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, more than 20 colleges and universities and core research institutions.

Long Island's median household income is substantially above that of New York State and the US. According to estimates from the US Census Bureau, the 2016 median household income for Nassau County and Suffolk County was \$99,465 and \$88,663, respectively, considerably higher than the \$59,269 for New York State and the \$59,039 for the US. According to the Authority, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 7 below shows the percentage of total billed revenue attributable to each customer class since 2011.

Exhibit 7
Sales by revenue class (% of total billed revenue)

	2011	2012	2013	2014	2015	2016
Residential	53.8%	54.2%	54.4%	53.4%	54.4%	55.0%
Commercial / Industrial	43.9%	43.7%	44.6%	44.0%	43.5%	43.1%
Street Lighting	0.8%	0.7%	0.7%	1.1%	0.7%	0.6%
Other Public Authorities	1.5%	1.4%	0.3%	1.5%	1.5%	1.3%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016; Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017, and Moody's Investors Service

For the twelve months ending on June 30, 2017, the ten largest retail electric customers represented approximately 7.24% of the Authority's retail kilowatt-hour sales resulting in 6.12% of revenues. As of the closing date, no customer or group of related commercial is exempt from paying the restructuring charges. Exhibit 8 below shows the energy usage and revenue from the top 10 commercial customers.

Exhibit 8
Top 10 LIPA commercial customers

	Industry	Energy Usage (GWh)	% of Total Energy Usage	Revenues (\$000)	% of Total Revenues
1	Federal Public Transportation	318.1	1.62%	\$46,510,087	1.35%
2	Telecommunications	182	0.92%	\$29,247,867	0.85%
3	Health Services-Hospitals	150.4	0.76%	\$22,581,950	0.66%
4	Water Districts	122.6	0.62%	\$21,454,396	0.62%
5	Nas/Suf County Govt Twnsps	126.8	0.64%	\$20,053,050	0.58%
6	Retail Food	119.5	0.61%	\$19,513,015	0.57%
7	Nas/Suf County Govt Twnsps	100.1	0.51%	\$16,559,359	0.48%
8	Health Services-Hospitals	104.3	0.53%	\$15,871,928	0.46%
9	Telecommunications	148.2	0.75%	\$11,098,588	0.32%
10	Nassau Universities	53.6	0.27%	\$7,614,085	0.22%
	Total	1,426	7.24%	210,504,325	6.12%

Source: Utility Debt Securitization Authority

#### Remote risk of severe ratepayer base declines

The Series 2017 bonds are exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's stable ratepayer base. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

# Self-generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Customers that self-generate will only be responsible for paying restructuring charges based upon their net-billed consumption. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

## Change in service area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The restructuring charge will be recoverable from all customers taking T&D service. As of July 29, 2013, the securitization law defines the service area to include two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in

Queens, NY known as the Rockaways. Thus, the service area is fixed by the legislation. If the service area expands in the future, the new customers would be subject to the restructuring charge on a going-forward basis.

## Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges. Moreover, municipalization would not affect restructuring charge collections since a successor and its customers will be subject to the restructuring charges, even if the T&D system assets are no longer owned by the Authority. Since 1998, no municipalizations have occurred in the service area.

#### Storm damage

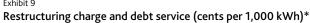
We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact the Authority's operations, temporarily interrupting transmission, distribution and consumption of electricity, hence reducing the collections of restructuring charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the Authority's service area, which could cause the per-kWh restructuring charge to be greater than expected.

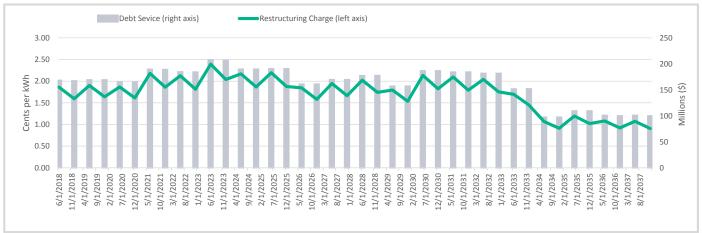
## Forecasting electricity consumption

The Authority's internal company forecasts are used for projections of electricity price and weather conditions. The forecast incorporates customer usage, delinquencies and write-offs, among other inputs.

The Authority assesses the restructuring charges based on its forecasts of customer usage. The amount and the rate of restructuring charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs.

Exhibit 9 below shows the forecasted restructuring charge per 1,000 kWh and scheduled debt service payments.





\*Preliminary and subject to change based on market conditions Source: Utility Debt Securitization Authority; Moody's calculations

# **Forecast variance**

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Additionally, there may be insufficient funds if the servicer inaccurately forecasts electricity consumption or uses inaccurate customer delinquency or charge-off data when setting or adjusting the 2017 restructuring charges. We view this risk as remote, as the annual forecast variance since 2011 generally has been less than 6% per customer category, as shown in Exhibit 10.

Exhibit 10

Annual forecast variance for ultimate electric delivery (% of forecast)

	2011	2012	2013	2014	2015	2016
Residential	4.31%	-2.37%	-2.69%	-4.28%	0.51%	-1.26%
Commercial	-1.00%	-3.59%	-2.39%	-1.70%	-2.07%	-6.53%
Street Lighting	0.17%	-2.19%	-4.44%	1.71%	-3.81%	-12.27%
Other Public Authorities	5.49%	-13.64%	-4.20%	3.13%	2.49%	-2.24%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016; Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017

#### Cash flow analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm that the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the restructuring charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the restructuring charge, both in absolute terms and as a percentage of the customer's energy bill. In our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the restructuring charge is as high as 24.53%, higher than most other utility cost recovery charge securitizations. This concern is mitigated by the Authority's securitization offset rider, which reduces the delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

The Authority expects the combined initial restructuring charge for the 2013, 2015, 2016A, 2016B and 2017 transactions to be around 9.64% of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 15, 2018, which is higher than most other utility cost recovery charge securitizations we rate. The 9.64% is preliminary and subject to change based on market conditions.

We looked at three scenarios:

# Scenario description and projected output

Base Scenario

- 1. Electricity consumption as per the Authority's projections
- 2. Implied net charge-offs of 0.62%
- 3. Collection curve projects 20.0% of collections within 30 days and 80.0% of collections between 30-60 days
- 4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains LIPA or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

#### Stress Scenario 1

- 1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
- 2. Annual net charge-offs are the same as in base case
- 3. Collection curve is the same as in base case

4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year

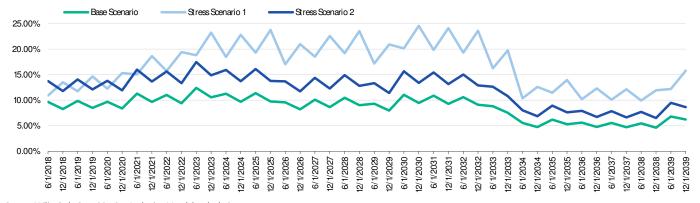
5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

## Stress Scenario 2

- 1. Electricity consumption is reduced by 25% permanently against the first year base case projection
- 2. Annual net charge-offs the same as in base case
- 3. Collection curve is the same as in base case
- 4. Servicing fee and all other fees the same as in base case

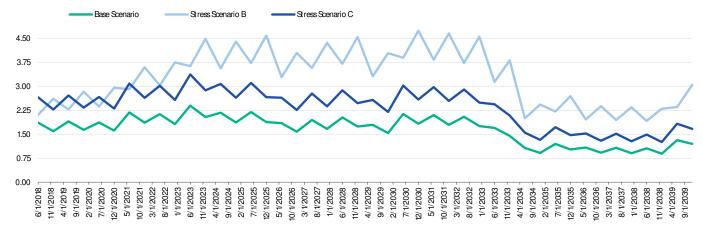
For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 11 shows the projected restructuring charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 12 shows the projected restructuring charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 11
Projected restructuring charge as a percentage of a customer's total bill



Source: Utility Debt Securitization Authority; Moody's calculations

Exhibit 12
Projected restructuring charge (\$ per 1,000 kWh)



 $Source: \ Utility\ Debt\ Securitization\ Authority;\ Moody's\ calculations$ 

## Comparables

As shown in Exhibit 13, stress scenario 1 is more stressful and results in a peak restructuring charge equal to about 24.53% of a 1,000 kWh per month customer's bill. This is high compared to other utility cost recovery deals.

Exhibit 13

Maximum recovery charge comparison (% of a 1,000 kWh customer's bill)

Deal name	Base	Stress1	Stress2
UDSA 2017	12.40%	24.53%	17.45%
UDSA 2016B	11.48%	23.81%	15.30%
UDSA 2016A	7.21%	16.04%	10.40%
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

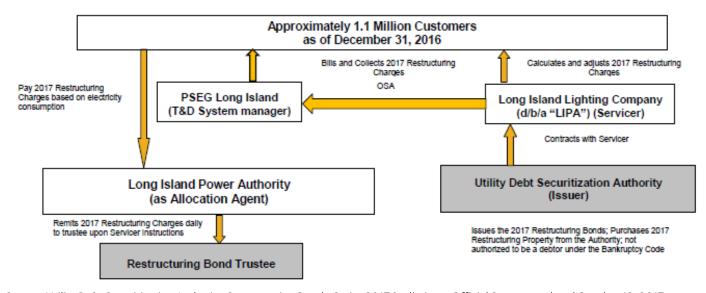
# Securitization structure description

On the closing date, the Authority will sell the restructuring property to the issuer pursuant to a sale agreement between the issuer and the Authority. LIPA will be the servicer of the restructuring property. PSEG-LI will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others.

#### Structural diagram

Exhibit 14 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 14 **Structural diagram** 



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2017 Preliminary Official Statement dated October 12, 2017

- 1. The issuer purchases the restructuring property from the Authority and issues the Series 2017 bonds
- 2. The issuer contracts with LIPA as servicer to calculate and adjust the restructuring charges
- 3. LIPA contracts with PSEG-LI to bill and collect the restructuring charges

- 4. Electric utility customers pay restructuring charge on electricity bills based on electricity consumption
- The Authority, as allocation agent, remits the restructuring charges to the trustee on a daily basis

# Detailed description of the structure

#### Credit enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the debt service reserve account. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

## Operating reserve account

On or before the date of issuance of the bonds, the Authority will deliver to the trustee for deposit into the operating reserve account an amount not less than 0.50% of the initial aggregate principal amount of the Series 2017 bonds. Amounts may be withdrawn from the account to pay scheduled principal on the Series 2017 bonds, provided however that an amount not less than 0.50% remains on deposit in the account.

## Debt service reserve account

On or before the date of issuance of the bonds, the issuer will make a capital contribution to the trustee in an amount not less than 1.5% of the aggregate outstanding principal amount of the bonds, which will be deposited in the debt service reserve account. Under the financing order, any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the subaccount and applied to subsequent payments.

#### Cash commingling

The servicer is entitled to commingle the restructuring charges that it receives with its own funds until it remits the funds to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from restructuring charges with other funds.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the allocation account within two business days. Any discrepancy between estimated and actual collections is mitigated by the true-up mechanism, which allows the Authority to adjust the restructuring charges at any time as needed to make timely interest and principal payments on the bonds.

#### Payment priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

- 1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed \$800,000 in each year;
- 2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
- 3. to the administrator, the administration fee (\$100,000 per year) and all prior unpaid administration fees;
- 4. the payment of all other operating expenses to the persons entitled to such payment;
- 5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;
- 6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;

7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;

- 8. to the trustee, indemnity amounts in excess of \$800,000 in each year;
- 9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
- 10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
- 11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
- 12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
- 13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

LIPA will calculate the annual true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment. Should LIPA perform a mid-year true-up adjustment, LIPA will similarly calculate the mid-year true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next mid-year true-up adjustment.

#### **Events of default**

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

- 1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
- 2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
- 3. failure of the issuer to perform a covenant (after a cure period);
- 4. breach by the issuer of its representations or warranties (after a cure period);
- 5. commencement of an involuntary bankruptcy or similar proceeding against the issuer which remains in effect for 90 days;
- 6. commencement of a voluntary bankruptcy or similar proceeding by the issuer; or
- 7. an action violating the financing order or state pledge.

## Issuance of additional bonds

The issuer can issue up to \$4.5 billion in restructuring bonds over five distinct financing orders. The issuer has reached the limit of \$4.5 billion with this fifth and final financing order. Each series of restructuring bonds is backed by separate restructuring property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of restructuring bonds. However, the issuer may not issue additional restructuring bonds unless the rating agency condition for the bonds has been satisfied.

#### Asset transfer, true sale and bankruptcy remoteness

The securitization law provides that an electric utility's transfer of restructuring property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the restructuring property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under Chapter 9 or any other provision of the Bankruptcy Code.

The issuer was formed solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.

The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from the Authority and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.

#### Sponsor and seller

The Long Island Power Authority will be the securitization's sponsor and the seller of the restructuring property. The Authority is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a Chapter 9 debtor pursuant to its enabling legislation.

The Authority took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of the Authority through a merger. Since the merger, LILCO has done business under the name "LIPA," LIPA, acting through LILCO provides electric delivery service in the service area.

The Authority is governed by a Board of Trustees and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. The Authority is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

The Authority and LIPA are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LIPA conducts the electric business in the service area and is responsible for providing service to customers in the service area. The Authority and LIPA are also parties to an administrative services agreement pursuant to which the Authority provides personnel, personnel-related services and other services necessary for LIPA to provide electric service in the service area.

## Administrator

LIPA will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. LIPA, as administrator, will be entitled to receive an annual administration fee of \$100,000 payable annually, in arrears.

## Securitization structure analysis

The key structural feature of this transaction is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage.

In this transaction, the strong true-up mechanism combined with nonbypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds. The operating reserve and debt service accounts provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

# Methodology and monitoring

The principal methodology used in this rating was <u>Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges</u> published in June 2015. Please see the Ratings Methodologies page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on <a href="https://www.moodys.com">www.moodys.com</a>.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of LIPA (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

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