## **2015 ANNUAL REPORT** Reliability Powered by Markets

New York Independent System Operator



### POWER YOU CAN RELY ON

To keep the lights on, the New York Independent System Operator manages the flow of electricity across New York so it is produced and transported to utilities in exactly the right amount at exactly the right time.



To provide the lowest-cost power available to reliably meet consumer needs, the NYISO conducts and monitors competitive auctions of wholesale electricity every five minutes, every day of the year.

To sustain the reliable supply of electricity for years to come the NYISO comprehensively plans for New York's energy future, providing the authoritative information public policymakers and private investors require to address emerging energy needs.



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## Message from Board Chair President and CEO

Today's electric system is experiencing a time of exciting innovation. In the Empire State, the New York Independent System Operator (NYISO) is at the heart of those changes, serving the needs of consumers, addressing public policy goals, and ensuring that the power to drive our economy is there when it's needed.

Since the restructuring of the electric utility industry in the 1990s, NYISO's competitive markets for wholesale electricity have powered reliability, increased efficiency, and supported the secure operation of the grid.

In 2015, we continued to enhance electric system reliability by managing historic cold weather conditions, achieving record-setting wind production, and advancing gas-electric coordination. Markets reflected dramatic declines in fuel costs as energy prices reached historic lows, and cross-boundary coordination flourished as Broader Regional Markets initiatives progressed. We also further refined our pioneering consumer impact analysis process.

The full range of our planning capabilities was evident in 2015 as markets responded to NYISO-identified reliability needs. In addition, we assessed transmission congestion, and the new public policy transmission planning process was launched.

We bolstered our stature as an authoritative source of information, as well. We improved the transparency of market performance, budgeting and grid operations with website upgrades, and continued to be called upon to provide expert testimony to public hearings. The NYISO hosted a record level of visitors in 2015, who toured our facility to learn more about grid operations, wholesale electricity markets, and system planning.





Michael B. Bemis Board Chair



Bradley C. Jones President and CEO

In 2015, Governor Cuomo announced a public policy objective of serving 50% of New York State's energy with renewable resources by 2030. The NYISO supports the Governor's "50 by 30" renewable goal, and continues to play an active role in public policy initiatives that will shape the energy landscape of the future.

We remain committed to excellence as demonstrated through our customer service feedback process, which encourages market participants and stakeholders to share their thoughts on doing business with the NYISO. In 2015 we focused on improving that process, investing in new tools to gather better, more specific customer survey data. As a result we enjoyed higher rates of customer satisfaction across a number of areas, and learned where we should focus in order to provide best-in-class service.

We also successfully managed an executive transition, as Stephen Whitley retired in 2015 after a long, distinguished career in the energy industry. Brad Jones replaced Steve as President and CEO in October, bringing with him 29 years of experience, including grid operations, power plant operations, generation development, market design, and regulatory and legislative affairs. His integrity, experience, and commitment to excellence have made him a great choice to lead the talented and dedicated people of the NYISO.

New York is fertile ground for innovations that will change the energy landscape, and we will continue to advance the electric system towards the most efficient, affordable, and reliable future.



## RELIABILITY

2015 ANNUAL REPORT | Reliability Powered by Markets

## Managing Historic Cold in 2015

Winter 2015 was especially cold, with New York State experiencing its most frigid February since 1941. The average temperatures in both January and February 2015 were colder than the 10-year and 30year average temperatures for those months. February 2015 electrical load, at an average monthly peak of 22,750 megawatts, also exceeded the 2014 peak and the 10-year load average for the month.

Despite the severe conditions, the NYISO successfully met all operating criteria through day-ahead planning procedures and extensive regional collaboration.

2015 Energy Usage 161,572 gigawatt-hours 2015 Peak Demand 31,139 megawatts Communication and planning enabled the NYISO to meet some of our toughest cold weather conditions in history with efficient,

reliable service. The NYISO used its cold weather fuel inventory protocol before every cold day to stay in contact with generators, which helped operators monitor and verify gas and oil inventories. In addition, transmission owners were able to reschedule maintenance outages and make transmission lines available on the coldest days.

### **Empowering Wind**

Wind power continues to grow as a resource and the NYISO continues to optimize the electric system's use of renewable power. In March 2015, electricity generated by wind in New York reached a new record – 1,524 megawatts.

The new record was set during the 1:00 pm hour on Monday, March 2, 2015. The output at that time represented 87 percent of the total nameplate capacity of New York's installed wind generation.

The NYISO was the first grid operator in the nation to enhance its wind management system by enabling wind plant operators to submit offer prices reflecting their cost of operation. That process allows the NYISO to better evaluate and integrate wind power alongside all other generating resources.

### Regional Gas-Electric Coordination Study

The cold weather in winter 2015 reinforced the value of focusing on gas-electric coordination. Those efforts included the Eastern Interconnection Planning Collaborative (EIPC) Gas-Electric System Interface Study, which was completed in July 2015.

The study provided an adequacy analysis of the natural gas pipeline delivery system across the territories of six electric system planning authorities: NYISO, Ontario's Independent Electricity System Operator (IESO), ISO New England (ISO-NE), PJM Interconnection (PJM), Midcontinent Independent Transmission System Operator (MISO), and the Tennessee Valley Authority (TVA). The study identified constraints on the natural gas pipeline system as well as many local gas distribution systems. In addition, it reviewed mitigation measures that may be considered by gas and electric system operators to alleviate the impacts on the electric system under gas-constrained conditions.

## MARKETS

### Fuel Cost and Energy Prices at Record Lows

The average annual wholesale cost of electric energy in New York State was \$44.09 per megawatt-hour in 2015—the lowest in the 15-year history of New York's competitive marketplace for wholesale electricity. The record low electric energy prices were significantly influenced by persistently low natural gas prices.

## Broader Regional Markets Progress

In December 2015, the NYISO and ISO New England implemented Coordinated Transaction Scheduling, a component of the cross-boundary Broader Regional Markets initiative. The new interregional market system increased the frequency of scheduling energy transactions between the regions. It enables market participants to access the lowest-cost source of power between the two regions.

**2015 Market Participants** 415

**2015 Market Transactions** \$6.48 billion



## Consumer Impact Analysis Enhanced

Working with stakeholders in the shared governance process, the NYISO made several improvements to its Consumer Impact Analysis in 2015. The enhancements provide end-use consumers and other market participants greater detail on the reasons market design initiatives are undertaken, the anticipated benefits of these projects, and the potential impacts of these initiatives on electricity rates. In addition, stakeholders have expanded opportunities to provide feedback on projects throughout the entire process. The Consumer Impact Analysis evaluates NYISO market projects' potential impact within four areas: reliability, environment/new technology, cost impact/market efficiencies, and transparency.

### Customer Satisfaction Increased in 2015

The NYISO's Core Values establish the foundation from which its responsibilities and accountabilities are delivered. In keeping with its Customer Focus core value, the NYISO is engaged in a company-wide effort to further enhance overall customer service.

To measure the success of those efforts, the NYISO Customer Satisfaction Index (CSI) integrates multiple survey feedback channels (Annual Customer Survey, Customer Inquiry Survey, Ongoing Performance Assessment, and the CEO Strategic Outreach Survey) to provide a unified metric. The CSI is presented on the NYISO's public website, www.nyiso.com.

In 2015, the overall CSI for 2015 was 86.6, an increase of +3.4 points from the 2014 score of 83.2. All survey channel scores saw improvement from 2014 to 2015 and the CSI Score increased across all market sectors from 2014 to 2015.

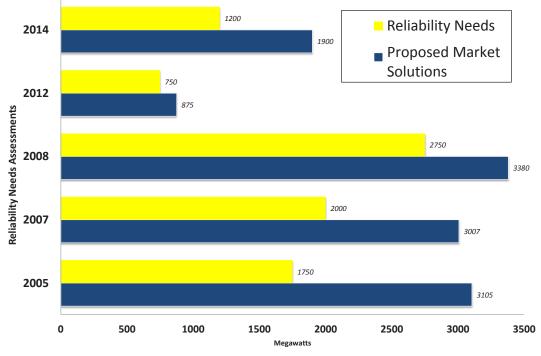
## PLANNING

## Reliability Needs Addressed

The Comprehensive Reliability Plan, approved by the NYISO Board of Directors in July 2015, concluded that New York's bulk power system will meet all applicable reliability criteria through 2024. It confirmed that the reliability needs initially identified in the 2014 Reliability Needs Assessment will be resolved. That assessment had identified transmission security needs starting in 2015 and resource adequacy needs in Southeast New York beginning in 2019.

These reliability needs were addressed by a combination of market participant investments made in response to market signals, and planned upgrades to local transmission owner systems.

Throughout the history of the NYISO's reliability planning process, market solutions have consistently responded to address identified reliability needs.



Note: The 2009 and 2010 Reliablity Needs Assessments identified no reliability needs.

## Transmission Congestion Assessed

The NYISO presented the results of the latest Congestion Assessment and Resource Integration Study (CARIS) in 2015. The CARIS process provides economic analysis of transmission congestion and the potential costs and benefits of congestion relief.

The 2015 study identified the most congested parts of the New York bulk power system-the high-voltage transmission path from Oneida County through the Capital Region and south to the Lower Hudson Valley, as well as the 230-kilovolt system in Western New York. The study also reviewed generic transmission, generation, and demand response solutions in these regions that could ultimately yield savings for power consumers.

## Public Policy Transmission Planning Launched

The New York State Public Service Commission (PSC) in July 2015 issued an order that identified relieving congestion in the state's western region as a public policy transmission need. This was the first transmission need identified in New York under the new process established in compliance with FERC Order No. 1000.

In December 2015, the PSC advanced its Alternating Current Transmission Proceeding to a competitive process managed by the NYISO under the Public Policy Transmission planning process. Transmission improvements are sought for 156 miles of high-voltage lines representing the backbone of the state's electric transmission system running west to east and north to south.

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## Enhanced Transparency

In 2015, the NYISO launched new features on its public website, offering more userfriendly information about New York's wholesale electricity markets and high-voltage electric grid. With more than 640,000 visitors in 2015, the NYISO website offers essential data for market participants, regulators, policymakers, news media and others.

New sections of the website include value metrics that provide ongoing measurements of the NYISO's performance in key areas of its wide-ranging responsibilities. To enhance the transparency of budget and financial information, the website's new NYISO budget page provides a centralized location for information about the budget process, expenditure trends, and financial statements. A real-time view of the fuels being used to generate New York's electricity was added to the section of the site that presents realtime data on load, price, and power flows.

### Center Attraction

NYISO's Control Center drew a record number of visitors for tours of the state-of-the-art facility in 2015. A total of 1,610 people toured the facility. That total broke the record of 1,548 visitors set in 2014 after the new control center opened for tours.

> Throughout its history, the NYISO has been a destination for electric industry professionals and energy policymakers interested in understanding how competitive markets were structured in New York State and in seeing realtime grid operations at work. From the NYISO's inception in December 1999 through the end of 2015, more than 7,700 visitors from nearly 90 nations have toured the NYISO.

## IFORMATION

## A Resource to Policymakers

The NYISO continued to be called upon by state government to provide authoritative information on energy issues in 2015. Executive Vice President Rich Dewey testified during two public hearings conducted by the New York State Senate in May 2015. One forum focused on New York State's Energy Highway and Reforming the Energy Vision (REV) initiatives. The other hearing addressed New York State's cybersecurity infrastructure, including the electric grid.

The NYISO also has been active in supporting Governor Cuomo's public policy objectives associated with serving 50% of the State's energy with renewable resources by the year 2030. New York's Clean Energy Standard will play a significant role in shaping the bulk power system in New York State over the next 15 years. The NYISO remains committed to working constructively with the Commission to achieve Governor Cuomo's clean energy objectives.





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\$ \$96,000.00

-00 DOLLARS

January 15, 2016

Brad Jones

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PAYTOTHE United Way of the Greater Capital Region

ICO NEW YORK INDEPENDENT SYSTEM OPERATOR

Ninety six thousand and ---

FOR Employee Contribution

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A record share of the NYISO workforce contributed to the 2015 NYISO United Way Campaign, with 80 percent of employees generously donating to the effort. The record-breaking pledges totaled nearly \$96,000. The 2015 total surpassed the previous record of \$92,000 set in 2004. NYISO employees have donated more than \$1.3 million to the United Way since 2000.

## AMUNITY

## STEM Schools Collaboration

The NYISO was pleased to partner with the East Greenbush School District to boost student interest in Science, Technology, Engineering and Math (STEM) in 2015. More than 300 decommissioned and surplus laptop computers as well as 100 networking gear components (switches and routers) were donated by the NYISO.

In 2015, we once again partnered with Schenectady's Museum of Innovation and Science (miSci) as a proud sponsor and exhibitor for the museum's annual Science Festival, where thousands of children from Capital Region schools get hands-on lessons about electricity, nanotechnology, robotics, natural sciences, chemistry, and astronomy.





## NYISO LEADERSHI

## 2015 NYISO Board of Directors *as of December 31, 2015*

Michael B. Bemis, Board Chair Former President of Exelon Corp.; CEO of London Electricity; EVP of Entergy Corp.; Partner with Deloitte

#### Erland E. Kailbourne, Board Vice Chair Chairman of the Board of Financial Institutions, Inc. and its subsidiary Five Star Bank

**Ave M. Bie** Partner in the law firm of Quarles & Brady and former Chair of the Wisconsin Public Service Commission

#### **Daniel C. Hill** Former Senior Vice President and Chief Information Officer (CIO) of Exelon Corporation

#### **Robert A. Hiney** Former Executive Vice President for Power Generation of the New York Power Authority (NYPA)

**Daniel B. More** Former Managing Director at Morgan Stanley, leading the firm's global efforts in Utility Mergers and Acquisitions

**James V. Mahoney** President and CEO of Energy Market Solutions, Inc. and former President and CEO of DPL Inc., a regional energy and utility company

**Thomas F. Ryan, Jr.** *Former President and COO of the American Stock Exchange* 

**Vikki L. Pryor** *Principal and founder of Change Create Transform* 

**Bradley C. Jones** *President and CEO of New York Independent System Operator* 



### 2015 NYISO Leadership Team: Corporate Officers *as of December 31, 2015*

**Bradley C. Jones** *President and CEO* 

**Richard Dewey** *Executive Vice President* 

**Rick Gonzales** Senior Vice President and Chief Operating Officer

Rana Mukerji Senior Vice President, Market Structures

**Henry Chao** *Vice President, System and Resource Planning* 

**Doug Chapman** Vice President and Chief Information Officer

**Diane L. Egan** *Board Secretary and Corporate Secretary* 

**Robert E. Fernandez** *General Counsel* 

**Cheryl Hussey** Vice President and Chief Financial Officer

Kevin M. Lanahan Vice President, External Affairs

**Emilie Nelson** *Vice President, Market Operations* 

Wesley Yeomans Vice President, Operations



## SHARED GOVERN

The NYISO is governed jointly by an independent Board of Directors working with Market Participants that include transmission owners, generation owners, other suppliers such as wind and demand response providers, end-use consumers, public power, and environmental interests.

The shared governance process includes three standing stakeholder committees: the Management Committee, the Business Issues Committee and the Operating Committee. These committees, and the dozens of supporting subcommittees, working groups, and task forces, provide stakeholders collaborative forums where issues regarding the administration of the markets, the operation of New York's bulk electricity grid, and future system planning are addressed.

The 2015 shared governance process involved 218 meetings of committees, subcommittees, task forces and working groups.

By maintaining an open, collaborative process soliciting and considering diverse points of view, the various elements of the NYISO's mission and expanding roles are better understood by all who participate. This commitment to collaboration is an invaluable asset as the NYISO moves forward to meet and master future challenges.



# ANCE 450



### Committee Chairs and Co-Chairs

In 2015

#### Management Committee

Chair - Deidre Altobell, *Consolidated Edison* Vice Chair - Andrew Antinori, *NYPA* 

#### **Business Issues Committee**

Chair - Patti Caletka, *NYSEG* Vice Chair - Chris LaRoe, *Brookfield* 

#### **Operating Committee**

Chair - Rick Roby, *Dynegy* Vice Chair - Dave Evanoski, *Somerset Operating Company* 

## MARKET PARTICIPANTS

3M Company Abest Power & Gas, LLC ABN Energy, LLC AC Energy, LLC Accent Energy Midwest II LLC dba IGS Energy Aesir Power, LLC AG Energy, L.P. Agera Energy, LLC Aggressive Energy, LLC Agway Energy Services, LLC Albany Energy LLC Allegany Generating Station, LLC Alpha Gas and Electric, LLC Alphataraxia Nickel LLC Ambit New York, LLC American Power & Gas, LLC Ameristar Energy LLC Amherst Utility Cooperative (AUC) AP Gas & Electric (NY), LLC dba APG&E AP Gas & Electric (TX), LLC Appian Way Energy Partners East, LLC Ardor Energy Limited Liability Company Associated Renewable Inc. Astoria Energy II, LLC Astoria Energy LLC Astoria Generating Company L.P. Astral Energy LLC Atlantic Energy, LLC Atlantic Power and Gas LLC Axon Energy, LLC

Baker Boy, LLC **Barclays Services Corporation** Bayonne Energy Center, LLC BBPC, LLC, d/b/a Great Eastern Energy Binghamton BOP LLC **BJ Energy LLC** Black Oak Energy LLC Bluco Energy, LLC Blue Rock Energy, Inc. BNP Paribas Energy Trading GP Boralex Hydro Operations Inc Boston Energy Trading and Marketing LLC Bounce Energy NY, LLC **BP Energy Company** Brookfield Energy Marketing LP Brookfield Renewable Energy Marketing US LLC Broome Energy Resources, LLC Brown's Energy Services LLC Bruce Power Inc. BTG Pactual Commodities (US) LLC Buffalo Watt Holdings, LLC Buy Energy Direct, LLC Calpine Energy Services LP Canadian Wood Products - Montreal Inc Canandaigua Power Partners, LLC Canastota Windpower LLC Cargill Power Markets, LLC Carr Street Generating Station LP Carthage Energy LLC Castleton Commodities Merchant Trading L.P.

Castleton Power, LLC Cayuga Operating Company, LLC CCI Rensselaer LLC **CECONY-LSE** Censtar Energy Corp Central Hudson Gas & Electric Corp. Centre Lane Trading Ltd. Champion Energy Services, LLC Chesapeake Trading Group, LLC CHI Power Marketing, Inc Chief Energy Power, LLC Chubu TT Energy Management Inc. Citigroup Energy Inc. Citizens Choice Energy, LLC City of Niagara Falls City Power & Gas, LLC Clear Choice Energy, LLC Clearview Electric, Inc. Columbia Utilities Power, LLC Commerce Energy, Inc. d/b/a Amigo Energy Con Edison Solutions, Inc. ConocoPhillips Company Consolidated Edison Co. of New York, Inc. Consolidated Edison Energy, Inc. Consolidated Hydro New York, Inc. Consolidated Power Co., LLC Constellation Energy Power Choice, Inc. Constellation Energy Services of New York, Inc. Constellation NewEnergy, Inc. Copperwood Energy Fund, LP

Corporate Services Support Corp. County of Erie NY County of Niagara NY Covanta Niagara, LP Credit Suisse (USA), Inc. Cummins Inc Cutone & Company Consultants, LLC Danskammer Energy, LLC DC Energy LLC DC Energy New York, LLC Demand Response Partners, Inc. Demansys Energy LLC Direct Energy Business Marketing, LLC Direct Energy Business, LLC Direct Energy Marketing Inc Direct Energy Services, LLC Direct Energy Small Business, LLC DTE Energy Trading Inc Dufossat Capital III, LLC Dynamis ETF, LLC Dynasty Power Inc Dynegy Marketing and Trade, LLC (DMT) E.ON Global Commodities North America LLC Eagle Creek Hydro Power, LLC Eagle Power Authority, Inc. Eagles Power, LLC East Coast Power and Gas, LLC East Coast Power, LLC EDF Energy Services, LLC EDF Trading North America, LLC

EDP Renewables North America LLC eKapital NY, LLC Eligo Energy NY, LLC Eligo Energy, LLC Emera Energy Services Subsidiary No. 1, LLC Emera Energy Services, Inc Emera Energy U.S. Subsidiary No. 1, Inc. Emera Energy U.S. Subsidiary No. 2, Inc. **EMP Power, LLC Empire Generating Co, LLC** Empire Natural Gas Corp. Energetix, Inc. Energy Connect, Inc. Energy Conservation and Supply, Inc. Energy Cooperative of America, Inc dbaEnCoop of NY Energy Limited Inc Energy Plus Holdings LLC Energy Services Providers, Inc dba NY Gas&Electric Energy Spectrum Inc. Energy Technology Savings, Inc energy.me midwest, llc Energya VM Gestion de Energia S.L.U. EnergyMark Business Solutions, LLC EnergyMark, LLC EnerNOC, Inc. Enerwise Global Technologies, Inc. dba CPower Entergy Nuclear Fitzpatrick, LLC Entergy Nuclear IP-2 LLC Entergy Nuclear IP3, LLC Entergy Nuclear Power Marketing LLC **Entergy Solutions LLC** Entra Energy LLC Entrust Energy East, Inc. Erie Boulevard Hydropower LP Erie Wind, LLC ETC Endure Energy L.L.C. Ethical Electric, Inc. dba Ethical Electric

**ETS Emerald LLC** Everyday Energy, LLC **Exelon Generation Company LLC** Family Energy Inc FC Energy Services Company, LLC First Choice Energy, Inc. First Commodities International Inc. Flanders Energy LLC Flat Rock Windpower II LLC Flat Rock Windpower LLC Franklin Power LLC Freepoint Commodities LLC Freeport Electric Frontier Utilities Northeast LLC Galaxy Energy, LLC Galt Power Inc. Gateway Energy Services Corporation GDF Suez Energy Marketing NA, Inc GDF Suez Energy Resources NA, Inc GDF SUEZ Retail Energy Solutions, LLC dbaThinkEner GenOn Energy Management, LLC Global Energy LLC Green Island Power Authority Green Mountain Energy Company Green Mountain Power Corporation Greenlight Energy Inc **GRG Energy LLC** Griffiss Utility Services Corporation Hampshire Paper Co., Inc. Hanissim Capital, LLC Hardscrabble Wind Power LLC HIKO Energy, LLC Homer City Generation, L.P. Howard Wind LLC HQ Energy Services (US) HSBC Bank USA Hudson Energy Services, LLC Iberdrola Renewables, LLC

IDT Energy, Inc Indeck Energy Svs of Silver Springs Indeck-Corinth LP Indeck-Olean LP Indeck-Oswego LP Indeck-Yerkes LP Independence Energy Group LLC Inertia Power V, LLC Infinite Energy Corp dba Definite Energy Group Innovative Energy Systems, Inc. Innoventive Power LLC Inspire Energy Holdings, LLC Integrys Energy Services, Inc. International Paper Company Iron Energy LLC dba Kona Energy Islip Resource Recovery Agency J Aron and Company Jamestown Board of Public Utilities Josco Energy Corp. Just Energy New York Corp Kaleida Health **KASS** Commodities, LLC KFW Energy Trading, LLC Kiwi Energy NY LLC L&L Energy, LLC Lavand & Lodge, LLC Lexington Power & Light, LLC Liberty Power Holdings LLC Linde Energy Services, Inc. Lockport Energy Assoc. Long Island Power Authority Lyonsdale Biomass, LLC M&R Energy Resources Corp. Macquarie Energy LLC Madison Windpower, LLC MAG Energy Solutions Inc. Major Energy Electric Services, LLC Mansfield Power and Gas, LLC

Marathon Power LLC Marble River, LLC Marsh Hill Energy LLC Mercuria Energy America, Inc Merrill Lynch Commodities, Inc. Midwest Energy Trading East LLC Mitchell Supreme Fuel Co. Model City Energy, LLC Modern Innovative Energy, LLC Monroe County NY Monterey NY, LLC Morgan Stanley Capital Group, Inc. MPower Energy LLC Munnsville Wind Farm, LLC Nalcor Energy Marketing Corporation Nationwide Energy, LLC NDC Partners LLC NetPeak Energy Group LLC New Athens Generating Company LLC New Wave Energy Corp New York Industrial Energy Buyers, LLC New York Municipal Power Agency New York Power Authority New York State Electric & Gas Corp. Next Utility Energy LLC NextEra Energy Power Marketing, LLC NextEra Energy Services Massachusetts, LLC NextEra Energy Services New York, LLC Niagara Frontier Transportation Authority Niagara Generation, LLC Niagara Mohawk Power Corp. Niagara University Niagara Wind Power, LLC Nine Mile Point Nuclear Station, LLC Nissequogue Cogen Partners Noble Altona Windpark, LLC Noble Americas Energy Solutions LLC Noble Americas Gas & Power Corp



Noble Bliss Windpark, LLC Noble Chateaugay Windpark, LLC Noble Clinton Windpark I, LLC Noble Ellenburg Windpark, LLC Noble Wethersfield Windpark LLC NOCO Electric LLC Nordic Energy Services, LLC North American Power and Gas LLC North Energy Power, LLC Northbrook Lyons Falls, LLC Northbrook New York LLC Northern States Power Company Northstar NY Ltd. NRG Curtailment Solutions, Inc. NRG Power Marketing LLC NuEnerGen, LLC NYSEG Solutions, Inc. Oasis Power, LLC d/b/a Oasis Energy Occidental Power Services Inc **OCP** Resources, LLC Ontario Power Generation Energy Trading, Inc. Ontario Power Generation Inc. Orange & Rockland Utilities, Inc. Orthogonal Energy, LLC **ORU-LSE** Pacific Summit Energy LLC Palmco Power NJ, LLC Palmco Power NY, LLC Pay Less Energy, LLC Peninsula Power, LLC Perigee Energy, LLC Phoenix Energy Group, LLC Planet Energy (New York) Corp Plant-E Corp. Plymouth Rock Energy, LLC Point Break Energy Marketing LTD Power City Partners, L.P. Power Supply Services LLC

**Powerex** Corporation Premier Empire Energy LLC PSEG Energy Resource & Trade, LLC Public Power, LLC Pure Energy Inc R.E. Ginna Nuclear Power Plant, LLC Rainbow Energy Marketing Corp **RBC Energy Services LP** Red Wolf Energy Trading, LLC Red Wolf NT, LLC **ReEnergy Black River LLC ReEnergy Chateaugay LLC** Reliant Energy Northeast, LLC dba NRG Retail Solut Renaissance Power & Gas, Inc. Repsol Energy North America Corporation Residents Energy, LLC **Riverbay Corporation** Robison Energy, LLC Rochester Gas & Electric Corp. Roctop Investments Inc Roseton Generating LLC Royal Bank of Canada Rubicon NYP Corp. S.J. Energy Partners, Inc. Sanctorum Energy Inc. Saracen Energy East LP Saracen Energy West LP Saracen Power LP Saranac Power Partners, L.P. SBF New York, L.L.C. SBR Energy, LLC Schools & Municipal Energy Cooperative (SMEC) Selkirk Cogen Partners, L.P. Seneca Energy II, LLC Seneca Power Partners, L.P. **SESCO Enterprises LLC** Sheldon Energy LLC Shell Energy North America (US), L.P.

Siemens Industry, Inc Smart One Energy, LLC SmartEnergy Holdings, LLC Sol Energy, LLC Solea Energy, LLC Solios Power LLC Somerset Operating Company, LLC South Bay Energy Corp. South Jersey Energy Company South Jersey Energy ISO1, LLC South Jersey Energy ISO3, LLC South Jersey Energy ISO4, LLC South Jersey Energy ISO5, LLC South Jersey Energy ISO6, LLC South Jersey Energy ISO7, LLC Southern Energy Solution Group, LLC Spark Energy, L.P. Spartan Electricity Futures, Inc Sperian Energy Corp SREC Generating Company, Inc Starion Energy NY, Inc StatArb Investment LLC State of New York - OGS State of New York - OGS Municipal State of New York - SUNY State of New York - SUNY Buffalo Stephentown Spindle, LLC Sterling Power Partners, L.P. Stony Creek Energy LLC Stream Energy New York, LLC Synergy Biogas LLC Talen Energy Marketing, LLC Targray Americas Inc. TC Ravenswood, LLC TEC Energy Inc. Tenaska Power Services Co. Texas Retail Energy, LLC The Dayton Power and Light Company Time Warner Inc. TrailStone Power, LLC TransAlta Energy Marketing (U.S.) Inc. TransCanada Power Marketing, Ltd. Trident Retail Energy, LLC dba Trident Power Triton Power Company TrueLight Energy Fund, LP Twin Eagle Resource Management, LLC U.S. Energy Partners LLC UGI Energy Services, LLC Uncia Energy, LP - Series F University of Rochester Utility Expense Reduction, LLC Velocity American Energy Master I, L.P. Verde Energy USA New York, LLC Village of Rockville Centre Viridian Energy NY, LLC Viridity Energy, Inc. Virtual Power Hedging, LLC Vitol Inc. Watchtower Bible and Tract Society of New York, In Western New York Wind Corp. Wheelabrator Hudson Falls, LLC Wheelabrator Westchester, L.P. Windy Bay Power, LLC WM Renewable Energy, LLC XO Energy NY, LP XOOM Energy New York, LLC **XOOM Energy, LLC** Zone One Energy, LLC



## FINANCIALS

#### **Independent Auditors' Report**

The Board of Directors New York Independent System Operator, Inc.:

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of New York Independent System Operator, Inc. which comprise the statements of financial position as of December 31, 2015 and 2014, and the related statements of activities, and cash flows for the years then ended, and the related notes to the financial statements.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Opinion**

In our opinion, the financial statements referred to above present fairly in all material respects, the financial position of New York Independent System Operator, Inc. and the results of its operations and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

Albany, New York March 18, 2016

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#### NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Statements of Financial Position

December 31, 2015 and 2014

Assets		2015	2014
Current assets: Cash and cash equivalents Restricted cash Marketable securities - (note 8) Accounts receivable – net (note 2) Prepaid expenses Regulatory assets – current portion (note 3) Other current assets	\$	48,569,637 352,720,173 423,655 37,550,745 8,898,407  3,286	51,567,015 417,362,068 
Total current assets		448,165,903	556,748,571
Noncurrent assets: Regulatory assets (note 3) Property and equipment – net (note 4) Other noncurrent assets (note 7)		13,910,110 114,551,020 5,763,084	13,226,398 121,610,352 4,979,804
Total noncurrent assets		134,224,214	139,816,554
Total	\$	582,390,117	696,565,125
Liabilities	-		
Current liabilities: Accounts payable and accrued expenses Market participant security deposits Market participant prepayments Working capital reserve (note 10) Long-term debt – current portion (note 6) Regulatory liabilities – current portion (note 3) Deferred revenue (note 11) Other current liabilities (note 8)	\$	130,256,725 257,132,016 7,936,346 33,011,079 23,340,474 9,909,888 6,750,052 1,961,946	141,894,041 362,535,937 5,714,915 33,010,149 22,334,961 5,783,212 4,321,447 1,668,658
Total current liabilities		470,298,526	577,263,320
Noncurrent liabilities: Accrued pension liability (note 8) Accrued postretirement liability (note 8) Regulatory liabilities (note 3) Other noncurrent liabilities (notes 7 and 8) Long-term debt (note 6)		3,820,083 5,061,122 4,865,362 19,665,594 78,679,430	2,651,751 565,484 9,845,620 23,960,378 82,278,572
Total noncurrent liabilities		112,091,591	119,301,805
Total liabilities	-	582,390,117	696,565,125
Commitments and contingencies (note 12)		_	_
Unrestricted net assets		_	
Total liabilities and net assets	\$	582,390,117	696,565,125

See accompanying notes to financial statements.



#### NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

Statements of Activities

Years ended December 31, 2015 and 2014

		2015	2014
Revenues:			
Rate Schedule 1 tariff charge	\$	168,269,091	164,984,481
Planning studies revenue	Ψ	4,498,202	3,347,306
Fees and services		1,330,574	1,364,906
Grant revenue (notes 13 and 14)		683,185	4,610,945
Interest income		12,659	9,303
Total revenues		174,793,711	174,316,941
Operating expenses:			
Compensation and related benefits (note 8)		77,322,885	73,685,956
Depreciation and amortization (note 4)		27,395,084	26,697,078
Professional fees and consultants		22,230,646	20,541,424
Maintenance, software licenses and facility costs		19,014,704	16,764,557
Federal energy regulatory commission fees		10,909,381	12,000,000
Administrative and other expenses		4,581,156	4,384,954
Telecommunication expenses		3,725,922	3,736,307
Interest expense		3,677,026	4,030,128
Insurance expense		2,856,994	2,856,974
Training, travel, and meeting expenses		1,861,519	2,305,162
Change in fair value of interest rate swaps (note 7)		519,635	3,245,985
Grant expenses – New York transmission owners		126 240	2 017 127
(notes 13 and 14)		426,249	3,817,137
Northeast power coordinating council fees Change in fair value of marketable securities		260,980 11,530	251,279
	-		
Total operating expenses		174,793,711	174,316,941
Change in unrestricted net assets		—	_
Unrestricted net assets, beginning of year		_	_
Unrestricted net assets, end of year	\$	_	_
	=		

See accompanying notes to financial statements.

#### NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

#### Statements of Cash Flows

#### Years ended December 31, 2015 and 2014

	_	2015	2014
Cash flows from operating activities:			
Change in unrestricted net assets	\$	_	_
Adjustments to reconcile change in unrestricted net assets to net cash provided by operating activities:			
Depreciation and amortization		27,395,084	26,697,078
Loss on disposition of assets		35,502	20,077,070
Unrealized loss on marketable securities		11,660	
Change in operating assets and liabilities:		11,000	
Decrease in accounts receivable and prepaid expenses		41,296,022	29,383,013
Decrease in restricted cash		64,641,895	186,729,265
Increase in marketable securities		(435,315)	100,727,205
Decrease (increase) in regulatory assets		26,555	(830,761)
(Increase) decrease other assets		(724,029)	326,285
Decrease in accounts payable and accrued expenses		(11,100,807)	(185,518,722)
Increase (decrease) in market participant prepayments		2,221,431	(838,115)
Decrease in market participant security deposits		(105,403,921)	(27,244,618)
Increase in working capital reserve		930	1,184
Increase (decrease) in regulatory liabilities		3,656,834	(2,525,542)
(Decrease) increase in deferred revenue and other liabilities		(1,117,827)	3,304,312
	-		
Net cash provided by operating activities	-	20,504,014	29,483,379
Cash flows from investing activities: Acquisition of property and equipment (including capitalized interest)		(20,907,763)	(24,602,490)
	-		
Net cash used in investing activities	-	(20,907,763)	(24,602,490)
Cash flows from financing activities:			
Proceeds from revolving credit facility loan		7,000,000	5,000,000
Repayment of revolving credit facility loan		(7,000,000)	(5,000,000)
Repayment of 2011 – 2013 budget facility loan		(16,151,942)	(30,192,372)
Proceeds from 2014 – 2017 budget facility loan		25,000,000	25,000,000
Repayment of 2014 – 2017 budget facility loan		(7,719,909)	—
Proceeds from 2012 Infrastructure Loan		—	6,249,025
Repayment of 2012 Infrastructure Loan		(2,646,316)	(1,102,632)
Repayment of Mortgage and Renovations loans	-	(1,075,462)	(1,013,598)
Net cash used by financing activities	-	(2,593,629)	(1,059,577)
Net (decrease) increase in cash and cash equivalents		(2,997,378)	3,821,312
Cash and cash equivalents - beginning of year	-	51,567,015	47,745,703
Cash and cash equivalents - end of year	\$	48,569,637	51,567,015
Supplemental disclosure of cash flow: Information – cash paid during the year for interest, net of capitalized interest	\$	3,699,255	3,992,021
Noncash operating activity: Change in pension and postretirement liabilities	\$	5,208,906	3,445,575
Noncash investing activities: Property and equipment additions which were accrued but not paid Property and equipment additions previously accrued which were paid	\$	3,971,670 4,508,179	4,508,179 5,700,096

See accompanying notes to financial statements.





#### (1) Summary of Significant Accounting Policies

#### (a) Business Description

The New York Independent System Operator, Inc. (NYISO) was formed in April 1997 and commenced operations on December 1, 1999. NYISO is incorporated in the state of New York as a not-for-profit organization. NYISO assumed the responsibilities of its predecessor, the New York Power Pool (NYPP), which had coordinated the reliability of New York State's electric power grid for more than 30 years. Formed as a result of Federal Energy Regulatory Commission (FERC) policies, NYISO monitors a network of 11,000 circuit miles of high-voltage transmission lines and serves approximately 400 market participants.

NYISO's mission, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by maintaining and enhancing regional reliability, operating open, fair and competitive wholesale electricity markets, planning the power system for the future, and providing factual information to policy makers, stakeholders and investors in the power system. The NYISO facilitates fair and open competition in the wholesale electricity markets in which electricity and related services are purchased and sold on the basis of competitive bidding. Billing invoices are issued by NYISO to each market participant to settle transactions occurring in the NYISO markets.

NYISO is governed by an independent board of directors, as well as a committee structure consisting of market participant representatives. In addition to FERC oversight, NYISO is also subject to regulation in certain aspects by the New York State Department of Public Service Commission.

#### (b) Basis of Accounting and Presentation

The accompanying financial statements have been prepared on an accrual basis of accounting in accordance with U.S. generally accepted accounting principles.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include the useful lives of fixed assets, recoverability of regulatory assets, the valuation of derivative instruments, and reserves for employee benefit obligations.

#### (c) Regulatory Accounting

NYISO's financial statements are prepared in accordance with generally accepted accounting principles for rate-regulated entities, Financial Accounting Standards Board Accounting Standards Codification (FASB ASC) Topic 980, *Regulated Operations*. As such, regulators may permit specific incurred costs, typically treated as expenses by unregulated entities, to be deferred and expensed in future periods when it is probable that such costs will be recovered in customer rates. Incurred costs are deferred as regulatory assets when NYISO concludes that it is probable future revenues will be provided to permit recovery of the previously incurred cost. A regulatory liability is recorded when amounts that have been recorded by NYISO are likely to be refunded to customers through the rate-setting process.

#### (d) Revenue Recognition

Settlements of market participants' energy transactions are not reflected in NYISO's Statements of Activities since they do not represent revenues or expenses of NYISO, as NYISO merely acts as an

intermediary in the settlement process. In this role, NYISO receives and disburses funds from and to market participants for each settlement period.

Effective July 1, 2012, NYISO's two FERC-approved tariffs, the Open Access Transmission Tariff (OATT) and the Market Administration and Control Area Services Tariff (Services Tariff), were amended to clarify NYISO's role as the single counterparty to market participant transactions in the NYISO markets. For all market participant transactions in the NYISO markets, flash title passes through NYISO immediately prior to passing to the ultimate buyer and seller of the product. This arrangement reinforces NYISO's authority to continue to net a market participant's offsetting financial positions in NYISO markets for credit and billing purposes; provides clarity in NYISO's legal standing to pursue collection from a bankrupt market participant; and, also complies with the FERC directives on credit policy requirements for competitive wholesale electricity markets.

NYISO's tariffs allow recovery of NYISO's capital requirements, operating expenses and debt service costs through a surcharge assessed to market participants. The revenue from this surcharge, Rate Schedule 1, is earned when energy is scheduled and dispatched. Market participants are then billed for such charges in the subsequent settlement period's invoice.

NYISO's Rate Schedule 1 includes a timing mechanism that effectively meets the requirements of an alternative revenue program set forth in ASC Topic 980, *Regulated Operations*, Subtopic 602, *Revenue Recognition*. Accordingly, revenue is recognized for net financing obligations and capital costs incurred during the reporting period based on the revenue requirement formula in the tariffs. NYISO has recorded an Other Noncurrent Liability of \$12,531,130 and \$16,996,595, respectively, in the accompanying 2015 and 2014 Statements of Financial Position in connection with this rate-making recovery mechanism.

Revenues recorded as planning studies revenues arise from billing and collection services in the study service agreement process performed by NYISO. These revenues are offset by the corresponding study expenses, recorded in operating expenses, which were incurred in performing such studies. A portion of the deposits related to planning studies are nonrefundable and recorded as revenue when received.

#### (e) Government Grants

NYISO recognizes government grants when there is reasonable assurance that NYISO will comply with the conditions attached to the grant arrangement and the grant will be received. Government grants are recognized in the Statements of Activities in the period in which NYISO recognizes the related costs for which the government grant is intended to compensate.

#### (f) Cash and Cash Equivalents

NYISO considers short-term marketable securities with original maturities of three months or less to be cash equivalents. The cash equivalents at December 31, 2015 and 2014 were held in money market accounts invested primarily in short-term U.S. government obligations. NYISO's cash and cash equivalents consist primarily of funds accumulated for the working capital reserve, for general operating purposes, and amounts for funding employee benefit plans.

#### (g) Restricted Cash

Restricted cash consists primarily of market participant security deposits held in escrow accounts, amounts prepaid by market participants in advance of settlement billing dates, amounts collected on settlement invoices, amounts collected for Transmission Congestion Contract (TCC) auctions, amounts deposited for planning studies, amounts collected for voltage support services, amounts





collected for the estimated annual FERC fee, and funds received from FERC for the purpose of enhancing NYISO's surveillance capabilities. Security deposits are invested at the market participant's choice in money market funds or short or intermediate-term bond funds. NYISO presents changes in restricted cash in the operating activities section of the Statements of Cash Flows instead of in the investing activities section. NYISO has determined that this classification is more suitable to the nature of its operations.

#### (h) Other Assets

Other assets consist primarily of timing differences on certain rate-making recoveries, the fair value of interest rate swap agreements, noncurrent prepaid expenses, and miscellaneous receivables.

#### (i) **Property and Equipment**

Property and equipment are recorded at cost. NYISO capitalizes property and equipment additions in excess of \$5,000 with a useful life greater than one year. Depreciation is computed on the straight-line method over the assets' estimated useful lives of three to five years, except for building and building improvements, which are depreciated on a straight-line basis over 20 years. When assets are retired or otherwise disposed of, the cost and related depreciation are removed, and any resulting gain or loss is reflected in expense for the period. Repairs and maintenance costs are charged to expense when incurred.

Labor, overhead, interest, consulting, and related costs incurred to acquire and develop computer software for internal use are capitalized and amortized using the straight-line method over three years. Costs incurred prior to the determination of feasibility of developed software and following the in-service date of developed software are expensed.

NYISO capitalizes the interest cost as part of the historical cost of developing certain assets.

Long-lived assets are recorded at cost, and are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. Management is not aware of any events or changes in circumstances that would necessitate a review of any long-lived assets as of the years ended December 31, 2015 and 2014.

#### (j) Working Capital Reserve

In order to maintain the liquidity and stability of NYISO's markets, NYISO has accumulated a working capital fund through amounts charged to market participants under the Rate Schedule 1. Any change to NYISO's working capital needs would be billed to market participants in future Rate Schedule 1 charges. Market participants are entitled to interest on their principal contributions to the working capital reserve. Each market participant is allocated interest based on the respective ratio share of each market participant's principal contributions to the total working capital fund. Accumulated interest on the working capital fund is distributed annually to market participants.

#### (k) Market Participant Prepayments

Amounts received from certain market participants who do not provide an alternate form of financial assurance and must prepay their obligations to NYISO in advance of settlements billing dates are recorded as market participant prepayments. Also, certain market participants choose to make advance payments to the NYISO to be applied to future settlement invoices.

#### (1) Deferred Revenue

Advance payments from developers for planning studies, and funds received from FERC for the purpose of enhancing NYISO's surveillance capabilities are reflected as deferred revenue. Fees for participation in NYISO's governance process are billed to market participants in advance of the year for which they apply and are amortized over the related governance period. All such unamortized amounts are included in deferred revenue.

#### (m) Income Taxes

NYISO has been recognized by the Internal Revenue Service as an organization described in Internal Revenue Code (The Code) Section 501(c)(3) and is generally exempt from income taxes under Section 501(a) of the Code. During the calendar years 2015 and 2014, no unrelated business taxable income was generated by NYISO, and therefore no disclosure is made for federal or state income taxes.

The NYISO has determined prior to recording any benefit in the financial statements that it is more likely than not that the tax position will be sustained upon examination by the appropriate taxing authorities, as required by the *Accounting for Uncertainty in Income Taxes* Topic of the FASB ASC. A tax position is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon settlement.

#### (n) Fair Value

NYISO utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. Fair value is determined based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between the observable and unobservable inputs, which are categorized in one of the following levels:

- Level 1 inputs: Unadjusted quoted prices in active markets for identical assets or liabilities that NYISO has the ability to access at the measurement date
- Level 2 inputs: Other than quoted prices included within Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability
- Level 3 inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for a situation in which there is little, if any, market activity for the asset or liability at the measurement date

The level in the fair value hierarchy within which a fair value measurement in its entirety falls is based on the lowest-level input that is available for that particular financial instrument.

NYISO's financial instruments consist primarily of cash and cash equivalents, restricted cash, marketable securities, accounts receivable, prepaid expenses and other current assets, accounts payable and accrued expenses, short-term and long term debt, and benefit plan assets such that carrying value approximates fair value. The fair value of derivative instruments and benefit plan assets is discussed in notes 7 and 8, respectively.





#### (o) Pension and Other Postretirement Benefit Plans

NYISO has a defined benefit pension plan covering certain employees upon their retirement. The benefits are based on years of service and employee's compensation during the five years before retirement. NYISO also sponsors a defined post-retirement benefit medical plan for retired employees and their dependents. NYISO records annual amounts relating to its pension and postretirement plans based on calculations that incorporate various actuarial and other assumptions, including discount rates, mortality, assumed rates of return, compensation increases, turnover rates, and healthcare costs and trend rates. Assumptions are reviewed on an annual basis and modifications are made to the assumptions based on current rates and trends. The effect of modifications made to those assumptions utilized in recording its obligations under its plans are reasonable based on its experience and market conditions.

The net periodic costs are recognized as employees render the services necessary to earn the pension and postretirement benefits. Unamortized amounts that are expected to be recovered in rates in future years are recorded as a regulatory asset or liability. See note 8 for additional information.

#### (p) Concentration of Credit Risk

Financial instruments that subject NYISO to credit risk consist primarily of market settlement invoices and Rate Schedule 1 revenue due from market participants. As provided in the OATT and Services Tariff, NYISO reviews the creditworthiness of market participants, who are required to either maintain certain financial statement criteria and/or approved credit ratings, to post specified financial security in an amount sufficient to cover their outstanding liability to NYISO, or to prepay their obligations in advance of settlement billing dates.

NYISO's tariffs establish specific periods for the adjustment of settlement invoices and for market participant challenges to amounts billed for a particular service period. Settlement invoices can be adjusted for up to four months after the date of the monthly invoice issuance, and these invoices can be challenged for an additional one month after the issuance of all settlement adjustment invoices. Subsequent invoices issued during the settlement adjustment period "true up" amounts previously billed. After all true-up invoices are issued during the settlement adjustment adjustment period, market participants may challenge the amounts billed for a particular service period. If NYISO agrees with the provisions of the challenge, a final invoice is issued for that service period. As a result, NYISO is exposed to credit risk until all settlement adjustment and final invoices for each service period are finalized and liquidated. As of December 31, 2015, the adjustments and true-ups of all settlement invoices through March 2015 were completed. However, in the event of a market participant default and bad debt loss, Rate Schedule 1 of the OATT allows NYISO to recover bad debt losses from all remaining market participants on future invoices.

#### (q) Derivative Instruments

NYISO recognizes all derivative instruments as either assets or liabilities in the Statement of Financial Position at their respective fair value. The fair values of NYISO's derivative instruments are quoted by external sources. The changes in the fair value of these derivatives are recorded as a change in fair value of interest rate swaps in the Statement of Activities. Due to NYISO's regulated rates, any changes in fair value of these derivative instruments are recorded as either Other Current or Noncurrent Assets or Other Current or Noncurrent Liabilities, as appropriate. Payments on these derivative instruments are recorded and classified as interest expense.

NYISO uses derivative instruments primarily to hedge the cash flow effects of fluctuations in interest rates. NYISO is exposed to credit loss in the event of nonperformance by the commercial

banks under the interest rate swap agreements. The credit risk related to hedge agreements is limited to the cost to NYISO to replace the aforementioned hedge arrangements with like instruments. NYISO monitors the credit standing of the counterparties and anticipates that the counterparties will be able to fully satisfy their obligations under the hedge arrangements. See note 7 for additional information.

#### (2) Accounts Receivable

NYISO's accounts receivable at December 31, 2015 and 2014 consisted of the following:

	_	2015	2014
Billed:			
Current-due settlement invoices Miscellaneous billed receivables Past-due-settlement invoices Grants billed receivables	\$	23,825,273 468,083 18,054 —	67,608,207 224,394 39,848 306,437
	_	24,311,410	68,178,886
Unbilled:			
Centralized TCC Two Year Auction		10,439,149	9,978,057
Rate Schedule 1 revenue for December		2,328,355	2,138,159
Miscellaneous unbilled receivables		471,525	139,706
Replenishments of working capital reserve		306	306
Grants unbilled receivables	_		66,758
		13,239,335	12,322,986
Total	\$	37,550,745	80,501,872

NYISO invoices market participants weekly for settlement charges and Rate Schedule 1 revenue. Current due settlement invoices represent amounts invoiced on December 30, 2015 and due to be collected on January 4, 2016.

Past due settlement invoices as of December 31, 2015 are expected to be recovered in 2016. Rate Schedule 1 of the OATT allows NYISO to recover bad debt losses from market participants and provides guidance on the provisions of such recoveries.

NYISO conducts a Centralized TCC Two Year Auction, with the second year payment due to the NYISO in January of the subsequent year.

NYISO recovers its Rate Schedule 1 revenue in the invoice following the period of service. Therefore, a portion of unbilled Rate Schedule 1 revenues for December are billed and recovered in January of the subsequent year.



#### (3) Regulatory Assets and Liabilities

At December 31, 2015 and 2014, regulatory assets and liabilities consisted of the following:

		2015	2014
Regulatory assets:	~		
Funding for pension benefits Funding for deferred charges	\$	8,654,513 5,255,597	7,956,023 5,270,375
Voltage support service (reactive power) market			11,777
Total regulatory assets		13,910,110	13,238,175
Less current			(11,777)
Noncurrent regulatory assets	\$	13,910,110	13,226,398
Regulatory liabilities:			
	\$	4,671,760	5,141,602
Rate Schedule 1 transactional volume overcollections Rate Schedule 1 underspending		4,393,160 3,881,577	1,976,147 3,807,065
Voltage support service (reactive power) market		1,635,151	5,807,005
Funding for postretirement benefits		193,602	4,704,018
Total regulatory liabilities		14,775,250	15,628,832
Less current		(9,909,888)	(5,783,212)
Noncurrent regulatory liabilities	\$	4,865,362	9,845,620

#### (a) Funding for Pension and Postretirement Benefits

The pension and postretirement funding regulatory assets and liabilities reflect the unrecognized pension and postretirement benefit costs that would normally be recorded as a component of accumulated other comprehensive income or loss. Since these amounts represent costs or income that are expected to be included in future rates, they are recorded as deferred noncurrent regulatory assets or liabilities.

#### (b) Funding for Deferred Charges

The NYISO recovers its annual employer cash contributions for both the pension and postretirement benefit plans via Rate Schedule 1. The amounts in funding for deferred charges represents the pension and postretirement benefit costs net of cash contributions.

#### (c) Rate Schedule 1 Underspending

To the extent that NYISO's spending does not exceed the annual Rate Schedule 1 revenue requirement, a regulatory liability is established for the underspending amounts.

#### (d) Rate Schedule 1 Transaction Volume Overcollections

NYISO recovers its costs through a surcharge assessed to market participants via Rate Schedule 1 of the OATT and Services Tariff. To the extent that transactional volumes billed under Rate Schedule 1 exceed the amount expected when the Rate Schedule 1 surcharge is established, NYISO reflects a regulatory liability for the overcollection amounts.

## (e) Voltage Support Service

In order to maintain acceptable transmission voltages on the New York State transmission system, certain market participants within the New York Control Area produce or absorb voltage support service (reactive power). Payments to market participants supplying voltage support service and recoveries from other market participants are assessed via Rate Schedule 2 of the OATT and Services Tariff. Differences between the timing of recoveries and payments for voltage support service that result in undercollections or overcollections are reflected as regulatory assets or liabilities.

# (4) **Property and Equipment**

As of December 31, 2015 and 2014, property and equipment consisted of the following:

	2015	2014
Software developed for internal use Building, building improvements, and leasehold improvements Computer hardware and software Machinery and equipment Land and land improvements Furniture and fixtures Work in progress	\$ 162,970,429 100,335,776 66,006,231 6,989,015 3,307,867 3,247,784 2,441,606	$\begin{array}{c} 151,786,042\\ 96,539,980\\ 63,053,163\\ 6,616,077\\ 2,785,146\\ 3,085,848\\ 5,369,980\end{array}$
Accumulated depreciation and amortization	345,298,708 (230,747,688)	329,236,236 (207,625,884)
Property and equipment – net	\$ 114,551,020	121,610,352

Property and equipment includes interest of \$117,019 and \$51,500 capitalized during 2015 and 2014, respectively. Depreciation and amortization expense for the years ended December 31, 2015 and 2014 was \$27,395,084 and \$26,697,078, respectively.

Total capitalized labor as of December 31, 2015 and 2014 was \$6,224,002 and \$7,800,737, respectively.

#### (5) Revolving Credit Facility

On October 22, 2013, NYISO entered into a \$50.0 million Revolving Credit Facility with an effective date of January 1, 2014 through December 31, 2017. The proceeds from this Revolving Credit Facility are to be used for working capital purposes. Interest on borrowings under the Revolving Credit Facility is based on NYISO's option of varying rates of interest tied to either the prime rate or the London Interbank Offered Rate (LIBOR). At December 31, 2015 and 2014, respectively, there were no amounts outstanding on the Revolving Credit Facility. During 2015 and 2014, \$7.0 million and \$5.0 million in borrowings were made under this credit agreement, respectively, at an average interest rate of 1.049%.

## (6) Long-Term Debt

At December 31, 2015, the following amounts were outstanding on NYISO's long-term debt:

	1	2012 Infrastructure loan (iv)	2011–2013 Budget facility loan		2014–2017 Budget facility loan (ii)	Mortgage (iii)	Renovations (iii)	Total
Outstanding balance Less current portion	\$	41,238,429 (2,646,316)	2,889,018 (2,889,018		42,280,091 (16,666,667)	8,657,499 (684,637)	6,954,867 (453,836)	102,019,904 (23,340,474)
Long-term portion	\$	38,592,113		-	25,613,424	7,972,862	6,501,031	78,679,430

At December 31, 2014, the following amounts were outstanding on NYISO's long-term debt:

	1	2012 nfrastructure loan (iv)	2011–2013 Budget facility loan (i)	2014–2017 Budget facility loan (ii)	Mortgage (iii)	Renovations (iii)	Total
Outstanding balance Less current portion	\$	43,884,745 (2,646,316)	19,040,961 (10,974,294)	25,000,000 (7,638,889)	9,304,549 (647,050)	7,383,278 (428,412)	104,613,533 (22,334,961)
Long-term portion	\$	41,238,429	8,066,667	17,361,111	8,657,499	6,954,866	82,278,572

- (i) On July 21, 2010, NYISO entered into an unsecured \$75.0 million line-of-credit facility (2011–2013 Budget Facility), the proceeds of which may be drawn between January 1, 2011 and December 31, 2013 to fund capital purchases and the development of significant projects during 2011–2013. NYISO must convert each year's annual borrowings to term loans, with principal and interest payments payable over three years. Interest on borrowings under this facility is based on NYISO's option of varying rates of interest tied to LIBOR plus 175 basis points for borrowings, or the prime rate. Interest payments on borrowings are due monthly. On October 24, 2013, NYISO amended the interest rate on this credit facility to LIBOR plus 100 basis points. During 2011, \$25.0 million was drawn on the 2011–2013 Budget Facility, which was converted to a term loan in January 2012 with monthly principal and interest payments payable from January 2012 through December 2014. At December 31, 2014, these borrowings were fully repaid. During 2012, an additional \$25.8 million was drawn on the 2011–2013 Budget Facility, which was converted to a term loan in January 2013 with monthly principal and interest payments payable from January 2013 through December 2015. At December 31, 2015, these borrowings were fully repaid. At December 31, 2014, the interest rate on \$2.9 million was fixed at 3.330%. During 2013, an additional \$24.2 million was drawn on the 2011– 2013 Budget Facility, which was converted to a term loan in January 2014 with monthly principal and interest payments payable from January 2014 through December 2016. At December 31, 2015, the interest rate on the remaining \$2.9 million was fixed at 4.023%. At December 31, 2014, the interest rate on \$13.3 million was fixed at 4.023% and the remaining \$2.8 million was at 1.156%.
- (ii) On October 22, 2013, NYISO entered into an unsecured \$100.0 million line of credit facility (2014–2017 Budget Facility), the proceeds of which could be drawn between January 1, 2014 through December 31, 2017 to fund capital purchases and the development of significant projects during 2014–2017. NYISO must convert each year's annual borrowings to term loans, with principal and interest payments payable over three years. Interest on borrowings under this facility is based on NYISO's option of varying rates of interest tied to LIBOR plus 95 basis points for borrowings, or the prime rate. Interest payments on borrowings are due monthly. During, 2014, \$25.0 million was drawn on the 2014 2017 Budget Facility, which was converted to a term loan in January 2015 with monthly principal and interest payments payable from February 2015 through January 2018. At

December 31, 2015 the interest rate on \$13.3 million was fixed at 1.780% and the remaining \$4.0 million was at 1.175%. At December 31, 2014 the interest rate on \$20.0 million was fixed at 1.780% and the remaining \$5.0 million was at 1.106%. During 2015, an additional \$25.0 million was drawn on the 2014 – 2017 Budget Facility, which was converted to a term loan in January 2016 with monthly principal and interest payments payable from January 2016 through December 2018. At December 31, 2015, the interest rate on \$20.0 million was fixed at 2.510% and the remaining \$5.0 million was at 1.194 %.

- (iii) On July 8, 2005, NYISO entered into two financing agreements to purchase and renovate a 140,000-square foot office building in Rensselaer, NY. The first agreement is a \$14.7 million mortgage to finance the building purchase (Mortgage), and the second agreement represents a \$10.0 million line of credit for renovations during an 18-month period, beginning in July 2005 (Renovations Loan). The Mortgage has principal and interest payments payable over 20 years, beginning September 2005. Principal and interest payments on borrowings made during the Renovations Loan draw period are payable over 20 years, beginning in January 2007. During 2005, \$14.7 million was borrowed on the Mortgage, and during 2006, \$10.0 million was drawn on the Renovations Loan. Both agreements are secured by liens on the building and subsequent capitalized renovations. Interest on borrowings under both facilities is due monthly and is based on varying rates of interest tied to LIBOR plus 100 basis points.
- (iv) On July 18, 2012, NYISO entered into the 2012 Infrastructure Loan to renovate its facilities in Guilderland, NY and to perform construction at its facility in Rensselaer, NY. The agreement permitted borrowings of up to \$45.0 million through July 18, 2014. As of July 3, 2014 the full \$45.0 million was drawn on the loan which was converted to a term loan on July 18, 2014. The NYISO is required to make interest only payments for up to 24 months, followed by 17 years of principal and interest payments. Interest on borrowings under the 2012 Infrastructure Loan is due monthly and is based on varying rates of interest tied to LIBOR plus 225 basis points. At December 31, 2015, the interest rate on \$36.7 million was fixed at 4.149% and the remaining \$4.9 million was at 2.405%.

	2012 Infrastructure Ioan	2011–2013 Budget facility loan	2014–2017 Budget facility loan	Mortgage	Renovations	Total
2016	\$ 2,646,316	2,889,018	16,666,667	684,637	453,836	23,340,474
2017	2,646,316	í í <u>–</u>	16,666,666	727,364	483,225	20,523,571
2018	2,646,316	_	8,946,758	771,230	513,248	12,877,552
2019	2,646,316	_	· · ·	817,743	545,136	4,009,195
2020	2,646,316	_	_	866,134	578,162	4,090,612
Thereafter	28,006,849			4,790,391	4,381,260	37,178,500
Total	\$ 41,238,429	2,889,018	42,280,091	8,657,499	6,954,867	102,019,904

At December 31, 2015, scheduled maturities of NYISO's long-term debt were as follows:

#### (7) Derivatives and Hedging Activities

NYISO's derivative instruments are cash flow hedges used to manage its exposure related to changes in interest rates related to long-term debt. The NYISO does not enter into derivative instruments for any purposes other than cash flow hedging. By using derivative instruments to hedge exposure to changes in interest rates, NYISO is exposed to credit and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivative contract. When the fair value of a derivative contract is positive, the counterparty owes the NYISO, which creates credit risk. When the fair value is negative, the NYISO



owes the counterparty and, therefore, the NYISO is not exposed to the counterparty's credit risk in those circumstances. NYISO minimizes counterparty credit risk in derivative instruments by entering into transactions with high-quality counterparties. Market risk is the adverse effect on the value of a derivative instrument that results from a change in interest rates.

In February 2005, NYISO entered into two interest rate swap agreements with a commercial bank to fix interest rate payments on the financing of a new office building purchase. The notional amount of debt on the swap agreement for the Mortgage was \$14,708,750. NYISO pays a fixed interest rate of 5.79% on the outstanding principal amount of this financing on payments from August 2005 through August 2025. The notional amount of debt on the swap agreement for the Renovations Loan was \$10,000,000, and NYISO pays a fixed interest rate of 5.96% on payments from January 2007 through January 2027. As of December 31, 2015 and 2014, the fair value of these interest rate swap agreements was (\$1,367,247) and (\$1,414,992), respectively, for the Mortgage and (\$1,297,401) and (\$1,529,143), respectively, for the Renovations Loan, recorded in Other Noncurrent Liabilities. For the years ended December 31, 2015 and 2014, NYISO recorded a fair value gain of \$279,487 and a fair value loss of (\$294,790), respectively, related to these two swap agreements.

In July 2010, NYISO entered into three interest rate swap agreements with a commercial bank to fix interest rate payments on the 2011–2013 Budget Facility. The notional amount of debt on the swap agreements was \$60,000,000. NYISO pays fixed interest rates ranging from 3.280% to 4.772% through December 2016. On October 24, 2013, NYISO amended the interest rate on this credit facility to LIBOR plus 100 basis points. Due to this amendment, NYISO will pay fixed interest rates ranging from 2.530% to 4.023%. As of December 31, 2015 and 2014, the fair value of these interest rate swap agreements was (\$71,917) and (\$380,044), respectively, recorded in Other Noncurrent Liabilities. For the years ended December 31, 2015 and 2014, NYISO recorded a fair value gain of \$308,127 and \$651,181, respectively, related to these three swap agreements.

In July 2012, NYISO entered into a interest rate swap agreement with a commercial bank to fix interest rate payments on the 2012 Infrastructure Loan. The notional amount of debt on the swap agreements was \$40,000,000. NYISO pays a fixed interest rate of 4.149% through July 2031. As of December 31, 2015 and 2014, the fair value of this interest rate swap agreement was \$90,919 and \$559,802, respectively, recorded in Other Noncurrent Assets. For the years ended December 31, 2015 and 2014, NYISO recorded a fair value loss of (\$468,883) and (\$2,698,286), respectively, related to this swap agreement.

In October 2013, NYISO entered into four interest rate swap agreements with a commercial bank to fix interest rate payments on the 2014–2017 Budget Facility. The notional amount of the debt on the swap agreements was \$80,000,000. NYISO pays fixed interest rates ranging from 1.780% to 4.076% through December 2020. As of December 31, 2015 and 2014, the fair value of these interest rate swap agreements was (\$1,080,809) and (\$442,443), respectively recorded in Other Noncurrent Liabilities. For the years ended December 31, 2015 and 2014, NYISO recorded a fair value loss of (\$638,366) and (\$904,090), respectively, related to these four swap agreements.

	_	Swap Notional amount at inception	Swap Notional amount at December 31, 2015	Swap Fair value at December 31, 2014	Swap Fair value at December 31, 2015	2015 Gain (loss) on fair value
Loan:						
2011 - 2013 Budget Facility	\$	60,000,000	6,666,656	(380,044)	(71,917)	308,127
2014 - 2017 Budget Facility		80,000,000	41,333,333	(442,443)	(1,080,809)	(638,366)
2012 Infrastructure Loan		40,000,000	36,666,667	559,802	90,919	(468,883)
Mortgage		14,708,750	8,657,499	(1,414,992)	(1,367,247)	47,745
Renovations		10,000,000	6,954,867	(1,529,143)	(1,297,401)	231,742
Total					5	\$ (519,635)

The fair value of NYISO's interest rate swaps are determined using pricing models developed based on the LIBOR swap rate and other observable market data (Level 2 inputs).

The fair value of interest rate swaps are included in Other Noncurrent Assets and Other Noncurrent Liabilities. The following table presents the carrying amounts and estimated fair values of NYISO's interest rate swaps at December 31, 2015 and 2014:

	20	15	2014		
	Carrying amount	Fair value	Carrying amount	Fair value	
Financial assets: Interest rate swaps	\$ 90,919	90,919	559,802	559,802	
Financial liabilities: Interest rate swaps	\$ 3,817,374	3,817,374	3,766,622	3,766,622	

#### (8) Employee Benefit Plans

#### **Defined Benefit Pension and Postretirement Plans**

NYISO has a defined benefit pension plan covering certain employees upon their retirement. Plan benefits are based on employee compensation levels and years of service, including service for certain employees previously employed by NYPP member companies. Employees become vested in pension benefits after three years of credited service. There were no NYISO cash contributions made during 2015 and 2014 to the pension plan. Effective December 1, 2009, NYISO adopted changes to its pension plan to end the accrual of future benefits for most employees. Certain grandfathered employees will continue to accrue benefits until attaining age 55. NYISO replaced the defined benefit accruals with equivalent contributions to employee 401(k) plan accounts after December 1, 2009.

NYISO sponsors a defined benefit postretirement plan to provide medical benefits for eligible retirees and their dependents. Substantially all employees who retire from NYISO become eligible for these benefits provided they have been credited with at least ten years of NYISO service (5 years of NYISO service for those employees hired before January 1, 2005). The benefits are contributory based upon years of service, with NYISO paying up to 50% of costs for retired employees and up to 25% for their dependents (subject to specified dollar limits). Medical coverage becomes secondary upon Medicare eligibility.

Pursuant to resolutions adopted by NYISO's Board of Directors, NYISO's Retirement Board is responsible for administration of NYISO's pension and postretirement plans, including recommending investment policy to the Board of Directors, and monitoring investment performance. The Retirement Board reports to



NYISO's Board of Directors and currently consists of NYISO's Chief Financial Officer, General Counsel, Vice President of Human Resources, and Controller. The Retirement Board provides reports to the Commerce and Compensation Committee of the Board of Directors on at least an annual basis.

NYISO records the overfunded or underfunded position of a defined benefit pension and postretirement plan as an asset or liability, with any unrecognized prior service costs, transition obligations, or gains/losses reported as recoverable under ASC Topic 980 and recorded as a regulatory asset or liability.

For payment of benefits under the postretirement plan, as noted above, the NYISO established a Voluntary Employee Benefit Association (VEBA) trust in January 2010. The assets held in the VEBA trust reduce the accumulated postretirement benefit obligation as reported on the NYISO's Statements of Financial Position. The VEBA trust held assets of \$5,024,248 and \$5,221,244 as of December 31, 2015 and 2014, respectively. As noted in the following table, current obligations are assumed to be paid out of the trust assets, with the remaining unfunded obligation to be reflected as a noncurrent liability.

The schedules that follow show the benefit obligations, the plan assets, and the funded status as of December 31, 2015 and 2014, and the change in benefit obligations for NYISO's pension and postretirement plans for the years ended December 31, 2015 and 2014.

	Pension plan			Postretirement plan		
		2015	2014	2015	2014	
Change in benefit obligation:						
Benefit obligation –						
beginning of year	\$	32,191,533	31,533,009	5,786,728	8,062,072	
Service cost		81,299	184,077	402,931	720,012	
Interest cost		1,114,368	1,253,828	214,497	375,808	
Actuarial (gain)/loss		(885,123)	(14,383)	3,796,215	(3,281,940)	
Participant contributions		_	_	160,654	138,995	
Benefits paid	_	(1,107,539)	(764,998)	(275,655)	(228,219)	
Benefit obligation – end of year	_	31,394,538	32,191,533	10,085,370	5,786,728	
Change in plan assets:						
Fair value of plan assets –						
beginning of year		29,539,782	29,502,890	5,221,244	4,974,167	
Actual return on plan assets		(672,890)	982,720	(29,324)	389,766	
Participant contributions		-	_	160,654	138,995	
Benefits paid		(1,107,539)	(764,998)	(275,655)	(228,219)	
Expenses paid	_	(184,898)	(180,830)	(52,671)	(53,465)	
Fair value of plan assets –						
end of year	_	27,574,455	29,539,782	5,024,248	5,221,244	
Funded status	\$_	3,820,083	2,651,751	5,061,122	565,484	

	Pensio	n plan	Postretirement plan		
	2015	2014	2015	2014	
Net actuarial loss (gain) recognized in regulatory assets (liabilities)	8,654,513	7,956,023	(193,602)	(4,704,018)	
Projected benefit obligation Fair value of assets	(31,394,538) 27,574,455	(32,191,533) 29,539,782	(10,085,370) 5,024,248	(5,786,728) 5,221,244	
Unfunded projected benefit obligation	(3,820,083)	(2,651,751)	(5,061,122)	(565,484)	

Amounts recognized in the 2015 and 2014 Statements of Financial Position consist of the following:

In 2015, in accordance with the Actuarial Standard of Practice No. 6, "Measuring Retiree Group Benefit Obligations and Determining Retiree Group Benefits Plan Costs or Contributions", the age-related morbidity factors for postretirement health care costs were updated using factors developed from a 2013 study (Health Care Costs – From Birth to Death) sponsored by the Society of Actuaries. This change in assumptions resulted in an increase to the Projected Benefit Obligation and Actuarial (gain)/loss for the postretirement benefit plan of \$4,847,335.

Net periodic pension expense and other postretirement benefit costs include the following components:

	Pensio	n plan	Postretirement plan		
	2015	2014	2015	2014	
Service cost	\$ 81,299	184,077	402,931	720,012	
Interest cost	1,114,368	1,253,828	214,497	375,808	
Expected return on plan assets	(1,266,588)	(1,225,285)	(314,203)	(224,606)	
Amortization of unrecognized					
prior service cost	1,654	1,955			
Amortization of unrecognized					
(gain) loss	539,109	511,227	(318,003)	(52,230)	
Total	\$ 469,842	725,802	(14,778)	818,984	

NYISO uses a December 31 measurement date for its pension and postretirement benefit plans. NYISO's accumulated benefit obligation for the defined benefit pension plan is \$31,353,122 and \$32,107,694 at December 31, 2015 and 2014, respectively.



The following table as of December 31, 2015 and 2014 shows the assumptions used to calculate the pension and postretirement benefit obligations and net periodic costs:

	Pension	plan	Postretirement plan		
	2015	2014	2015	2014	
Benefit obligations:					
Discount rate	3.90%	3.65%	4.30%	3.90%	
Rate of compensation					
increases	3.00	3.00	N/A	N/A	
Net cost or credit:					
Discount rate	3.65%	4.30%	3.90%	4.80%	
Rate of compensation					
increases	3.00	3.00	N/A	N/A	
Expected return on plan					
assets	4.60	4.60	6.10	4.60	
Discount rate Rate of compensation increases Expected return on plan	3.00	3.00	N/A	N/A	

NYISO's expected rate of return on plan assets reflects anticipated returns on the pension and postretirement plans' current and future assets. To determine this rate, NYISO considers historical returns for equity and debt securities, as well as current capital market conditions and projected future conditions. The long-term investment objective for NYISO's pension plan is to maximize the total return on plan assets while limiting risk, reflected in volatility of returns, to prudent levels. To that end, NYISO's Retirement Board has appointed and regularly meets with an investment advisor to review asset performance, compliance with target asset allocation guidelines, and appropriate levels of asset diversification. NYISO's investment advisor operates under written guidelines provided by NYISO, which cover such areas as investment objectives, performance measurement, permissible investments, investment restrictions, and communication and reporting requirements. NYISO's pension and postretirement plan investments are composed of common stocks, mutual funds and commingled trust funds that are redeemable at net asset value (NAV) on a daily basis. Redemption of such investments generally requires 1 to 2 days written prior notice prior to the redemption date.

NYISO measured benefit obligations using the most recent RP-2014 mortality tables and MP-2015 mortality improvement scale in selecting mortality assumptions as of December 31, 2015.

The targeted allocation and actual investment mix of the pension plan's assets are as follows December 31:

	201	5	2014		
Asset category	Target	Actual	Target	Actual	
Fixed income	70%	69%	70%	65%	
International and emerging					
equities	15	15	15	16	
Large cap equities	8	9	8	10	
Mid cap equities	5	5	5	6	
Small cap equities	2	2	2	3	
Total	100%	100%	100%	100%	

The targeted allocation and actual investment mix of the VEBA Trust (postretirement) plan's assets are as follows:

	201	5	2014		
Asset category	Target	Actual	Target	Actual	
Domestic equities Fixed income International and emerging equities	50% 35	53% 31	50% 35	58% 28 14	
Total	100%	100%	100%	100%	

The actual rate of return for the pension plan's assets as of December 31, 2015 and 2014 is as follows:

	Annual returns <b>D</b>	December 31
Asset category	2015	2014
Large cap equities	1.6%	13.5%
Mid cap equities	0.1	7.7
Fixed income	(0.7)	3.2
Small cap equities	(4.6)	3.0
International and emerging equities	(12.2)	(6.5)
Total portfolio weighted average	(2.4)%	3.3%

The actual rate of return for the VEBA Trust (postretirement) plan's assets as of December 31, 2015 and 2014 is as follows:

	Annual returns December 31			
Asset category	2015	2014		
International and emerging equities Fixed income Domestic equities	2.0% (0.2) (3.1)	(2.6)% 5.2 10.3		
Total portfolio weighted average	(1.6)%	6.9%		



The fair values of the pension plan assets at December 31, 2015 and 2014 are presented below and on the following page:

		2015 Fair value			
		Level 1	Level 2	Level 3	Total
Domestic investments: Equities:					
Small cap Mid cap Large cap	\$		692,463 1,360,989 2,440,933		692,463 1,360,989 2,440,933
Total	_		4,494,385		4,494,385
Fixed income		5,470,524	13,609,013		19,079,537
Total	_	5,470,524	13,609,013		19,079,537
International and emerging equities		3,976,328		_	3,976,328
Total		3,976,328	—	—	3,976,328
Cash and cash equivalents		24,205			24,205
	\$	9,471,057	18,103,398		27,574,455

		2014 Fair value			
		Level 1	Level 2	Level 3	Total
Domestic investments: Equities:					
Small cap	\$		906,996		906,996
Mid cap		_	1,712,197	—	1,712,197
Large cap	_		3,046,721		3,046,721
Total	_		5,665,914		5,665,914
Fixed income	_	5,717,718	13,556,850		19,274,568
Total	_	5,717,718	13,556,850		19,274,568
International and					
emerging equities	_	4,543,327			4,543,327
Total		4,543,327	—	—	4,543,327
Cash and cash equivalents	_	55,973			55,973
	\$	10,317,018	19,222,764		29,539,782

The fair values of the postretirement plan assets at December 31, 2015 and 2014 are presented below:

	2015 Fair value				
		Level 1	Level 2	Level 3	Total
Domestic equities	\$	2,262,573			2,262,573
Total	_	2,262,573			2,262,573
Fixed income: Fixed income securities U.S. government		682,161	_	_	682,161
obligations		547,476	_	—	547,476
Mortgage-backed securities Corporate debt securities		_	32,979 283,242	_	32,979 283,242
Total	_	1,229,637	316,221		1,545,858
International and emerging equities	_	939,910			939,910
Total		939,910	—	—	939,910
Cash and cash equivalents		275,907			275,907
	\$	4,708,027	316,221		5,024,248

	2014 Fair value				
		Level 1	Level 2	Level 3	Total
Domestic equities	\$	2,693,474			2,693,474
Total		2,693,474		_	2,693,474
Fixed income: Fixed income securities U.S. government		604,145	_	_	604,145
obligations Mortgage-backed		580,132	—	—	580,132
securities Corporate debt securities		_	40,403 189,437	_	40,403 189,437
Total		1,184,277	229,840		1,414,117
International and emerging equities		901,356	_	_	901,356
Total		901,356	_	_	901,356
Cash and cash equivalents	_	212,297		_	212,297
	\$	4,991,404	229,840	_	5,221,244

In 2015, the assumed post retirement plan healthcare cost trend rates for participants pre-65 are 7.5% for 2016 to 2017 decreasing to 5.0% in 2026, and the participants post-65 are 5.5% going from 2016 to 2017 decreasing to 5.0% in 2018. In 2014, the assumed healthcare cost trend rates for the postretirement plan are 7.0% for 2015 decreasing to 5.0% in 2023, and 7.75% for 2014 decreasing to 5.0% in 2025. A one-percentage point change in the assumed healthcare cost trend rate would change the 2015 postretirement benefit obligation as follows:

	_	1% increase	1% decrease
Effect on postretirement benefit obligation	\$	1,519,000	(1,171,900)
Effect on total of service and interest cost components		39,500	(34,200)

The following benefit payments, which reflect expected future service, are expected to be paid:

	_	Pension plan	Postretirement plan
2016	\$	2,376,618	206,401
2017		2,470,925	241,756
2018 2019		2,181,114 2,239,539	292,182 344,042
2020		2,406,703	429,145
2021–2025		10,184,452	2,939,292

# 401(k) Plan

NYISO has a 401(k) Retirement and Savings Plan open to all nontemporary employees. This plan provides for employee contributions up to specified limits. NYISO matches 100% of the first 3% of employee contributions, and 50% of the next 2% of employee contributions. Beginning December 1, 2009, NYISO

also contributes funds to employee 401(k) plan accounts equivalent to defined benefit accruals formerly earned in the pension plan.

Employees are immediately vested in NYISO's matching contributions and become vested in other employer contributions after three years of credited service. The total NYISO contributions to the 401(k) plan were \$5,482,768 and \$5,102,526 for 2015 and 2014, respectively.

#### Long-Term Incentive Plan

NYISO's Long-Term Incentive Plan provides certain members of senior management with deferred compensation benefits. Benefits are based upon the achievement of three-year performance goals established by the Board of Directors, with participants becoming fully vested and distributions payable for these deferred amounts after the completion of the audited financial statements for the third year. Beginning with the long-term incentive cycle for the period January 1, 2010 through December 31, 2012, benefits will be paid in equal installments over three years following the completion of the three-year cycle. Accrued Long-Term Incentive Plan benefits included in Other Noncurrent Liabilities at December 31, 2015 and 2014, were \$3,314,591 and \$3,170,677, respectively. The short-term portion of such liability, included in Other Current Liabilities, at December 31, 2015 and 2014, was \$1,657,296 and \$1,326,391, respectively.

#### 457(b) Plan - Eligible Deferred Compensation Plan

NYISO's 457(b) Plan provides for certain members of senior management to defer a portion of their current compensation and have it credited under a supplemental unfunded savings program. This Plan is intended to satisfy the requirements of an eligible deferred compensation plan maintained by NYISO as a non-government tax-exempt entity under Code section 457(e)(1)(B). The investment balance as of December 31, 2015 was approximately \$400,000 recorded as marketable securities and the deferred compensation liability was recorded in Accounts Payable and Accrued Expenses.

#### (9) Other Commitments

On July 8, 2005, NYISO purchased an office building to relocate NYISO's alternate control center and to consolidate employees located in leased facilities. In connection with the purchase, management entered into a Payment in Lieu of Taxes (PILOT) Agreement with the Rensselaer County Industrial Development Agency (RCIDA) to achieve certain benefits. Per the terms of this agreement, NYISO is required to make annual payments of approximately \$195,000 for the first 10 years. Effective January 1, 2016, this PILOT Agreement was amended to add three additional parcels of land purchased in 2014 and 2015, and to extend the term of the PILOT for an 10 additional years. Per the amendment, NYISO is required to make annual payments of approximately \$293,000, over the next 10 years. The agreement is cancelable at the discretion of NYISO.

#### (10) Working Capital Reserve

At December 31, 2015 and 2014, the working capital reserve consisted of the following:

	_	2015	2014
Market participant contributions through Rate Schedule 1 Interest on market participant contributions	\$	33,000,000 11,079	33,000,000 10,149
Total	\$	33,011,079	33,010,149



# (11) Deferred Revenue

Deferred revenue at December 31, 2015 and 2014 consisted of the following:

	_	2015	2014
Advance payments received on planning studies Funds received for the enhancement of surveillance	\$	6,179,714	3,421,822
capabilities		139,738	465,325
Governance participation fees		430,600	434,300
Total	\$	6,750,052	4,321,447

# (12) Commitments and Contingencies

NYISO is routinely involved in regulatory actions. In the opinion of management, none of these matters will have a material adverse effect on the financial position, results of operations, or liquidity of NYISO.

#### (13) Smart Grid Investment Grant

The NYISO received a \$37.8 million Smart Grid Investment Grant from the United States Department of Energy (DOE) partially funding the New York State Capacitor/Phasor Measurement Project for the period July 1, 2010 through June 30, 2015. The NYISO and the eight New York transmission owners (TOs) are responsible for contributing \$37.9 million in nonfederal matching funds to fully fund the \$75.7 million project. As the prime recipient of the funds, the NYISO is responsible for administering the overall project on behalf of itself and the TOs.

The NYISO and the TOs entered into a Subaward Agreement in 2010 that specifies the portion of the approved Federal grant funds that each entity is eligible to receive from the Government through reimbursement requests. Consistent with the requirements of the grant agreement with DOE, in order to receive its respective portion of the SGIG Award, each party must expend a matching amount. Under the Subaward Agreement, the NYISO's obligation to reimburse the TOs is limited to the amount that the NYISO receives from DOE in response to the TOs' requests for reimbursement. The NYISO and the TOs are eligible to receive reimbursement for allowable costs incurred from August 6, 2009–the approved pre-award period–through June 30, 2015.

As of December 31, 2015 and 2014, approximately \$600,000 and approximately \$4.4 million, respectively, are recognized in NYISO's Statements of Activities in Grant revenue, which represents 50% reimbursement from DOE of NYISO's and the TO's allowable costs incurred during these respective years. Recorded in NYISO's Statements of Activities is the TO's 50% share of allowable costs incurred, as of December 31, 2015 and 2014, approximately \$400,000 and \$3.8 million, respectively, are classified as Grant expenses – New York Transmission Owners. As of December 31, 2015 and 2014, \$0 and approximately \$400,000, respectively, are recorded in NYISO's Statements of Financial Position included as Accounts receivable – net.

#### (14) Eastern Interconnection Planning Collaborative Grant

On December 18, 2009, the DOE announced that the Eastern Interconnection Planning Collaborative (EIPC) would receive \$16.0 million (the EIPC Award) in federal stimulus funding to promote collaborative long-term analysis and planning for the Eastern electricity interconnection, which will help states, utilities, grid operators, and others prepare for future growth in energy demand, renewable energy sources, and Smart Grid technologies. As the prime recipient of the EIPC Award, PJM Interconnection, L.L.C. (PJM), is responsible for administering the overall project on behalf of itself and seven other "Participating Principal Investigators," including the NYISO. The agreement with DOE for the EIPC Award was executed on July 19, 2010 and the project obligations became effective on July 16, 2010. NYISO has a separate agreement with PJM and the other Participating Principal Investigators (the EIPC Agreement) which specifies the parties' obligations under the EIPC Award. During 2013, DOE issued an extension to this grant to cover expenditures related to a gas-electric coordination study, effective through June 2015. Consistent with the requirements of the DOE agreement, NYISO is eligible to receive reimbursement of approximately \$900,000 from DOE for expenditures incurred from March 1, 2010. Under the PJM agreement with the Participating Principal Investigators, PJM's obligation to reimburse the NYISO is only for the amount that PJM receives from DOE in respect of NYISO's request for reimbursement.

As of December 31, 2015 and 2014, NYISO recognized approximately \$100,000 and approximately \$200,000, respectively, in NYISO's Statements of Activities as Grant revenue.

#### (15) Subsequent Events

NYISO considers events and transactions that occur after the balance sheet date, but before the financial statements are issued, to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure. These financial statements were available to be issued on March 18, 2016 and subsequent events have been evaluated through that date.

On March 18, 2016, NYISO amended its \$50.0 million Revolving Credit Facility to extend the maturity date through December 31, 2018.

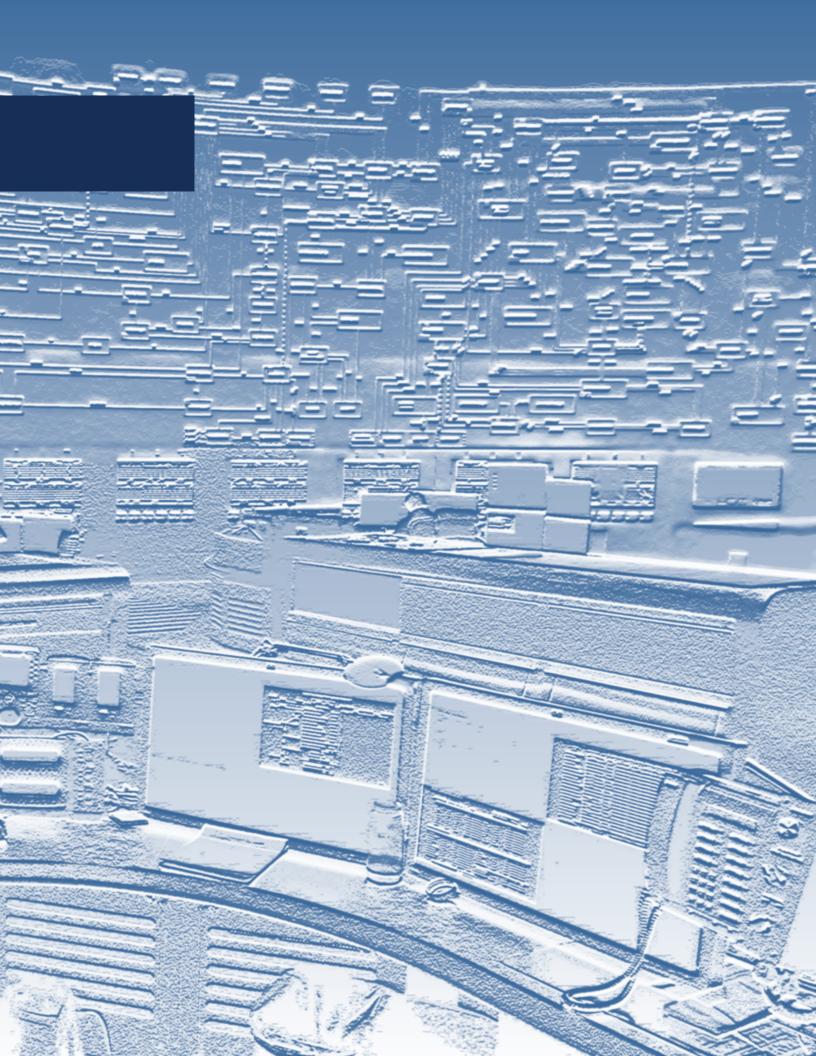
On March 18, 2016, NYISO amended and restated its unsecured \$100.0 million line of credit facility (2014–2017 Budget Facility) to increase the unsecured amount to \$125.0 million and extend the maturity date to December 31, 2018.

In addition, a new \$30.0 million delayed-draw term loan was executed to fund the replacement of NYISO's Energy Management and Business Management Systems. In accordance with the amendment and restatement, the proceeds of which can be drawn beginning March 18, 2016 through December 31, 2018. NYISO must convert each year's annual borrowings to term loans, with principal and interest payments payable over three years. Interest on borrowings under this facility is based on NYISO's option of varying rates of interest tied to LIBOR plus 95 basis points for borrowings, or the prime rate. Interest payments on borrowings are due monthly.

# NYISO MISSION

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system





# 4150

New York Independent System Operator 10 Krey Boulevard, Rensselaer, NY 12144

PHONE: (518) 356-6000 | WWW.NYISO.COM

