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## New Models of Financing Energy Efficiency

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## Erin Tehan

Manager, Legislative & Federal Affairs  
Council of Development Finance Agencies  
Columbus, OH

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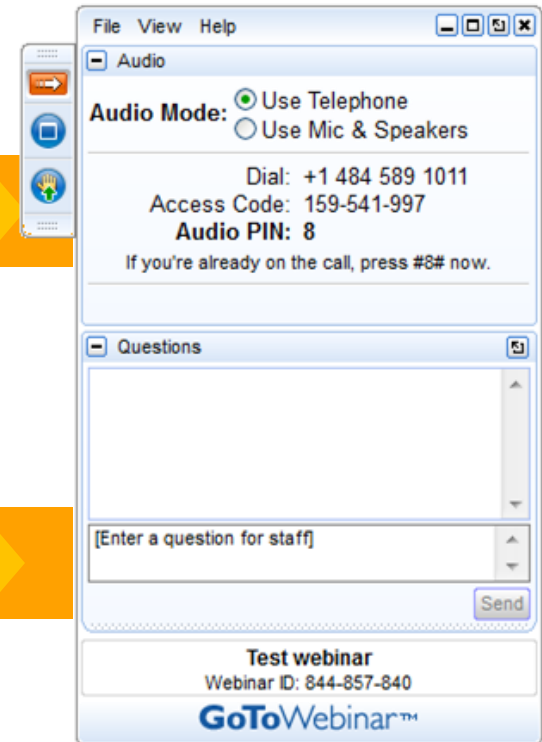
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**Rena Nakashima, Moderator**

BNY Mellon

**Lew Milford**

Clean Energy Group

**Jeff Pitkin**

New York State Energy Research Development Authority

**Jim Levine**

New York State Environmental Facilities Corporation

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# New Models for Financing Energy Efficiency

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Treasurer

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# New Models of Financing Energy Efficiency

CDFA-BNY Mellon Development Finance Webcast

9/17/2013

Jeff Pitkin, Treasurer

New York State Energy Research and Development Authority

# Green Jobs-Green New York Program

## **Green Jobs-Green New York Act of 2009 (Oct 2009)**

- Supports sustainable community development, create opportunities for green jobs, and finance energy audits and energy efficiency improvements
- Funded with \$112 million allocated from the proceeds of selling carbon dioxide allowances under the Regional Greenhouse Gas Initiative (RGGI)
- Finance energy efficiency improvements for:
  - Residential 1-4 family dwellings (up to \$25,000)
  - Multifamily buildings (program limit \$5,000/unit or \$500,000 per building)
  - Small business (<101 employees) and not-for-profit structures (up to \$50,000)
- \$42.5 million allocated to Revolving Loan Fund
  - \$26.7M residential; \$7.7M small business/NFP; \$8.1M multifamily
  - Leverage residential funds through aggregation and securitization of loans through secondary markets
  - Small business/NFP and Multifamily leveraged through participation loans with lenders
- Additional Funding: \$9 million loan loss/debt service reserve (DOE Better Buildings Grant)

# On-Bill Recovery Financing

## Power NY Act of 2011 (Aug 2011)

- Establishes on-bill recovery mechanism for repayment of GJGNY loans
- Statewide program - customers of: Central Hudson, Con Edison, NYSEG, National Grid, Orange & Rockland, Rochester Gas & Electric, and LIPA
- Transferability of On-Bill Recovery Obligation
  - Unless satisfied prior to sale (allows purchaser to require seller to payoff)
  - Seller must provide written notice of the loan to prospective purchaser; seller responsible for arrears up to transfer
  - Requires NYSERDA to record a *Program Declaration* in county/city clerk's office – does not place a lien on property; ensures notice to prospective purchaser
- Installment charge is tariff charge
  - Subject to termination of service for non-payment; consumer safeguards (notices; deferred payment arrangements)
  - Installment charge subordinated to utility collection of service charges
- Established fees paid to utilities to offset system changes & administration
- Uses 3<sup>rd</sup> party loan servicer for utility data transfers/collection

Offers consumer simplicity and **highly scalable/efficient** secondary capital markets financing approach

# Residential Loan Terms

Loan Type	Unsecured Loan (Launched 11/15/2010)	On-Bill Recovery Loan (Launched 1/30/2012)
Borrower eligibility	Owner or lessee	Owner and named on utility account
Loan Amt	Up to \$13,000; \$25,000 if payback period is 15 years or less	
Loan Term	5, 10, or 15 years; term may not exceed expected useful life of measures	
Interest Rate	3.99% 3.49% if repaid through automatic ACH payment	3.49% (2.99% prior to Jan 2013)
Cost Effectiveness Required	At least 85% pre-qualified measures - or - anticipated energy savings over life of measures are at least 80% of total principal and interest to be repaid on loan	Loan installment charge may not exceed 1/12 <sup>th</sup> or estimated annual energy savings

# Loan Underwriting Approach

## **Tier1 loans**

- Traditional FNMA standards (FICO 640+, Debt:Income < 50%)
- Aggregated and financed through capital markets

## **Tier2 loans**

- Originated using alternate loan underwriting criteria
- Loans held in revolving loan fund
- Monitor loan performance 2-3 yrs, then added to pool of loans financed through capital markets with good performance

Third Party loan origination and servicing:

- Loan Originator: Energy Finance Solutions
- Master Loan Servicer: Concord Servicing Corporation

# Rating Agency Feedback – Fall 2012

- Approached markets with traditional ABS structure/ratings process
- Minimum investment grade “achievable”
- Challenges with ABS vs Municipal bond structuring
- Insufficient payment performance data
  - NYSERDA portfolio – avg paid term of about 1yr for avg 12yr loan term
  - Keystone HELP (PA) portfolio data
  - Summary performance data on NY loans issued in Fannie Mae portfolio
  - No comparable loss statistics on 15 yr consumer loans
- Unable to include OBR loans in first bond issue without jeopardy to rating
  - Insufficient evidence of consumer and utility performance
- Unable to include QECB subsidy payment in ratings cash flow models
  - Appropriation risk – resulted in lower advance rate (higher overcollateralization)
- Servicing risks – Primary servicer not rated; required backup servicer
- ABS turbo bond structure to address marketability
- Likely to achieve only BBB rating (~70% advance rate)

**\$10M bonds with \$14M in pledged loans, \$9M of reserves, \$1B balance sheet is BBB?**





# New York State Environmental Facilities Corporation

## A Collaborative Approach to Financing Critical Infrastructure

*Opportunities to Advance Clean Energy with the  
Clean Water State Revolving Fund*



# The Environmental Facilities Corporation

*Providing Low-cost Financing and Technical Assistance to Municipalities, Businesses, and NY State Agencies for Environmental Projects*



## Clean Water SRF

(1987 Clean Water Act Amendments)

- Provides financial assistance for wastewater and water quality infrastructure



## Drinking Water SRF

(1996 Safe Drinking Water Act)

- Provides financial assistance for drinking water infrastructure





# New York's SRF

- NYS EFC manages the largest State Revolving Fund (“SRF”) program in the U.S.
- NYS EFC’s SRF assets currently total in excess of \$12.2 billion with an asset parity ratio of 1.89.
- NYS EFC has issued \$15.5 billion SRF bonds of which \$6.1 billion are outstanding as of Aug. 1, 2013
- Awarded more than \$5.3 billion in federal capitalization grants and state matching funds and \$520 million in federal stimulus grants under ARRA

# Statutory Authority

- **The general authority for the CWSRF program is stated in §601(a) of the Clean Water Act [33 U.S.C. 1381]:**

*... grants to each State for the purpose of establishing a water pollution control revolving fund for providing assistance (1) for construction of treatment works (as defined in section 212 of this Act) which are publicly owned, (2) for implementing a management program under section 319 of this Act, and (3) for developing and implementing a conservation and management plan under section 320 of this Act.*



**NONPOINT SOURCE**



# **MANAGEMENT PROGRAM**

*October 2000*



**NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION**

**DIVISION OF WATER  
BUREAU OF WATERSHED MANAGEMENT**

*Governor George E. Pataki  
Governor, New York State*

*John P. Cahill  
Commissioner*

## CHAPTER V

### PROGRAMS TO CONTROL NONPOINT SOURCE POLLUTION

#### 2. Atmospheric Deposition

Atmospheric deposition and the subcategory of acid rain have been identified as the most frequently occurring cause of water quality impairment in the state. While lakes and ponds in the Adirondack Mountains are the predominant receptors identified, atmospheric deposition in general is affecting water bodies in other parts of the state as well. Atmospheric pollution may contribute as much as 14.3% of the nitrogen enrichment to Long Island Sound. Nitrogen enrichment is the cause of severe summertime hypoxia problems in the Sound. Airborne pollutants cause water quality problems when they fall on impervious urban areas adding to the pollution of storm water runoff.

#### 3. Acid/Base (pH)/ Atmospheric Deposition/ Acid Rain

The deposition of sulfur and nitrous oxides in the form of acid rain can lower the pH of some ponds, lakes and streams to such a degree that they cannot support fish communities. Waters of the Adirondack and Catskill Mountains are most susceptible due to their low pH buffer capacity. In addition to acidity, other pollutants (lead, mercury) can be transported by atmospheric deposition.

## Chapter VIII

### **SOURCES OF FUNDING AVAILABLE TO IMPLEMENT NONPOINT SOURCE PROGRAMS**

1. Clean Water State Revolving Fund (CWSRF)
2. Drinking Water State Revolving Fund (DWSRF)
3. Clean Water/Clean Air Bond Act of 1996
4. Environmental Protection Fund (EPF) - Non-Ag Projects
5. Environmental Protection Fund (EPF) -Ag Projects
6. Environmental Protection Fund - Hudson River Estuary Program

## NYSERDA's Estimated Environmental Impact (useful life)

	Electric Savings (GWh)	Gas* (MMBtu)	Oil** (MMBtu)	Total
<b>Savings</b>	28.2	1,804,618	939,400	n/a
<b>NO<sub>x</sub> (tons)</b>	11	90	56	158
<b>SO<sub>2</sub> (tons)</b>	25	0	108	133
<b>CO<sub>2</sub> (tons)</b>	11,661	105,570	76,091	193,323

\*Includes gas and propane

\*\*Includes oil and kerosene



# Clean Water Act Section 603

(d) TYPES OF ASSISTANCE.- Except as otherwise limited by State law, a water pollution control revolving fund of a State under this section may be used...

- (1) to make loans...
- (2) to buy or refinance the debt obligation of municipalities...
- (3) to guarantee, or purchase insurance for, local obligations where such action would improve credit market access or reduce interest rates
- (4) as a source of revenue or security for the payment of principal and interest on revenue or general obligation bonds...
- (5) to provide loan guarantees for similar revolving funds established by municipalities or intermunicipal agencies
- (6) to earn interest on fund accounts... and
- (7) for the reasonable costs of administering the fund...

# Transaction Overview

Issuer	New York State Energy Research and Development Authority
Guarantor	New York State Environmental Facilities Corporation
Par Amount	\$24,300,000
Use of Proceeds	Finance and refinance loans made by NYSERDA to fund energy audits and residential energy efficiency improvements for eligible applicants pursuant to NYSERDA's Green Jobs – Green New York program
Pricing	July 30, 2013
Settlement	August 13, 2013
Structure	Serial Bonds through 2023, Term Bond due 2028 (callable 2023)
Tax Status	Taxable (Qualified Energy Conservation Bonds) QECB subsidy – lesser of interest on bonds or 70% of published rate Subject to 8.7% reduction from sequester in Federal Budget for 2013; projections assume reduction will continue over life of bonds
Rating	AAA S&P / Aaa Moody's



# Security - Flow of Funds

Secured by pledge of loan payments from:

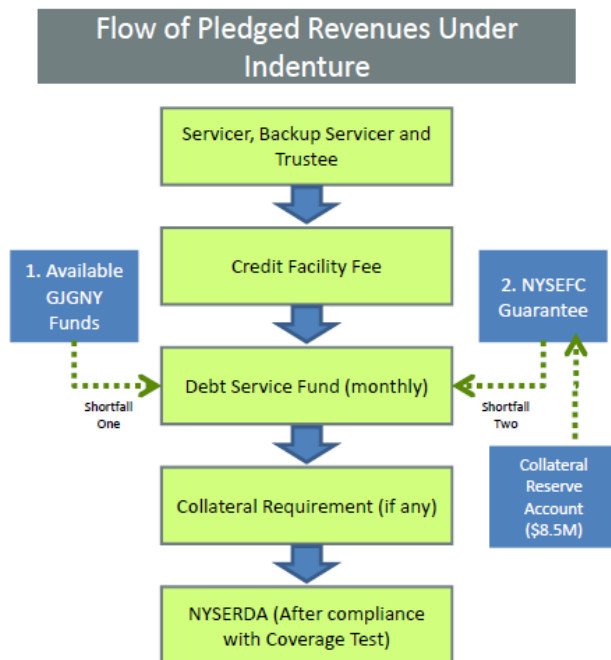
- 3,116 residential EE loans originated Nov 2010-Jun 2013 (\$27.75 million outstanding)
- Additional \$1.48 million residential EE loans to be originated

QECCB Interest Subsidies

Additional pledge of any monies in GJGNY Revolving Loan Fund

NYSEFC guarantee of gross principal and interest on bonds

- \$8.5 million Collateral Reserve Account pledged to NYSEFC to reimburse any draws on the SRF guaranty (account is reduced pro-rata with principal payments on bonds)



Indenture Provisions	
<b>Substitution of Loans:</b>	Authorizes substitution of Portfolio Loans by the Authority based upon meeting Coverage Test and loan criteria
<b>GJGNY Funds:</b>	To the extent there is a deficiency of Pledged Revenues to meet the debt service requirements, NYSERDA may transfer GJGNY Funds to the extent available to meet the deficiency
<b>Coverage Test:</b>	Net Pledged Revenues, together with amounts held in the Reserve Fund and Debt Service Fund, are equal to or greater than 110% of Maximum Annual Debt Service for the then current and each future Bond Year

# Portfolio Composition and Attributes

## Key Attributes

- Maximum principal balance of \$25,000
- Repayment via level scheduled monthly payments
- Loans are geographically dispersed across the State of New York
- FICO® score of at least 640
- Very modest delinquency and loss experience thus far (June 30, 2013):
  - Delinquencies 31+ days: 1.05%
  - Net Chargeoffs (120 days): .35%

## Composition of the Initial Portfolio Loans as of the Cutoff Date

	<u>On-Bill Loans</u>	<u>Direct Bill Loans</u>	<u>Total</u>
Aggregate Principal Balance	\$8,706,602	\$19,040,971	\$27,747,573
Percentage of Pool Balance	31.4%	68.6%	100.0%
Number of Initial Portfolio Loans	829	2,287	3,116
Average Principal Balance	\$10,503	\$8,326	\$8,905
Average Coupon Rate	3.05%	3.58%	3.44%
Average Original Term*	173.9	145.0	152.7
Original Term* (Range)	60-180	60-180	60-180
Average Remaining Term*	170.4	129.8	140.6
Remaining Term* (Range)	50-180	13-180	13-180
*Months Average FICO® Score	752	751	751

# Projected Debt Service Coverage

Bond Year Ended	Pledged Loan Payments <sup>1</sup>	Pledged Interest Subsidies <sup>2</sup>	Administrative Expenses <sup>3</sup>	Scheduled Credit Facility Fees	Net Pledged Revenues	Annual Debt Service <sup>4</sup>	Debt Service Coverage
6/30/2014	\$3,188,408	\$453,737	\$216,100	\$60,750	\$3,365,296	\$2,717,841	124%
6/30/2015	3,220,454	506,651	217,777	55,263	3,454,065	2,664,213	130%
6/30/2016	3,192,566	496,206	216,542	50,063	3,422,167	2,677,773	128%
6/30/2017	2,998,354	476,449	208,907	44,800	3,221,096	2,481,134	130%
6/30/2018	2,770,038	447,886	199,367	39,975	2,978,581	2,294,848	130%
6/30/2019	2,643,826	415,944	193,926	35,538	2,830,308	2,239,863	126%
6/30/2020	2,630,281	377,937	193,230	31,150	2,783,838	2,243,235	124%
6/30/2021	2,599,444	332,382	191,095	26,650	2,714,082	2,173,339	125%
6/30/2022	2,350,144	283,856	175,945	22,200	2,435,855	1,930,188	126%
6/30/2023	2,076,774	237,315	159,985	18,225	2,135,879	1,734,212	123%
6/30/2024	1,940,741	192,380	151,852	14,613	1,966,657	1,624,996	121%
6/30/2025	1,920,420	146,795	150,516	11,150	1,905,548	1,533,128	124%
6/30/2026	1,883,044	102,361	147,616	7,775	1,830,014	1,502,697	122%
6/30/2027	1,593,963	57,105	127,986	4,338	1,518,744	1,146,239	132%
6/30/2028	902,259	21,723	83,676	1,650	838,656	687,100	122%
	\$35,910,716	\$4,548,729	\$2,634,520	\$424,138	\$37,400,788	\$29,650,805	126%

<sup>1</sup> Does not take into account estimates of loan prepayments or defaults. Actual loan prepayments and loan defaults will affect debt service coverage.

<sup>2</sup> The Budget Contract Act of 2011 and the Sequestration Transparency Act of 2012 reduced by 8.7% the amounts payable for direct subsidy payments for Qualified Energy Conservation Bonds for the federal fiscal year ending September 30, 2013. The Pledged Interest Subsidies shown assume continuation of the 8.7% reduction in direct subsidy payments for all Bond Years.

<sup>3</sup> Includes estimated fees for Servicer, Backup Servicer, and Trustee.

<sup>4</sup> For purposes of determining Debt Service Coverage, principal and interest due on each July 1 is assumed to accrue on the preceding June 30.



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