

Clean Energy Finance: A Guide to Federal Financing Programs Available for Energy Efficiency Upgrades and Clean Energy Deployment



U.S. DEPARTMENT OF
ENERGY

September 24, 2013

Agenda

- Welcome – Molly Lunn, DOE
- Overview and Invitation for Feedback – Colin Bishopp, DOE
- USDA's Electric Loan Program – Jon Claffey, USDA
- HUD's PowerSaver Home Improvement Loans Program – Michael Freedberg, HUD
- SBA's 504 Loan Program – Patrick Kelley, SBA
- Case Study: Leveraging Two Federal Finance Facilities in New York State – Jim Levine, New York State Environmental Facilities Corporation
- Q & A

About the Guide

- Provides a snapshot of the various federal financing tools available for clean energy companies and projects, including energy efficiency upgrades for homes, schools, and commercial buildings
- Covers financing tools available from the U.S. Departments of Agriculture, Energy, Housing and Urban Development, Transportation and Treasury, as well as the Environmental Protection Agency and Small Business Administration
- Serves as a resource to help you more easily find information on financing programs
- Seeks to increase the utilization of these programs to build a robust, clean energy economy

How the Guide is Structured

- As a “Yellow Pages” for federal financing
- Organized by market segment
- Matrix of each financing program/facility by type and agency
- Contact information for each program

- Does *not* include various tax credits and state-specific incentives for investment in building upgrades and renewable energy projects. For these resources, visit DOE’s Database for State Incentives for Renewable Energy and Energy Efficiency (DSIRE): www.dsireusa.org

Matrix of Federal Finance Facilities by Type and Agency

Financing Type	USDA	DOE	EPA	HUD	SBA	DOT	Treasury
Loan Guarantee							
The Rural Utilities Service - Electric Loan Program	X						
Rural Development Loan Assistance (Several Programs)	X						
Rural Development Biorefinery Assistance Program	X						
7(a) Loan Program					X		
504 Loan Program					X		
Transportation Infrastructure Finance and Innovation Act Program						X	
Other Credit Enhancement							
Rural Development Loan Assistance (Several Programs)	X						
Rural Development Repowering Assistance Program	X						
FHA Risk Sharing				X			
Transportation Infrastructure Finance and Innovation Act Program						X	
Market Rate Debt							
Rural Development Loan Assistance (Several Programs)	X						
Small Business Lending Fund							X
Rehabilitation Mortgage Assistance - Section 203(k) Loans				X			
Energy Efficient Mortgage Program				X			
PowerSaver Home Improvement Loans Pilot Program				X			
Section 108 Loan Guarantee Program				X			
Refinancing of Existing Multifamily Housing				X			
Supplemental Multifamily Loans				X			
Small Business Investment Company				X			

Matrix cont.

Financing Type	USDA	DOE	EPA	HUD	SBA	DOT	Treasury
Below Market Debt							
The Rural Utilities Service - Electric Loan Program	X						
Clean Water State Revolving Fund			X				
Drinking Water State Revolving Fund			X				
Transportation Infrastructure Finance and Innovation Act Program						X	
Qualified Energy Conservation Bonds							X
Performance Contracting							
Energy Savings Performance Contracts for Federal Buildings		X					
Public Housing Energy Performance Contracts				X			
Tax Credit							
New Markets Tax Credits							X
Grant							
The Rural Utilities Service - Electric Grant Program	X						
Rural Development Grant Assistance (Several Programs)	X						
Public Housing Capital Fund				X			
Payment							
Rural Development Advanced Biofuel Payment Program	X						



Rural Utilities Service Electric Program Update

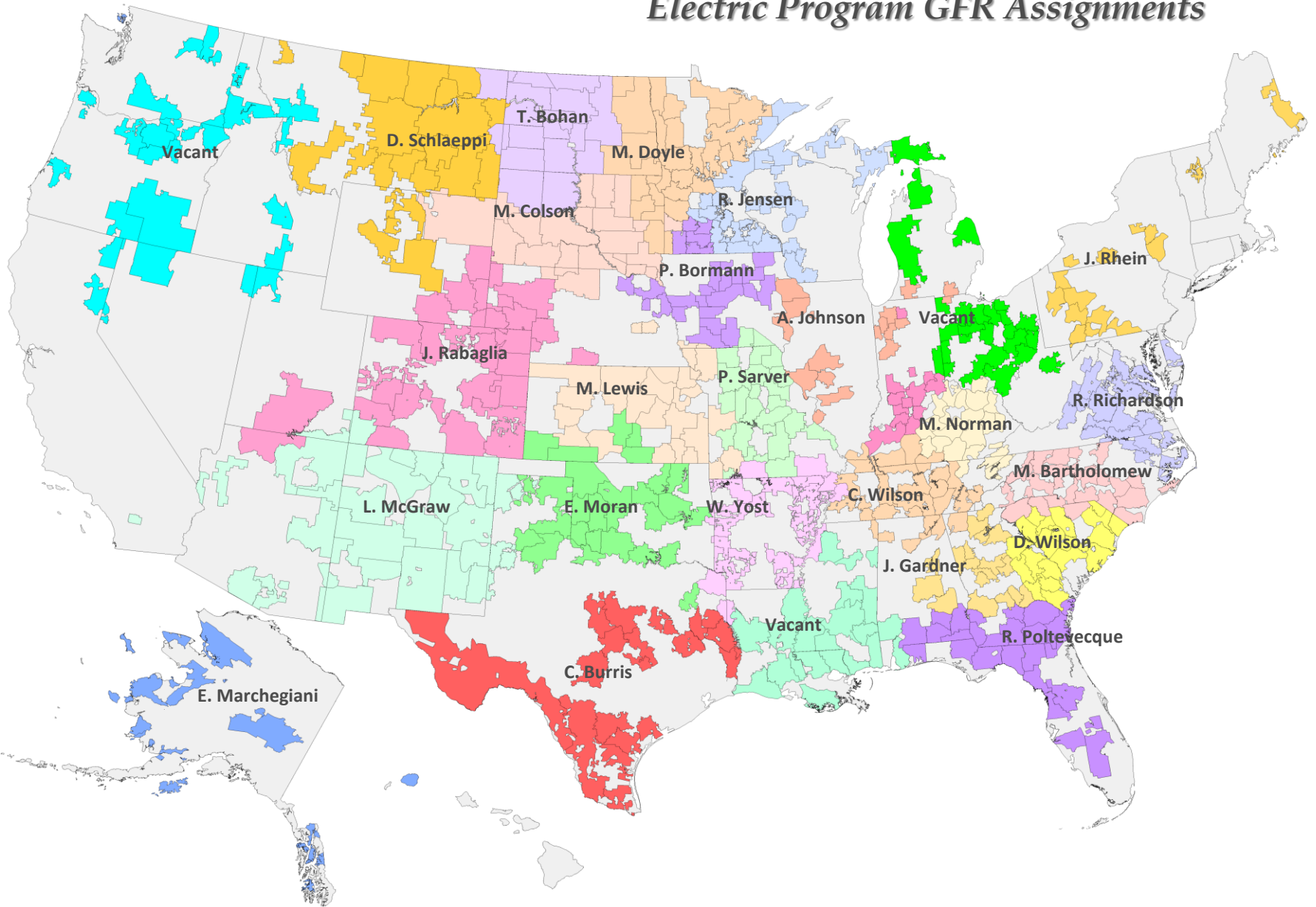
Jonathan Claffey
Director, Electric Staff Division
Electric Program

Highlights of the Presentation

- Portfolio Status
- Program Funding 2013
- President's Budget 2014
- Advanced Notice of Proposed Rulemaking (ANPR)
- Rurality
- Electric Program Improvements

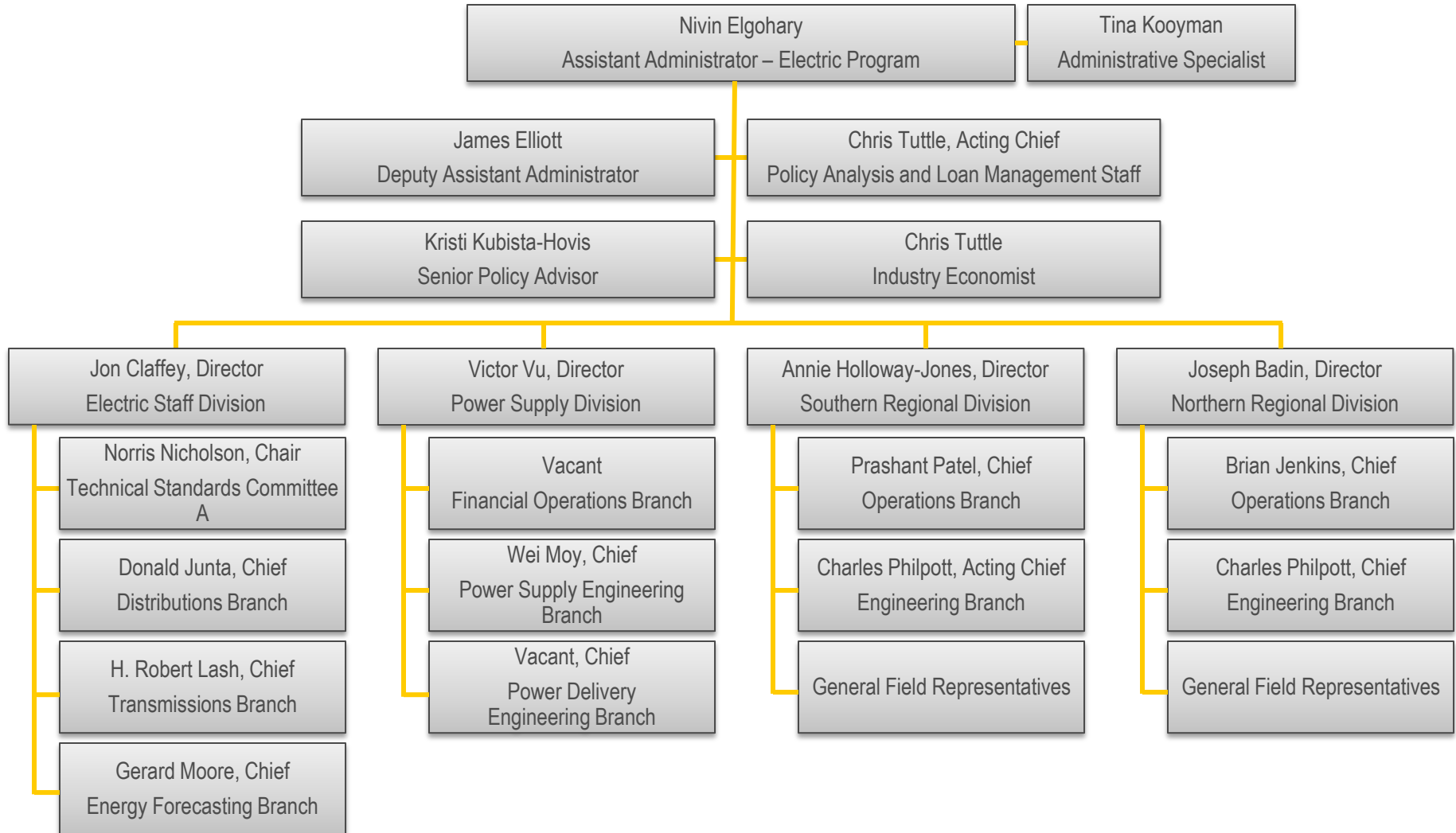


Electric Program GFR Assignments



National Office Organizational Structure

Administrator John C. Padalino oversees and directs the Electric, Telecommunications, and Water Programs at RUS



Electric Program

CONNECTIVITY

- **Fund all complete pending applications with a focus on smart grid technologies**
- **Replenishing pipeline of projects to address rural need**
 - Outreach
 - Rurality Regulation
 - Project Financing
 - Energy Efficiency
- **Continued communication with the field and our customers**
 - Electric Newsletter

CAPACITY

- **Continued portfolio review and early intervention**
 - Loan servicing regulation / managing our portfolio
- **Interagency Initiatives**
 - Working with our federal and state partners to benefit rural energy consumers
- **Internal Capacity Building**
 - Staff engagement / training
 - Coordination with state offices

CREATIVITY

- **Business Process Reengineering**
 - Electronic loan submission
 - Delivery focused organization
- **Streamlining**
 - Updated regulations and processes
 - Staff driven improvements in delivery and efficiency
- **Flexibility and Innovative Approaches to Program Delivery**
 - Reestablishing contracting stables

Eligible Applicants

- Corporations
- States
- Territories
- Subdivisions
- Municipalities
- People's Utility Districts
- Cooperatives
- Limited-Dividends or Mutual Associations

The Electric Program serves approximately 650 borrowers and grantees in 48 states, plus the territories of the Marshall Islands, and American Samoa.



RUS Loan Portfolio As of June 30, 2013

Loan Portfolio	# of Loans	Amount of Principal Outstanding	Delinquent Loans > 30 days				Delinquent Loans > 1 Year				
			# Loan Delinq.	% Loan Delinq.	Delinquent Principal balance	% Delq. Prin.	# Loan Delinq.	% Loan Delinq.	Delinquent Principal balance	% Delq. Prin.	
Direct Portfolio											
Utilities											
Water & Waste	17,121	\$12,066,445,000	66	0.39	\$79,938,104	0.66	25	0.15	\$33,915,575	0.28	
Electric	3,088	\$44,312,188,172	2	0.06	\$19,887,347	0.04	1	0.03	\$1,415,178	0.00	
Telecommunications	1,860	\$4,515,918,331	28	1.51	\$263,751,608	5.84	19	1.02	\$127,687,595	2.83	
Total Utilities	22,069	\$60,894,551,503	96	0.43	\$363,577,059	0.60	45	0.20	\$163,018,348	0.27	
Guaranteed Portfolio											
Utilities											
Water & Waste	68	\$80,207,086	0	0.00	\$0	0.00	0	0.00	\$0	0.00	
Electric/Other	17	\$274,776,154	0	0.00	\$0	0.00	0	0.00	\$0	0.00	
Total Utilities	85	\$354,983,240	0	0.00	\$0	0.00	0	0.00	\$0	0.00	

Summary of Historical Electric Program Levels (Dollars In Million)

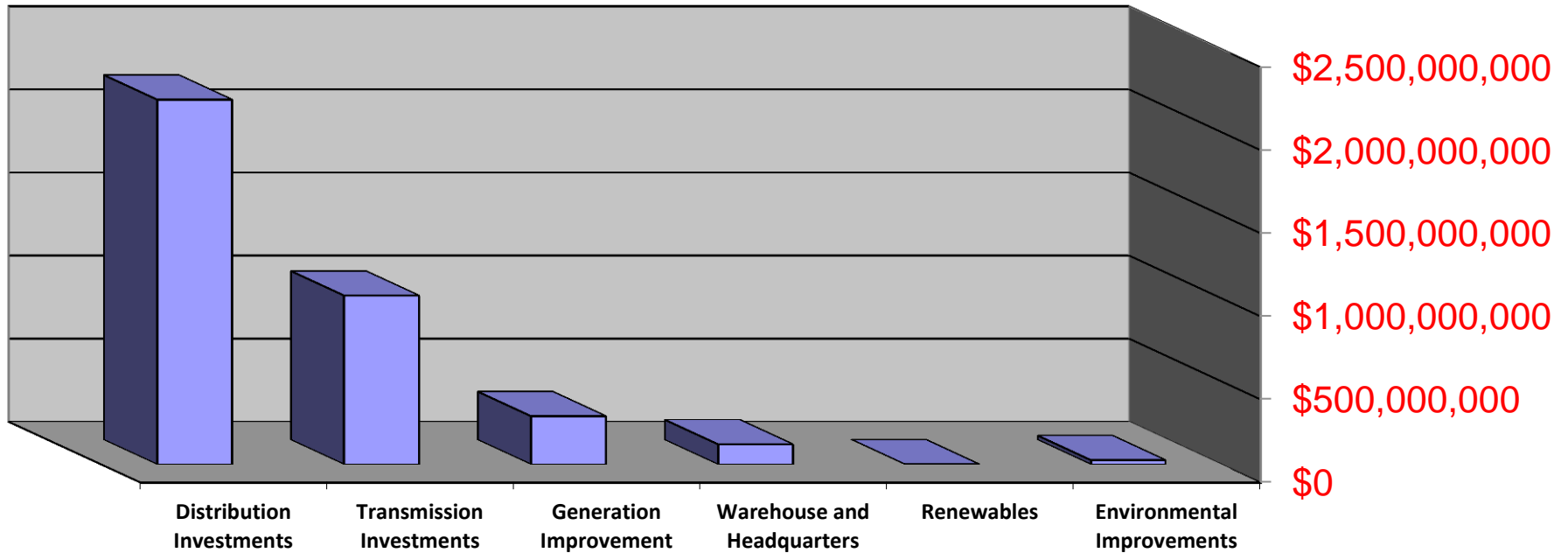
Loan Programs:	2009	2010	2011	2012	2013
Hardship	\$100	\$100	\$100	\$100	\$100
Municipal Rate	\$0	\$0	\$0	\$0	\$0
Treasury Rate	\$0	\$0	\$0	\$0	\$0
FFB Guaranteed	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500
Non-FFB Guarantee	\$0	\$0	\$0	\$0	\$0
Guaranteed Underwriting	\$0	\$500	\$499	\$424	\$500
Total	\$6,600	\$7,100	\$7,099	\$7,024	\$7,100

Electric Loan Program Status As of September 19, 2013

	Number of Applications	FFB	Hardship	Guaranteed Underwriting
Program Level		\$6,500,000,000	\$100,000,000	\$500,000,000
Approved	123	\$3,205,147,000	\$0	\$500,000,000
In Process	15	\$1,260,630,000	\$0	\$0
Anticipated	0	\$0	\$0	\$0
Remaining Funds		\$2,034,223,000	\$100,000,000	\$0

Applications are being approved on a first in first out basis in a matter of weeks.

As of September 19, we have obligated \$2.2B for distribution, \$1B for transmission, \$290M for generation improvements, and \$25M for environmental improvements.



2014 President's Budget Proposal

The 2014 Budget provides \$4 billion for electric loans. Of this amount, up to \$1 billion will be available to support environmental upgrades to existing fossil fuel electric generation facilities to significantly reduce carbon emissions.

Of the remaining funds, not less than \$3 billion will be used for generation, transmission, and distribution of renewable energy. Loan funds can also be used to purchase or construct peaking units at electric generating plants in conjunction with an electric generating plant that produces electricity from solar, wind or other intermittent source of energy.

Funding can be used to support the transformation from fossil fuels to cleaner technologies. Allowing financing for environmental upgrades will support the continued development of a national clean energy strategy.

High Energy Cost Grants

- **The Rural Electrification Act of 1936, authorizes three programs to help rural areas challenged by high energy cost and lack of adequate energy infrastructure.**

- **USDA Rural Development High Energy Cost Grants and Loans**

For communities with extremely high energy costs exceeding 275 percent of the national average

Electricity	\$2,509 per year or \$0.239 per kilowatt hour
Natural Gas	\$1,859 per year or \$26.85 per thousand cubic feet
Fuel Oil	\$1,882 per year or \$3.35 per gallon
LPG/Propane	\$1,514 per year or \$3.61per gallon

Total household expense\$4,013 per year or \$43.91per million Btus

May be used to acquire, construct, or improve energy generation, transmission, and distribution facilities.

- **Denali Commission High Energy Cost Grants and Loans**

For energy facilities serving extremely high energy cost communities in rural Alaska

- **State Bulk Fuel Revolving Fund Grants**

-Assists remote communities dependent on fuel deliveries by air or water in purchasing adequate fuel supplies for the winter

Advanced Notice of Proposed Rulemaking (ANPR)

Administration and Statute Background

In the 2008 Farm Bill, Congress added Section 317 to the RE Act, which allows RUS to make electric loans for rural and non-rural residents.

Section 317: ELECTRIC LOANS FOR RENEWABLE ENERGY.

‘(a) Definition of Renewable Energy Source- In this section, the term ‘renewable energy source’ means an energy conversion system fueled from a solar, wind, hydropower, biomass, or geothermal source of energy.

‘(b) Loans- In addition to any other funds or authorities otherwise made available under this Act, the Secretary may make electric loans under this title for electric generation from renewable energy resources for resale to rural and nonrural residents.

‘(c) Rate- The rate of a loan under this section shall be equal to the average tax-exempt municipal bond rate of similar maturities.’

ANPR Objectives

1. Gather feedback on implementing Section 317.
2. Identify industry standard and collect public recommendations on a potential Project Finance Program (PFP).
3. Help RUS determine market need for a PFP.

Next Steps

- RUS is consolidating comments and will use them to determine:
 1. If RUS will create a PFP and if so;
 2. What the specific details of the PFP will be
- If RUS decides to go forward with a PFP, a proposed rule will be drafted and published for comment.

Rurality Regulation

Why We Need the Regulations

- The Electric Program’s proposed regulation was created to:
- Increase transparency, clarity, and uniformity in determining rural/urban ratios.
- Establish consistent approaches for determining financing eligibility of distribution, transmission, generation and energy efficiency projects.

Expected Outcome

- The regulation allows RUS to lend to all eligible borrows under the RE Act.
- The regulation recognizes the differences between distribution, generation, and transmission.
- Creates an easier mechanism to fund renewable energy projects.
- Increases transparency in determining rurality.

Highlights of the Regulation

- Clarifies the four methods of determining rurality
- Establishes new approaches to determine financing
 - Generation
 - Transmission
 - Distribution
 - Energy Efficiency

Status

- The Proposed Rule was published June 5th. Public comments were accepted until August 5th.
- Currently examining policy issues before drafting the Final Rule.

Business Process Reengineering and Streamlining Initiatives

- Improving customer service in an environment of diminishing resources
- Functional organization
- Better leverage IT capabilities to gain efficiencies in origination and underwriting
- Streamlining compliments the BPR process through standardization of processes and elimination of unneeded or duplicative tasks across organization
- Incorporates staff input / suggestions as we move forward

Streamlining of the EP Construction Standards

Currently, many of the RUS specifications and standards for materials, equipment, and construction units are incorporated in CFRs (primarily 7 CFR Part 1728) as part of the rule by reference. Other standards can be found directly in the CFRs.

To streamline RUS activities and ensure up-to-date bulletins, and other guidance documents, RUS proposes to complete the following activities:

- Remove 26 bulletins that are incorporated by reference.

Borrowers will be required to follow industry standards, but apply RUS guidance on the standards through guidance bulletins. These bulletins will be published on an as needed basis to reflect current utility and technology practices.

Streamlining of the EP Construction Standards – cont...

- Eliminate sections 1728.201, 1728.202 and 1728.204. RUS proposes to issue the information in these sections as guidance bulletins. By removing the information from the CFR, the agency will have greater flexibility to update these publications on an as needed basis.

The target date for publishing the final rule with these changes is August, 2014; however, the actual timing will depend on whether the rule is deemed to be significant by OMB.

Benefits of Guide Bulletins

- Fewer levels of approvals required to make necessary changes driven by such factors as:
 - Code changes
 - Error corrections
 - Adding new designs

- Provides borrowers more operational flexibility without being in technical violation of the mortgage

- Aligns RUS regulations with current practices

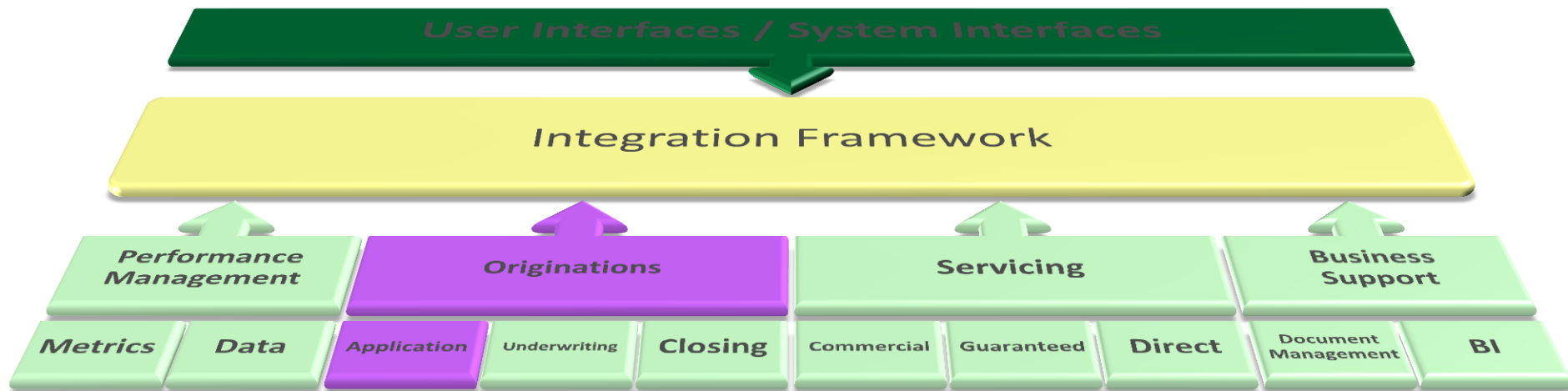
Note: RUS will still require all construction/operations to be in compliance with applicable federal and local codes. RUS will continue to maintain the List of Acceptable Materials in order to ensure that the facilities being financed are safe, reliable and will last the expected useful life.

Plans for Outside Consultants

- Two transmission engineering firms
- One engineering firm for each of the following renewable energy technologies: solar, wind, hydro, manure digester, biomass, municipal solid waste
- Two outside legal firms
- One environmental support firm
- Transmission consultants have the highest priority, followed by renewable energy
- The Electric Program has cleared three statements of work: Transmission Engineering, Renewable Energy Engineering, and Legal Support Services

Common Application Intake and Processing

- The RD CIO has developed an open agile technical framework with the capability to automate loan application processing throughout RD
- We will leverage the existing components using knowledge base on site and additional resources
- Changing business requirements will be efficiently addressed through a service oriented architecture
- Improve data quality, availability, visibility across the enterprise





Rural Development



RUS ELECTRIC SPECIAL EDITION ANNIVERSARY NEWSLETTER

Helping improve the economy and life in rural America

Special Anniversary Edition

Assistant Administrator's Corner

It was truly an honor and privilege to meet with Laura Noble and Ginny Bridges and learn about their family history and their connection to the Rural Electrification Administration (REA), a connection that they still feel today. I want to personally express the gratitude of the Electric Program for the hard work and extra effort that their parents provided REA and Rural America. In addition, I would like to thank them for their generous donation of REA photographs, publications and other memorabilia.

The Electric Program staff are proud to continue serving Rural America and the spirit of Mannie and Ethel Noble lives on in today's Electric Program. It is an honor to me, personally, to work with such a dedicated staff, hard-working cooperative employees, and all of those who serve in rural areas.

Happy anniversary!

- Nivin Elgohary



This Special Edition Anniversary Newsletter would not have been possible without the generosity of Laura Noble and Ginny Bridges. Their father, Emanuel "Mannie" Noble, pictured above with his wife Ethel, joined the Rural Electrification Administration (REA) in 1942. Mannie was well known in the cooperative family for the photographic schools he conducted across the country. As the head of the Exhibits Unit in REA's Information Services Division, he was heavily involved in the electric farming campaign and created the slogan, "Electric farming gets more to market." Sadly, Mannie passed away unexpectedly on April 9, 1952, at the age of 38, leaving behind his wife Ethel and three young children.

After Mannie's passing, REA staff reached out to Ethel and loaned her a typewriter to practice on until she was able to pass the civil service typing test and then hired her as a clerk typist. When she retired from REA in 1972, she was serving as a statistical assistant. After Ethel's passing in April of 2012, Laura and Ginny went through their mother's belongings, they discovered a treasure trove of REA memorabilia from their parent's years with REA. They reached out to the Electric Program where they met with Assistant Administrator Nivin Elgohary and Anne Mayberry of our Legislative and Public Affairs Staff.

The Electric Program would like to thank Laura and Ginny for their kindness and generosity in sharing their story and providing us with so much REA history. As this newsletter will show, the more things change, the more they fundamentally remain the same.

Celebrating 78 Years of Rural Electrification!



PowerSaver Home Improvement Loans Program

Michael Freedberg
Senior Advisor for Energy Policy
Office of Sustainable Housing and Communities

Single Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Rehabilitation Mortgage Assistance – Section 203(k) Loans	Enables homebuyers and homeowners to finance both the purchase of a house and the cost of its rehabilitation through a single mortgage or to finance (or refinance) the rehabilitation of their existing home	<p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/203kabou</p> <p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/faqs203k</p> <p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>
HUD	Energy Efficient Mortgage Program	Helps homebuyers or homeowners save money on utility bills by enabling them to finance the cost of improvements that will make their home more energy efficient	<p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/fhairesourcectr</p> <p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>
HUD	PowerSaver Home Improvement Loans Pilot Program	Enables homeowners to make cost effective, energy saving improvements to their homes. PowerSaver enables homeowners to borrow up to \$25,000 for terms as long as 20 years	<p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>

HUD Section 108 Loan Guarantee Program

- Provides financing for the economic development, housing rehabilitation, public facilities rehab, construction or installation for the benefit of low- to moderate-income persons
- Eligible users include:
 - Metropolitan cities and urban counties (i.e., Community Development Block Grant [CDBG] program entitlement recipients)
 - Non-entitlement communities that are assisted in the submission of applications by States that administer the CDBG program
 - States
 - Non-entitlement communities eligible to receive CDBG funds under the HUD-Administered Small Cities CDBG program and
 - Insular areas (American Samoa; Guam; Northern Mariana Islands; and the Virgin Islands)
- Eligible activities
 - Economic development activities eligible under CDBG
 - Acquisition of real property
 - Rehabilitation of publicly owned real property
 - Housing rehabilitation eligible under CDBG
 - Construction, reconstruction, or installation of public facilities (including street, sidewalk, and other site improvements)
 - Related relocation, clearance, and site improvements
 - Payment of interest on the guaranteed loan and issuance costs of public offerings
 - Debt service reserves
 - Public works and site improvements in colonias
 - In limited circumstances, housing construction as community economic development

For more information:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs/108

Cory Schwartz
Benjamin.C.Schwartz@hud.gov

Multi-Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Refinancing of Existing Multifamily Housing	Section 207/223(f) insures mortgage loans to facilitate the purchase or refinancing of existing multifamily rental housing	http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/progdesc/purchrefi223f Daniel Sullivan Daniel.J.Sullivan@hud.gov
HUD	Supplemental Multifamily Loans	Federal mortgage loan insurance to finance improvements, equipment, and additions to multifamily rental housing and healthcare facilities	http://www.hud.gov/offices/hsg/mfh/progdesc/supplement241a.cfm Daniel Sullivan Daniel.J.Sullivan@hud.gov
HUD	Public Housing Capital Fund	Available by formula distribution for capital and management activities, including development, financing, and modernization of public housing projects	http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/ph/capfund Bruce Rieder Bruce.D.Rieder@hud.gov

Multi-Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Public Housing Energy Performance Contracts	Innovative financing technique applied to the public housing sector that uses cost savings from reduced energy consumption to repay the cost of installing energy conservation measures	http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_inian_housing/programs/ph/phecc/eperformance Alan Spera Alan.Spera@hud.gov
USDA	Multi-Family Housing Energy Efficiency Initiative	Enables rural multi-family housing grant applicants to help the environment and increase their eligibility for funding by incorporating energy efficiency practices into project designs, construction, and operations	http://www.rurdev.usda.gov/eehome.html Meghan Walsh Meghan.Walsh@wdc.usda.gov

HUD FHA Risk Sharing

- Section 542(c) enables HUD and state and local housing finance agencies (HFAs) to provide new risk-sharing arrangements to help those agencies provide more insurance and credit for multifamily loans
- Eligible activities and investments include new construction, substantial rehabilitation, refinancing, and housing for the elderly
- Provides full FHA mortgage insurance to enhance HFA bonds to investment grade
- An HFA must be approved by HUD to participate in this program

For more information:

<http://www.hud.gov/offices/hsg/mfh/progdesc/riskshare542c.cfm>

Daniel Sullivan

Daniel.J.Sullivan@hud.gov

PowerSaver Home Improvement Loans Program

- FHA PowerSaver is a mortgage insurance pilot program from the Federal Housing Administration (FHA) that enables homeowners to make cost effective, energy saving improvements to their homes.
- PowerSaver enables homeowners to borrow up to \$25,000 for terms as long as 20 years to make energy improvements of their choice.
- Examples of eligible improvements include insulation, duct sealing, energy efficient doors and windows, energy efficient HVAC systems and water heaters, solar panels and geothermal systems.
- Borrowers must have credit scores of at least 660 and their total debt to income ratios cannot exceed 45 percent.



504 Loan Program

Patrick Kelley
Deputy Associate Administrator
Office of Capital Access

504 Loan Program

- The CDC/504 Loan Program provides financing for major fixed assets such as equipment or real estate. It can be used to finance construction of new facilities or to modernize, renovate, or convert existing facilities.
- Energy efficiency upgrades to buildings or manufacturing facilities are eligible projects.
- To be considered for a Certified Development Company (CDC)/504 loan applicants must:
 - Operate as a for-profit company;
 - Do business (or propose to) in the United States or its possessions;
 - Have a tangible net worth less than \$15 million and an average net income less than \$5.0 million after taxes for the preceding two years.

More information can be found online at:

<http://www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq>

Case Study: New York State

State Revolving Funds (EPA) & Qualified Energy Conservation Bonds (Treasury)



Jim Levine

Senior Vice President and General Counsel

New York State Environmental Facilities Corporation



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*

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
Savings	28.2	1,804,618	939,400	n/a
NO_x (tons)	11	90	56	158
SO₂ (tons)	25	0	108	133
CO₂ (tons)	11,661	105,570	76,091	193,323

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...

The New York State Environmental Facilities Corporation



Jim Levine
Senior Vice President & General Counsel
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518.402.6969

www.efc.ny.gov

Thank You

Download the complete *Federal Finance Facilities Available for Energy Efficiency Upgrades and Clean Energy Deployment* guide at:

<http://energy.gov/downloads/federal-finance-facilities-available-energy-efficiency-upgrades-and-clean-energy>

Provide us feedback!

Comments can be sent to the Energy Finance Working Group at:

EFWG@Hq.Doe.Gov

A Guide to Federal Financing Programs Available for Energy Efficiency Upgrades and Clean Energy Deployment



Financing Programs Serving Multiple Market Segments

Agency	Financing Program	What it Does	Learn More
USDA	Rural Utilities Service Electric Loan Program	Provides leadership and capital to upgrade, expand, maintain, and replace America's vast rural electric infrastructure	http://www.rurdev.usda.gov/UEP_Homepage.html Jon Claffey Jon.Claffey@wdc.usda.gov
USDA	Rural Utilities Service Electric Grant Program	Provides grants to purchase, construct, install, repair, replace, or improve energy generation, transmission, or distribution facilities in communities with extremely high energy costs	http://www.rurdev.usda.gov/UEP_Homepage.html Jon Claffey Jon.Claffey@wdc.usda.gov
Treasury	Qualified Energy Conservation Bonds (QECB)	Enables qualified state, tribal, and local government issuers to borrow money at attractive rates to fund energy conservation projects	http://financing.lbl.gov/reports/qecb-guidance.pdf http://www1.eere.energy.gov/wip/solutioncenter/qecb.html Zoran Stojanovich Zoran.Stojanovich@irscounsel.treas.gov

Treasury New Markets Tax Credits (NMTCs)

- Help small and medium-sized businesses in low-income communities access financing that is flexible and affordable
- Attract capital investments in Community Development Entities (CDEs), which are certified intermediaries that can then invest in projects
 - Financing from CDEs can apply to a wide range of projects, including housing developments, renewable energy installations, and facilities that provide community services
 - NMTCs are distributed in a competitive process to CDEs that propose specific types of projects for financing
 - With these capital investments, CDEs can make loans and investments to businesses operating in distressed areas that have better rates and terms and more flexible features than the market
- Eligible NMTC activities and investments include:
 - Projects that have environmentally sustainable outcomes in low-income communities
 - Construction or retrofit of buildings that meet LEED certification standards (green buildings) and/or directly support the production or distribution of renewable energy resources (e.g., biomass, hydro, geothermal, solar, wind, etc.)

For more information:

http://cdfifund.gov/what_we_do/programs_id.asp?programID=5

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Single Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Rehabilitation Mortgage Assistance – Section 203(k) Loans	Enables homebuyers and homeowners to finance both the purchase of a house and the cost of its rehabilitation through a single mortgage or to finance (or refinance) the rehabilitation of their existing home	<p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/203kabou</p> <p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/faqs203k</p> <p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>
HUD	Energy Efficient Mortgage Program	Helps homebuyers or homeowners save money on utility bills by enabling them to finance the cost of improvements that will make their home more energy efficient	<p>http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/fhairesourcectr</p> <p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>
HUD	PowerSaver Home Improvement Loans Pilot Program	Enables homeowners to make cost effective, energy saving improvements to their homes. PowerSaver enables homeowners to borrow up to \$25,000 for terms as long as 20 years	<p>Patricia McBarron Patricia.A.McBarron@hud.gov</p>

HUD Section 108 Loan Guarantee Program

- Provides financing for the economic development, housing rehabilitation, public facilities rehab, construction or installation for the benefit of low- to moderate-income persons
- Eligible users include:
 - Metropolitan cities and urban counties (i.e., Community Development Block Grant [CDBG] program entitlement recipients)
 - Non-entitlement communities that are assisted in the submission of applications by States that administer the CDBG program
 - States
 - Non-entitlement communities eligible to receive CDBG funds under the HUD-Administered Small Cities CDBG program and
 - Insular areas (American Samoa; Guam; Northern Mariana Islands; and the Virgin Islands)
- Eligible activities
 - Economic development activities eligible under CDBG
 - Acquisition of real property
 - Rehabilitation of publicly owned real property
 - Housing rehabilitation eligible under CDBG
 - Construction, reconstruction, or installation of public facilities (including street, sidewalk, and other site improvements)
 - Related relocation, clearance, and site improvements
 - Payment of interest on the guaranteed loan and issuance costs of public offerings
 - Debt service reserves
 - Public works and site improvements in colonias
 - In limited circumstances, housing construction as community economic development

For more information:

http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs/108

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Multi-Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Refinancing of Existing Multifamily Housing	Section 207/223(f) insures mortgage loans to facilitate the purchase or refinancing of existing multifamily rental housing	http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/progdesc/purchrefi223f Daniel Sullivan Daniel.J.Sullivan@hud.gov
HUD	Supplemental Multifamily Loans	Federal mortgage loan insurance to finance improvements, equipment, and additions to multifamily rental housing and healthcare facilities	http://www.hud.gov/offices/hsg/mfh/progdesc/supplement241a.cfm Daniel Sullivan Daniel.J.Sullivan@hud.gov
HUD	Public Housing Capital Fund	Available by formula distribution for capital and management activities, including development, financing, and modernization of public housing projects	http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/ph/capfund Bruce Rieder Bruce.D.Rieder@hud.gov

Multi-Family Housing

Agency	Financing Program	What it Does	Learn More
HUD	Public Housing Energy Performance Contracts	Innovative financing technique applied to the public housing sector that uses cost savings from reduced energy consumption to repay the cost of installing energy conservation measures	http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_inian_housing/programs/ph/phecc/eperformance Alan Spera Alan.Spera@hud.gov
USDA	Multi-Family Housing Energy Efficiency Initiative	Enables rural multi-family housing grant applicants to help the environment and increase their eligibility for funding by incorporating energy efficiency practices into project designs, construction, and operations	http://www.rurdev.usda.gov/eehome.html Meghan Walsh Meghan.Walsh@wdc.usda.gov

HUD FHA Risk Sharing

- Section 542(c) enables HUD and state and local housing finance agencies (HFAs) to provide new risk-sharing arrangements to help those agencies provide more insurance and credit for multifamily loans
- Eligible activities and investments include new construction, substantial rehabilitation, refinancing, and housing for the elderly
- Provides full FHA mortgage insurance to enhance HFA bonds to investment grade
- An HFA must be approved by HUD to participate in this program

For more information:

<http://www.hud.gov/offices/hsg/mfh/progdesc/riskshare542c.cfm>

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Commercial Buildings & Facilities

Agency	Financing Program	What it Does	Learn More
SBA	7(a) Loan Program	Provides business loans to American small businesses to establish a new business or to assist in the operation, acquisition, or expansion of an existing business	www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/7a-loan-program Patrick Kelley Patrick.Kelley@sba.gov
SBA	CDC/504 Loan Program	Provides financing for major fixed assets such as equipment or real estate, including construction of new facilities or to modernize, renovate, or convert existing facilities. Energy efficiency upgrades to buildings or manufacturing facilities are eligible projects	www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq Patrick Kelley Patrick.Kelley@sba.gov

Commercial Buildings & Facilities

Agency	Financing Program	What it Does	Learn More
SBA	7(a) Loan Program	Provides business loans to American small businesses to establish a new business or to assist in the operation, acquisition, or expansion of an existing business	www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/7a-loan-program Patrick Kelley Patrick.Kelley@sba.gov
SBA	CDC/504 Loan Program	Provides financing for major fixed assets such as equipment or real estate, including construction of new facilities or to modernize, renovate, or convert existing facilities. Energy efficiency upgrades to buildings or manufacturing facilities are eligible projects	www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq Patrick Kelley Patrick.Kelley@sba.gov

Rural Development Loan & Grant Assistance

Agency	Financing Program	What it Does	Learn More
USDA	Housing and Community Facilities Loan Assistance	Provides a variety of ***** including: Rural Housing Guaranteed Loan, Rural Housing Direct Loan, Rural Repair and Rehabilitation Loans, Rural Rental Housing, and Community Facilities Loan Program	http://www.rurdev.usda.gov/rd_loans.html Meghan Walsh Meghan.Walsh@wdc.usda.gov
USDA	Utilities Loan Assistance	<p>Water and Waste Disposal Direct Loans and Grants Program develops water and waste disposal systems in rural areas and towns with a population not in excess of 10,000</p> <p>Water and Waste Disposal Guaranteed Loan Program provides loan guarantees for the construction or improvement of water and waste disposal projects serving the financially needy communities in rural areas</p>	http://www.rurdev.usda.gov/rd_loans.html Jon Claffey Jon.Claffey@wdc.usda.gov
USDA	Business and Industry Loan Guarantee Program	Business conversion, enlargement, repair, modernization, or development; purchase and development of land, easements, rights-of-way, buildings, or facilities; purchase of equipment	http://www.rurdev.usda.gov/rd_loans.html John Broussard John.Broussard@wdc.usda.gov

Rural Development Loan & Grant Assistance

Agency	Financing Program	What it Does	Learn More
USDA	Rural Energy for America Program (REAP)	Offers loan guarantees and grants to help rural small businesses and agricultural producers install renewable energy systems, make energy efficiency improvements, and conduct energy audits and feasibility studies	<p>http://www.rurdev.usda.gov/BCP_Reap.html</p> <p>State Rural Energy Coordinator: http://www.rurdev.usda.gov/BCP_Energy_CoordinatorList.html</p> <p>William Smith William.Smith@wdc.usda.gov</p>
USDA	Rural Development Biorefinery Assistance Program	Provides loan guarantees up to \$250 million for the development, construction, and retrofitting of commercial-scale biorefineries	<p>http://www.rurdev.usda.gov/BCP_Biorefinery.html</p> <p>William Smith William.Smith@wdc.usda.gov</p>
USDA	Rural Development Advanced Biofuel Payment Program	Supports and helps to ensure the expanding production of advanced biofuels by providing payments to eligible advanced biofuel producers	<p>http://www.rurdev.usda.gov/BCP_Biofuels.html</p> <p>State Rural Energy Coordinator: http://www.rurdev.usda.gov/BCP_Energy_CoordinatorList.html</p> <p>William Smith William.Smith@wdc.usda.gov</p>

Public Buildings and Facilities

Agency	Financing Program	What it Does	Learn More
DOE	Energy Savings Performance Contracts (ESPCs) for Federal Buildings	An innovative financing technique that uses cost savings from reduced energy consumption to repay the cost of installing energy conservation measures	<p>www.eere.energy.gov/femp/about/about.html</p> <p>Resources and best practices: www.eere.energy.gov/wip/solutioncenter/performance_contracting.html</p> <p>Schuyler “Skye” Schell Schuyler.Schell@ee.doe.gov</p>
DOE	State Energy Program	Offers a range of financial and technical assistance to states through formula and competitive grants	<p>www.eere.energy.gov/wip/sep.html</p>

Infrastructure Projects

Agency	Financing Program	What it Does	Learn More
EPA	Drinking Water State Revolving Fund (DWSRF)	Provides funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water. Each state and Puerto Rico maintain revolving loan funds to provide independent and permanent sources of low-cost financing for a wide range of public health protection projects. In addition, a portion of each state's federal capitalization grant has been provided to water efficiency, energy efficiency, green infrastructure, and other environmentally innovative projects through the Green Project Reserve (GPR) program	<p>water.epa.gov/grants_funding/dwsrf/index.cfm</p> <p>Drinking Water State Revolving Fund Program Operations Manual: www.epa.gov/ogwdw/dwsrf/pdfs/manual_dwsrf_programoperation_almanual.pdf</p> <p>Peter Shanaghan Shanaghan.Peter@epa.gov</p>
EPA	Clean Water State Revolving Fund (CWSRF)	Supports water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management	<p>www.epa.gov/cleanwatersrf</p> <p>George Ames Ames.George@epa.gov</p>

Transportation Infrastructure Finance and Innovation Act Program

Agency	Financing Program	What it Does	Learn More
DOT	Transportation Infrastructure Finance and Innovation Act Program	Awards credit assistance to eligible applicants, which include state departments of transportation, transit operators, special authorities, local governments, and private entities, for eligible transit projects including the design and construction of stations, track, and transit-related infrastructure, and purchase of transit vehicles. Intercity bus vehicles and facilities are also eligible	www.fta.dot.gov/grants/123099711.html Case studies: www.fhwa.dot.gov/ipd/tifia/projects_project_profiles/project_profiles.htm Duane Callender Duane.Callender@dot.gov

Manufacturing and Supply Chain Companies

Agency	Financing Program	What it Does	Learn More
SBA	Small Business Investment Company (SBIC)	Privately owned and managed investment funds, licensed and regulated by SBA, that use their own capital plus funds borrowed with an SBA guarantee to make equity and debt investments in qualifying small businesses	<p>www.sba.gov/sites/default/files/Program%20Overview%20-%20FY%202013_0.pdf</p> <p>www.sba.gov/content/sbic-program-0</p> <p>www.sba.gov/content/all-sbic-licensees-state</p> <p>Patrick Kelley Patrick.Kelley@sba.gov</p>
Treasury	Small Business Lending Fund (SBLF)	Encourages lending to small businesses by providing Tier 1 capital to qualified community banks with assets of less than \$10 billion. An insured depository institution is eligible if it has assets of less than \$10 billion and it meets the other requirements for participation	<p>www.treasury.gov/resource-center/sb-programs/Pages/Small-Business-Lending-Fund.aspx</p> <p>www.treasury.gov/resource-center/sb-programs/Documents/SBLF_Fact_Sheet_03-28-11.pdf</p> <p>Jason Tepperman Jason.Tepperman@Treasury.Gov</p>

Links to Additional Information

Agency	
EPA	Clean Water State Revolving Fund Regional and State Contacts http://water.epa.gov/grants_funding/cwsrf/contacts.cfm
DOE	State and Local Solution Center www.eere.energy.gov/wip/solutioncenter/default.html State Energy Program www.eere.energy.gov/wip/sep.html
HUD	Local Offices http://portal.hud.gov/hudportal/HUD?src=/localoffices Regional Office Liaisons I. Tom Chase, Thomas.R.Chase@hud.gov II. Jacob Levine, Jacob.N.Levine@hud.gov III. Rebecca Maclean, Rebecca.L.Maclean@hud.gov IV. Edgar Rodriguez-Mendez, Edgar.Rodriguez-Mendez@hud.gov V. Dale Darrow, Dale.A.Darrow@hud.gov , and Brian Gillen, Brian.Gillen@hud.gov
SBA	Qualified SBA Lenders www.sba.gov/category/lender-navigation/search-sba-lenders?select=proximity Small Business Investment Company Directory http://www.sba.gov/content/all-sbic-licensees-state

Links to Additional Information

Agency	
Treasury	<p>Small Business Lending Fund's Participating Community Banks www.treasury.gov/resource-center/sb-programs/Pages/sblf-map.aspx</p> <p>State Reports on CDFIs and New Markets Tax Credits Allocatees www.cdfifund.gov/impact_we_make/state_reports.asp</p>
USDA	<p>Rural Development Business Programs Directors List www.rurdev.usda.gov/BCP_BI_ProgramDirectorList.html</p> <p>Rural Development Business Programs Energy Branch – Energy Coordinators www.rurdev.usda.gov/BCP_Energy_CoordinatorList.html</p> <p>Rural Development State Offices www.rurdev.usda.gov/stateofficeaddresses.html</p> <p>Rural Electric Co-ops (Qualified Lenders) www.nreca.coop/MEMBERS/MEMBERDIRECTORY/Pages/default.aspx</p> <p>Energy Matrix usda.gov/wps/portal/usda/usdahome?navid=ENERGY</p>



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
Savings	28.2	1,804,618	939,400	n/a
NO_x (tons)	11	90	56	158
SO₂ (tons)	25	0	108	133
CO₂ (tons)	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...

The New York State Environmental Facilities Corporation



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