



Public Service  
Commission

# REV Update

Low Income Forum on Energy  
2017 Regional Meetings

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NYS Department of Public Service

# Reforming the Energy Vision

Case 14-M-0101

**REV is Governor Cuomo's strategy to build a cleaner, more resilient and affordable energy system for all New Yorkers**

**REV places clean, locally produced power at the core of New York's energy system, protecting the environment by reducing greenhouse gas emissions & increasing our use of renewable energy**



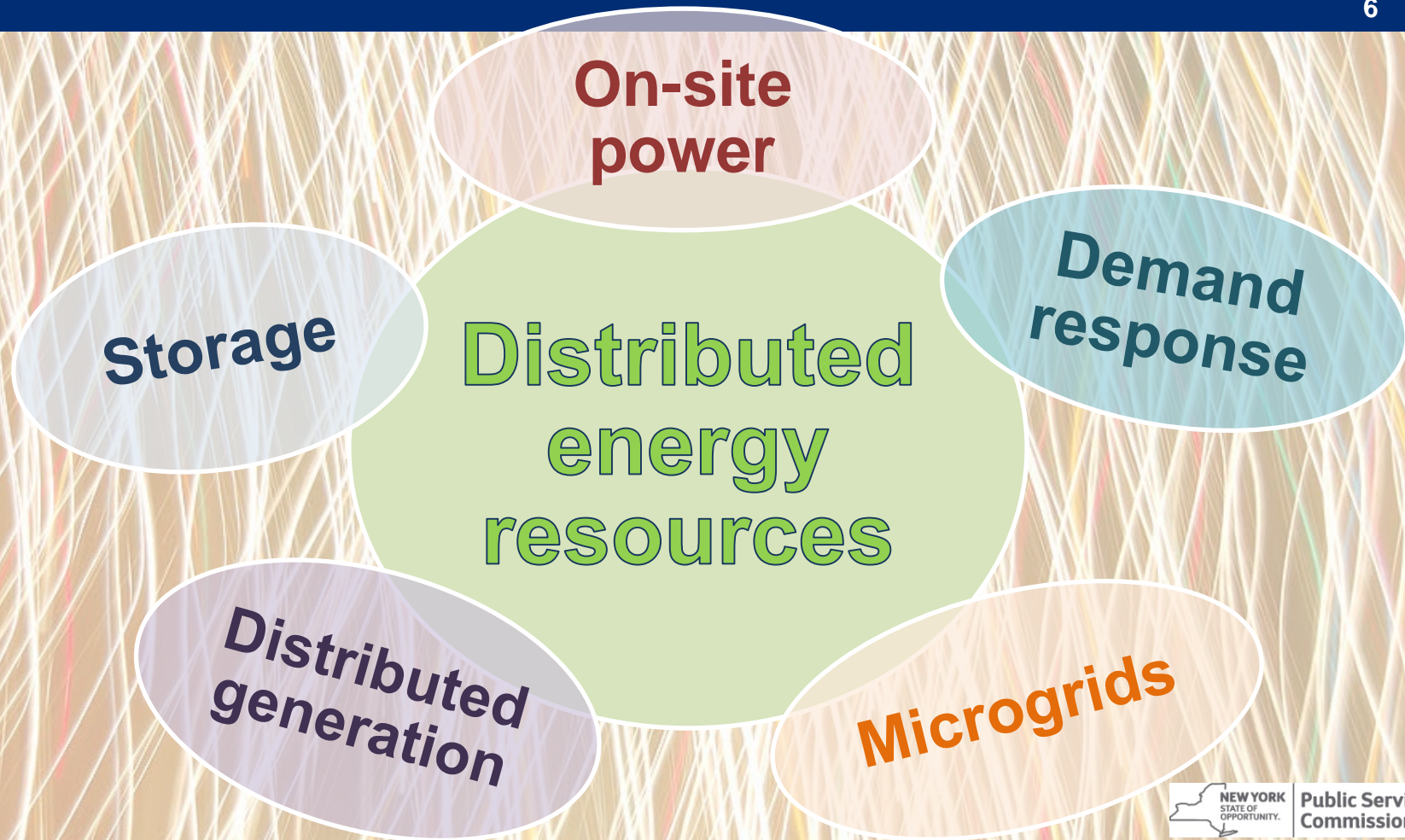
# New York's Electric Grid

- **Current system built to meet peak demand during hottest summer days**
  - Idle nearly half the time
  - Costs customers around \$2B a year
- **Overall demand for electricity is flat**
  - Peak demand continues to increase, resulting in even higher costs to customers
- **In last 10 years, maintaining grid has cost \$17B**
  - If not addressed, \$30B will be spent in next decade

# REV Solution:

**A networked “smart grid” that combines the cost benefits of a central production and distribution system with the innovation and flexibility of distributed solutions**





# Reforming the Energy Vision is ...

**empowering customers to better manage energy through animating markets for distributed energy resources in order to drive toward:**

- higher efficiency,**
- lower environmental impacts, and**
- increased affordability**



**Make energy  
more affordable**

**Help clean energy innovation grow**

**Create new jobs and  
business opportunities**

**Support cleaner  
transportation**

**Protect NY's  
natural resources**

## **REV goals**

**Improve existing  
energy programs,  
infrastructure**

**Empower New Yorkers to make  
more informed energy choices**

**Build a more resilient energy system**



# REV Demonstration Projects

- **Central Hudson “CenHub” marketplace**
  - Online portal for energy products and services that provides customers with personalized recommendations and offers an enhanced data analytics package for customers who want greater insight into their energy use
- **Consolidated Edison - CONnectED Homes Marketplace**
  - Marketing platform that targets residential customers with relevant messaging from DER providers on the bill, by email, and through an online marketplace

# REV Demonstration Projects

- **Orange and Rockland Utilities (O&R)**
  - **Residential Online Marketplace**
    - Online engagement platform that leverages customer data and analytics to help customers find energy products and services that meet their needs
- **Rochester Gas and Electric (RG&E)**
  - **Energy Marketplace e-commerce site**
    - RG&E will test energy-related online transactions, customer satisfaction, and the delivery of more comprehensive energy solutions, allowing RG&E to connect with customers on a range of DER offerings through targeted marketing and tailored content



# REV Demonstration Projects

- **New York State Electric & Gas (NYSEG)**
  - **Community Energy Coordination (CEC)**
    - NYSEG partners with a consulting firm to:
      - aggregate local demand for clean energy technologies
      - target outreach to areas where DERs can provide the greatest system benefits
      - orchestrate a bulk purchase from providers on behalf of customers to lower costs and increase benefits

# REV Demonstration Projects

- **National Grid**

- **Demand Reduction Demonstration Project in Clifton Park**
  - Tests infrastructure, customer outreach and engagement, deep energy insights and actionable information, as well as price signals and DER products and services
  - Incentivizes customers to reduce peak electric load and overall electric and gas energy use
- **Fruit Belt Neighborhood Solar – Buffalo**
  - Helps low- to moderate-income customers access clean energy while reducing arrears through a utility-owned neighborhood solar project in an economically distressed area
  - Tests how solar can be paired with communications technologies to deliver benefits to the overall electricity system



# Community Distributed Generation

15-E-0082



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# Community Distributed Generation

- **Critical tool to effectuate many REV principles**
- **Expand access and increase affordability**
- **Compliment to other programs and policies**
- **Embodies the commitment to low income energy users as part of the REV initiative**



# CDG Parameters

- **Members must be located in the same utility territory and NYISO load zone as the project**
- **At least 10 members must participate**
- **Minimum member allocation of 1,000kWh annually**
- **Membership terms defined by sponsor/member contract**
- **Utility service not affected by participation status**
- **Members can alter, transfer or give up ownership after providing 30-day notice**

# CDG Proceeding Updates

- On March 9, 2017, the PSC reduced the minimum membership requirement for CDG projects proposed for multiple-unit buildings
- Several parties petitioned the PSC to waive previous ten-member minimum
- Waiver opens up project development in dense urban areas, better serves low income communities



# CDG Low Income Collaborative

- PSC initially ordered Staff and interested parties to investigate, evaluate low income customer participation in CDG
- Working groups examined key barriers to low income customer participation and develop solutions
- Staff Report found no scalable solutions
- Staff is investigating utility ownership

# Value of Distributed Energy Resources

15-M-0751


# Value of DER Order

- On March 9, 2017, the PSC enacted a new compensation structure to more accurately and efficiently value DER in NY
- Advances Clean Energy Standard
  - Half of New York's electricity to be supplied by renewable energy by 2030
- Enables solar power, energy storage and other small, local clean energy systems to grow faster across NY



# Value of DER Order

- First step in moving beyond 'net metering' (NEM) to an improved compensation system
- Establishes first phase of a multi-year effort to create a more market-driven approach to optimizing the use of clean, distributed energy systems
- Order provides a smooth transition, maintains NEM for existing solar energy systems
- Directs DPS Staff to issue recommendations on oversight of DER providers for PSC consideration
- Commences Phase Two to accelerate further improvements to the Value of DER methodology



# Low Income Affordability

14-M-0565

# Low Income Program Design

- **Broad-based or targeted**
- **Arrears forgiveness**
- **Reconnection fee waivers**
- **Monthly discount**
  - **Fixed**
  - **Percentage/volumetric**
  - **Income-based**



# Program Goals

- **Streamline utilities' low income programs**
- **Work toward energy affordability**
- **Determine appropriate eligibility**
- **Discounts set at levels sufficient to achieve 6% energy burden on levelized monthly bills**
- **Maximize benefits**
- **Minimize costs**

# Low Income Order – May 20, 2016

- **Adopts a policy that an energy burden at or below 6% of household income shall be the target level**
- **Attempts to reach all 2.3 million low-income households in New York**
- **Directs Staff to work with sister agencies to create an inter-agency task force**
- **Directs utilities to open low income discount programs to all households that currently receive a HEAP benefit, regardless of fuel or benefit type**



# Low Income Order

- **A default process of setting rate discount levels is established which varies levels based on need**
  - **Utilities allowed some flexibility in designing discounts**
    - **Alternatives must be shown to accomplish the same results and leave no class of participant underserved**
- **Monthly bill discounts – tiered system**
  - **Electric customers: between \$11 and \$44**
  - **Gas customers: between \$3 and \$33**
- **Customers enrolled in budget billing (opt-out permitted)**



# Low Income Order

- Program costs will be borne by all classes of customers
  - Specific mode of cost recovery will be determined in rate cases
- Total funding capped at 2% of total electric or gas revenues for sales to end-use customers
- Arrears forgiveness programs may continue if their funding remains below 10% of the total budget
  - Many will be curtailed or discontinued by the majority of utilities as the costs exceed budget limits
- Reconnection fee waivers also limited to no more than 1% of the budget

# Low Income Order

**Statewide, the enhanced low income discount program will serve approximately 1.65 million customers at a cost of approximately \$260 million, an increase of approximately 87% to existing programs**



# Low Income Order Modifications

- On February 16, 2017, the PSC approved implementation plans for the major utilities to increase the number of low-income households eligible to receive discounts
- Restored discounts to direct voucher/utility guarantee customers
- Heating discounts modified
  - Electric heating customers will receive up to \$76, up from \$27
  - Gas heating customers will receive discounts up to \$67, an increase from \$50



# Low Income Implementation Plans

- Utilities' low income program implementation plans were approved with certain modifications
- Utilities must expand enrollment to all HEAP recipients by no later than December 31, 2017
- Tiered discount levels must be implemented by no later than December 31, 2018
  - Deadlines designed to allow utilities sufficient time to carry out the substantial system and programming changes – No additional funds for billing system updates

# Retail Access

15-M-0127





## Retail Energy Market

- PSC began encouraging competitive market for energy in 1994
- Customer can purchase gas and/or electric from an Energy Service Company (ESCO)
- ESCO must be approved by the PSC

## Retail Access Order

- Amended Feb. 25, 2014
- Modifies Uniform Business Practices, structure of retail access
- Affects all residential customers
- Standardized format for renewal notices
- Sales reps must identify themselves and their employer



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# Order Resetting Energy Markets

- Issued by PSC on Feb. 23, 2016
- Prohibits new ESCO contracts with residential or small non-residential customers unless they provide guaranteed cost savings, or at least 30% of supply is from renewable energy
- Requires ESCOs to obtain consent prior to renewing that customer from a fixed rate or guaranteed savings contract into a contract that provides renewable energy but no guaranteed savings
- Requires ESCO CEO or equivalent corporate officer to certify enrollments comply with Order
- Strengthen the process for revoking ESCO eligibility to do business in NY if ESCO violates State regulations



# Order Resetting Energy Markets

- **Several ESCOs filed a lawsuit against the PSC on March 3, 2016 in Albany County Supreme Court**
- **On March 4, 2016, the court issued a Temporary Restraining Order which stayed parts of the PSC Order**
- **The ordering clause strengthening the ESCO enforcement process was not stayed and is still in effect**

# Moratorium on Low Income Customer Enrollments and Renewals - July 15, 2016

- **Directed ESCOs to de-enroll any customer identified by utility as a low income program participant**
  - Existing contracts may continue until expiration
- **Utilities must place a block to prevent all low income accounts from being enrolled with an ESCO**
- **Utilities must send letters to affected customers informing them that they are not eligible to take ESCO service and will be returned to full utility service**



# As a result of the July 15, 2016 Order

- On September 28, 2016, a lawsuit was filed in Albany County Supreme Court against the Commission by several ESCOs.
- On December 16, 2016 the Commission Adopted the Order on the Prohibition on Service to Low Income Customers by Energy Service Companies. A contempt motion was filed by ESCOs with the Supreme Court.
- The decision on this case is expected by mid-May.

# Hearings & Collaboratives

- **PSC determined retail markets serving mass-market customers are not providing sufficient competition or innovation to properly serve consumers**
- **On December 2, 2016, PSC issued a Notice of Evidentiary and Collaborative Tracks and Deadline for Initial Testimony**
- **Track I - Evidentiary Hearing**
  - **Sworn testimony and exhibits, subject to cross examination, followed by filing of post-hearing briefs prior to PSC action**
- **Track II - Collaborative Meetings**
  - **Party meetings, collaborative or party reports or proposals, and comment period prior to PSC Action**



# PSC Considerations

- Should ESCOs be completely prohibited from serving their current products to mass-market customers?
- Should regulatory rules and the Uniform Business Practices applicable to ESCOs be modified to implement such a prohibition, to provide sufficient additional guidance as to acceptable rates and practices of ESCOs, or to create enforcement mechanisms to deter customer abuses and overcharging?
- Can new ESCO rules and products be developed to provide real value to mass-market customers at just and reasonable rates?

# Questions?

**Monica Ferreri – [Monica.Ferreri@dps.ny.gov](mailto:Monica.Ferreri@dps.ny.gov)**

**NYS Department of Public Service**





**NYSERDA**

# **Clean Energy Fund Updates**

**Focus on LMI Initiatives**

**2017 LIFE Regional Meeting Series**

# Clean Energy Fund (CEF)

- Reduce ratepayer collections
- Drive economic development
- Accelerate the use of clean energy and energy innovation
- Reduce greenhouse gas emissions



# What is the CEF?

- 10-year, \$5 billion funding commitment
- Supports Governor Cuomo's Reforming the Energy Vision (REV), *a strategy to build a clean, resilient, and affordable energy system for all New Yorkers*
- Reduces cost of clean energy by accelerating adoption of energy efficiency to reduce load while increasing renewable energy to meet demand

# The CEF Supports:

- Aggressive Clean Energy Standard commitment that requires 50% of New York State's electricity come from renewable energy sources by 2030
- Goals to make 500,000 homes and 20,000 businesses more energy efficient, and bring solar to 150,000 new homes and businesses by 2020
- Customer savings
  - Reduction in total annual ratepayer collections for NYSERDA activities- \$1.5 billion by 2025 (\$91 million in 2016)
  - More than \$39 billion in bill savings over 10 years of CEF



# NYSERDA's New Direction - Why

- Substantial restructuring of NYS programs through REV
- CES requires 50% of NYS electricity come from renewable sources by 2030
- New approaches meaningfully increase scale of clean energy in NYS and achieve the level of energy savings and greenhouse gas reductions that are core State policy objectives
- State resources can have more impact if expended in more strategic ways (i.e., by focusing on reducing soft costs as opposed to subsidizing hard costs)

# NYSERDA's Energy Programs and Investment Under the CEF

## Four Portfolios:

- Market Development – \$2.7B State funding; \$8.9B private investment
- NY-Sun – \$961M State funding; \$9.2B private investment
- NY Green Bank – \$782M State funding; \$8B private investment
- Innovation and Research – \$717M State funding; \$3.3B private investment

# Market Development

Reduce costs and accelerate customer demand for energy efficiency and other behind-the-meter clean energy solutions, and increase private investment.

Focus on strategies to reduce soft costs and other nonmonetary barriers:

- Provide information, data, and education
- Offer technical assistance and provide standardized, simple, robust tools
- Provide quality assurance
- Pilot, demonstrate, and replicate new technologies and business models
- Aggregation to reduce costs through economies of scale



# NYSERDA LMI Portfolio

Initiatives to improve energy affordability for LMI households and improve access to clean energy solutions for LMI households and affordable building owners. \$234.5 million of CEF funds committed over first three years of CEF.

- Standard Offer Programs
- Market Development Initiatives
- Awareness and Education
- Creative finance solutions
- Emphasis on aligning policy and deployment with other program administrators for greater impact and reduced admin burden

# NYSERDA LMI Initiatives

## Standard Offer Programs

Initiative	Target Market	Service Provided	Est. Annual Budget
EmPower NY	1-4 family homes-owners and renters; renters in MF buildings	Energy efficiency, in-home education	\$25 million
Assisted HPwES	1-4 family homes	Energy efficiency	\$8 million
Multifamily Performance Program	Affordable multifamily buildings	Energy efficiency	\$10 million
Affordable New Construction	Affordable low and high rise new construction	Building performance	\$7 million
Affordable Solar (Rooftop)	Single family LMI homeowners	Incentives for rooftop solar	\$7 million (multi-year budget)
Affordable Solar Predevelopment and Tech Assistance	Shared solar/multifamily solar that provide benefit to LMI residents	Tech assistance for the development of a shared solar project that benefits LMI residents	\$3.6 million (multi-year budget)



# NYSERDA LMI Initiatives

## Market Development Initiatives

Initiative	Target Market	Service Provided	Budget
RetrofitNY	Affordable multifamily buildings, A&E firms, manufacturing, financiers	Solutions development through engagement with industry, design competition, and piloting solutions	\$30.5 million (10 year budget)
REVitalize	Organizations that serve or represent lower income and environmental justice communities	Technical assistance for the planning/ development of community-scale clean energy projects	\$325,000 (3 year budget)
Low-Income Forum on Energy	Organizations and individuals that serve low-income energy customers	Awareness and education	\$1.3 million (10 year budget)
Healthy Homes Feasibility	Single family and multifamily buildings	Study the potential for integrated health, housing, and energy intervention	\$215,000 (total budget)



# Upcoming Initiatives

- Community Energy Engagement Program
  - RFP 3588
  - Community outreach with focus on improving affordability and increasing deployment of clean energy solutions
  - Residential, multifamily, and small business
- Access to shared solar
  - Provide access and energy bill savings to LMI households
  - Expand/support the community solar market overall
  - Encourage community-driven projects and a range of project types/locations
  - Exploration of debt financing or tax equity support from NYGB
- LMI market characterization

# Coordination

## Interagency Task Force

- DPS, NYSERDA, HCR, OTDA, Gov's Office
- 2017 SOTS 20k homes initiative

## Clean Energy Advisory Council LMI Working Group

- 28 stakeholders
- Recommendations for improving the delivery of clean energy services to LMI households. Report filed February 2017, 43 recommendations
- Currently on hiatus

## Philanthropic engagement

# Questions

Chris Coll- [chris.coll@nyserda.ny.gov](mailto:chris.coll@nyserda.ny.gov)  
518-862-1090, ext. 3425





**Homes and  
Community Renewal**

# **2017 L.I.F.E CONFERENCE**

## **Update on HCR Green Guidelines**

# HCR Overview

- New York State **Homes and Community Renewal** (HCR) builds and preserves affordable housing through its vast portfolio of services and programs.
- To achieve our goals, we work directly with many private, public and nonprofit sector partners, including affordable housing developers, owners, landlords, banks, community development organizations, faith-based groups, elected officials, the Federal government, local municipalities, fair housing advocates, and other New York State agencies.

# HCR in Action

- In 2016, New York set a record for financing the creation or preservation of more than 17,000 affordable homes.
- HCR was the #1 bond issuer in the nation for the third year in a row, with more than \$2.5 billion issued to create affordable housing statewide.



# Finance and Development

HCR provides financing and capital to promote affordable rental housing opportunities for low-to-moderate income residents of New York, primarily through:

- Issuing tax-exempt bonds through the Housing Finance Agency, which qualify for as-of-right 4% Low Income Housing Tax Credits.
- The 9% Low Income Housing Tax Credits, which are awarded competitively through the NYS Unified Funding Application (UFA).
- Both 4% and 9% LIHTC projects may be supplemented with various capital programs and the State Low Income Housing Credit.

# Green Requirements - STANDARDS

- HCR seeks to encourage the growth of green buildings in the affordable housing sector to standards that will promote a timely transition to a low carbon economy.
- HCR is working to align the green building requirements 9% and the 4% Low Income Housing Tax Credit Programs:
  - 9% tax credits requirements – All projects must meet nationally recognized standards for energy efficiency and sustainability outlined in the UFA.
  - 4% tax credits + Bonds requirements – Meet standards in UFA; new projects must be certified as Green Bonds. All projects to benchmark energy use data.

# Green Requirements - BENCHMARKING

- All HFA projects required to monitor utility usage with benchmarking software and share energy data on an annual basis with HCR in EPA Portfolio Manager® throughout the regulatory agreement period.
  - New construction projects start benchmarking at conversion to permanent financing.
  - Preservation projects provide prior 2 years utility usage with application for financing.
  - NYC properties can share data submitted for LL 84 in EPA Portfolio Manager® with HCR account.



# NYS's Certified Climate Bonds = Green Bonds

- New York State's **Housing Finance Agency** is the first HFA in the nation to have its bonds certified as 'Climate Bonds' by the Climate Bonds Initiative (CBI).
- In November 2016, **Governor Cuomo** announced an initial \$100 million in Green Bonds for affordable housing. These bonds will inject nearly \$200 million in economic activity into local economies.
- HCR will continue to issue Green Bonds to finance new construction going forward. We now require that all new construction meet these CBI standards.
- This transition fortified New York's reputation as a national leader in addressing climate issues and reducing carbon emissions.

# Green Bonds Announcement

- "Green Bonds are an innovative tool to build cleaner, greener, affordable housing and place New York at the forefront of sustainable development," **Governor Cuomo said.** "New York leads the nation in pioneering solutions to 21<sup>st</sup> century challenges, and these Green Bonds will provide hundreds of new housing units to New Yorkers in need, while reducing carbon emissions, mitigating the impact of climate change and creating a more sustainable future for all New Yorkers."
- **Governor Cuomo** is committed to creating sustainable communities through innovative strategies, public-private partnerships, and thoughtful regional investments.
- In 2015, **Governor Cuomo**, joined by former Vice President Al Gore, signed a pledge to reduce greenhouse gas emissions 40% by 2030 and 80% by 2050 across New York State.

# Green Bonds Issuance

- Our initial \$100 million in Green Bonds will create 643 affordable apartments across New York State in four separate developments.

Project	County	Type of Project	Reserved Units	Total Units	Total Development Cost	Total Bond Amount*	Green Standards
<b>Confirmed Projects</b>							
Fountains Community Residences	Kings	New Construction	67 Supportive Units	267	\$86,478,932	\$45,125,000	Energy Star Multifamily High Rise Program
Crossroads at Baldwin Place	Westchester	New Construction	12 Family & 52 Senior Units	64	\$25,000,405	\$12,275,000	Energy Star New Homes Version 3.1 Program
Upper Falls Square	Monroe	New Construction	75 Supportive Units	150	\$47,476,056	\$23,190,000	Energy Star New Homes Version 3.0 Program
Bella Vista/Temple Hill	Orange	New Construction	54 Supportive Units	162	\$35,472,908	\$18,540,000	Energy Star New Homes Version 3.0 Program
<b>Green Series Totals</b>				<b>643</b>	<b>\$194,428,301</b>	<b>\$99,130,000</b>	

# Green Bonds Standards

- HCR will use the US Environmental Protection Agency's **Energy Star** standard as a proxy to achieve Climate Bonds Initiative certification.
  - Energy Star Multifamily High Rise Program
  - Energy Star Certified Homes Version 3.1 Program – projects must be 8% more efficient
  - Energy Star Certified Homes Version 3.0 Program – projects must be 9% more efficient



# HFA's 1<sup>st</sup> CBI Certified Green Bond Project



Architectural rendering of Fountain Avenue, Building A2, in East New York, Brooklyn.

The 9 story building is being developed by The Arker Companies and contains 266 units for residents with income under 60% of AMI.

# Climate Bond Initiative

CBI's mission is to mobilize the \$100 trillion debt capital markets to meet the low carbon transition.

CBI's Strategies:

- Provide information to the market
  - Green bonds data base, feeding MSCI/Barclays, S&P, DJI indices
  - State of the Market report
  - Regional and thematic focus reports, e.g. China, Covered Bonds
- Outreach to inform and stimulate the market
  - Policy models and government advice
  - Efforts in emerging markets to grow issuance
  - Green innovations, e.g. securitization, covered bonds, Islamic Finance
- Established and run the Climate Bond Standard & Certification Scheme
  - Screening tool for investors and guidelines for bond issuers
  - Assurance through certification

# Green Bonds: The Benefits

*Issuer benefits  
become more  
and more  
apparent and  
diverse...*

## Issuer Benefits

- Investor Diversification across regions and types
- Investor engagement and “stickiness”
- Strong oversubscription, yields tighter

*...given strong  
and persistent  
investor  
demand for  
green.*

## Investor Benefits

- Strengthened Reputation
- Alignment of Corporate Social Responsibility (or core business when pure play) with funding scheme
- Well-understood projects reduce risk exposure
- Well-managed projects reduce risk exposure
- Trading at a premium in secondary markets
- Strengthened reputation
- Deeper engagement with company management on green

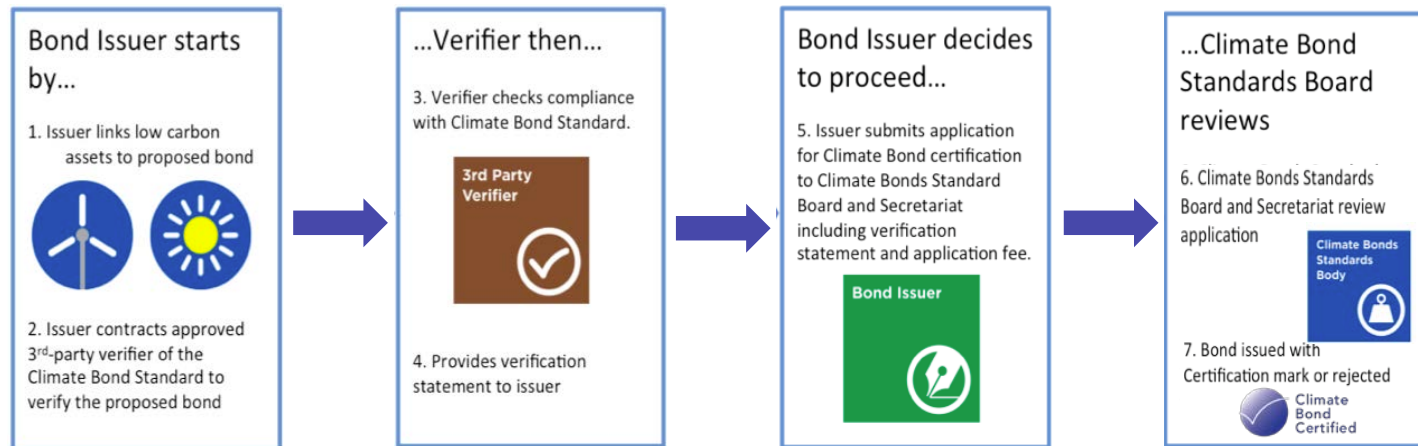
# The Importance of Credibility in the Green Bond Market

- To develop a strong green bond market, need to prevent 'greenwashing'
- Need a system of 'environmental due diligence' to review key environmental attributes, to complement existing financial due diligence
- Investors can't do this themselves
  - Specialist expertise needed regarding what counts as 'green'
  - Costly & inefficient to assess and verify themselves on a case-by-case, bond-by-bond basis
- Standards, assurance & certification is a practical way forward here, where system is
  - Scientifically robust
  - Transparent
  - Consistent
  - As simple as possible



# Growing the Market: The Climate Bond Standard (CBS) & Certification Scheme

- A fair trade-like certification scheme for green (and blue) bonds
- A Certified Climate Bond is a bond for which it has been independently verified that
  - The use of proceeds complies with the sector-specific climate criteria of the CBS
  - Management and reporting processes comply with the requirements of the CBS



# HCR Update – ADDITIONAL INFORMATION

- Stay tuned for a new HCR website - Green Tab at: [www.nyshcr.org](http://www.nyshcr.org)
- HFA update Green Guidelines:  
<http://www.nyshcr.org/assets/documents/1656.pdf>
- Questions: [Karen.Phillips@nyshcr.org](mailto:Karen.Phillips@nyshcr.org) or 212-872-0496