

ENVIRONMENTAL JUSTICE PERSPECTIVES ON CLEAN ENERGY

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OVERVIEW OF ENVIRONMENTAL JUSTICE IN THE ENERGY SPACE



REVitalize: Towards a Just Transition

**Urban Energy Transitions
Spring 2018**

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Traditional Energy Economy

- **Environmental Health Burdens**
 - **Excess deaths: ~200,000¹**
 - **Racial distributions: 6-7/10 POC near plants²**
- **Economic Burdens**
 - **Energy burdens: LI & POC most vulnerable³**
 - **Employment: 1.1%²**
 - **Revenue access: .01%²**

¹ <http://www.sciencedirect.com/science/article/pii/S1352231013004548>

² http://www.naacp.org/wp-content/uploads/2014/03/Just-Energy-Policies-Compendium-EXECUTIVE-SUMMARY_NAACP.pdf

³ http://www.naacp.org/wp-content/uploads/2017/04/lights_out.pdf

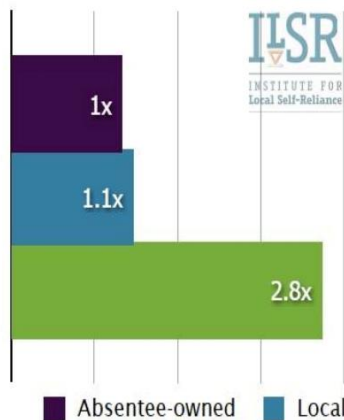


The Partnership

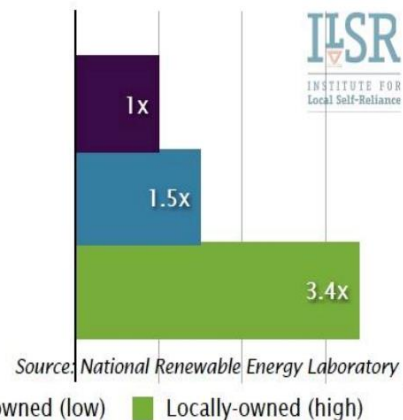


Local Ownership Means More Jobs & More Local Economic Impact

Job Impact of Local Ownership



Economic Impact of Local Ownership



Courtesy of ISLR and NAACP

REGULATORY AND POLICY CONSIDERATIONS

KEY POLICIES

- Reforming the Energy Vision (REV)
- Community Distributed Generation (CDG) Order
- Value of Distributed Energy Resources (VDER)
- Low-income Affordability Order

Reforming the Energy Vision

Overarching Framework for
Largescale Transformation of Energy
Sector in New York

- ✓ Centralized to Distributed
- ✓ Vulnerable to Reliable and Resilient
- ✓ Costly to Affordable
- ✓ Dirty to Clean

Image source: rev.ny.gov

MAKE ENERGY
MORE AFFORDABLE
FOR ALL NEW YORKERS

SUPPORT THE GROWTH OF
CLEAN ENERGY
INNOVATION

CUT
GREENHOUSE GAS EMISSIONS
80% BY 2050

EMPOWER
NEW YORKERS
TO MAKE MORE INFORMED
ENERGY CHOICES

IMPROVE
NEW YORK'S EXISTING
ENERGY
INFRASTRUCTURE

CREATE
NEW JOBS
AND BUSINESS
OPPORTUNITIES

PROTECT
NEW YORK'S
NATURAL RESOURCES

BUILD A
MORE RESILIENT
ENERGY SYSTEM

SUPPORT
CLEANER
TRANSPORTATION

GROW
NEW YORK'S
ENERGY EFFICIENCY



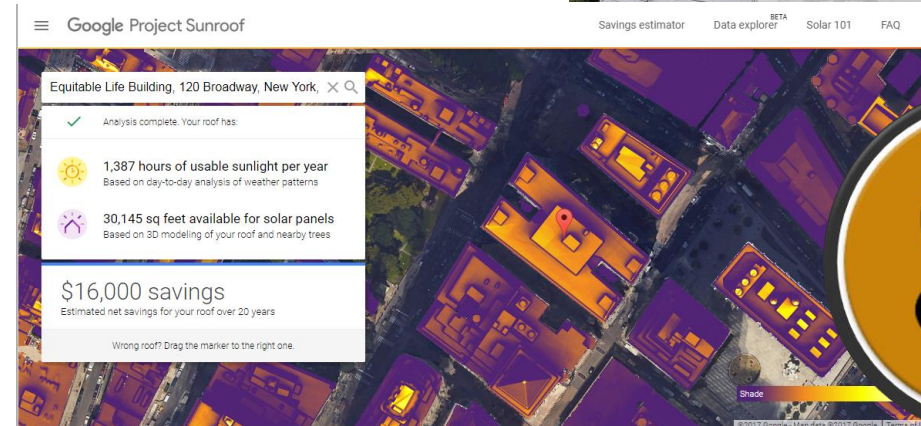
Community Distributed Generation

- July 2015 Public Service Commission Order
- Created the mechanism that allows for expanded remote net metering beyond same bill payer
- Establishes the relationships and roles between actors in a CDG project
 - sponsor, owner, subscriber, utility
- Key underpinning of Community Shared Solar, but not limited to solar (can be hydro, wind, etc.)

How does Community Solar create access and equity?

Significant barriers to accessing traditional rooftop solar include:

1. High upfront costs and barriers to credit access
2. Renter status with no ownership of usable roof space
3. Roof is shaded, not structurally sound, not located with enough exposure



Innovative Community Solar Financing

- Shared Local Ownership
 - Consumer Cooperatives provide a legal structure for participants to own and manage larger projects together
 - Local LLCs - small projects can be owned and operated by neighbors through a shared standard business entity, like an LLC
 - Profits generated by the project are returned to participant-owners in the project
- Credit enhancement mechanisms
 - Loan loss reserve
 - Backstop offtaker or subscriber
 - Institutional/commercial offtaker
- Community development oriented financing models
 - Community Development Financing Institutions (CDFIs)
 - Community Reinvestment Act (CRA) programming
 - Revolving Loan Funds
- Multiple project aggregation

Value of Distributed Energy Resources

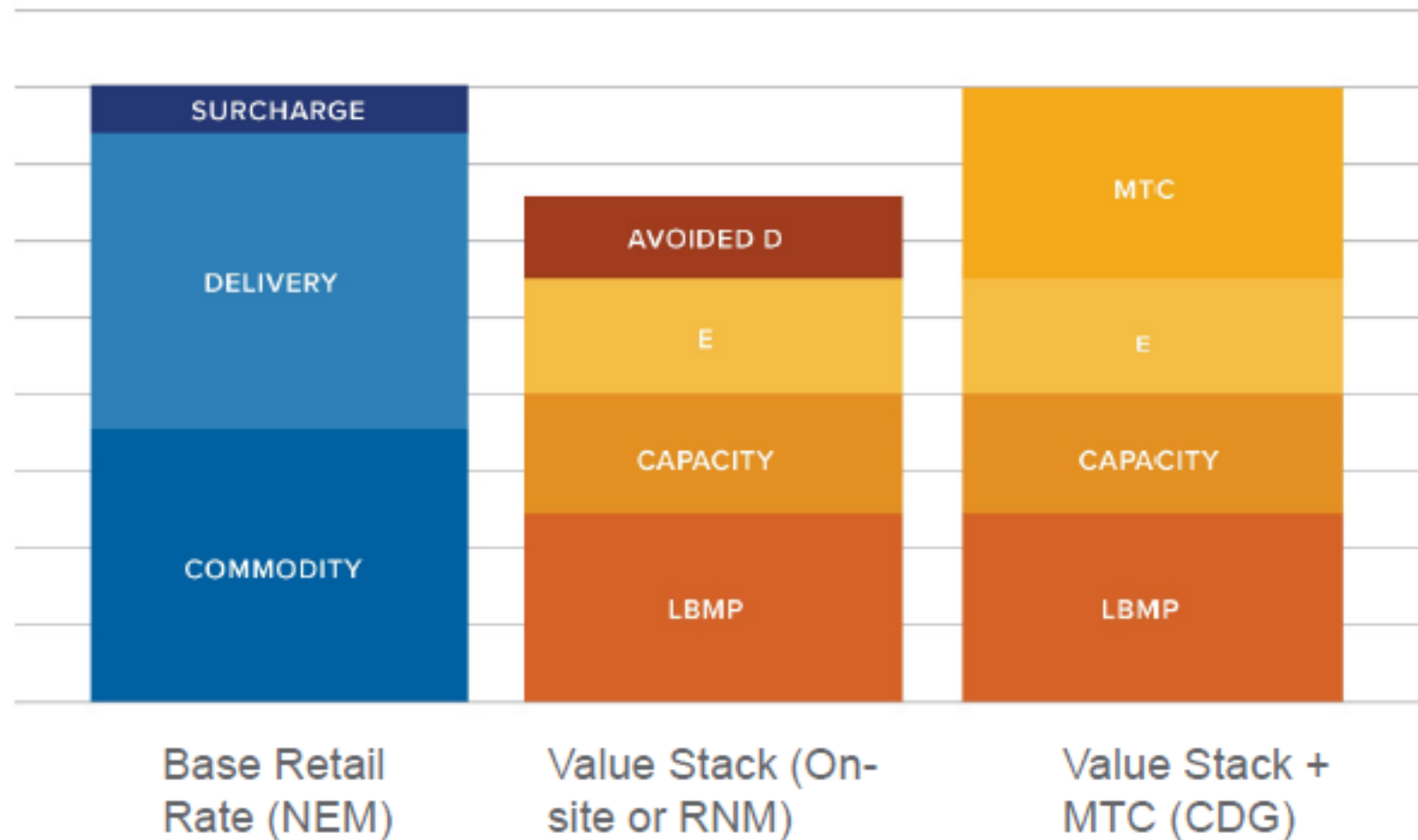
- March 2017 Public Service Commission Order and subsequent September 2017 Phase 1 Implementation Order with Phase 2 Working Groups currently underway.
- CDG order allowed for the expansion of distributed energy resources development which led to the push for a reconsideration of how generated energy is valued
- Transition away from net-metering/retail value for CDG projects
 - A number of values taken into account: wholesale energy prices, locational system relief, avoided demand, capacity, environmental
 - Additional transition value provided in the short-term
 - Tranche system based on capacity and by utility service territory
 - Value intended to start close or at net-metering rate and decrease over time

Phase One Value Stack - Components

- **Energy (LBMP)** – the current wholesale energy price, changes hourly
- **Capacity (ICAP)** – similar to the capacity credit currently provided under NEM, changes monthly
- **Environmental benefits (“E”)** – project’s rate is locked in for 25 years. Certain CDG projects can take a non-tradable REC instead
- **Avoided demand (“D” or “DRV”)** – based on amount system will reduce distribution grid’s peak demand
- **LSRV (locational system relief value)** – locational adder for some projects
- **MTC (market transition credit)** – additional element for CDG or mass market opt-in, given in place of “DRV”
- For a deeper examination of these elements, please see the *Value Stack Calculator Overview presentation* at nyserdera.ny.gov/vder



Phase One Value Stack - Components



- Avoided D – avoided demand
- E – environmental benefit
- Capacity – ICAP
- LBMP – energy commodity
- MTC – market transition credit for CDG

Low Income Affordability Target

- May 2016 Public Service Commission Order
- Sets a target level of energy burden at or below 6% of household income for all 2.3 million low income households in New York.
- Directs interagency efforts led by DPS staff to tackle reaching this target with a holistic and multi-pronged approach
- Weaves through nearly all REV-related proceedings including VDER and utility rate cases

Role of Income in Energy Burden

Table 2.1 - Energy Burden for New York State Households by Income Group

Household Group	Average Energy Bill	Average Income	Average Energy Burden
Low-Income Households	\$2,712	\$21,074	12.9% ⁴
Moderate-Income Households	\$3,064	\$48,048	6.4%
Non-LMI Households	\$3,452	\$142,243	2.4%
All Households	\$3,186	\$93,860	3.4%

Source: ACS (2013-2015) / Households that pay energy bills directly to energy suppliers

Table 3.1 - Energy Burden for LMI Households by Income Group

Income Group	Percent of LMI Households	Average Energy Bill	Average Income	Average Energy Burden
Less than \$10,000	14%	\$2,394	\$4,877	49.1%
\$10,000 - <\$20,000	19%	\$2,484	\$14,948	16.6%
\$20,000 - <\$30,000	20%	\$2,693	\$24,796	10.9%
\$30,000 - <\$40,000	18%	\$2,788	\$34,524	8.1%
\$40,000 - <\$50,000	13%	\$2,992	\$44,309	6.8%
\$50,000 or More	16%	\$3,722	\$61,898	6.0%
All LMI Households	100%	\$2,839	\$30,726	9.2%

Source: ACS (2013-2015) / Households that pay energy bills directly to energy suppliers

“In addition, the best solution for all customers, including low income, lies in **facilitating opportunities to invest in clean energy** and the **means to reduce energy costs**. Greater access and support for low income and underserved communities to DER is the best way to narrow the affordability gap that needs to be filled with direct financial assistance for customers with low incomes. Greater access to advanced energy management products to increase efficiency for low income customers will **empower those for whom these savings may have the greatest value**, as well as allowing the most disadvantaged customers more choice in how they manage and consume energy.”

- PSC Order in the Energy Affordability for Low Income Utility Customers Proceeding (May 20, 2016)