Guiding Communities Through Community Choice Aggregation And on its Potential Benefit in Enabling Efficiency, Local Renewable Power, and Microgrids

Presenter: Mike Gordon

Co-chair—Sustainable Westchester Guests: Community Leaders & Media

March 10th, 2015



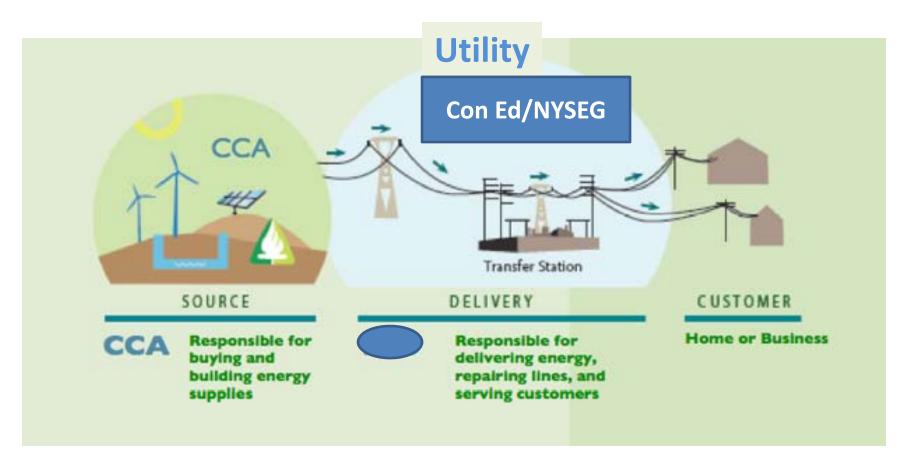
✓ CCA

- ✓ Description of Market Structures & CCAs Potential Role
- ✓ Common Features
- ✓ Potential "Added Value"
 - ✓ Renewable Generation
 - ✓ Micro-grids
 - ✓ Energy Efficiency
- ✓ Stage of NY Regulation
- ✓ Action Items & Time-line

- **✓** CCA
 - ✓ Description of Market Structures & CCAs Potential Role
 - ✓ Common Features
 - ✓ Potential "Added Value"
 - ✓ Renewable Generation
 - ✓ Micro-grids
 - ✓ Energy Efficiency
 - ✓ Stage of NY Regulation
 - ✓ Action Items & Time-line

WHAT IS CCA?

CCA allows cities and municipalities (& in some cases, counties) to pool their residential, business and municipal electricity loads (& gas, in NY), and to purchase power on their behalf. Energy transmission, distribution, repair and customer service functions remain with the incumbent utility.



NY—A HYBRID APPROACH

 Roughly 70% of U.S. electricity is supplied by vertically integrated investor-owned utilities (IOUs), with much of the balance coming from publicly-owned municipal utilities. Competitive "retail" markets are a hybrid where key energy functions are split between regulated and unregulated entities.

Regulated Private

Unregulated Private

Governmental

"Vertically Integrated" market

Competitive "retail" market

Municipal/ Public Utility

IOU Owns Generation

Privately Owned Generation

Muni Owns Generation

IOU Purchases & Sells
Power

Private Companies
Purchase & Sell Power

Muni Purchases & Sells Power

IOU Maintains
Transmission Lines

IOU Maintains Transmission Lines

Muni Maintains
Transmission Lines

IOU Provides Customer Service

IOU Provides
Customer Service

Muni Provides
Customer Service

CCAs in Westchester

 CCA fits into the hybrid market & adds market clout (buying on behalf of all consumers who do not opt out of CCA) and potentially enriched services via Sustainable Westchester. In any market, there's a default provider. CCA changes who that is: from IOU to CCA

CCA contracts with one competitive supplier & can add services

"Vertically Integrated" market

Competitive "retail" market

Municipal/ Public Utility

IOU Purchases Power

CCA Aggregates Power Purchase

Muni Purchases
Power

IOU Maintains Transmission Lines

IOU Maintains Transmission Lines

Muni Maintains
Transmission Lines

IOU Provides
Customer Service

IOU Provides Customer Service

Muni Provides
Customer Service

Non-Profit/IMA

Adds Features

- ✓ CCA
 - ✓ Description of Market Structures & CCAs Potential Role
 - ✓ Common Features
 - ✓ Potential "Added Value"
 - ✓ Renewable Generation
 - ✓ Micro-grids
 - ✓ Energy Efficiency
 - ✓ Stage of NY Regulation
 - ✓ Action Items & Time-line

COMMON FEATURES

- ✓ Enabled by State Legislation (However, NY DPS published an Opinion that only rule-making is required)
- ✓ Opt-out program (in NY, Westchester has been approved for electric & gas)
- ✓ Local governments as decision-makers (Vote of local governing authority or municipal referendum)
- ✓ Utilities as delivery and billing partners (We requested, and are awaiting decision on "bill stuffer" ability): "Consolidated billing"
- Existing regulations and environmental mandates apply (e.g. EPS & SPC costs remain, as does eligibility for all NYSERDA incentives)
- ✓ No taxpayer funding required (saves residents & small businesses certain NYS taxes)

Additional Value?

#1: STABLE RATES & COST SAVINGS

NY: Pilot; Sustainable Westchester approval requires either:

Floating rates with discount commitments or Fixed rates that are lower than trailing average (12 months)

IL: Initial 25% savings off Utility rates (rate gaps narrower, now)

MA: Average 6% lower rates for default supply; small premium for 100% green

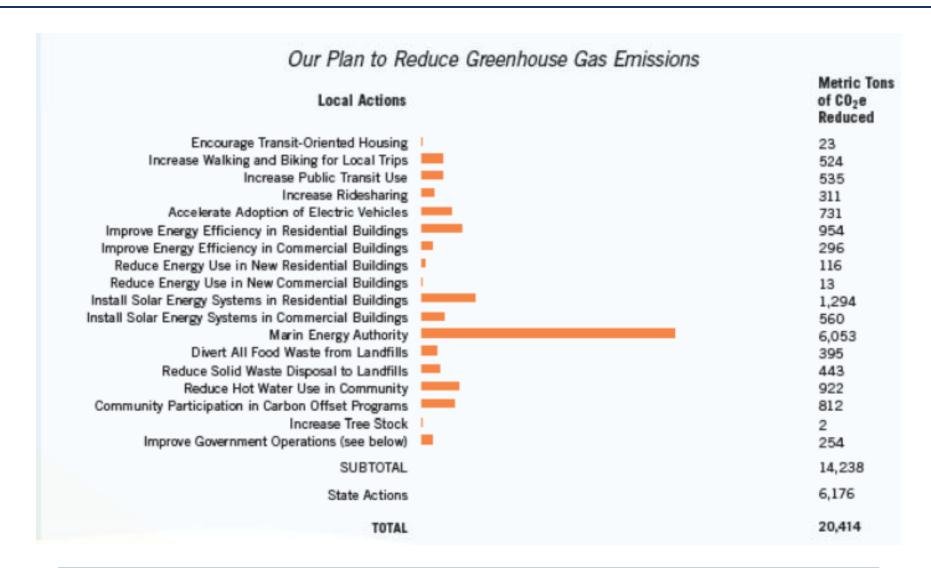
Additional Value?

#3: INJECTION OF DOLLARS, BEYOND SAVINGS, INTO LOCAL ECONOMIES

- Westchester County demonstration for other municipalities in the state:
 - Opportunity to direct a portion of \$1.5 billion in annual spend, toward local power supply
 - Tax relief
 - Enhanced investment in
 - renewables,
 - micro-grids and in
 - energy efficiency upgrades
- Marin: \$100 million, bought locally
- Illinois; Chicago, and the majority of state residents, buy locally

Investment in Renewables—Example

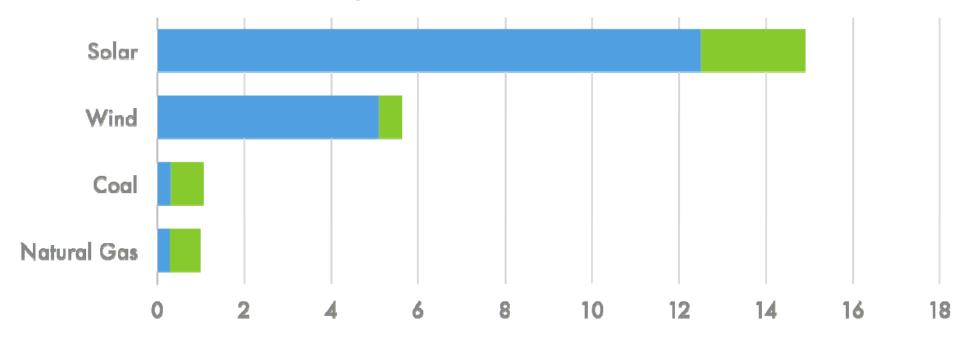
A. DIRECTED PURCHSE OF RENEWABLE SUPPLY REDUCES GHG EMISSIONS



Investment in Renewables—Example

B. PPAS CAN DIRECTLY FINANCE LOCAL RENEWABLE SUPPLY

Local Ownership Boosts Jobs from Renewables

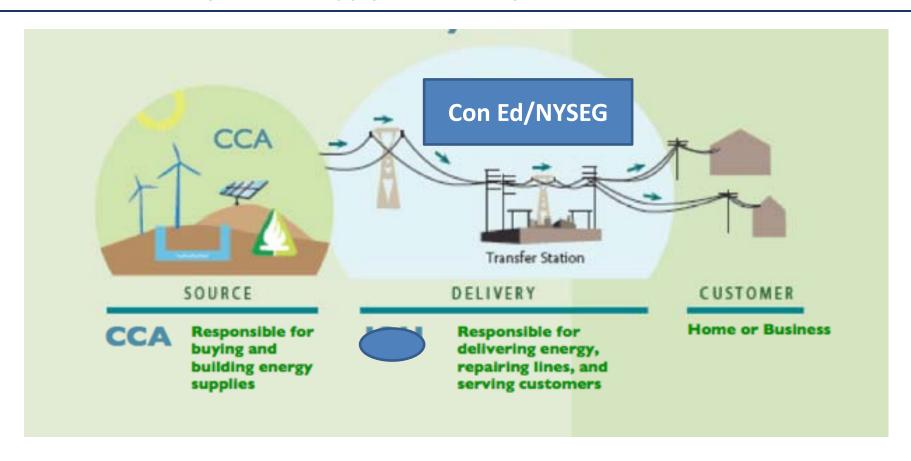


Jobs per Megawatt

- Construction, manufacturing and installation
- Ongoing maintenance and fuel

Investment in Microgrids—Example

A. Win-Win for Local Supply & Reliability



- The further a power plant is, from its customer, the greater is its "transmission loss" penalty
- Due to this "win-win" opportunity, CCAs should be uniquely eligible for NYS' micro-grid support funds (\$40 million)

Investment in Microgrids—Example

B. ABILITY TO EARN REVENUE IN STATE POWER MARKETS

The power grid pays for services These services include:

- 1. Balancing intermittent renewable generation by adjusting generation or consumption (2 seconds notice)
- 2. Providing relief when the grid is stressed by over-use by either generating more, or reducing consumption (2 hours notice) and
- 3. Responding to local perturbations by either generating more or reducing consumption (10 minutes notice)



 The entire micro-grid can sell these services, together, allowing access to the more lucrative "grid support" programs

Investment in Efficiency—Example

A. CAN CREATE EFFICIENCY INVESTMENT FUND, OVER AND ABOVE NYSERDA

- The Public Service Commission Order explicitly asks SW to submit our efficiency fund proposal, once we're closer to "going live:"
- If total price is still lower than utility's, the CCA can include a bill surcharge that will accumulate dollars for an energy efficiency fund that can distribute incentives for energy efficiency upgrades even "Smart Thermostats" like, e.g., the Nest
- Residents and small businesses will still be eligible for additional NYSERDA incentives for any qualifying efficiency upgrade

- ✓ CCA
 - ✓ Description of Market Structures & CCAs Potential Role
 - ✓ Common Features
 - ✓ Potential "Added Value"
 - ✓ Renewable Generation
 - ✓ Micro-grids
 - ✓ Energy Efficiency
 - √ Stage of NY Regulation
 - ✓ Action Items & Time-line

What's Happening in New York?

✓ Legislation

- ✓ A7896 (Paulin)/S5500 Pilot Legislation Passed in Both Houses; Vetoed by Governor
 - ✓ Chairwoman (PSC) Audrey Zibelman felt that it could have sent an unwitting message to other communities in the state that legislation was required and that they therefore could not apply for approval from the PSC

What's Happening in New York (2)?

✓ Regulatory

- ✓ Department of Public Service
 - ✓ Allows Westchester municipalities (administered by Sustainable Westchester) the freedom to implement "optout" structures
 - ✓ Link to PSC Order and PSC-issued news release (items 3 and 4, when you click through):

http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-M-0564&submit=Search+by+Case+Number

- ✓ Conducting a quick process (24 days from Order) to determine what, if any, cost will be levied for data provided to municipality from utility (\$100 \$500, tops)
- ✓ Promulgating regulations for the rest of the state, while inviting other communities to submit similarly well thought out demonstrations to the Agency, for similar approval
- ✓ Municipalities
 - Now free (only in Westchester and only through Sustainable Westchester) to pass a local resolution, to start the ball rolling
 - ✓ Some may choose to conduct a referendum, after the Resolution has been passed
- ✓ Sustainable Westchester
 - ✓ Orienting communities & seeking municipal resolutions
 - ✓ Determining a deadline for the first round of municipalities to be included in the first RFP
 - ✓ Preparing to hire expert staff and legal (e.g. is a separate IMA the optimal approach?)
 - ✓ Gaining clarity on:
 - ✓ Definition of "Small Commercial"
 - ✓ Whether a referendum is required
- ✓ Attorney General
 - ✓ Will provide "Advisory Opinion" re whether a referendum will be required after a municipality's governing body has passed a resolution

- ✓ CCA
 - ✓ Description of Market Structures & CCAs Potential Role
 - ✓ Common Features
 - ✓ Potential "Added Value"
 - ✓ Renewable Generation
 - ✓ Micro-grids
 - ✓ Energy Efficiency
 - ✓ Stage of NY Regulation
 - ✓ Action Items & Time-line

Action Items & Time-line?

✓ Akin to locking in a mortgage rate

- ✓ Set your preference, then wait till the rates get to that level
- ✓ Perfect in a market chugging along at historically low rates

✓ Time-Critical—Prices at historical lows ('02)

- ✓ March 3rd, 2014: Price >\$7 per million BTU (EIA; Henry Hub)
- ✓ March 3rd, 2015: Price <\$2.80 per million BTU</p>
- ✓ Risk: global event spurs price hikes

✓ Sustainable Westchester

- ✓ Must set a time limit, in order to get out first Round of RFPs (there will be a 2nd Round)
- ✓ An aggressive schedule (2 months?) would allow the consortium to fix rates advantageously, for the 1st Round

Action Items & Time-line?

✓ Municipalities

- ✓ Decide if you want to hold a referendum, even if one is not required—ASAP
- ✓ Craft a resolution that reflects that preference—ASAP
- ✓ Invite someone to orient your Board—ASAP
- ✓ Pass the resolution—(one or two meetings?)
- ✓ Request aggregated consumption data from your utility (form letter; the day after it's passed)
- ✓ Forward data to Sustainable Westchester, when you receive it (20 days later?)
- ✓ Inform residents through open hearings, when we've a bid in hand (SW deadline + 20 days)

Action Items & Time-line?

✓ Sample Resolution

- ✓ WA: ...PSC wants competitive markets
- ✓ WA:...utilities intend to focus, not on sales of energy, but on reliability
- ✓ WA: ...limited uptake from consumers on competitive residential supply
- ✓ WA: ...aggregation creates clout
- ✓ WA: ...clout can save or help to fix prices at historically low levels
- ✓ WA: ...PSC offered this flexibility to Westchester, in advance of anyone else in the state
- ✓ BIR: ...
- ✓ Be it Resolved that
- ✓ The ---- of ----- will enter into an agreement for its residents and business consumers who
 are not currently purchasing electricity from an Energy Service Company if (with the
 explicit understanding from a bidding Energy Services Company, or "ESCO", that the ---- will
 not be held liable for any failure to deliver promised prices)
- ✓ The default price is guaranteed by the ESCO to be consistently less than the utility price for the same period or
- ✓ The default price is locked-in by the ESCO at a level that is less than the average utility price for the same commodity, for the same customer class, over the last twelve months or
- The default price is at first set at a level that is less than the average utility price for electricity, for the same customer class, over the last twelve months and only floats upward by less than 25% of price hikes implemented by utilities

CCA—OVERVIEW

CCA offers consumers an energy choice that reflects their goals and values without the tax burden of maintaining an aging delivery system.

CCA allows communities to choose their electricity supply, use/build local generation, and set rates locally.

CCA allows for local program optimization: integration of solar PACE, energy efficiency funding, green business programs, reliable micro-grids, etc.

CCA helps meet State regulations and environmental mandates.

The opportunity can be realized, now.

Low fossil-fuel prices make this timely and time-sensitive

CCA—OVERVIEW

I am available to present at municipal governance meetings. Questions?

Contact Info; Mike Gordon:

- (e) mgordon@jouleassets.com
- (c) 914.282.7000