



Community Clean Energy for the Genesee Finger Lakes Region

GFLRPC Spring Regional Workshop
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Pittsford
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About JouleCommunity

Joule: NYS Leadership and Innovation



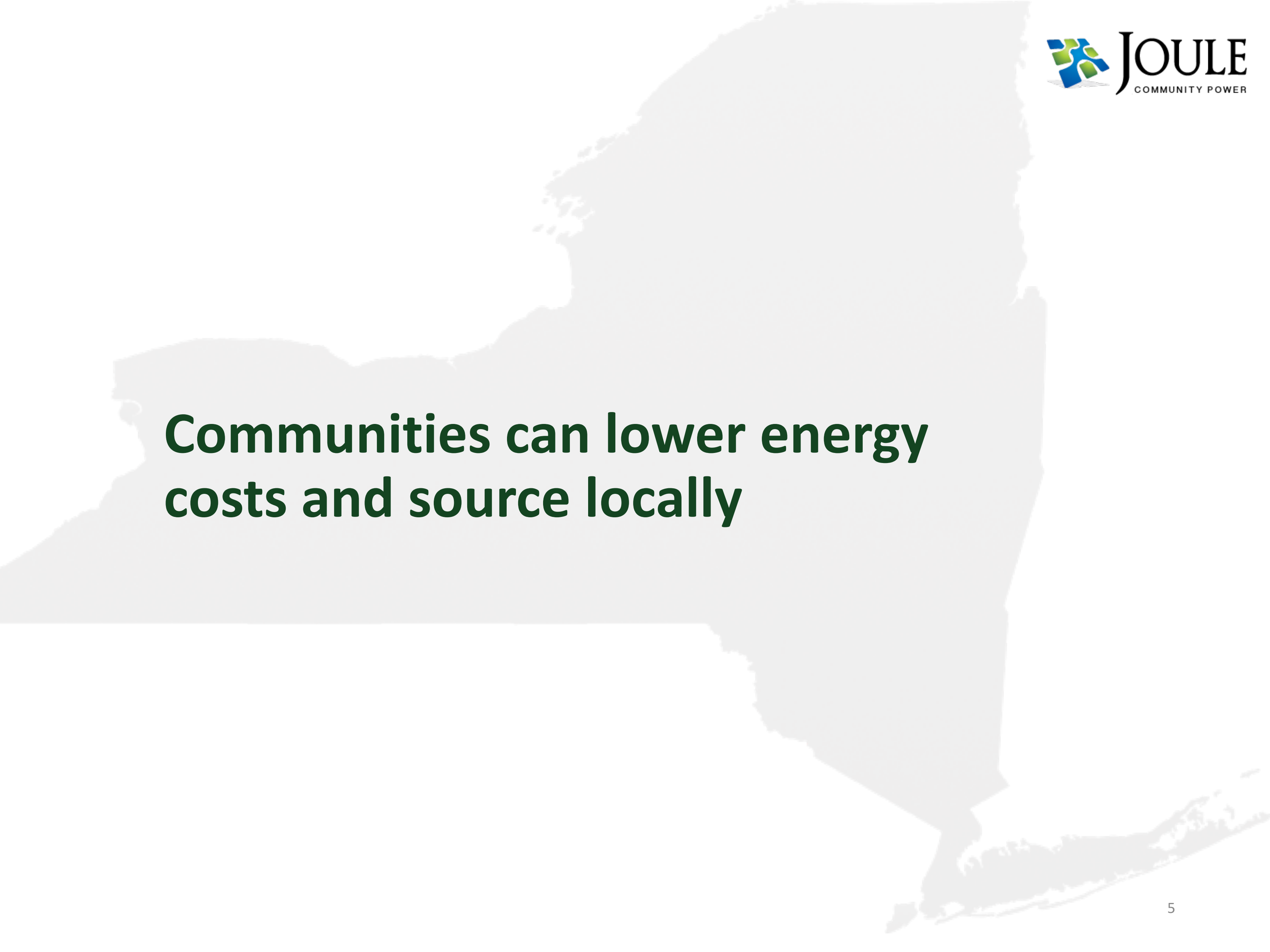
Founded in 2010 with the *mission of representing underserved customers in clean energy and efficiency markets*, accessing value available only to large users

Joule principals responsible for organization and implementation of *first and only* NYS CCA in 2016

Only state-approved CCA Plan allowing communities to source community renewables for residents with *no individual contracts or credit requirements*

Contracted by NYSERDA to develop their CCA resources

Only entity in NYS authorized by the grid operator to register consumers as a dynamic grid resource, earning \$ by adjusting smart thermostats at critical moments



Communities can lower energy costs and source locally

Community Choice Aggregation (CCA)

Enabling tool. Relocates authority to source default energy supply for residents *from* the state *to* the local level

Empower the community. Leverage collective purchasing power, dictate buying terms, combat market volatility

Protect the consumer. No individual contracts, guaranteed rates, no penalties. Municipally vetted supply agreement.

Free opt-out anytime. Residential and small commercial customers currently supplied by Utility will be automatically enrolled

Market power. Savings typically 5-10% on electricity supply. Utility retains monopoly on delivery (poles, wires, meters)

First New York CCA Program



Spearheaded by Joule CEO and VP

Launched May 2016

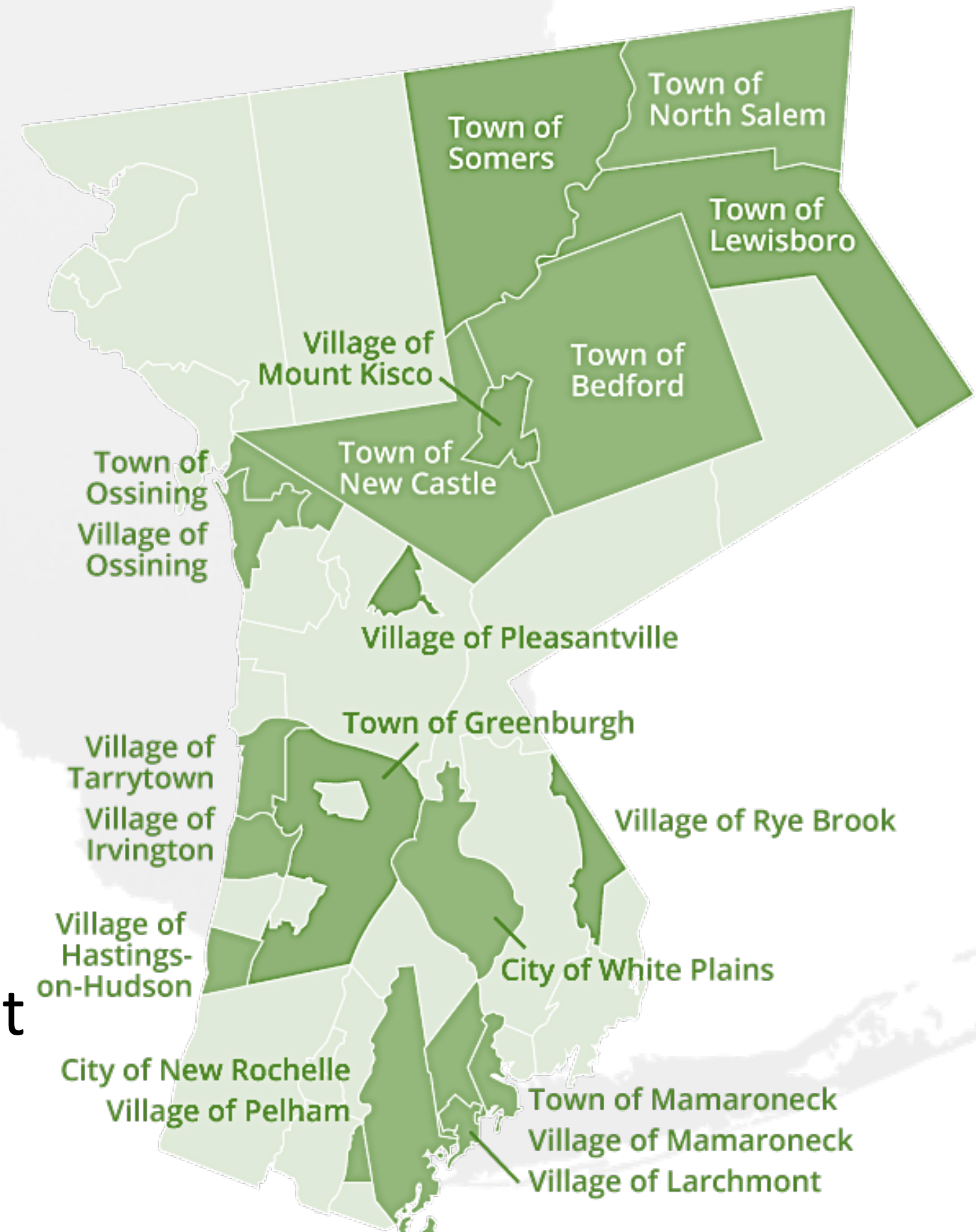
100,000+ customers in 20 communities

\$10 million in savings (as of 4/2018)

Largest renewable energy purchase in
NYS history

14 communities 100% renewable default

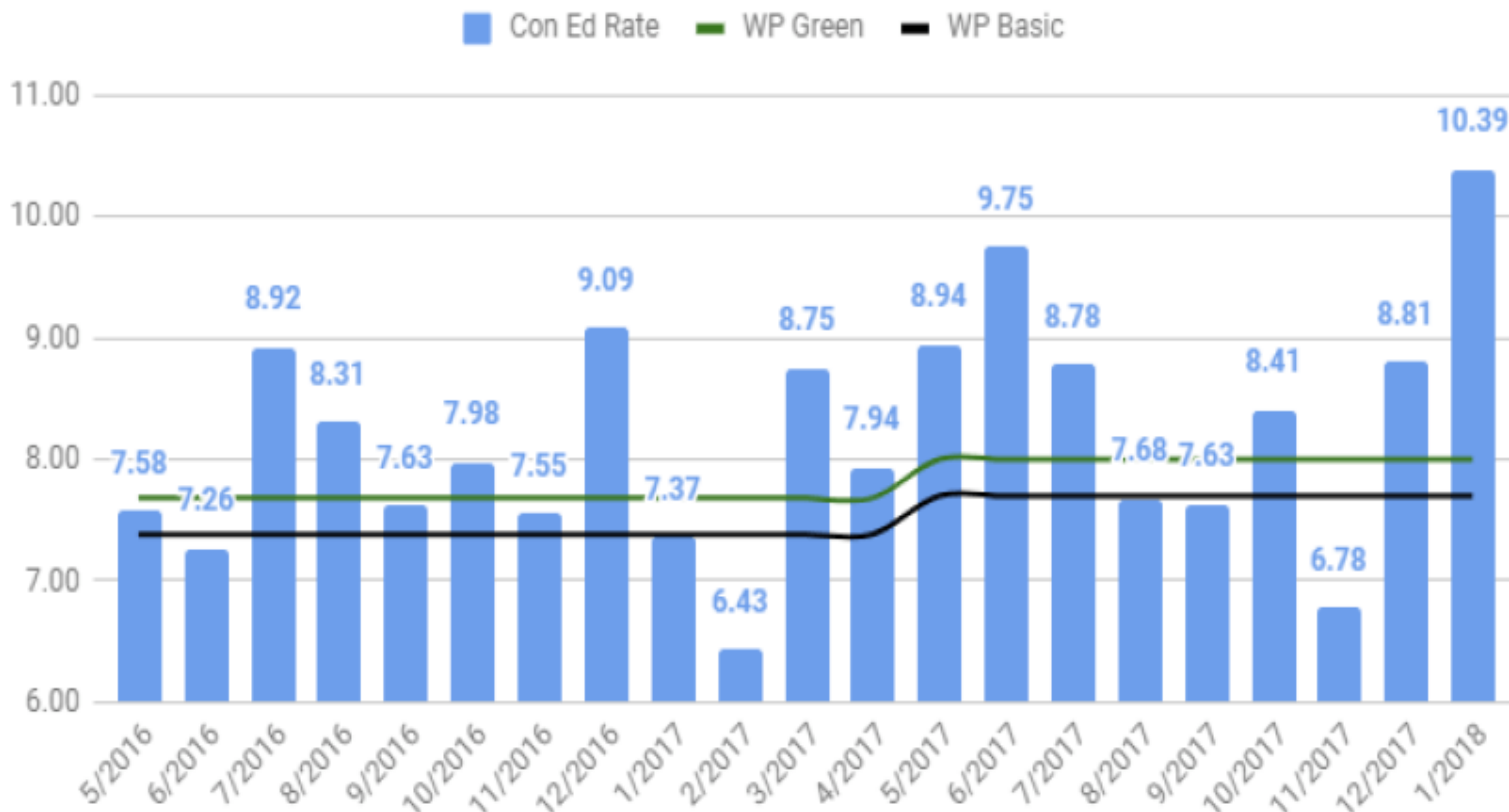
Free opt-out/cancellation any time



Residential Rate Comparison

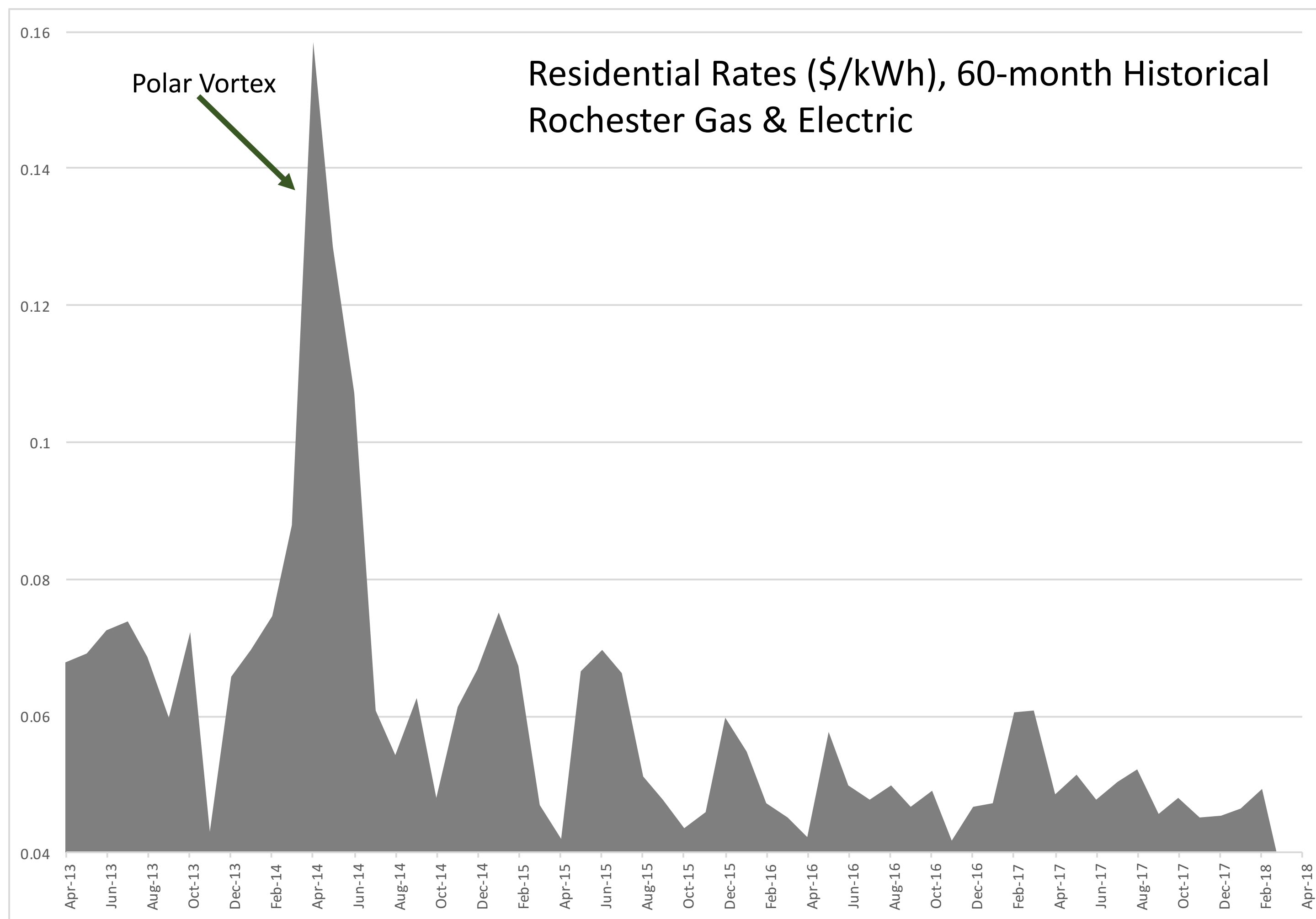


savings to date in ConEd territory: \$8.8million



Address Energy Price Roller Coaster

with fixed rates (Utility not permitted to offer)



Source Local Clean Energy

access community distributed generation market
recently established by NYS regulators

Synonyms: community solar, solar farms, shared solar, solar gardens

Mid-scale generation. 5 MW cap; typical project equivalent to 200-500 residential rooftop solar arrays, yet only 1-5% the capacity of a large gas or nuclear power plant

Cleaner AND cheaper. Guaranteed savings to all participating consumers- usually ~10% off the entire bill (not just supply). NYS mandates Utility to credit participating customers' bills for the market value of the power they've purchased

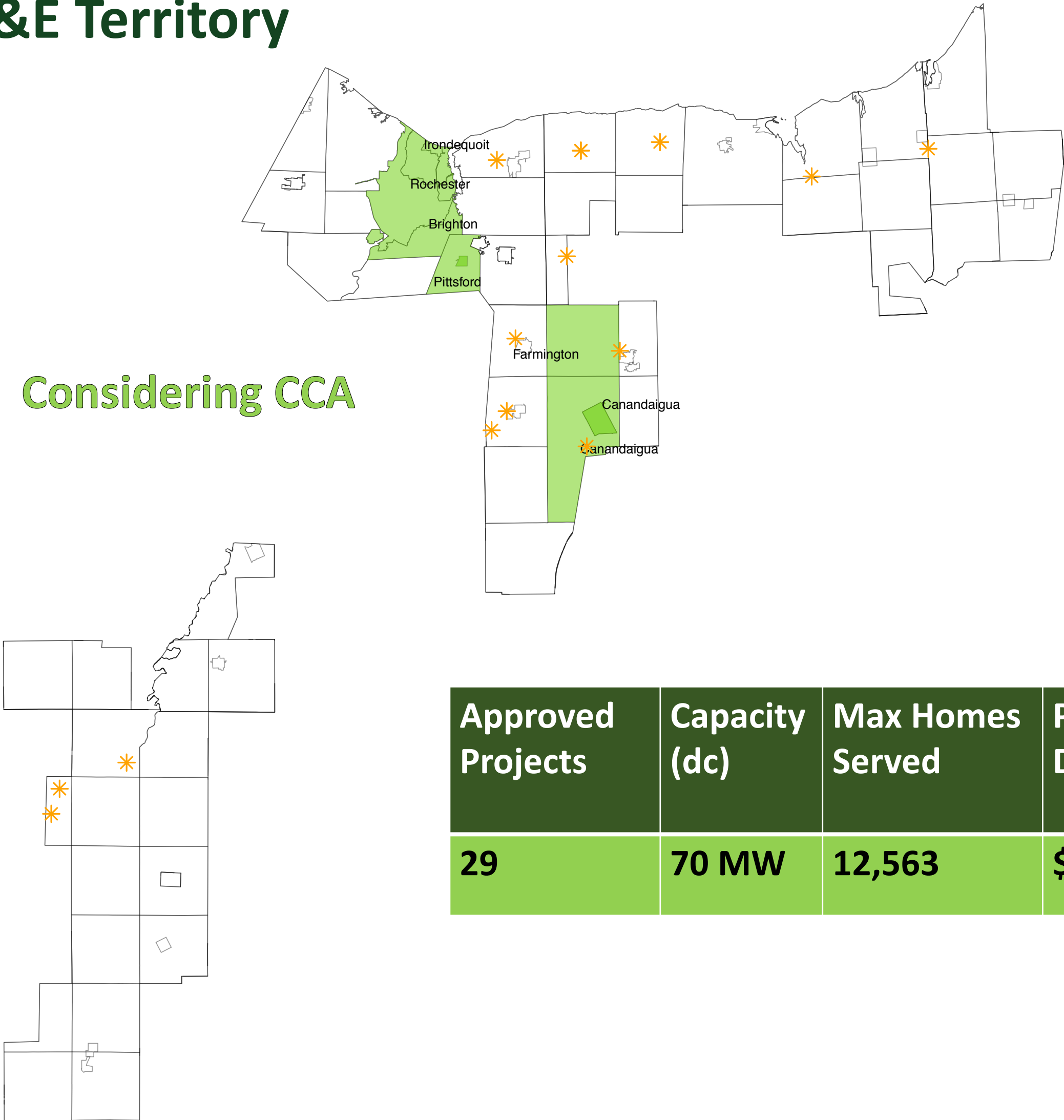
Benefits stay local. System resilience and reliability, local economic development, green jobs, long-term sustainability

Not only solar. Wind, hydro, anaerobic digesters, fuel cell eligible for same benefit

Community Solar Opportunity RG&E Territory



Considering CCA



Approved Projects	Capacity (dc)	Max Homes Served	Potential Econ. Development
29	70 MW	12,563	\$100 million

The Roctricity Program

100% Clean Energy

First of its kind community energy program; approved by New York State 3/2018:

Dynamically integrates the benefits of CCA and community clean energy

10-20 years of guaranteed savings for residents by partnering with community clean energy projects

Equal access for all income levels

No individual customer contracts, no credit requirements

Joule acts as representative of municipality to develop/vet projects/developers

Community ownership options in local projects

Enhanced Consumer Value

Program Component	Estimated Annual Savings/Household
Electricity Supply (CCA alone)	\$40
Local Clean Energy Program	\$90
Smart Thermostat Program	\$40
Total	\$170

Joule is aligned with the community:
we are compensated by a portion of the value we create

No commitment until we deliver a contract and pricing
that meets your established criteria

Beyond CCA

Capability	Joule	Competitors	Annual Savings / Household	Description
Authority to buy energy and renewable certificates in bulk	✓	✓	\$40	Joule wrote the petition for NY's pilot CCA (12/2014); as of 4/21/2016, program is open to all NYS communities
Experience implementing renewable energy CCA in NY	✓		N/A	Joule Principals worked with 25 municipalities and their counsel to develop the only operating CCA in the state
Authorized by PSC to offer community distributed generation credits with no individual contract	✓		\$90	Joule is the only authorized Administrator in New York State, by the Public Service Commission (3/15/2018)
Authority to pay homeowners for enrolling their smart thermostats in grid response program	✓		\$40	Joule has been granted the only license in New York State by the grid operator (12/2017)
Compensates local organizers	✓		N/A	Joule partners with local groups to manage customer support and community outreach operation; administrative fees are shared

Next Steps

1. Select CCA Administrator

Entity authorized to represent the municipality in CCA implementation process with utilities, regulators, energy suppliers, project developers.

Joule serves in this role. Administrative fee shared equally with Roctricity.

Administrative fee is a volumetric charge (per kWh) paid by contracted energy suppliers, not by municipality or as a line item on residents' utility bills.

Selecting an Administrator does not commit the municipality to CCA; simply authorizes Administrator to collect data and present contract options. Municipality determines threshold criteria for execution.

2. Approve CCA Local Law

Purely enabling. Calls upon municipal home rule authority to establish a CCA program.

Establishes principles and desired outcomes, but gives municipality flexibility to explore and implement on their own terms.

3. Identify Suppliers and Terms

Joule represents the municipality in negotiations with local renewable operators and retail suppliers to find available resources, arrive at pricing benchmarks and contract terms.

Municipality (and counsel) has final authority, establishes binding terms for contract execution through MOU.

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