

# Community Aggregation

City of Cambridge

Health and Environment Committee Hearing

October 8, 2015

# Energy Procurement Goals

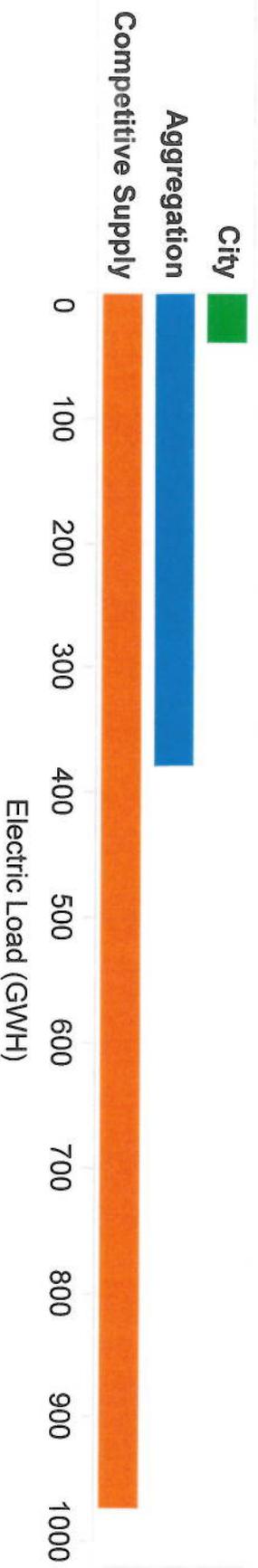
- Increase the amount of renewable energy procured for municipal operations with a goal of reaching 100%.
- Increase the amount of renewable energy being consumed by residents and small businesses above what is required through the Renewable Portfolio Standard (RPS).
- Procure renewable energy that leads to the development of new renewable energy projects, a.k.a. “additionality”.
- Develop financing plan to support energy goals.

# What is Community Aggregation?

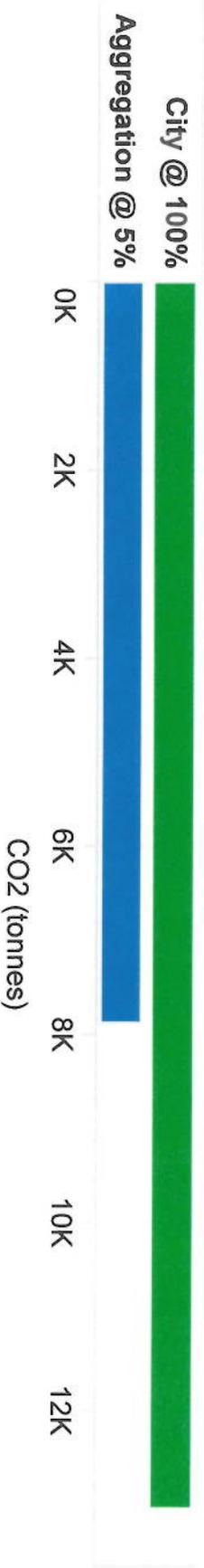
- A form of group purchasing in which a city buys electricity on behalf of its residents and businesses that receive Basic Service electricity.
- Aggregation is typically handled by consultant (Aggregation Vendor) and designed as 'opt-out' program; could include 'opt-in' options for buying larger percentage of renewable energy. Low income customers stay on special rate.
- Community Aggregation requires regulatory approval at the state level.
- Purpose of aggregation:
  - Rate stability and avoidance of winter spikes.
  - Could provide residents and businesses with electricity that is less expensive.
  - Could provide electricity that includes higher percentage of renewable energy.
  - Could raise funds for investment in renewable energy projects.

# Impact of Community Aggregation

## Electric Load



## CO2 Avoided



## Key Context for Renewable Energy Credits (RECs)

- Renewable Energy Credits are the ‘environmental attribute’ of electricity produced.
- Not all RECs are equal: REC regulations and markets differ, environmental impact vary greatly.
- MA REC market is highly regulated and utilities and other power suppliers are required to purchase the vast majority of the RECs in our market to meet their statutory requirements, making demand and prices high.
- The additionality impact of voluntary REC purchases is limited:
  - Demand is high and voluntary purchase has low or indiscernible effect on new generation.
  - Utilities are allowed to make Alternative Compliance Payment in lieu of buying RECs.
  - Alternative Compliance payments do not necessarily get used to directly build more renewable energy facilities.
  - Regulatory authorities could intervene to manage costs if voluntary purchases affected prices.

## Key Context for Additionality

- Additionality means that investments in renewable energy by individual or institutions *actually* lead to **new** renewable power facilities being built.
- Additionality is often referred to as the “but for” rule:  
“But for” your investment the facility would not have been built.
- The additionality test is met when a buyer contracts with a renewable energy developer to buy power and/or RECs from a facility that is not yet built, and that contract enables the developer to obtain financing.
- If the buyer wants to claim the GHG reductions associated with the renewable generation, they must purchase and retire the RECs.

# Procurement Strategy Development

- City issued RFQ, articulating goals for both municipal and aggregation.
- Hired a consultant team with deep experience:
  - Bay State Consultants – Procured and negotiated more than 700 energy contracts.
  - Peregrine Energy Group – 20 years of energy and energy efficiency services as one of the leading energy consulting firms in Massachusetts.
  - New Energy Opportunities – specialists in procuring long-term contracts with renewable generators.
  - Zapotec – Cambridge-based solar design and engineering firm; President of Zapotec, Paul Lyons, served on Net Zero task Force and is Cambridge resident.
- Develop strategy that in the shortest amount of time will lead to 100% renewable energy and additionality.

# Procurement 1: Municipal Energy Supply

- Secure short term contract for power supply before expiration of current contract on December 1, 2015.
- To secure uninterrupted electricity supply:
  - Issue request for “indicative pricing” (completed).
  - Review electricity suppliers based on business and investment practices (in process).
  - Issue bid for municipal electricity load (pending).
- RECs not included; preference for investment in power plus RECs (bundled from the same generator).

# Strategy for Greening Municipal Supply

- Purchase short-term 'brown' power at lowest rates from pre-screened suppliers (December 2015).
- Procure Solar Virtual Net Metering Credits as financial strategy (procurement in October 2015 for credits from projects coming on line by December 2016).
- Sign long-term contract for bundled electricity and RECs purchased directly from new renewable energy project (2018).

# Aggregation Strategy Options

- Buy power at lowest possible price to lower overall rates for consumers; no increase in renewable energy percentage (multiple municipalities).
- Buy low price power plus RECs to increase percentage of renewables (Melrose aggregation would increase renewable power by 5%).
- Buy power and invest differential between bid price and Basic Service rate in renewable energy projects (Cape and Vineyard Electric Cooperative).
  - City fund or Local Carbon Fund proposed in Net Zero Action Plan could hold funds.
- All options: Decide whether to include 'opt-in' options for customers seeking to buy higher amounts of renewable energy; limited results elsewhere.

Good afternoon

Thank you

I'm Jeannie Ramey and I live at 101 Chilton Street in Cambridge. I co-founded Synapse Energy Economics, a 35-person firm located in Central Square, doing technical and economic research and consulting on electric industry issues. I worked at the Mass DPU in the '90s and contributed to the restructuring order that laid the groundwork for Community Choice Aggregation.

Today I am here as a mother, and as part of Mothers Out Front; I've chosen to align myself with this group in part because we work together to become educated on these deeply complex issues; and because mothers have a unique voice: as family purchasers, heads of households, and keepers of hope for our children's future. Already, Cambridge mothers have helped 148 households in Cambridge switch to clean energy, despite NSTAR's then Eversource's refusal to allow MassEnergy's product to be billed through regular electricity bills. Think how much easier it will be for folks to do the right thing when a 100% renewable product is the default supplier! Some worry about the price of renewables: we worry about the enormous cost of doing nothing: prices of renewable are coming down, and for the CCA, anyone who wishes to can opt out.

We applaud the efforts of the city to require additionality. We know that by creating more demand for renewables, more will eventually be built. You have access to the best experts around so we don't need to tell you how to achieve our shared goals (100% New England Class 1 renewables). We want Cambridge to be a leader, and show the world that it is possible to have a strong thriving economy and protect the planet at the same time.

OPT OUT of higher % - people want to do something about climate change  
We mothers want to support the City in its efforts to obtain 100% renewable energy for municipal buildings, and we support CCA that is 100% supplied by renewable sources.

suggest the tiered approach going down

feel fortunate

focus on Camb - step back global context

Nina Dillon  
386 Walden

ATTACHMENT C

We've all seen the bumper sticker: think globally, act locally. That expression has never been more appropriate than for carbon emissions. Blanketing our entire earth is one atmosphere – thinner compared to the mass of the planet than the skin on an apple. Whatever carbon we emit right here in Cambridge enters that delicate and vulnerable atmosphere – our one and only -- contributing to our world's dangerously changing climate.

Sixteen years ago, I traveled to China to adopt my daughter, Eva. She was five months old. There were ten baby girls adopted from her orphanage that day. Each had been given a name that included the Chinese character for "rain." When we asked why, we were told the girls had been born in the months following a particularly heavy rainy season. We called them the "rain babies."

Turns out that "particularly heavy rainy season" is now known as The Great Flood along the Yangtze River. 4,000 people were killed in that flood; 14 million left homeless. And I know ten baby girls whose lives were profoundly and forever changed by those storms. We called them rain babies but really they were climate refugees. *we all know climate change contributes to more frequent + severe flooding - enough said about that.*

There's a Chinese legend ~~maybe you know it, Councilor Chung~~ – that says the gods tie an invisible red thread around the ankles of those whose lives are destined to be intertwined. Do I believe Eva and I were connected by this red thread? Destined to be mother and daughter? Maybe.

But I do know **this** is no myth: every person on this planet is connected to the same atmosphere and the choices we make here in Cambridge – concrete choices YOU'RE making right now between powering our city with fossil fuels or clean energy – make a difference.

Sometimes I feel like the world is such a big place, and climate change is such an overwhelming challenge. But I have only to look at my daughter's beautiful Chinese face to realize how very small our world really is – and to remember what's at stake.

As elected officials and city employees you have the privilege to make decisions on our behalf. With that privilege comes responsibility. Mothers Out Front is here today on behalf of our children – and yours – to hold you accountable for the energy mix you choose for us. But we're here as more than just mothers and grandmothers. We are Eversource ratepayers – and I don't suppose it hurts to take this opportunity to remind you that we vote.

*Thank you*

Think globally, yes. And act locally, please. ~~Take~~ action right now to move our City as quickly as possible beyond fossil fuels to a bright and healthy clean-energy future.