THE GREEN RESOURCE HUB

CCA+CDG Bridge Proposal

Initial Report

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Abstract

Proposed is the creation of a community based organization that would combine the NY State Public Service Commission (PSC) orders for Community Choice Aggregation (CCA) and Community Distributed Generation (CDG). By combining the roles of CCA Administrator and CDG Sponsor as defined under these two policies and adding shared services to municipalities that include direct customer billing and ability to enter Power Purchase Agreements (PPA)s with CDG developers, there is a potential to create an organization that would enable local communities to rapidly expand ever increasing savings through the addition of local renewable energy while establishing and retaining financial benefits and decision making related to energy in the hands of local communities.

Introduction

Status quo, business-as-usual enterprise, in particular within the energy industry, is rapidly bringing our natural environment, and ultimately our civilization, to a point of crisis. Deregulation efforts in the energy industry have often had only modest impact on price and have created a much greater level of complexity and confusion for the end customer. This has prompted many to ask if is it possible to change the way in which we provide goods and services. It is imperative that we find alternative ways of doing business that move us toward a society based upon "…practices and institutions on all levels and in all sectors of the economy that embody certain values and priorities: cooperation, sustainability, equality, democracy,

justice, diversity, and local control."[1] Business structures and practices that are aligned with these values can have clear practical advantages in meeting our increasingly complex social, economic, and environmental challenges.

An energy system purely based on corporate supply, transmission, and distribution, relying entirely on Investor Owned Utilities (IOUs) and Energy Service Companies (ESCOs), has clearly hindered a community centered focus on goals of economic, social, and environmental justice. The providers of this essential public service are legally required to maximize shareholder value, and in spite of regulations or state oversight, the decision making of these for profit entities are largely made outside of the community and frequently even outside of the country.

In cities with publicly owned municipal utilities, power agencies have the potential to incentivise energy efficiency programs such as low income home weatherization, investments in distributed renewable energy generation, and increased democratic control of energy policy. Programs to develop distributed renewable energy sources can be configured to help foster a locally owned independent business sector of renewable energy installers. Investments of this kind may even help develop a primary industry of manufacturers around new, renewable energy technologies.[2]

[1] Allard, J., Davidson, C., & Mattaei, J. (2008). *Solidarity economy: Building alternatives for people and planet. Papers and reports from the U.S. Social Forum 2007*. Chicago: ChangeMaker Publications. p. 6
[2] Hess, D., & Winner, L. (2007) Enhancing justice and sustainability at the local Level: Affordable policies for urban governments. *Local Environment (12)*4, 379-395. DOI 10.1080/13549830701412489

But the reality is that most cities do not have public power agencies, and without this public leverage, policy makers are less able to press their IOU-owned energy systems into these socially responsible developments. In practice it is a daunting task for a city to transition from a private to a public energy system. Such a transition would involve very large public investments in generation, transmission, and distribution infrastructure, and while large cities have the ability to finance large projects through bond issues, in the current political environment, municipalization of a privately owned energy systems can become an impossible uphill battle of rhetoric and ideology.[3]

The present report is an initial research proposal examining a viable solution to the apparent stalemate between IOU-based energy systems and municipal-owned energy systems. As we will expand further in this report, Community Choice Aggregation (CCA) and Community Distributed Generation (CDG) can work together to bring local energy policy into alignment with values of social, environmental, and economic justice. To this end we will develop an approach to establishing a community based organization that can provide services that combine the benefits of CDG and CCA to local communities. This plan will then be used to seek additional support to move forward on developing a business plan and establishment of CCA + CDG 'bridge' organization to serve local communities.

[3] ibid.

Energy Deregulation

In states with energy deregulation (see figure 1), customers have the ability to choose an energy supply (producer of energy), while still receiving delivery (transmission and distribution) from a local utility. The supply of energy is marketed by Energy Services Companies (ESCOs) directly to consumers. ESCOs are often alleged to use aggressive and misleading practices, which have given many ESCOs a bad reputation among consumers and the agencies tasked with regulating their activities. However, there are reputable ESCOs and like any commodity market there are opportunities for energy customers to save, especially well informed customers with large energy usage. In spite of this ability to choose, the majority of small residential and commercial customers take no action and default to the supply provided by the utility.

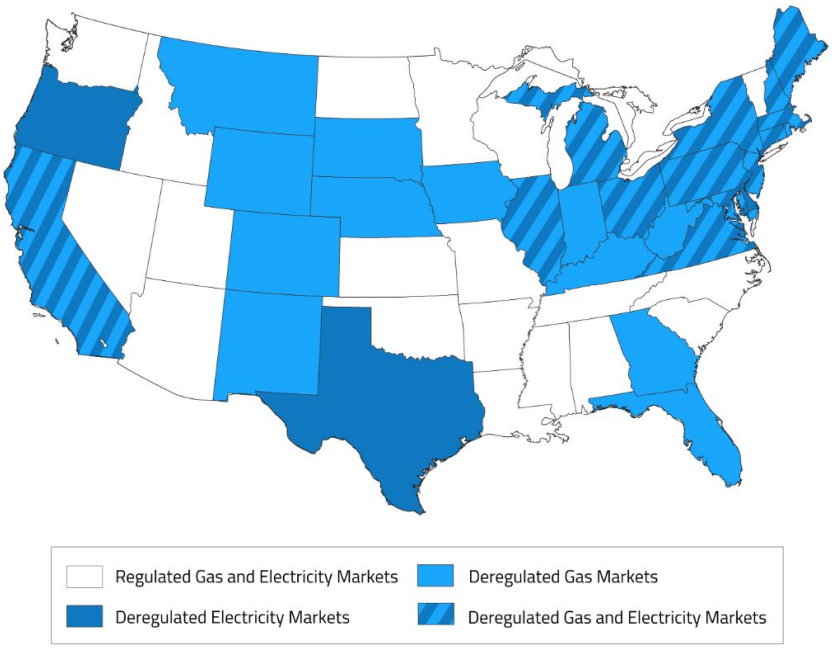

Figure1: Source: https://www.electricchoice.com/map-deregulated-energy-markets/

Community Choice Aggregation (CCA)

Community Choice Aggregation (CCA) programs to date have been implemented in seven US states.[4] These programs allow municipalities to procure power in bulk on behalf of the community. As with the direct to customer model under energy deregulation, the transmission and distribution of energy is still provided by local utilities and the utilities are mandated by a regulatory authority to comply with communities that enact CCA legislation. By aggregating a large customer base, CCA programs offer the ability to negotiate better pricing with ESCOs, provide a higher level of due diligence in their decision making, and are more likely to avoid the pitfalls that individual consumers may experience. The result is that municipalities that adopt CCA legislation are able to offer the community lower costs and/or cleaner energy choices.

One of the most important factors that make CCA programs impactful is that they generally include an 'opt-out' structure, such that community members are notified of the program and unless they choose to 'opt-out' of the program they are automatically included. As is the case for ESCOs marketing direct to end customers, the majority will take no action, however in the case of CCA programs this means that the majority of the community members will automatically be included in the CCA program unless they choose to opt-out. Given that community members will almost certainly be better off financially through inclusion, there is little rational reason for them to 'opt-out'. The importance of the 'opt-out' provision of CCA

[4] https://www.epa.gov/greenpower/community-choice-aggregation

programs is one of the most relevant aspects of the proposed solution for bridging aspects of both CCA and CDG programs into the combined program that is proposed.

Community Distributed Generation (CDG)

Community Distributed Generation is a New York policy based on programs that are often referred to as Community Solar, Wind or Shared Renewables in other states. New York's CDG program is part of the larger Reforming the Energy Vision (REV) initiative that seeks to transform "New York State's energy policy and initiatives to make sure energy efficiency and clean, locally produced power are at the core of the State's energy."[5]

CDG in New York State was enabled by the Public Service Commission (PSC) in July 2015. While thus far the majority of CDG facilities are PV solar based, the PSC ruling allows wind, solar, biogas, fuel cells, micro-hydro and energy storage as Distributed Energy Resources (DER). The existing CDG program is an evolution of the previous remote net metering laws that were established in 2011. Remote net metering required each customer to establish an additional metered service for their remote installation that would then be used to credit another specified account related to where they consumed electricity, generally home or business account meter. There are many inefficiencies related to this approach including the requirement that each system have its own power conversion and grid interconnection. As an example consider a remote net metering solar farm with 100 members, it would require 100 inverters, 100 utility meter interconnections, and segregation of each system of the 100 members solar panels. The CDG

[5] https://goo.gl/HvVL6C

approach allows these distributed energy resources to be installed with the economies of scale related to a large combined installation with shared usage of power conversion, a single meter for utility interconnection, and more efficient design and operations of the system.

For the first phase of the CDG program credits appear on the member's utility bill just as they would in the case of remote net metered approach with kW hours generated from the members allocation offset with kW hours used at their home. However, the long term intent of the CDG program is to have compensation based on the value that these resources bring to the complex equation of the underlying Value of Distributed Energy Resources (VDER). VDER is the very controversial proposal for moving away from remote net metering and toward an approach that will provide a more market based value for these DER assets. While the utilities prefer to frame the contribution of DER benefits to the existing electricity market functions, there are values inherent in DER assets that extend beyond this framework including value related to reaching climate goals and supporting and/or reducing investment in the aging electricity grid infrastructure.

The complexity of the VDER discussion has greatly hampered interest in CDG projects. The CCA+CDG bridging organization proposed would seek to reduce this complexity by providing a very attractive alternative to utility companies to assuage their concerns over net metering, as well as provide a concerted voice for communities to help guide the future phases of the valuation of DER. It is too complex to convey all aspects of the VDER discussion in this research proposal, however a very good summary of the VDER controversy has been created by

the Alliance for a Green Economy[6] and will provide further details as to the impacts it has on the CDG program.

CCA Administration

According to the NY PSC order for CCA[7] (appendix D. 3.) a "municipality or group of municipalities may work with a non-profit, retain a consultant, or otherwise designate a third party to act as a CCA Administrator." Given that it is outside the normal capabilities of a municipality or even a group of municipalities to provide this type of administration on their own, they will more than likely opt to work with a third party.

The NY PSC and NYSERDA provided support in the pilot of the first CCA program for New York state in Westchester county. This pilot CCA program is named Westchester Power and was created as a program partnership between the non-profit, Sustainable Westchester and participating municipalities in the CCA program. Westchester Power has over 100,000 members in its CCA across 25 participating municipalities. It is a great model for how a non-profit can act on the behalf of a group of municipalities as their own CCA administrator without outsourcing that role to a third party that may risk local decision making and potentially involve costly administration fees. The example of Westchester Power provides a model to build upon in the creation of the CCA+CDG bridge organization proposed.

Among the main current third party organizations in New York that can be contracted to serve as a CCA administrator are MEGA, Good Energy, and Joule Assets. All offer assistance in

[6] https://goo.gl/TbqUpM
[7] https://goo.gl/XmK48L

implementation and management of CCAs for municipalities. Municipal Energy and Gas Alliance (MEGA) is a non-profit entity which has historically largely functioned as an energy aggregator/broker. MEGA's services are focused on New York and it has a great reach throughout the state having served "more than 30 county governments and more than 250 municipalities, including many school districts."[8] Their expansion into CCA services is a very natural evolution and they have already engaged several communities in the process.[9] MEGA is following the traditional CCA approach centered around bulk buying power for projects put out to bid and provided by a single ESCO. In preliminary discussions with their organization about combining CCA and CDG they do not seem to have plans or interest in expanding their activities further to include local CDG assets. That said, they remain a very good potential partner for the CCA+CDG bridging discussion, especially given their status as a non-profit, which reduces the risk of larger outside interests gaining control over their activities.

Good Energy has offices in five states (New York, Massachusetts, Texas, Illinois, and Connecticut) and is structured as a Limited Partnership with Charles de Casteja[10] as its Managing Partner. They claim that "with more than 200 Community Energy Aggregation programs representing more than one million households, Good Energy manages energy procurement for 1 percent of the U.S. population."[11] Similar to MEGA, Good Energy employs the traditional bulk

[8] http://www.megaenergy.org/about/
[9] http://megacca.org/communities-we-serve/
[10] https://www.linkedin.com/in/charles-de-casteja-8905913/
[11] http://www.goodenergy.com/About/our-company

buy from a single ESCO for CCA projects and they do not seem to have plans to expand their services to include local CDG assets.

Joule Assets is a Delaware incorporated company founded by Mike Gordon[12], who was co-chair of Sustainable Westchester during the creation of the Westchester Power CCA. Joule is moving toward an approach which would integrate CDG projects into the CCA offering, however they are doing so as a for-profit representing generation sources that the company has contracted with to promote to municipalities. There is a very interesting and informative interview recorded in 2017[13] where Mike Gordon discusses his company's approach to combining CCA and CDG. While there are several similarities between Joule's approach and the CCA+CDG bridging organization proposed, there are some significant differences between what Joule proposes beyond the underlying concern of being a for profit organization. In particular, there is a clear indication that they would use the energy generation his company has contracted with as opposed to creating a conduit for communities to make that decision, nor does it appear that there would be motivation within their business model to include local CDG, but rather the NYISO zonal based model (figure 2) which extend across large areas of the state and

[12] https://www.linkedin.com/in/mikegordonjoule/
[13] https://www.youtube.com/watch?v=UwMb4Ub6Dsk µµ

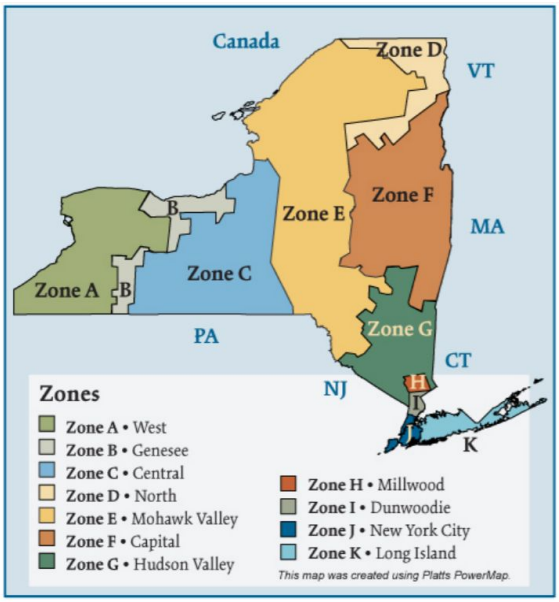

Figure 2. Source: FERC[14]

does not provide a mechanism for communities to directly develop their own agreements with CDG developers, rather they would have to rely on the CDG developers that Joule has contracted with already. All that said, Joule is the only current third party that is trying to be innovative and bridge the divide between CCA and CDG with a goal toward maximizing utilization of shared renewable energy under the CDG program in New York State. Clearly having only one such choice in the state is not good for choice, in particular when in spite of the current enlightened leadership, there is always a risk that a for profit organization like Joule could be subject to outside control by investors or take-over by another company that would not guide the organization under its existing mission based goals which, as of now, are laudable.

[14] https://www.ferc.gov/market-oversight/mkt-electric/new-york/2012/02-2012-elec-ny-archive.pdf

We are proposing a third alternative: a community owned, community managed organization, with shared services that allow communities to choose the energy suppliers themselves and the ability to contract directly with CDG projects that are developed in their community, not just in the same NYISO zone. Further we are proposing shared services that would allow communities to provide their own billing services to the local community, rather than rely on the relationship between a single ESCO or a single organization like Joule, MEGA or any others that may come.

CDG Project Sponsors

The CDG program requires that members of a CDG project contract with a ***project sponsor*** who allocates their portion of credits accrued by the installation via the local utility. According to the PSC order, a project sponsor may be "the project developer, a private company, or other entity."[15] In most cases to date, the project developer has taken on the role of project sponsor and two main approaches to the market have been employed. The first is a model wherein members pay for a portion of the project and accrue all of the benefits from electricity produced by their allocation less any agreed to operating fees. The second is where a project developer makes the entire investment for the installation and then recoups their investment by having the members agree to pay them for the energy produced by the CDG installation, less a certain percentage they would have otherwise payed. In almost all cases the savings amount that has been offered in this second approach has been in the range of 5 to 10% with varying agreements in regards to term of the contract. The second approach would seemingly be

[15] https://goo.gl/3hdGBf

attractive to consumers given that they are not required to make any investment and are guaranteed savings. However, in spite of the fact that this seems like a great deal, developers have found it found it very difficult to sign up members for their CDG projects. There are many reasons why this has proven difficult and there is little in the way of publically reported evaluation of the reasons, however based on personal experience and discussions with several developers, the following are some of the main hurdles faced in customer acquisition:

1. Too much confusion with too little benefit (i.e 10% savings)
2. Negative experiences with ESCOs and customers' not understanding the difference
3. Thought that it is "too good to be true" to get 10% savings without any investment

Developers have spent millions in customer acquisition costs and have still struggled to sign up enough members to make projects feasible. These developers often are not able to get their investors to release funds to actually break ground on the project until they reach a certain threshold of customer acquisition, leaving many who have signed up for a project waiting a very long time for the promised savings leading them to cancel their agreement or switch to another offer, which further erodes customer confidence in the CDG program as a whole and creates defection before the projects even begin. The result is that the uncertainty of compensation in the transition toward VDER and the difficulties that ***project sponsors*** have experienced in signing up members for CDG projects has stalled the progress of CDG development greatly. A further failing of the existing CDG program is that it often excludes low income customers based on credit ratings and low income communities are often the least informed as to the opportunity

and the most skeptical of deals that seem too good to be true. This leads to an equality in the distribution of the benefits of local CDG projects and is one of the main values of combining the opt-out aspects of CCA with the ability for municipalities to distribute the CDG benefits to the entire community.

As we discussed previously, CCAs aggregate the energy demand of a large number of consumers in a given locally governed region (town, village, or city), and use this collective purchasing power to seek the best market price from energy producers. The contracted energy supplier(s) for a CCA can be any of a large number of ESCOs including those that offer a mix of fossil fuel, nuclear, as well as clean resources. In light of the urgent need to reduce the carbon footprint of our society's energy consumption, the obvious choice is a source of clean renewable energy such as solar, wind, or hydropower. Even if this does not result in the lowest possible price to the rate payer it can achieve price parity quickly and continue to reduce price to the rate payer if municipalities can combine the ESCO offerings with the value with agreements made with local CDG developer installations. Better yet, the more local CDG agreements, the more savings will accrue leading to a strong incentive for adoption of more renewables.

If a CCA Administrator does not rely on a single ESCO, but rather has the ability to provide direct billing to its members either via the same system ESCOs access for on-bill utility billing or by taking over the entire billing process and branding it locally (a process with precedent demonstrated by Arcadia Power[16], MidAmerican[17],Oates Energy[18] and others) then the

[16] https://www.arcadiapower.com/
[17] https://www.midamericanenergyservices.com/
[18] https://www.oatesenergy.com/bill-pay-services/

CCA Administrator can also negotiate and include in its savings offering to its membership greater value from locally installed Community Distributed Generation (CDG) by serving as the CDG Sponsor for the project developer and allocating the savings across the entire community, or through standard Power Purchase Agreements (PPAs) with larger scale developments in the community (e.g. possible collaboration for Cayuga Power plant Solar and Storage proposal). Pairing a CCA with local, CDG generation resources adds the important advantage of energy resiliency and local decision making. A CCA +CDG bridging form of CCA Administrator thus provides an ideal structure, allowing the CCA to offer guaranteed savings over the default utility rate and ever decreasing electricity costs for each CDG system that is added to the membership. CDG developers benefit through greatly reduced customer acquisition costs and will be incentivized to pass along these savings in their discount offer to the community.

A Community Owned CCA+CDG Bridge Organization

We have provided in this initial report an overview of the CCA and CDG activities in New York state and discussed how an organization that bridges these programs can provide greater benefit to local communities. There remain many questions as to how to structure the proposed CCA+CDG bridge organization, whether and which partnerships to seek for providing the shared services, and how to provide initial funding to get operations off the ground. At its core, we are proposing an evolution of the CCA program, in many ways similar to what Joule Assets is pursuing. Therefore, the starting point is the formation of a CCA program, for which we intend to use the toolkit provided by NYSERDA for that purpose. Additionally, we would

need one or more municipalities to indicate their interest in working with the proposed organization as their CCA Administrator. In all CCA plans, the first step is local legislation, so part of our activities will be working with interested local municipalities to assist them in adopting CCA legislation.

As mentioned earlier, Westchester Power is a very good example for how a non-profit organization can act as the CCA Administrator without the need to rely on for-profit entities or entities whose core focus is not necessarily guaranteed to ensure a focus on local energy goals. However a large amount of potential savings and an even greater potential for expanding local renewables has been challenging for Westchester Power in part due to the limitation in its ability to provide certain services, the greatest of which is the reliance on a single ESCO to work with the local utility to provide the billing services to their members. This effectively limits the CCA from the opportunity to select multiple offers from several different ESCOs and create a portfolio of energy supply to maximize savings and environmental goals, it also means that there is no clear path for them to include directly the benefits of CDG installation to their members. This is a problem that can be alleviated by the proposed CCA+CDG bridge organization which would include services generally provided to a CCA by the ESCO within its core of shared services These services would include billing and the ability to include within the portfolio of energy sources additional Power Purchase Agreements (PPAs) made directly with local renewable developers and by acting as a sponsor for CDG developers while spreading the benefits from CDG projects to the entire local community.

We are not alone in believing that there needs to be an evolution in the CCA program, a group called Citizens for Local Power based in the Mid-Hudson valley also points out some of the same deficiencies in the current approach to CCAs. Among their suggestions for the CCA 2.0 evolution are:

1. empowering communities over energy decision-making, and
2. localizing clean energy investments to the benefit of the local economy and community resilience.[19]

These are suggestions that we also seek to see in the development of CCA programs. We look forward to working with this group, existing CCAs in NY and others involved in the development of CCA programs to help achieve these goals.

In the continuation of the current project we will examine a number of organizational models for the CCA administration incorporating a focus on retaining local decision making control and ability to include local renewable generation as key differentiations from the current alternatives. The possibilities for a mission-driven social enterprise of this sort include traditional not-for-profit structures, community-owned cooperatives, as well as hybrid solutions. As we work toward a detailed business plan for the organization, we will seek the most viable and sustainable solution, one which will optimize community engagement, renewable energy sources, and economic savings.

[19] https://citizensforlocalpower.org/cca/

We are starting from the assumption that the CCA+CDG Bridge organization will most likely be a cooperative organization in alignment with our focus on local control and democratic values and to prevent the risk of takeover from for-profit entities in the future. There are several types of cooperatives, but they all share in common the fact that the organization is owned by the membership and democratically controlled. This fact alone sets this proposal apart from the other offerings currently available for communities considering their options for assistance in filling the role of CCA Administrator. Also in common across the range of cooperative organizations is the fact that the member-owners are paid a share of the profits of the cooperative. We will investigate ways that this could be accomplished in the case of the CCA+CDG Bridge organization either with directed funding toward support for local energy projects, financial assistance for low income households, or other proposals put forth by the member communities. It is evident that there is no ready made template to structure such an organization, so considerable research and creative problem solving will be needed as well as extensive interaction with like-minded initiatives already working to evolve CCA programs. In the course of this research we have compiled a list of several organizations that we intend to work with in this regard. On the top of that list for us to reach out to is Lean Energy US[20] whose mission states that they are "dedicated to the accelerated expansion and competitive success of clean energy CCA nationwide. We work in partnership with a range of organizations to actively support the formation and operational success of CCAs around the country. We do this on a pro bono, advisory basis as well as through professional service contracts with states and

[20] http://leanenergyus.org/

municipalities interested in authorizing and forming CCA programs." We hope that once we can demonstrate enough local support for our initiative that we can engage with this group and others to assist in development of the proposed CCA+CDG bridge program.

We conclude this report with the following questions guiding the actions we propose to take in the next steps of the development of a CCA+CDG bridging organization.

Proposed Research Questions

- How can we best structure the organization to serve the needs of municipality members?
- How can we best protect the organization from potential outside control or take over?
- How can we find funding to start the organization and invest in development costs?
- Should we look to partner with organizations like MEGA or act independently?
- What partnership opportunities exist that would help in implementation?

Next Steps

- Informational discussions with local municipalities to gauge interest and gain feedback.
- Informational discussion with organizations that share common goals for CCA evolution.
- Attain legal advice on structuring the organization to meet goals.
- Meet with companies that we can partner with to provide the shared services proposed.
- Complete the steps in the NYSERDA CCA toolkit for establishing a CCA program.
- Assist pilot municipalities in adoption of CCA legislation for their communities.
- Develop business plan with required benchmarks and funding to begin operations.

THE GREEN RESOURCE HUB

CCA+CDG Interim Report

Research Update

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5/15/2019

INTRODUCTION

In our initial report we proposed the creation of a community based organization that would combine the NY State Public Service Commission (PSC) orders for Community Choice Aggregation (CCA) and Community Distributed Generation (CDG). This interim report refines our initial ideas with our research findings on how a community based organization might be structured to combine the roles of CCA Administrator and CDG Sponsor under the rules of the PSC orders.

This combination of CCA Administrator and CDG Sponsor would utilize shared staff and resources across multiple municipalities to, in effect, become an energy services company (ESCO). It could be organized as a shared services entity, a cooperative, a non-profit or a hybrid of these structures. Primary benefits from creation of such an organization flow from its ability to interact directly with local utilities instead of being reliant on existing ESCOs to provide this interface. By leapfrogging the ESCO intermediary relationship, the organization instantly reduces the fees associated with services that may seem complicated, but are readily available via the same providers that many ESCOs currently use (e.g. Customized Energy Solutions, and many others). The result is more control over the portfolio of energy resources used for the community and the elimination of profit margins paid to an ESCO. The result should ensure that 100% renewable energy will be the same or less than the current default utility rate, eliminating one of the main hurdles we have heard in regards to communities adopting CCA legislation.

This approach also puts the power in the hands of the municipalities to directly enter into Power Purchase Agreements (PPAs) with large scale developers and to bring the benefits of such agreement to the entire community (not just a select few). It can garner additional funds by satisfying customer acquisition needs for CDG developers which will also lead to savings for CDG developers and allow them to focus on their core business which is developing more renewable projects. The predicted outcome would see rapidly expanding local renewable power generation facilities and guaranteed savings to all in the community. Citizens would still have the choice to opt-out (under the standard CCA rules), but there would be little sound economic reason for them to do so. The rapid filling of CDG projects with customers will spur developers to create more projects which in turn would further lower rates and bring more customer acquisition fees directed to the communities that adopt renewables and other Distributed Energy Resources (DER).

As the future electricity grid develops with the adoption of more advanced forms of DER like energy storage, dispatchable loads, and micro-grids, municipalities will not need to rely on ESCOs or outside consultants to navigate the complexity as they will be sharing the staff and resources with many other municipalities that ensure these decisions are made in the best interest of their communities. Most importantly this approach will establish and retain financial benefit and energy procurement decision making in the hands of local communities.

Statement of Purpose

This interim report is a summary of the meetings, phone calls, discussions and other interactions that have taken place since releasing the initial report with some particular meetings

held before the report that are also very relevant to our findings. The research we conducted during this time period has led to more specific information and pathways toward reaching our stated goals to create an agency or organization to achieve these goals.

Research Questions

Our initial report concluded with the following proposed research questions. These have served as organizing guidelines in our current research process, and will be addressed specifically later in the report.

- How can we best structure the organization to serve the needs of municipality members?
- How can we best protect the organization from potential outside control or take over?
- How can we find funding to start the organization and invest in development costs?
- Should we look to partner with organizations like MEGA or act independently?
- What partnership opportunities exist that would help in implementation?

RESEARCH METHODOLOGY

Action Research - Combining Activism and Traditional Research

In recognition of the changing environment around CCA and CDG programs and our desire to move this research as rapidly as possible into an action plan to benefit the community, we have conducted this work while contemporaneously moving plans forward in creation of an organization to achieve these goals. This approach is often termed “Action Research” and was first used by sociologist Kurt Lewin in 1946 to describe techniques supporting systematic study

of group and organizational phenomena.[1] As it has been applied since that time, Action Research has come to be defined as a "... process wherein researchers participate in studies both as subjects and objects with the explicit intention of bringing about change through the research project."[2] As an approach to solving complex questions and adaptive challenges, it is ideal for policy development since social policy is necessarily embedded in a larger complex system.[3] [4]

As applied in the current project, this methodology includes traditional library research, informational interviews, and advocacy activities. Reference databases including *Business Source Complete* and *Academic Search Complete* served as stepping off points for the library work. This more academically oriented background work was supplemented with online webinars and informational websites, including basic presentations and slide decks from New York State Energy Research and Development Authority (NYSERDA), and webinars presented by Joule Energy, New York Power Authority (NYPA), and the Clean Power Exchange (CPX).

Attendance at several events and discussions with individuals that could help to form a successful organization were held in advance and during this research. The most relevant of which are indicated summarized below. These interactions included in-person and phone informational interviews with Ms. Irene Weiser (Tompkins County Council of Governments), Mr. Al Weinrub (Local Clean Energy Alliance), Mr. Don Barber (Greater Tompkins County Municipal Health Insurance Consortium), Mr. Jonathan Bates, (Groundswell Center for Local

[1] Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues* 2(4), 34–46.
[2] Raelin, J.A. (1999). Action research: Rethinking Lewin. *Management Learning,* (30)2, 116
[3] Marshall, J., Colman, G, & Reason, P. (Eds.). (2011). *Leadership for Sustainability: An action research approach.* Sheffield: Greenleaf Publishing Ltd.
[4] Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world.* Boston: Cambridge Leadership Associates.

Food & Farming), and Ms. Susan Gillespie of New Yorkers for Clean Power (NYCP). In addition we conducted several telephonic and in person discussions with ESCO services provider Consolidated Energy Solutions (CES), an in-person meeting at the office of Sustainable Westchester/Westchester Power, and Joule Energy, participation in a SUNY BEST event entitled "Managing Clean Energy in Your Community", attendance at the Cornell University Business Impact Symposium, organizing and facilitating a roundtable discussion event on "Planning a CCA+CCG Municipal Coalition", participation in the Tri-State Community Energy Summit, and participation in a web conference titled "CCA in New York - What is to be done?" which was inspired by the meeting hosted by GRH for this project in Binghamton. We have also continued ongoing participation in the the monthly meetings held jointly in Ithaca by the Campaign for Renewable Energy / Fossil Free Tompkins (CRE/FFT).

RESEARCH ACTIVITIES

5/28/18 - Topic: Collaborative Community Solar - Meeting at GRH offices
Attending: David Gower - GRH, Irene Weiser - Tompkins CCA, Eric Misbach - Nexamp (by phone), John King - Halco Renewables, Kelsy Fiori - Nexamp

Summary:
One of the important meetings prior to the creation of the initial report that identified the interest on the part of CDG developers to work with municipalities for greater efficiency and local benefit in customer acquisition for Community Solar development.

9/13/18 - Topic: Review of CCA activities in Tompkins - Meeting at GRH offices
Attending: Irene Weiser - Tompkins CCA, David Gower - GRH, Peter FitzRandolph - GRH

Summary:
Review of earlier attempts to create a CCA in Tompkins County NY. Explored the reasons why the project was determined to be unfeasible: long term contract with a single ESCO proved too great a risk exposure, and it seemed impossible to provide both cost savings and 100% renewable energy. In attending the CCA working group meetings, the above conclusion was reached, but this is where the initial discussions of approaching CCA by combining it with CDG began.

Much of the work in this project is based upon those initial discussions with Irene and the CCA workgroup. We hope to rekindle the fire of this group with this new approach and find a solution that allows the community to overcome the obstacles observed.

11/29/18 - Topic: Opportunities for CCA to solve Cayuga Power Plant issues - Phone
Attending: Jerry Goodenough - Upstate NY Power Producers - Operator of Cayuga Power Plant, David Gower - GRH

Summary:
Discussed potential to transform contentious coal power plant to Distributed Energy Resource (DER) pilot location with Solar CDG that could work with a municipally shared ESCO in a PPA relationship or other collaboration that would benefit the community as well as protect the jobs at the local power plant in a transition away from fossil fuel use. Discussed possibility of using flexible data center operations as base load for renewable generation and energy storage. Interesting recent news article showing that the conversation may have been influential:

Bloomberg Environment Environment & Energy Report

New York State Power Plants Must Be Coal-Free by 2020

By Keshia Clukey Posted May 9, 2019, 6:03 PM

- State adopts final regulations setting stricter limits on carbon dioxide emissions
- Last two coal-burning plants set to become data centers

Power plants in New York must be coal-free by the end of 2020 or close as a result of new greenhouse gas regulations.

The state Department of Environmental Conservation adopted final regulations setting new carbon dioxide emissions limits for all power plants in New York, Gov. Andrew Cuomo (D) announced May 9. The regulations essentially require the state's remaining coal-burning plants to either transition to cleaner, alternative sources of energy or shut down.

The finalization of the regulations comes as the Trump administration continues to promote coal production.

Cuomo first proposed New York going coal-free by 2020 in 2016, and last year directed the department to develop rules and regulations strengthening the state's carbon dioxide performance standards for major electric generating facilities. The regulations become fully effective on June 8.

"As our federal government continues to support the dying fossil fuel industry, deny climate change, and roll back environmental protections, New York is leading the nation with bold climate action to protect our planet and our communities," Cuomo said in a statement.

Coal Declining in State

The use of coal has been declining in New York. Since 2000, nearly 3,000 megawatts of generation fueled by coal have retired or suspended operation in the state, according to a May 2 report released by New York Independent System Operator, which runs the state's power grid.

Coal makes up less than 0.5 percent of energy production in the state, according to the report.

There are two remaining coal plants in the state: the 655-megawatt Somerset Generation Plant in western New York, and the 155-megawatt plant in Cayuga near the Finger Lakes. Both are owned by Riesling Power LLC, an affiliate of Blackstone Group, which enlisted Beowulf Energy to manage the plants.

Beowulf Energy is looking to turn the plants into data centers, one of which would have a large solar component, according to the governor's office.

The company has presented a "transition plan" to the state that would retire the plants in advance of the timeline outlined in the regulations "while creating a viable new business and jobs in their place, using renewable energy," Michael Enright, Beowulf Energy's managing director, said in a statement.

Environmental advocacy groups applauded the finalization of the regulations.

"It's great news for people who breathe," said Peter Iwanowicz, executive director of Environmental Advocates of New York. "It means cleaner air for those those who lives by the plants and those that live down wind of them."

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To contact the editors responsible for this story: Gregory Henderson at ghenderson@bloombergenvironment.com; Chuck McCutcheon at cmccutcheon@bloombergenvironment.com

Related Articles
New York's Plan to Kill Coal Is Already Boosting Power Prices (Jan. 18, 2019, 7:25 AM)

http://tiny.cc/3e4q6y

1/30/19 - GRH Introduces Customized Energy Solutions to Westchester Power - Phone
Attending: David Gower - GRH, Peter FitzRandolph - GRH, Dan Welch - WP, Michel Delafontaine - WP, Rick Mancini - CES, Juan Diaz - CES, Craig Tropea - CES

Summary:
Introduced Customized Energy Solutions (CES) to Westchester Power (WP) to examine how CES could extend WP's CCA capabilities to provide back office functions that would otherwise be handled by an ESCO. The discussion opened up new ideas on strategy and clarified further the things that would allow WP, or any CCA, to expand their services in a direction that would allow for more ability to include their community renewable and efficiency activities into furthering savings and clean energy of their CCA energy portfolio offering.

2/8/19 - Understanding CCA in CA and opportunities for collaboration with NY - Phone
Attending: Al Weinrub - Local Clean Energy Alliance (LCEA), David Gower - GRH

Summary:
LCEA is based in the California bay area and we reached out to learn more about the activities of CCA in CA and to learn what could be adopted in NY. Impressively CA, as of this writing (5/10), has 19 CCA programs that cover over 10 million customers, which equates to more than 25% of the population. NY in contrast currently has only Westchester Power with approximately 110,000 customers (~ 0.5%). In the phone call we discussed CCA development in the contexts of California & New York State, and noted LCEA's commitment to positive local social, economic, and environmental impacts. Of the differences between CA and NY, foremost is the lack of the depence on an intermediary ESCO entity in the CA market to interact with the utility. Though this makes the staffing needs for CCA greater in CA, it also has prompted more municipal activity and decision making influence in CA CCAs. Though there are some major policy differences between CA and NY, there is opportunity to advocate together to help move the two states, as well as others, forward together by learning from each other.

2/13/19 - Challenges of setting up Municipal Cooperatives - In-person Interview
Attending: Don Barber - Greater Tompkins County Municipal Health Insurance Consortium, David Gower - GRH, Peter FitzRandolph - GRH

Summary:
Discussion of the use of NYS General Municipal Law Article 5-G which authorizes municipalities to enter into cooperative agreements to share services. The Health Insurance Consortium led by Don is based on such an agreement. The cost and complexity of this consortium was clearly much more difficult in comparison to the requirements that a shared municipal ESCO consortium would require. This meeting solidified the already considered idea to use this existing NY 5G municipal law as the preferred method of agency/organizational structure for this project to realize its goals.

2/15/19 & 3/14/19 - Understanding CCA activities in mid-Hudson Valley - Phone
Attending: Susan Gillespie - Citizens for Clean Power (CLP), David Gower - GRH

Summary:
From their website- "Citizens for Local Power (CLP) helps communities in the Mid-Hudson Region transition to a locally-based, clean energy economy. CLP has for several years been advocating for CCA "2.0" in New York—a version of CCA that harnesses the collective buying power and scale of communities to provide energy supply and services aligned with local needs and goals. Key attributes of a 2.0 program are 1) empowering communities over energy decision-making, and 2) localizing clean energy investments to the benefit of the local economy and community resilience. However, the PSC's Order enabling CCA in New York, adopted in 2016, falls short in equipping communities with the tools to implement this vision."

We discussed activities of their group and their discussions with municipalities in regards to CCA. Susan expressed interest in the concept of sharing ESCO services and also helped in promoting the Binghamton event, including inviting Paul Fenn.

2/20/19 - Meeting with Sustainable Westchester and Joule Assets - SW office Mt. Kisco
Attending: David Gower - GRH, Peter FitzRandolph - GRH, Dan Welch - WP, Michel Delafontaine - WP, Mike Gordon - JA, Stephen Filler - JA, Glenn Weinberg - JA

Summary:
Discussed evolution and expansion of CCA structure to allow the CCA Administrator to act in effect as a Load Serving Entity or ESCO. To enable this ability we continued on the discussion regarding backend services provided by a company such as CES. Detailed exploration of data sharing issues between the local utilities and the CCA and how excluding the ESCO would alleviate many of these difficulties. Discussion as to openness of Joule to relinquish some of their activities as CCA administrator to expand the value to communities of utilizing a shared services model as opposed to their current approach which still involves an RFP process and reliance on an ESCO for interfacing with utility.

3/4/19 - Advocacy for CCA and activities in Geneva NY - In-person Interview
Attending: Jonathan Bates - Food Forest Farm, David Gower - GRH, Peter FitzRandolph - GRH

Summary:
At the suggestion of Don Barber we met with Jonathan Bates, who is an advocate for environmental sustainability with a focus on permaculture. We discussed potential common ground between local renewable energy and the local food movement. As well as activities and connections to others working on developing CCA in Geneva NY. Jonathan expressed interest in helping to advocate for and help create an organization that could reach the goals we discussed, including more community renewables, more local control over the decision making process and 100% clean energy with guaranteed savings to the entire community, not just a

select few.

3/11/19 - Attendance at training on Intermunicipal Agreements - In-person Cortland NY
hosted by: NYS Dept. of State - Local Govt. Services
Attending: David Gower - GRH

Summary:
Discussion on how municipalities can achieve many benefits by entering into intermunicipal agreements. This training presentation looked at the participants, opportunities, benefits, types, and contents of intermunicipal agreements. Of particular importance were questions that were answered by representatives that encouraged us to apply for funds in spite of the approach being out of the norm with most of their grant requests for intermunicipal agreements.

3/27/19 - "Planning CCA+CDG Municipal Coalition" meeting - Koffman Incubator
Attending: See list at this link.

Summary:
Event hosted by Green Resource Hub and intended as a capstone for the development of this report. We had a round table discussion with major stakeholders and decision makers including: NYSERDA, Cornell Coop. Ext., Westchester Power, Joule Energy, MEGA, Campaign for Renewable Energy, Custom Energy Solutions, and CNY Regional Planning and Development Board. Great discussion on the important topics and hurdles to evolving CCA in NY.

4/2/19 - 4/3/19 Tri-State Community Energy Summit - Conference in NYC
Attending: David Gower - GRH
Event Agenda - http://tiny.cc/9evr6y

Summary:
Event hosted by Lean Energy U.S. (http://leanenergyus.org/). Multi-day event with experts involved with CCA and community distributed generation in NY, NJ, and CT. Much new information learned about the format and success of CCA in NJ, new role NYPA intends to play in providing their energy supply to community as well as investing in CDG projects with communities. Many useful connections made with other attendees from various developers, NYPA, the NYPSC and others agencies and commercial organizations supporting CCA.

4/30/19 - CCA Community outreach, education and support - conference call
Attending: David Gower - GRH, Tom Collins - GRH

Summary:
Follow up discussion inspired by the meeting we held in Binghamton and hosted by Adam Flint of the New York Energy Democracy Alliance. Further exploration of the inter-municipal cooperation model, and how both cost reduction and 100% renewable energy goals can be

achieved by allowing the CCA Administrator to take on the traditional ESCO role.

KEY RESEARCH FINDINGS

Based on our interactions and research we are confident that there is value in moving forward in the creation of a municipally shared organization with services similar to an ESCO that will enable communities to expand local renewables and DER assets, while ensuring savings in a CCA program even when offering 100% renewable energy. These findings are based upon interactions and information prior and during the initiation of this research. We summarize below the responses to the research questions posed in our initial report:

- ***How can we best structure the organization to serve the needs of municipality members?***
    - Based on discussions with Don Barber and the Health Coalition's use of the Municipal Shared Services 5G law as well as the training held by the Municipal Services section of the NY Department of State, we are ever more confident that the best structure for the proposed CCA+CDG bridge organization would utilize this existing municipal law as the preferred structure.
    - Though the 5G law has not been previously used for energy services in this way, we did verify with representatives of the NYDOS that such an approach would both fall within the scope of shared services and would also, from a preliminary evaluation, be qualified for state funding that is intended to help form cooperatively shared services between municipalities in NY state.

- Considering the added complexity and cost that was required for Don Barber and his collaborators to form shared services for Health Insurance, we feel that the bar for creating a cooperatively shared ESCO would be relatively easy. Whereas they were subject to initial costs exceeding $1.2 million to begin operations, the financial requirements for starting ESCO are much less, as is the complexity involved. In addition, this is a service provided by companies like CES and others which we can utilize to ensure proper compliance. Furthermore, it is quite possible that we may not even need to become an ESCO and may instead just declare our entity as an Energy Broker which has even fewer requirements and regulations. We will evaluate in our next phase the advantages and disadvantages to each approach, but we will focus our organizational structure around the format of the 5G municipal law as our first preference. This will require a sponsoring municipality or group of municipalities, which if not available will require us to rethink the organizational structure and require us to fall back to a cooperative or non-profit model. However, we are very hopeful that we will find partners when we demonstrate the value of this approach to municipalities, especially with so much potential savings and environmental benefits that would accrue to their entire community and the reduced costs involved by the sharing the services.

- How can we best protect the organization from potential outside control or take over?
  - This strongly relates to the previous question and is still an area that will require greater consideration in our next phase of the project where we design the bylaws

of the organization. Fortunately we have more legal experience within our team now with the addition of Tom Collins on the GRH board and his agreement to participate in this project. Part of the next phase will involve a deeper evaluation of 5G organizational structure to protect it from political swings and other aspects that could threaten continuity of service and benefit to the entire community.

- How can we find funding to start the organization and invest in development costs?
    - One clear source of funding will be NYDOS funding that is available to municipalities to form 5G shared services. We are encouraged by the recent announcement by Mayor Myrick of Ithaca in regards to the city's commitment to a Green New Deal. We have not yet had discussions with the task force that is being formed, but we hope to demonstrate the value of what we are proposing and collaborate with Ithaca to achieve its goals while sharing the benefits with other communities which in turn will reduce the overall costs to all members.
    - Additionally there are other possible private funding sources including the operators of the Cayuga Power plant which could benefit by entering into a PPA with the local municipalities for purchase of solar or stored generation, further a solar installation at their site could become a CDG project that would be managed by the entity we would create effectively reducing their customer acquisition costs for such a project to zero. There are several similar potential opportunities that provide win-win scenarios with private developers of CDG projects that may consider helping in the formation of our proposed organization.

    - Last, but not least, we hope that funding could come from either existing funding opportunities from NYSERDA or other state agencies like NYPA, NYISO, or the PSC or that special funding could be allocated for our project given its potential to help NY state rapidly reach its GHG and carbon reduction goals.
    - One specific funding opportunity from the NY Dept. of State is the Local Government Efficiency Grant Program. This grant would be open to any municipal entity that was interested in partnering with us to realize work on the planning and implementation phases in furthering the development of the organization proposed in this research. More information available at: https://www.dos.ny.gov/lg/lge/grant.html
- Should we look to partner with organizations like MEGA or act independently?
    - Working with one or all of the existing CCA administrators would be optimal, this is true in particular as there is a concern that the market could become flooded by many less scrupulous CCA Administrators, which could repeat issues that have been seen by the actions of many ESCOs; and in fact ESCOs are likely to take on the CCA Administrator role once they see the opportunities it could provide them to make profits for relatively passive work that is really only an opportunity given the complexity and confusion surrounding energy markets.
    - We have had discussions with all three current CCA Administrators and they all seem at present to be more interested in pursuing their current plans. This is understandable, but we hope that they will realize the potential for collaboration.

Even if they decide to compete with our offering in the longer term there is very little logical reason for a municipality to opt for their offering once they understand the benefits that they would have by collaborating in a shared service organization like the one we propose.

- What partnership opportunities exist that would help in implementation?
    - In addition to the existing funding agencies mentioned above we will need to form a partnership with a municipality or group of municipalities to pursue the 5G Municipal Shared Services approach to forming the proposed organization.
    - Lean Energy US (http://leanenergyus.org/) Paul Fenn's organization (http://www.localpower.com), the Park Foundation, and other local groups involved in clean energy advocacy are all potential partners. We look to coordinate with these groups and partner with them to not only create the organization, but also to help communicate the opportunity to join the shared services among their local municipalities to further reduce the overhead and increase the opportunities that come from collaborations in regards to energy procurement related to bulk buying in the energy market.

CONCLUSIONS AND NEXT STEPS

The results of our findings lead us to the conclusion that taking the next step, to propose more concretely how to form an organization under the structure of a cooperative municipal agreement, is not only worthwhile, but a necessary solution to head off the potential for confusion and lost opportunities in realizing the full potential of the CCA and CDG programs for local communities and the state as a whole. The next phase of this project has already commenced and includes the development of a strategic plan (or business plan) that we will propose to municipalities interested in partnering to implement the development of the shared services organization. Continuing the methodological approach of Action Research, we will supplement the development of the strategic plan and outreach to municipalities with activities related to attaining grant funding to move the project toward the next phase of implementation and creation of the organization.