The ‘Power’ to Choose: From Monopoly to Collective ‘Power’

PREPARED FOR :

LEAN ENERGY US

BY

DEEPA VEDAVYAS

CONSULTANT
SUMMER 2025

TABLE OF CONTENTS

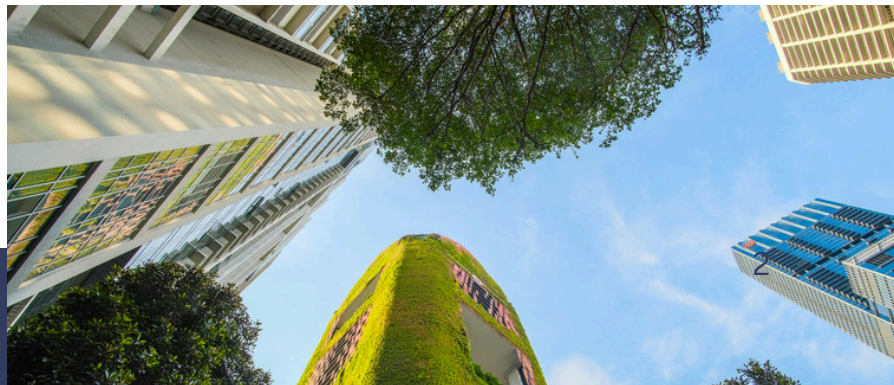
Executive Summary 003
Glossary 006
Client Background and Overview 011
Project Purpose and Need Statement 017
Client Mission and Business Area 022
Methodology 026

DELIVERABLE 1: ENERGY AGGREGATION BASICS 031
1920-1990 Monopoly Era 032
1990s Deregulation Pivot 032
CCA Models 033
State Specific Nomenclature 036
Community Resource: 039
Did you know? 039
Community Resource: 040
Frequently Asked Questions (FAQs)

DELIVERABLE 2: COMPARATIVE CASE STUDY 052
Rationale for State Selection 055
Municipal Aggregation of Massachusetts 056
Government Aggregation of Ohio 070
Community Choice Aggregation of California 087
Community Power of New Hampshire 104
Excerpts from Interviews with Field Experts 116

DELIVERABLE 3: 121
STRATEGIC RECOMMENDATIONS FOR LEAN ENERGY US
Change Management and Economics of Recommendations
Implementation Roadmap

Conclusion 123
Author's Note 124
Acknowledgement 125
References 127
Appendices 133



EXECUTIVE SUMMARY

This report is prepared for Local Energy Area Network (dba) LEAN Energy US to address a critical market and institutional gap in the field of community aggregation. The report offers three distinct deliverables:

A foundational resource on Community Choice Aggregation (CCA) for LEAN's digital library, with the creation of a community library to support public education and engagement;

Comparative case studies highlighting the formation journeys of the first CCAs across select states; and

Strategic recommendations to enhance LEAN Energy US's national leadership, programming, and support services to existing and new Community Choice Aggregation (CCA).

The U.S. energy sector, long dominated by vertically integrated, Investor-Owned Utilities (IOU), has undergone significant transformation over the past few decades. Under the traditional structure, before the 1990s, utilities were structured as monopolies with exclusive territorial control, where the utilities managed the generation, transmission, and distribution of energy with limited community influence and transparency (Wills, 2006).

The restructuring or deregulation of electric utilities in the 1990s was a direct response to shifts in power production, technology, and the consideration of other key infrastructure deregulation (Barnstable County, 1996). A deregulated system allowed for market competition in a previously monopolized structure that had not existed for the past sixty years (Barnstable County, 1996).

During the deregulation period of the 1990s, in response to growing public demand for local control, cleaner energy, and competitive pricing, a powerful new alternative to procure energy emerged in a few states, which later came to be known as the municipal aggregation or community choice aggregation (CCA), among others.

The following report has been prepared for LEAN Energy US and explores the rise and evolution of Community Choice Aggregation. Through this local energy procurement mechanism, cities, towns, and counties can combine their purchasing power and select their energy provider on behalf of residents and small businesses. Although a few states, such as California, New York, and Maryland, formally use the term Community Choice Aggregation (CCA) in their definition of the mechanism by their respective Public Utilities Commission, many other states operate under different state-specific nomenclatures.

Among these titles are Municipal Aggregation, Government Aggregation, Community Power, and Community Choice Energy. For the purpose of this report, "CCA" is used broadly as a unifying term to describe the mechanism across all states.

As of 2025, ten states have enacted legislation, or in New York's case, regulation enabling community aggregation (LEAN Energy US, n.d.-c). It is worth noting that in states like Ohio and New York, community aggregation is enabled to offer both electricity and natural gas, an important distinction among states in expanding the benefits of local control and energy savings across fuel types. Though each state's model varies in governance, structure, and procurement process, the overarching goals are similar: to provide communities with greater control, affordability, sustainability, and transparency in their energy supply.

This report is structured around three deliverables. Although the strategic recommendations for LEAN Energy US (Deliverable 3) formed the primary scope of work commissioned by the client, the consultant also identified critical gaps in the CCA ecosystem. To address these gaps, the following two additional deliverables (1 and 2) were developed early in the project after consultation with the client:

1. Energy Aggregation Basics:
This section serves as a foundational educational tool by simplifying complex energy sector concepts for community members, elected officials, and new entrants to the CCA space. It outlines the historical shift from monopoly utilities to competitive models and introduces aggregation as a powerful mechanism for aligning energy procurement with local community values and climate goals.

2. Comparative Case Studies:
Featuring in-depth interviews with founding CCA leaders in Massachusetts, Ohio, California, and New Hampshire, this section captures the nuances of each state's approach to community aggregation. It reveals lessons learned, governance structures, and innovations at the local level, creating a robust peer-learning resource for both new and established CCAs.

3. Strategic Recommendation for LEAN Energy US:
Drawing on insights from a national survey and stakeholder interviews, this section provides actionable recommendations to enhance LEAN's organizational capacity, member engagement, and national impact. It provides for expanded nontechnical educational resources, clearer membership benefits, new funding pathways, and leadership in advancing LEAN Energy US, a nationally recognized aggregation umbrella organization.

This report underscores the fact that community aggregation is not a one-size-fits-all model. Although each state's legislative path, operational structure, and community engagement approach vary, the collective impact of CCA is growing nationally. Currently, more than 1,500 communities across ten states are served by community aggregators serving over 40 million Americans (Lean Energy US, n.d.-a). This report equips LEAN with a roadmap to deepen its role as the national convenor and hub for community aggregation, supporting education, connection, and collaboration toward a cleaner, affordable, and more equitable energy future.

"Affordability is trumping climate action across the country"
– **Leora Broydo Vestel,**
Chief Experience Officer CalCCA

GLOSSARY

To avoid what one expert calls 'jargon monoxide,' we have included a glossary that demystifies acronyms like CCA, REC, LSE, RTO, and ISO. This ensures readers of varying backgrounds can engage with the report without getting lost in technical language.

Aggregation: An option you may consider when choosing an electric or natural gas supplier is to become part of a group that buys electricity or natural gas for its members.

Aggregator: An aggregator is a person or organization that brings a group of customers together. A large buying group may be able to get better terms for the group members than you could get on your own.

Competitive Retail Energy Service (CRES) provider: A retail electric service provider that is certified by the Public Utilities Commission of Ohio (PUCO) and competes for your business by offering alternative competitive prices, renewable energy options, or other services and incentives.

Clean Energy: Energy that is low carbon but does not meet the Renewable Portfolio Standard (RPS) qualifications. Typically, this is large hydropower from out-of-state (LEAN Energy U.S., n.d.).

Community: When a CCA mentions the term "community," it typically refers to both incorporated and unincorporated towns, villages, cities, and counties that are part of the CCA's service territory.

Community Choice Aggregation (CCA): The underlying principle is that the aggregator, whether single jurisdiction or multiple jurisdiction, leverages the collective purchasing power of the community (e.g., residents and small businesses) to procure a stable rate, energy (electricity and/or natural gas) that represents the community's values, local energy independence, customer protection, and transparency, for the customers to gain from the competitive electric utility market.

Distribution: Routing electricity to residents, businesses, and industries - in other words, where power would be consumed - via substations, feeders, and service transfers.

GLOSSARY

Electric Distribution Utility (EDU): The local electric distribution utility that delivers electricity to your home.

Energy Supplier: A company that sells electricity and, in some cases, natural gas to customers. In deregulated markets, energy suppliers compete to offer rates and contract terms, while the local utility continues to deliver the energy and maintain infrastructure. In a CCA program, the supplier is selected by the CCA or municipality through a competitive bidding process to serve participating customers.

Generation: Produce electricity through sources that are from one or many of the forms of energy, such as coal, hydro, sunlight, wind, biomass, nuclear, and others, into electricity

Greenhouse Gas (GHG): Gases that trap heat in the atmosphere are called greenhouse gases. The types of GHGs are carbon dioxide, methane, nitrous oxide, and fluorinated gases. Each of these gases can remain in the atmosphere for different amounts of time, ranging from a few years to thousands of years.

Hedging: A risk management strategy used by energy market participants to protect against price volatility. In the energy sector, hedging often involves financial contracts or forward agreements to lock in energy prices or supply costs for a future period, reducing exposure to market fluctuations.

Independent System Operator (ISO): An independent, non-profit organization that controls, coordinates, and monitors the operation of the electrical power system within a single state or region. ISOs perform functions similar to Regional Transit Organizations (RTOs) but typically operate in a more limited geographic area.

Investor-Owned Utility (IOU): The incumbent energy provider. If customers opt out of the CCA service, they will receive energy from the IOU. While served by the CCA, they will continue to receive bills, as well as transmission and distribution service, from the IOU (LEAN Energy U.S., n.d.).

Jargon Monoxide: Refers to the excessive and often unnecessary use of technical or specialized language (jargon) that can hinder communication and understanding, particularly in professional settings.

GLOSSARY

Kilowatt-hour (kWh): A unit of energy used to bill utility customers. Revenue is primarily based on the sale of kilowatt-hours (kWh) (LEAN Energy U.S., n.d.).

Kilowatt (kW): A unit of power used to quantify the rate of energy transfer. For large agricultural and commercial users, a demand charge is applied based on the peak kW usage over a specified period (LEAN Energy U.S., n.d.).

Load Capacity: The amount of generation available to serve the load, typically measured in megawatts (MW) (LEAN Energy U.S., n.d.).

Load Serving Entity (LSE): An organization, such as the utility (in some cases the CCA) that has the obligation to deliver electricity to end-use customers. LSEs are responsible for securing a sufficient energy supply and meeting resource adequacy requirements established by regulators or grid operators.

Megawatt-hour (MWh): A unit of energy equal to one thousand kilowatt-hours (kWh). It represents the amount of electricity used or produced over one hour. For example, one MW solar plant operating at full capacity for one hour generates one MWh of electricity.

Mercantile Customer: A customer who consumes more than five hundred thousand cubic feet of natural gas per year at a single location within this state or consumes natural gas, other than for residential use. For electricity, a customer who consume more than 700,000 kWh per year, other than residential use.

MISO: Midcontinent Independent Systems Operator - an electric grid operator for the central United States, operating across 15 states and the Canadian province of Manitoba (MISO, 2021).

National Renewable Energy Laboratory (NREL): The U.S. Department of Energy's primary national laboratory for renewable energy and energy efficiency research, development, and analysis. NREL conducts research in areas such as wind, solar, geothermal, bioenergy, and energy systems integration.

Opt-in Default: Each resident must provide consent to participate. Customers are not automatically enrolled in the CCA program. They must actively choose to join ("opt-in"). The default electricity provider remains the investor-owned utility unless the customer decides to switch.

GLOSSARY

Opt-out Default: Customers are automatically enrolled in the CCA program once it becomes available in their area. They must take action to leave ("opt-out") if they prefer to stay with the traditional utility. This method requires voter approval in many states, like OH and IL, and is the most common form of aggregation nationally.

PJM: An Independent Systems Operator in the U.S. for parts of Mid-Atlantic, Northeast, and Midwest states (MISO, 2021)

Power Purchase Agreements (PPAs): Contracts between a power generator and a buyer (often a CCA or utility) to purchase electricity over a fixed period at agreed-upon rates. PPAs are commonly used to finance renewable energy projects, e.g., solar or wind farms. The buyer (e.g., a CCA) agrees to purchase electricity at a set price, providing financial certainty to the generator. PPAs can include terms for energy delivery, pricing, length of contract, and environmental attributes such as Renewable Energy Credits (RECs).

Retail Sales: Measuring usage and billing consumers for the power delivered, accomplished via meters.

Renewable Portfolio Standard (RPS): The RPS program requires investor-owned utilities (IOUs), publicly owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy sources to meet the state-specific percentage of total procurement by 2030. Not every state has a renewable energy mandate (LEAN Energy U.S., n.d.).

RECS retired: RECs that have been permanently claimed by an entity (e.g., a CCA) to prove their use of renewable energy. Once retired, RECs cannot be sold or traded again. Retiring RECs is how organizations legally substantiate their renewable energy usage or environmental claims.

Renewable Energy Certificates (RECs): Tradable commodities that represent proof that one megawatt-hour (MWh) of electricity was generated from an eligible renewable source (LEAN Energy U.S., n.d.).

GLOSSARY

Retention Rate: Key metric showing customer support or satisfaction. In the context of CCA, retention rate refers to the percentage of customers who remain in the CCA program after being automatically enrolled. For example, if 90 out of 100 customers stay in the program after launch, the retention rate is 90%.

Regional Transportation Organization (RTO): An independent, non-profit entity that operates and manages the high voltage grid over a large multi-state region. RTOs ensure reliable grid operations, oversee wholesale electricity markets, and plan transmission system improvements.

Standard Product: Every aggregation will have a product that the customers will be automatically enrolled in at the time of launch. If the state has an RPS requirement, the standard product will include the required renewable energy.

Transmission: Moves the power over long distances from the place of generation by means of transmission lines and substations.

CLIENT BACKGROUND AND OVERVIEW

The project client is LEAN Energy US, an umbrella organization for Community Choice Aggregation (CCA). LEAN Energy US was established in 2011 to serve as a hub for information, networking, data, and education on CCA, initially with a focus on the California CCA market and extending support to a few additional states. Notable engagements in the first decade include supporting the creation of CCAs in New York and strengthening New Jersey's Government Energy Aggregation (GEA). LEAN helped states that were trying to enable CCA legislation, but it wasn't *officially* the national organization for CCAs then. In 2022, LEAN started working on federal engagement. Since then, LEAN has supported the expansion of CCAs nationally and is committed to the success of clean energy programs by providing market insights. LEAN also focuses on providing informational resources and expertise to national CCA organizations, advocacy groups, communities, and states, to enable CCA legislation (LEAN Energy US, n.d.).

While CCA is the term used in only three of the ten states that have enabled aggregation, others use their state-specific nomenclature, shown in Figure 1: Map of CCA States. This report encourages LEAN Energy US to develop a nationally preferred terminology among all CCA members through a democratic process that encompasses all states and community aggregation models. In the meantime, this report uses CCA broadly to refer to the aggregation across all states.

For this report, multiple interviews were conducted with LEAN's Director of Policy, Executive Director, and Board Members, including Shawn Marshall, the founding director of LEAN, who is also the founding Board Member of the first CCA in California, Marin Clean Energy (MCE). Interview insights of Shawn Marshall suggested that it was during the creation of MCE in 2010 that the realization struck that there was no umbrella organization to help other local governments learn and adopt community choice aggregation. Hence, LEAN was established in 2011 to address this gap by a few California CCA leaders. The founding members named the organization Local Energy Aggregation Network (LEAN) to serve as a non-profit umbrella for CCAs. In the initial years of LEAN, founding members made diligent efforts to create awareness of CCAs and build the organization. In furtherance of this objective, LEAN offered multiple educational and public webinars, provided free technical support to startups, and participated in numerous legislative discussions to elevate CCAs, with the ultimate goal of establishing LEAN as the national container for CCAs, despite the significant differences in structure, operation, and nomenclature among states.

By 2014, multiple proven track records of GHG reductions and savings data from MCE and other CCAs became available. This information accelerated the work of CCA between 2014 and 2020. According to the founding director of LEAN, the organization's influence and support were instrumental in achieving multiple milestones within the CCA ecosystem at large during that period, including:

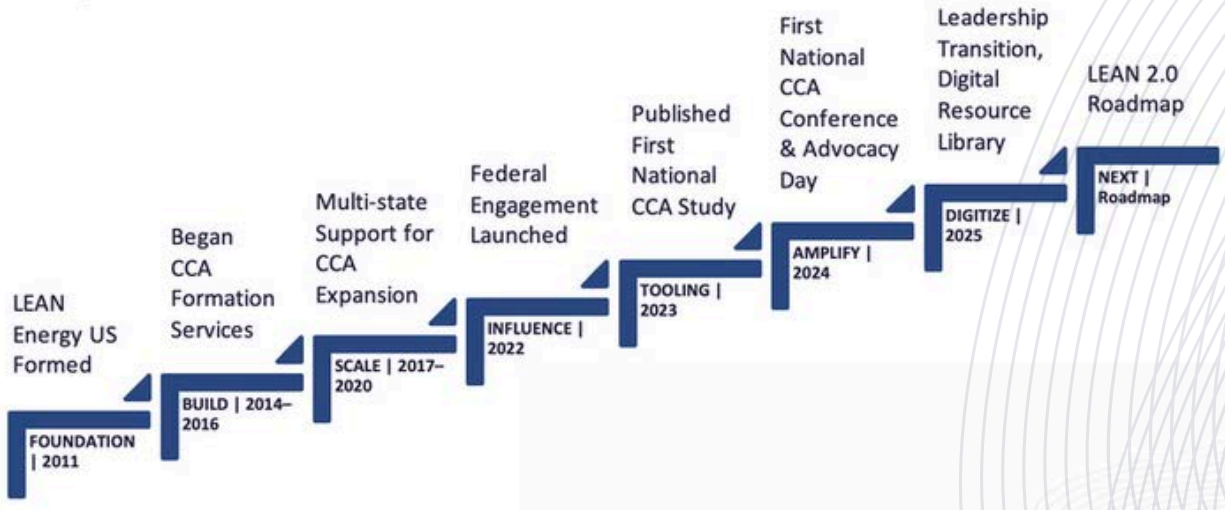
LEAN worked with energy advocates calling for CCAs in New York, alongside the state energy advocates, to assist in the startup

LEAN supported and strengthened the CCA program in New Jersey

LEAN strengthened and expanded the CCA programs in California and was involved in various capacities of support in 10 of the 25 California CCA start-ups

LEAN has been a two-person team and virtual since its inception, with strong leadership from Founding Executive Director Shawn Marshall, who served from 2011 to 2020, followed by Alison Elliott, then Director of Operations, who took over as Executive Director from 2020 to 2025 and served LEAN for 12 years in various capacities. In April 2025, LEAN welcomed Cody Hooven, LEAN's third Executive Director, who is also a long-term leader in the California CCA space as the founding member of San Diego Community Power. Additionally, Claire Dépit-Strömbäck, the Director of Public Policy, has been with LEAN for over three years and has extensive experience in the CCA space in NY, before joining LEAN.

Evolution of LEAN Energy US

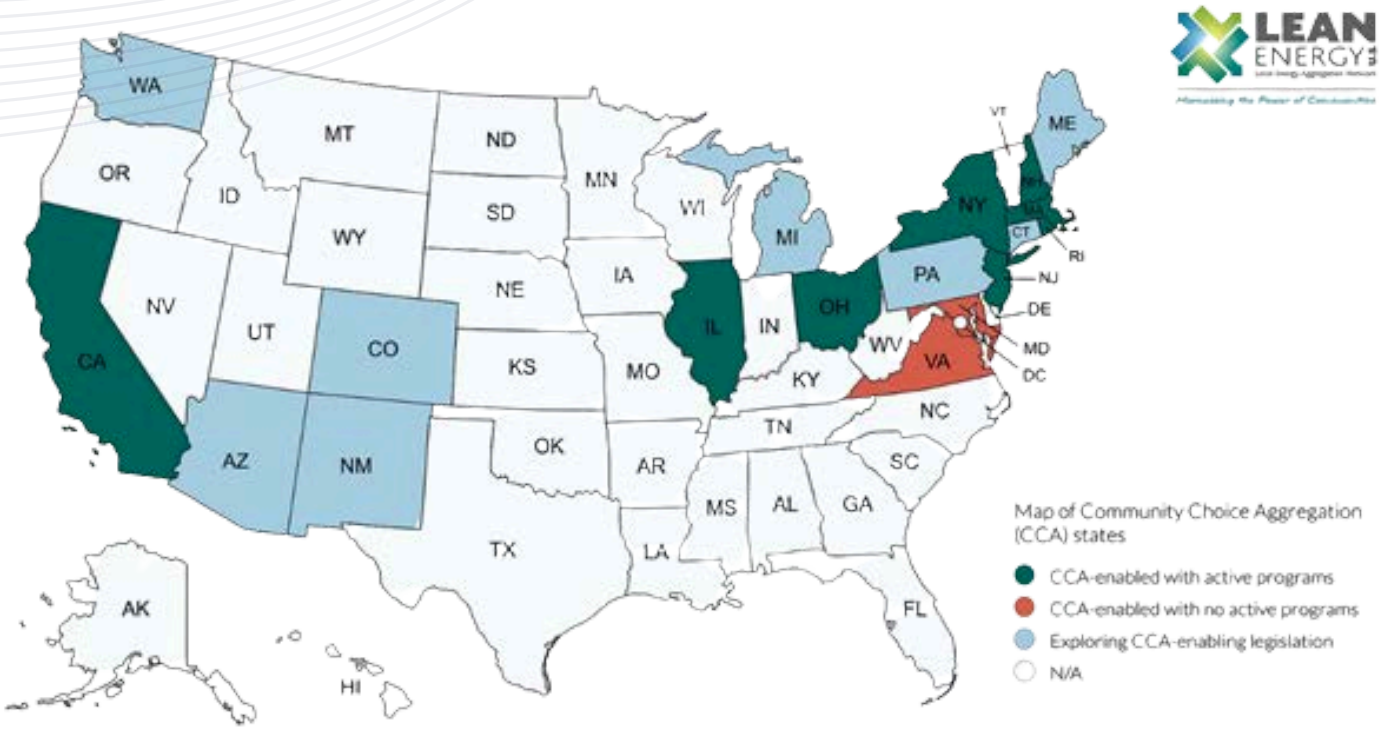


Based on initial discussions with the client, it is evident that LEAN adds value to the CCA space on a national level. However, multiple limiting factors prevent LEAN from realizing its full potential. These include limited capacity, funding limitations, lack of awareness about LEAN's services, unclear member benefits and areas of support for new and potential CCAs. In addition, as the founding of LEAN originated from CA CCA spaces, primarily by CCA experts from California and New York (states utilizing the term CCA as official nomenclature), it quickly became evident during interviews with energy aggregation leaders from multiple states that not all states refer to or relate to the term CCA. The current leadership at LEAN recognizes these challenges and is committed to addressing them. This report will offer recommendations to LEAN to address the multiple challenges noted above. In addition, LEAN is keen to explore restructuring the organization by examining its current membership structure, engagement strategies, and brand identity.

The topic of energy, specifically the power sector, is a complex subject. There are limited resources available that break down the energy sector context before deregulation, leading to a comprehensive overview of Community Choice Aggregation (CCAs), which is predominantly an energy procurement mechanism (except in CA, where CCAs are LSEs). There is the added layer of states initiating community aggregation through legislation (or regulation, as in New York). This layered complexity makes it harder to understand, as CCAs are not federally regulated, and they each have state-specific governance structures.

From an examination of LEAN’s publications, the consultant observed that they do not appeal to all readers. As LEAN's goal is to serve as a national umbrella to strengthen and accelerate the adoption of CCA, LEAN must expand its publications to appeal to both technical and non-technical readers. This can be achieved by compiling resources on energy aggregation basics for a digital community resource library, as well as creating a digital technical resource library. With these additional resources for non-subject matter experts, LEAN will tie directly to its mission, "...Bringing clarity and direction to a complex arena, LEAN serves as the nation's premier hub of information, networking, data, and education on CCA activities nationwide" (LEAN Energy U.S., n.d.-a).

Figure 1: Map of CCA States



Source: Lean Energy US, n.d.

To assess what members and potential members value in LEAN's existing resources, a recent survey conducted by LEAN in 2025, found in the appendix, identified the following as the most valued resources and services:

- National Community Aggregation Market Data Tracking
- Networking
- CCA Market Development and Expansion Support
- Research and Studies (e.g., 2023 National Study)
- Education
- Federal Advocacy Support
- Funding Opportunity Support

In addition, through surveys conducted by LEAN Energy US in 2023 and 2025, CCA market development and expansion, networking, and research and studies emerged as the most utilized resources by the respondents working in the CCA space. Upon further examination of key areas of future needs and opportunities for technical support, the survey and leadership discussion highlighted support for state legislation, peer learning, and the publication of best practices from states across the United States. The consultant had also expanded the work to address the gap in LEAN's current reports and research publications.

With that as a basis and the most recent leadership transition within LEAN, along with a confirmation that LEAN intends to broaden their reach in knowledge share and expand the reader base, the report is designed to include:

- A practical, relatable understanding of the subject of aggregation for the readers
- Tools and resources to enable readers to decide why aggregation is suitable for an individual and a community
- Information on how aggregation differs from state to state
- Best practices and advice on how this information, once published, can be utilized

This will help states communicate and learn from each other on their aggregation journey. Additionally, the report aims to highlight the gaps and recommend LEAN's program for pivot and expansion. And make a case for why it should matter for aggregators around the U.S. to stay engaged with LEAN Energy US to forward their collective efforts to expand aggregation.

PROJECT PURPOSE AND NEED STATEMENT

When a state is deregulated, it does not automatically enable CCAs to be formed. The state must rally to create a legislature that enables CCAs, and in some states regulate to enable CCAs. Since the creation of the first CCA 25+ years ago, no organization has been established beyond LEAN to examine community aggregation at a national level. There is, therefore, a critical role for LEAN to play in facilitating peer learning and sharing success stories of the CCAs' journey by amplifying its support. These factors led to the engagement of a Harvard student consultant on a project with very high implementation and impact potential.

This project's deliverables are a direct response to the market gap in the availability of concise nontechnical CCA resources to create interest and awareness on energy aggregation and the CCA mechanism, and an overview of states' CCA landscapes, a comparative study of multiple states and strategic recommendations for LEAN Energy US. The report is divided into three sections, each targeting a specific segment of readers to meet the client's needs. The purpose of this three-part deliverable is to empower LEAN as a national organization to support CCAs.

" It is a good deep dive in an area that needs further awareness and understanding. You are targeting an area of the industry that is still pretty nascent in the grand scheme. An opportunity to help unify and support the organization that is now acting as this coalition to support the growth of the space is fantastic."

Chris Castro, Chief Sustainability Officer at Climate First Bank and Former Chief of Staff and Senior Advisor, U.S. DOE

"Usually, any scholarship piece looks at one specific thing and not CCA holistically and not across multiple states. I want to read this report for my own benefit and to share."

Leora Broydo Vestel, Chief Experience Officer, CalCCA

"It's a wonderful subject you're tackling. One of the least understood concepts in the power sector, especially in the way it differs from state to state."

Dr. James Koehler, Harvard University

"This work is vital because we are experiencing an increased need to build a stronger, bipartisan coalition of community choice programs across the country. The collective voice is needed to educate federal officials on newer ways to serve communities and address major energy concerns such as affordability, energy efficiency, and clean energy. Further strengthening LEAN as an organization also helps communities across the country better understand and advocate for community choice energy opportunities."

Cody Hooven, Executive Director of LEAN Energy US

"Deepa's work is helping LEAN Energy US rethink what's needed nationally for energy aggregation communities and stakeholders, shape our expansion strategy, and strengthen both our services and member engagement. Her contributions are laying a foundation for a new era of energy aggregation program participation: Locally, statewide, and across the nation."

Claire Dépit-Strömbäck,
Director of Public Policy of LEAN Energy US

Deliverables: Ownership, Use, and Dissemination

This project is structured into three distinct deliverables; each designed with specific audiences and uses in mind.

Deliverable #1: Energy Aggregation Basics

This section is intended to be part of the publicly available digital community resource library database that the consultant will provide for LEAN Energy US. The content in this section of the document is intended to serve as foundational outreach materials for both members and non-members to learn about energy aggregation and the CCA mechanism, its emergence, and its rise in the United States. The content in the section is intended for diverse readers, including but not limited to:

- Community members who are currently a part of CCA and would like to understand community aggregation
- Elected government officials who are part of the CCA can utilize this content, along with their state-specific resources, to raise awareness about the benefits of CCAs.
- Readers of all backgrounds who are interested in learning about community aggregation, to empower them to be part of the CCA community, or to persuade their elected officials to vote for enabling legislation of CCA.

Importantly, CCAs across the country may adapt this resource by adding their own state-specific nomenclature, context, and organizational information and use this as part of their outreach materials to create tailored tools for broader stakeholder engagement.

Deliverable #2: Comparative Case Study of the First CCA's from Select States

This section captures the leadership journeys, governance structures, and innovations behind the creation of the first CCAs in four states. Unlike technical feasibility studies, it provides comparative, narrative insights into diverse models and lessons learned. It is designed to support peer learning in CCA-enabled states, assist advocates in states pursuing enabling legislation, and serve the 1,500+ member communities already part of CCAs.

This deliverable will also be made available through LEAN Energy US's library as part of the consultant's contribution to national peer learning. However, the consultant retains full authorship and reserves the right to share and expand upon this body of work and publish it independently, in collaboration with LEAN, or with other research partners in future research publications.

Deliverable #3: Strategic Recommendations for LEAN

This section is the property of LEAN Energy US and is provided for the client's use at their discretion. It contains confidential organizational recommendations aimed at assisting LEAN Energy US in its organizational financial health and programmatic offerings, while being responsive to the CCA needs at large and expanding its technical and educational offerings. LEAN Energy US, being the national umbrella organization in the US, has excellent impact potential to foster CCA growth, accelerate community choice aggregation at the local, state, and regional, and national levels.

CLIENT MISSION AND BUSINESS AREA

CLIENT MISSION AND BUSINESS AREA

OUTREACH AND EDUCATION

MARKET ANALYSIS OF CCA

REGULATORY AND LEGISLATIVE AFFAIRS

FEDERAL ENGAGEMENT

FUNDING OPPORTUNITIES

MARKET FORMATION, DEVELOPMENT AND INNOVATION

The mission of LEAN is "to accelerate the country's transition to clean and renewable power, support competition and customer choice in the energy sector, and maintain affordable electricity rates".

LEAN works in partnerships with a range of organizations to actively support the formation and operational success of Community Choice Aggregation (CCA) programs across the nation.

Bringing clarity and direction to a complex arena, LEAN serves as the nation's premier hub of information, networking, data, and education on CCA activities nationwide. We provide critical resources and expert guidance to a diverse network of local, state, and federal governments, commercial and nonprofit organizations, advocacy groups, and individuals seeking to launch or expand CCA programs in their communities and states (LEAN Energy U.S., n.d.).

Current Initiatives:

- Assist states in enabling CCA legislation
- CCA Federal Advocacy Coalition launched in 2025, with monthly meetings
- Quarterly newsletters, active reports, and bi-monthly webinars
- CCA implementation and expansion of offerings
- Support networking opportunities to CCA organizations from across the country
- Publish national CCA study and other technical reports
- Annual CCA conference and advocacy days in DC

KEY STAKEHOLDERS

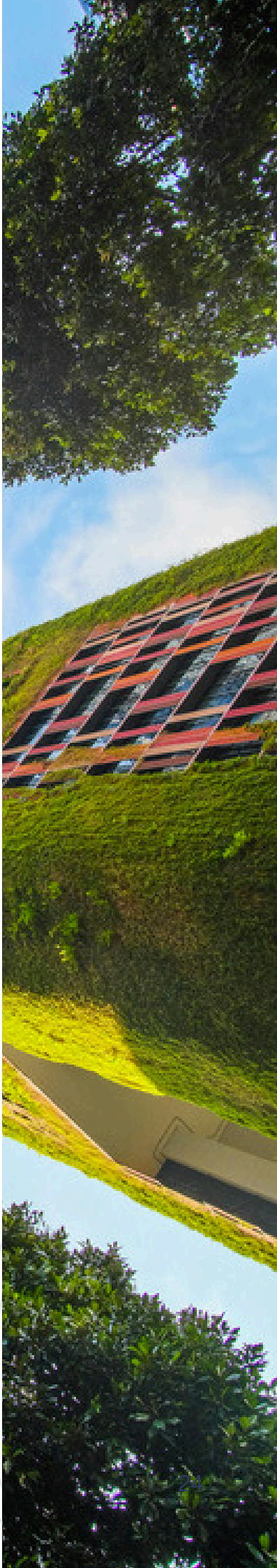
Internal stakeholders of LEAN are two staff members, the Executive Director and the Director of Public Policy. In addition to staff members, there are five Board of Directors, four Advisory Board members, three regional market advisors, and fifteen CCA federal advocacy committee members. The external stakeholders of LEAN are its members, which include CCAs, local government, and communities exploring CCAs.

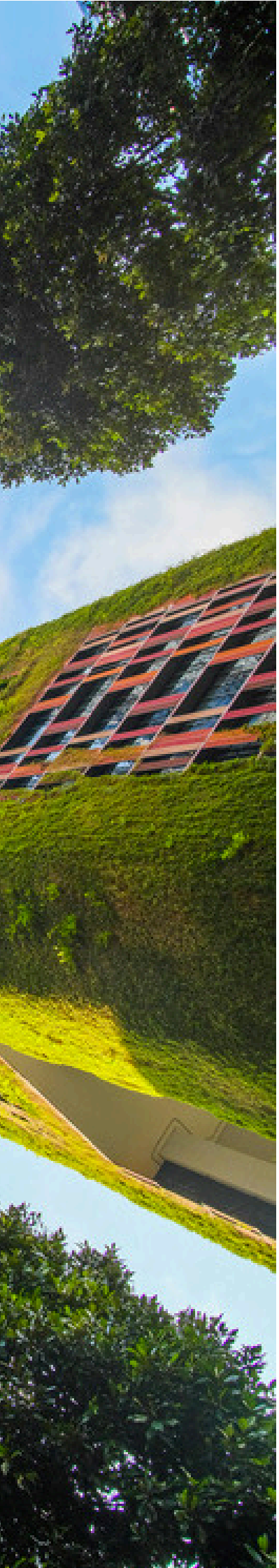
The two key leaders of LEAN Energy US, who are diligently co-creating the strategic focus areas for the organization, are listed below.

CODY HOOVEN,
Executive Director

Cody brings extensive experience and successes advancing groundbreaking and equitable climate, energy, and sustainable development progress in communities. She has established deep relationships with numerous organizations and community leaders, earning the trust of decision-makers in California and beyond.

Cody led the development of the first climate action plan in the United States for a port, securing support from waterfront businesses and adjacent environmental justice communities. She garnered unprecedented support for the passage and implementation of a nationally recognized climate plan for the City of San Diego. She also established the sustainability department for the City, including foundational initiatives in equity, energy, and climate that have been adopted in other cities. She later founded San Diego Community Power, the second-largest community choice aggregation agency in California, which generated $700 million in revenue at launch. From initial feasibility studies to successful formation and launch, her leadership was instrumental.





Most recently, Ms. Hooven co-founded Evolution Affairs, bringing her expertise to local governments, nonprofits, and businesses that want to achieve significant results. She also serves part-time as the Executive Director of LEAN Energy US (Lean Energy US, n.d-b)."

CLAIRE DÉPIT-STRÖMBÄCK,
Director of Public Policy

Claire is a dedicated systems thinker and expert in U.S. local clean energy policy. As the Director of Public Policy at LEAN Energy US, she leads federal engagement efforts and drives strategies to expand clean energy and community choice aggregation markets nationwide.

Claire is one of the few experts in Community Choice Aggregation (CCA) markets across the U.S., with expertise in states such as California, New York, Ohio, Illinois, New Jersey, New Hampshire, Massachusetts, and more. Claire authored "Community Choice Aggregation: A Cost-Effective Policy Tool that Accelerates Competitive Renewable Power Addition and Carbon Reduction at Scale" (Dépit, 2023).

In addition to her deep understanding of CCA markets and experience in advocacy, energy policy, and project development, Claire specializes in federal engagement. Through LEAN's Federal Advocacy Committee, she organizes federal advocacy campaigns for CCAs, helps them strengthen their relationships with the federal government, apply for federal funding, and navigate federal policy landscapes to foster growth and impact. Previously, Claire served as Project Manager for Strategy and Federal Engagement for a CCA based in New York (Lean Energy US, n.d-b)."

METHODOLOGY

Mixed Methods:
Interviews, Surveys, and Desk Research

This project used a mixed methods approach, combining surveys, structured interviews, and desk research to ensure that each deliverable was informed by credible, diverse, and nationally representative inputs.

SURVEY INFORMED DELIVERABLE #1:

To guide the development of the energy aggregation section of the report, a targeted survey, titled *Community Aggregation: Familiar or Fuzzy?* (refer to appendix), was conducted with five simple questions. This was done to assess the baseline awareness of Community Choice Aggregation (CCA) and identify priority topics for nontechnical audiences. The survey responses helped determine the content, structure, and details needed to make deliverable #1 accessible and meaningful to community members, elected officials, and other non-expert leaders.

INTERVIEWS INFORMED DELIVERABLE #2:

The comparative case study section was developed through the compilation of in-depth interviews with pioneering leaders involved in the launch of the state's CCA legislation and/or the first CCA in the four states featured. The conversations captured the regulatory, political, and community contexts that led to the shape and the creation of the program. The section also highlights the challenges, innovations, and lessons learned that could benefit peer programs nationwide.

NATIONAL SURVEY, DESK RESEARCH, AND ANALYSIS INFORMED DELIVERABLE #3:

As part of the Harvard Capstone, the consultant co-designed LEAN Energy US, a national survey aimed to assess LEAN's current offerings, identify unmet needs, and inform future priorities. The survey was distributed to diverse stakeholders across the Community Choice Aggregation (CCA) ecosystem, yielding 46 responses. The data offered both quantitative and qualitative insights into the market development needs, member expectations, and strategic opportunities. A structured analysis of the results, coupled with conversations with industry experts, informed the strategic recommendation section for the report. Although key findings from the survey are highlighted throughout the report, the survey questions and summary can be found in the appendix.

DELIVERABLE 01: ENERGY AGGREGATION

Prepared for readers new to aggregation

1920-1990 MONOPOLY ERA

Between the 1920s and the 1980s, the U.S. government granted a monopoly on electricity delivery to private Investor-Owned Utilities (IOUs). This led to a vicious cycle, where power is used to curb competition and maintain dominance. In turn, this allowed for overcharging customers, generating profit for shareholders, and funneling funds towards lobbying to maintain a monopoly (Farrell, 2024).

According to a 2024 study by the Institute of Local Self-Reliance (ILSR, 2024), there are many hidden costs associated with the monopoly of electric utilities, including:

- Costs due to high, unreasonable price hikes and costs associated with the community due to direct health impacts from utility pollution. Thirty-two percent of pollution in the U.S. comes from the energy sector, and is related to carbon emissions.
- Utilities engage in practices that block clean energy jobs, aiming to maintain their monopoly and limit competition.
- Funding campaigns on climate denial and engaging in highly corrupt and illegal political activities, hurting democracy and community benefits.

1990 DEREGULATION PIVOT

It was in the 1980s and the 1990s that the abusive cycle of the IOU monopoly grew alarmingly, and a call for structural reform emerged in the power sector. It was then that the U.S. entered a phase of dramatic transformation, breaking the monopoly of private utilities, referred to as the regulated model, towards fairer competition in the system, referred to as a deregulated model (Farrell, 2024). The transformed model would enable the separation of power in electricity generation, supply, transmission, and distribution, allowing market competition among independent power producers and suppliers who could utilize the transmission infrastructure of the IOUs on a tariff basis.

Although the restructuring of the sector that existed for over six decades continued, the Federal Energy Regulatory Commission (FERC), the entity that regulates the sale and interstate transmission of electricity, natural gas, and oil, left it to the states to decide when the competition would occur in each state. The discussion on the utility restructuring intensified in 1995, and a poll taken during that time indicated that one-third of U.S. states would restructure their electric utilities by the year 2000.

By 1996, the discussions had reached 47 states, with four states passing the legislation that year: New Hampshire, Rhode Island, California, and Pennsylvania (Farrell, 2024). It was then that the federal administration required states across the country to create a competitive retail market for electricity (Barnstable County, 1996). As every state had its regulatory authority and legislation, the proposals for the competitive model differed significantly, which affected the impact on revenue, budgets, community benefits for businesses and residents, and their ability to plan local energy infrastructure, economic and environmental priorities, and security (Barnstable County, 1996).

It was during the same period of restructuring that another unique mechanism for electricity and natural gas supply, in select states, emerged as an alternative to retail supply, now commonly referred to as community choice aggregation, municipal aggregation, or government aggregation (Faruqui, 2020). The power distribution networks of local communities continue to be regulated; however, in this new structure, communities will have the ability to choose their suppliers (Barnstable County, 1996). The mechanism of community aggregation did not put the municipality in the electric utility business; instead, it allowed municipalities or groups of municipalities to be consumer advocates that directly establish contracts with

- electricity suppliers based on a competitive bidding process and
- the distribution provider on behalf of municipalities through their collective bargaining power.

Additionally, separate contracts can be established for energy efficiency and other services that reflect the value of the communities being served. Thus, the aggregation model is not a replacement for state regulatory power but rather a partnership that offers better local control, transparency, lower rates, community participation, and access to greener electricity choices. State approval is required for all contracts, which in turn allows state policies to be transformed into market forces (Barnstable County, 1996). Community aggregation requires state-level legislation to be in place, and to date, 10 U.S. states have enacted it (see Figure 1: Map of CCA States).

In 1995, a study titled *Community Franchise: An Option for Local Governments Facing the Challenge of Electric Utility Industry Restructuring* was commissioned by Barnstable County Commissioners of Massachusetts to examine the movement in the 1990s that led to the beginning of the model of community aggregation as a non-profit or public entity to form (Farrell, 2024).

Due to the differences in legislation in each state, nuanced state-specific models for energy aggregation have evolved in ten states: Massachusetts, California, Ohio, Illinois, Maryland, New Jersey, New York, New Hampshire, Rhode Island, and Virginia (Roy, 2024). The underlying principle is that the aggregator will utilize the ability to pool the purchasing power of the community (municipalities) to procure the best rate and energy choice that represents the community's values. This is what aggregation does on a large scale. Even within deregulated states, there are primary differences, namely between fully deregulated and partially deregulated states, while some states have chosen to continue to remain regulated under their IOUs.

In the U.S., 29 states have deregulated either electricity, natural gas, or both (TrueEnergy, n.d.). A list of states can be found in the appendix. Within the existing deregulated states, ten states have CCAs. In addition, eight states are either actively investigating or on the watch list to legislate CCAs in their state, according to the Environmental Protection Agency (U.S. Environmental Protection Agency, 2022). Here are the fundamental differences and similarities between fully deregulated and partially deregulated energy markets.

Fully deregulated:

When a state allows distribution at both the generation and delivery levels, it is considered fully deregulated, meaning that choices are offered at both levels and to all customers (NREL executive interview, 2025).

Partially deregulated:

If a state offers a choice that is only available to a subset of its customer base, such as its large commercial and industrial customers, then it is a partially deregulated market. In some states, there is regulation at the distribution level and deregulation at the generation level, which is also classified as partially deregulated. For example, California opened up the retail market, but shortly thereafter, it was closed back up, with only the Commercial and Industrial (C&I) customers having the ability to have choices.

CHARACTERISTICS OF FULLY REGULATED, DEREGULATED AND CCA-ENABLED STATES

REGULATED	DEREGULATED	Community Choice Aggregation (CCA)
Sole provider	The customer chooses the provider	Municipalities form CCAs to choose a provider
No competition / high rates	Competition keeps rates low	CCA uses bulk purchase ability to shop for low rates
Shareholder satisfaction focus	Customer satisfaction focus	Higher focus on customer satisfaction
One size fits all model	Assortment of product choices	Greener and customer value-focused choices
No focus on emissions reductions without a mandate	Focus on the environment with a state mandate	Driven by local climate goals, focus on the environment with or without mandates.
Low motivation to stimulate the economy through green jobs	To stay ahead of the competition, jobs and economic growth occur	CCAs are vested in economic, green investments and job growth as a representative or coalition of municipalities

Source: TruEnergy, n.d.

In addition to the characteristics of CCAs noted in the table on page 31, there are additional traits that are noted below:

- Although CCAs operate within deregulated energy markets and share some functional similarities with retail suppliers, CCAs are fundamentally mission-driven, focused on delivering public value rather than generating profit.

- CCAs negotiate on behalf of the municipalities they serve. Their primary role is to secure competitive energy rates and terms for their member communities, leveraging collective buying power to benefit residents and businesses.

- Default energy offerings or standard programs of CCAs are often updated quarterly or semi-annually. This approach allows them to respond to seasonal price fluctuations and market conditions, ensuring customers benefit from the most competitive rates available. Unlike long-term contracts, these short-term pricing strategies reflect the CCA's active market engagement.

- California benefits from long-term contracts as its state regulation encourages that, and CA CCAs serve as load-serving entities, unlike other states.

- Unlike retail energy suppliers, CCAs do not lock customers into long-term contracts. There are no early termination fees or penalties; customers can opt out at any time, reinforcing choice and flexibility.

- CCAs are the community's energy negotiators without added cost to taxpayers. Their operations are funded through the supply rate itself, not public dollars. They work exclusively for the benefit of ratepayers, with procurement decisions made in the community's best interest.

- The success of a CCA depends on community trust and local governance. CCAs are typically overseen by boards composed of elected officials or representatives from the participating municipalities, ensuring transparency, accountability, and alignment with local values.

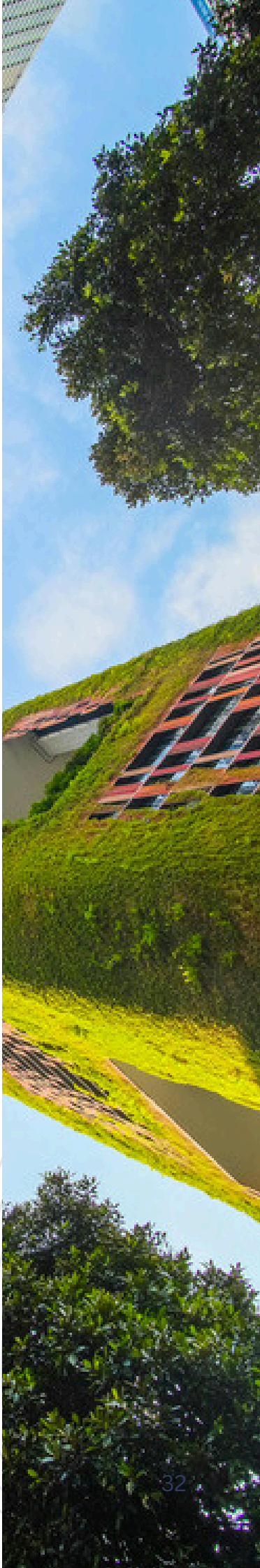
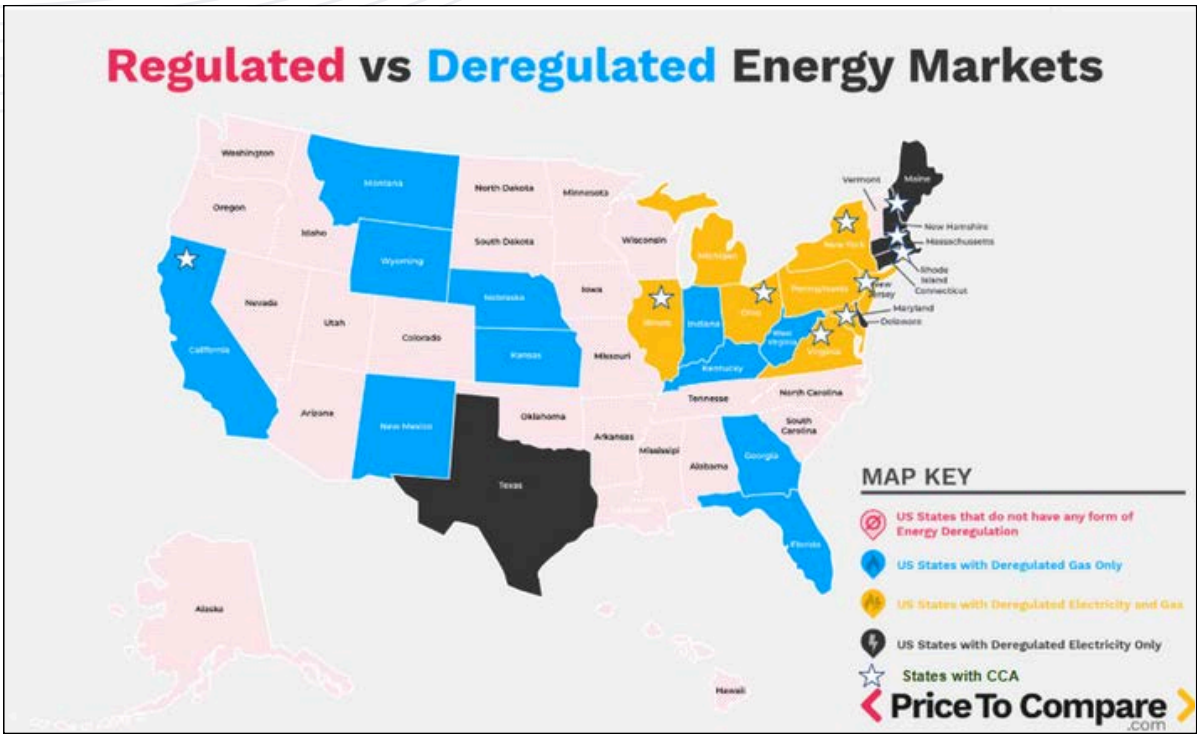


Figure 2: Regulated and Deregulated States (The classification for deregulated states includes those which are partially regulated.)



Source: (Price to Compare, n.d.)

CCA MODELS

The CCA mechanism is a true genius in the way it emerged, as a bottom-up movement giving power to the local governments. Among the ten states where CCAs are enabled, community participation is voluntary, and membership requires a resolution to join the CCA. There are various operational structures or models for the CCA, depending on state legislation. These models include, but are not limited to, the joint power agency model, the council of governments model, a single jurisdiction or enterprise model, a hybrid joint power agency model, a commercial vendor package, or a broker model.

Following are the definitions of the operational structures of the different California CCA models:

Joint Powers Authority: A JPA is an independent, public agency that operates a CCA on behalf of its member municipalities. JPAs are a standard legal structure in California for administering cooperative, multi-jurisdictional programs. MCE, Peninsula Clean Energy, Silicon Valley Clean Energy, and Sonoma Clean Power are examples of CCAs that operate with the JPA model (CalCCA, n.d.).

Single Jurisdiction: A city or county individually establishes and operates a CCA as an enterprise fund within the municipality. This model shares the same benefits of the JPA model but differs in that the City (or County) retains full program autonomy and all associated revenue. San Francisco and San Jose are examples of cities that have implemented CCAs under the single jurisdiction model (CalCCA, n.d.).

Hybrid JPA: Under a hybrid JPA, communities can contract for the services they need to operate a CCA by joining an existing joint-powers authority as an associate member. CalChoice is an example of a JPA, formed by the cities of Lancaster and San Jacinto, that offers a range of CCA services to cities that join as associate members. According to CalChoice, the hybrid JPA facilitates CCA implementation, operation, and administration while enabling jurisdictions to maintain local control over CCA programs (CalCCA, n.d.).

Commercial Vendor Package: Under this model, a private company manages the CCA on behalf of local government(s). King City Community Power is the only operational CCA program in California that has implemented CCA under this model (CalCCA, n.d.).

The CCA models listed below were identified based on a series of interviews with CCA leaders across the country.

MODEL TYPE	GOVERNANCE STRUCTURE	MARKET OPERATION	EXAMPLE
Joint Power Agency or Authority (JPA) or Entity (JPE)	Multiple government agencies establish a CCA program under one entity	All operations are run by the JPA. May hire a third party for specific phases of the program.	Marin Clean Energy (MCE), Peninsula Clean Energy (PCE), Community Power Coalition of New Hampshire (CPCNH), Caple Light Compact (CLC)

MODEL TYPE	GOVERNANCE STRUCTURE	MARKET OPERATION	EXAMPLE
Council of Governments (CoG)	Multiple Government Agencies established as the Council of Governments (CoG)	All operations are run by CoG. May hire a third party for specific phases of the program	Northeast Ohio Public Energy Council (NOPEC), Sustainable Ohio Public Energy Council (SOPEC)
Enterprise	Single Government	All operations are run in-house by the local government. May hire a third party for specific phases of the program.	San Jose Clean Energy (SCE), Boston Community Choice Energy (BCCE)
Municipal Aggregation-Broker model	Single Government or multiple governments	All operations ex. Procurement, implementation, management etc are run by a third-party on behalf of and in collaboration with the local government(s).	Naperville Energy Aggregation Program (IL); Village of Oak Park CCA (IL)
Hybrid	Formed as a JPA but has association members	Offer turnkey services	CalChoice

The most recent publication from LEAN Energy US in 2023 indicated that there were 10 CCA-authorized states, four states actively investigating, and three more on the potential watch list, serving over 40 million residential and business customers and is steadily growing (LEAN Energy U.S., n.d.). Despite the growth of the CCA market, there is limited understanding of who the serving CCAs are, except for those working in the space, as the awareness rate among the CCA-serving communities is usually lower than 50%. Moreover, the available literature often speaks to technical readers. There are no state-specific journey maps of CCAs, their creation, successes, and lessons learned.

To date, the CCAs have provided millions of dollars in energy savings to over 1,500 communities served through CCA (LEAN Energy U.S., n.d.), demonstrating its power to drive systemic transformation.

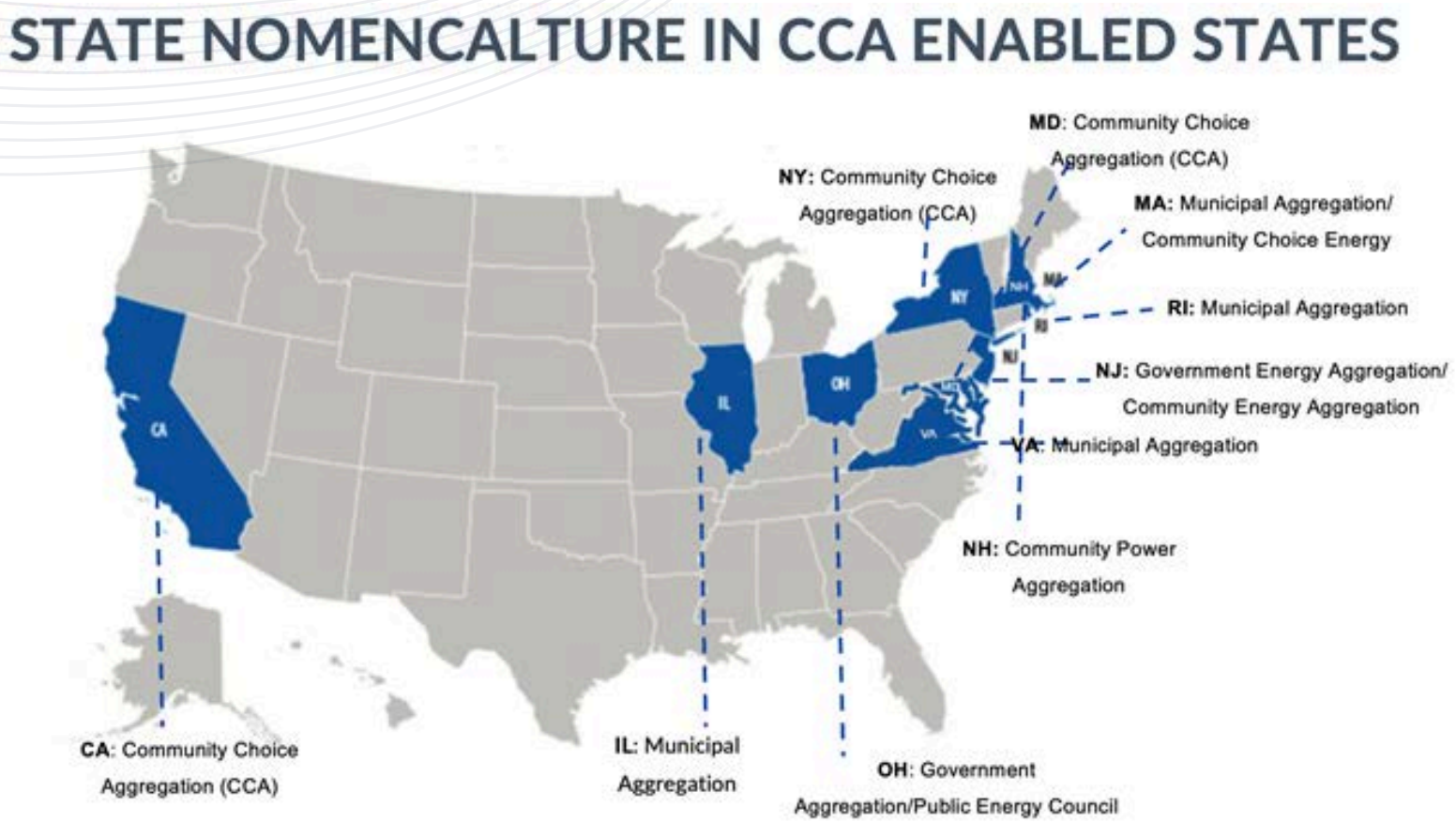
STATE SPECIFIC NOMENCLATURE

Although CCA is a common term used to refer to the community aggregation mechanism in LEAN Energy US publications, each state has a unique governance structure and state-defined nomenclature to address community aggregation, as shown in Figure 3.

MASSACHUSETTS

According to the Department of Public Utilities, the state nomenclature used for aggregation is “Municipal Aggregation,” and it was the first state to legislate in the year 1997, with the first aggregator established in 1998. Each aggregator submits an annual report to the DPU with their municipal-specific product offerings and usage breakdowns (Massachusetts Department of Public Utilities, n.d.).

Figure 3: State-specific Nomenclature in CCA-enabled States



.

OHIO:

The state nomenclature per the Public Utilities Commission of Ohio is "Government Aggregation." Ohio was the second state to legislate aggregation in 1999, with the first program launched in 2000 serving both electricity and natural gas. Aggregators must be certified by PUCO to offer service (Ohio Public Utilities Commission, n.d.).

CALIFORNIA:

California officially uses the term "Community Choice Aggregation (CCA)," authorized by Assembly Bill 117 in 2002. Marin Clean Energy (MCE) was the first to launch in 2010. California's CCAs operate as Joint Powers Authorities (JPAs), enterprises, or hybrids. They handle exit fees charged by utilities and serve nearly 30% of the state's electric load (California Community Choice Association, n.d.).

NEW HAMPSHIRE:

Known as "Community Power," New Hampshire enabled aggregation through SB 286 in 2019. The Community Power Coalition of New Hampshire (CPCNH) began operations in 2022, organizing municipalities under a JPA-like structure to promote local energy control and clean energy investment (Community Power Coalition of New Hampshire, n.d.).

ILLINOIS:

Illinois adopted "Municipal Aggregation" under the Illinois Power Agency Act in 2009, and programs began following local referenda in 2012. The model allows municipalities to aggregate customer load to negotiate lower electricity rates (Illinois Commerce Commission, n.d.).

NEW YORK:

The term "Community Choice Aggregation (CCA)" was formalized by the New York State Public Service Commission in 2016. The first operational programs began in 2017 and are coordinated via partnerships with municipalities and utility companies. They increasingly focus on renewables and demand-side resources (New York State Energy Research and Development Authority, n.d.; Sustainable Westchester, n.d.).

NEW JERSEY:

New Jersey refers to aggregation as "Government Energy Aggregation," authorized in 2003. Local governments can procure electricity supply on behalf of residents. The structure allows opt-out provisions and offers potential savings and green energy options (New Jersey Board of Public Utilities, n.d.).

RHODE ISLAND:

Rhode Island legalized "Community Aggregation" in 2021, with programs launching in 2022 in cities like Providence. Municipal ordinances enable these aggregations and focus on customer choice and clean energy (Rhode Island Office of Energy Resources, 2022; City of Providence, 2023).

MARYLAND:

The state began exploring Community Choice Aggregation (CCA) around 2016. House Bill 961 (2019) outlines how municipalities could structure CCA programs. Baltimore County and others have shown interest in implementing this model, though adoption remains limited (Maryland General Assembly, 2019).

VIRGINIA:

Virginia authorized Municipal Aggregation legislation in 2020, with early-stage program development starting in 2021. The framework allows localities to collectively procure renewable electricity, although statewide adoption is still in its early phases (Virginia Energy, 2020).

DID YOU KNOW ?

CCAs create anywhere between 3 and 80 long-term job opportunities per program and support workforce development for the construction and management of new clean energy developments? Ex: Marin Clean Energy in California created 6,800 green jobs in the 15 years since inception.

CCA law is enabled in ten states: California, New Hampshire, New York, New Jersey, Massachusetts, Rhode Island, Ohio, Illinois, Maryland and Virginia ?

CCAs were formed in response to deregulation laws as a unique mechanism that allowed competition in the energy market, where communities can participate either independently or collectively through aggregation ?

CCAs from across the country have provided, on average, savings of 2-25% for their customers compared to their default utility rates?

Over 1,500 local governments are currently part of a CCA program ?

Customers can opt out of their local CCA program without penalty if they choose to stay with their default utility. However, most often, community members stay because of the potential savings, greater consumer protection, and greener product options?

CCA allows communities and local governments to choose the energy supplier and energy source for all residents and local businesses, while the default utility still delivers electricity and maintains the electric grid ?

CCAs offer greater consumer protection, as they are formed by local governments and led by community values and priorities ?

In the US, about 40 million people and businesses are served by the CCA ?

Community aggregation allows cities, villages, townships, and counties to choose where their (local residents, businesses and municipal buildings) electricity is coming from while the default utility serving the municipality continues to own the infrastructure, maintain the grid, and bill the customer ?

Standard utility rates are often higher than rates offered through community aggregation mechanisms that use the collective buying power of the communities to negotiate the best possible rates and electricity sources on behalf of the communities ?

COMMUNITY RESOURCE FREQUENTLY ASKED QUESTIONS (FAQS)

To assess community familiarity with Community Choice Aggregation (CCA), a survey was conducted with five targeted questions. Forty-six individuals completed the survey in full. Among the U.S. respondents, 80% were unfamiliar with CCA or municipal aggregation, and notably, 75% of them lived in CCA-enabled states. This underscores the need for accessible, nontechnical resources like this one.

One survey question asked: If a friendly guide were created to raise awareness of CCA, what topics would you want it to cover? The open-ended responses yielded 35 thoughtful suggestions, which have been distilled into a comprehensive set of FAQs for public benefit.

These FAQs are organized into three categories:

CCA Exploration: for those learning about the concept and its potential benefits.
CCA Launch: for communities preparing to establish a program.
CCA Operation: for ongoing management, improvement, and community engagement.

This collection will be added to LEAN's digital resource library, enabling CCAs nationwide to adapt and expand the questions with state-specific content as needed.

FAQS FOR CCA EXPLORATION

These questions are intended for the community and community members who are interested in learning more about CCAs and are curious about the CCA mechanism and benefits.

Why have I not heard of CCAs before if they have been there since 1999?

In some circumstances, people participate in a CCA through their community but are unaware of their participation. That does not negate the benefits they receive from participation; they may be simply unaware of how they obtained an aggregated supply rate. Not every community participates in a CCA, even if they have the option to participate. Some communities pass ballot legislation but do not have an active aggregation program.

How common are CCAs?

According to Local Power's 2025 data, CCA laws cover over 50% of the U.S. annual electricity demand in ten states. More than 1,500 municipalities currently serve over 40 million Americans, or 14% of the national population, through CCAs (Community Choice Aggregation - Definition by CCA).

Is CCA an option in all states? Do federal regulations govern community choice aggregation?

CCAs are currently available in ten U.S. states. Although the Federal Energy Regulatory Commission (FERC) oversees the wholesale markets, it does not directly oversee each state's CCAs, as this responsibility lies with the state-level utilities commission.

Where are CCAs available in the United States?

CCAs are currently available in ten states. California, Illinois, Maryland (Montgomery County pilot), Massachusetts, New Hampshire, New Jersey, New York, Ohio, Rhode Island, and Virginia have enacted CCA legislation (CCA BY STATE | LEAN Energy US). CCAs are overseen by their respective state's Public Utilities Commission (Community Choice Aggregation | US EPA).

Is CCA international?

CCA is predominantly in the United States, although other countries have also undergone deregulation of their energy markets. For example, Electric Choice mentions that in Europe, England and Wales were the first to introduce a deregulated market, and now the majority of countries within the European Union are fully deregulated. In Canada, many provinces have the ability to shop for their energy supply, and deregulation is also present in countries such as New Zealand and Japan, to varying degrees (Energy Deregulation Around the World: A Comprehensive Guide).

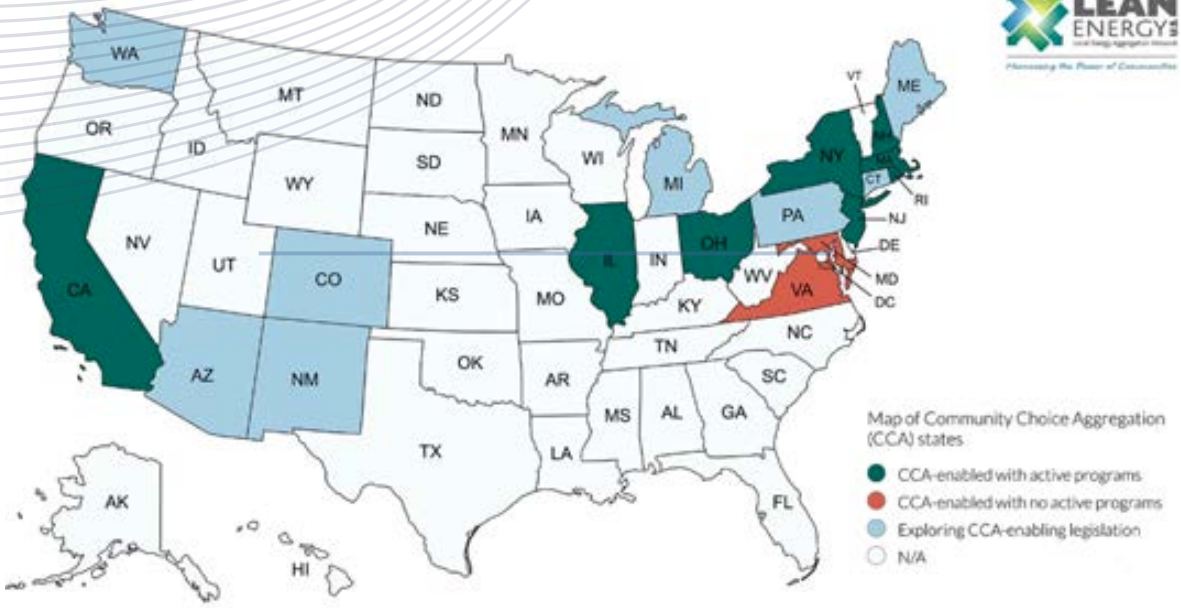
Is there detailed energy literature in easily understandable language for beginners to understand CCAs?

There are fact sheets and literature published in CCA-enabled states. For example, in Ohio, you can search for the specific nomenclature of the mechanism, "Government Aggregation", on the Ohio Consumers' Counsel website and the Public Utilities Commission website. As an example, here is the link to "Basics of Government Aggregation" on the OCC's website. Additionally, the International Counties Mayors and Managers Association (ICMA) has also published a fact sheet referring to the literature from LEAN Energy US- Community Choice Aggregation Fact Sheet | icma.org.

How do I know if CCAs are legitimate? I receive a lot of mailings, but I'm unsure which ones are scams, and which are not.

CCAs serve on behalf of the community's best interests. Research any offer thoroughly and check for associated terms and conditions. You can also contact your local municipal government agency for guidance on community-authorized aggregation programs. Visit your state's energy regulatory authority website (for example, in Ohio, the Public Utilities Commission of Ohio, or PUCO). There, you should be able to locate details about entities authorized to compete in the retail market. Ohio is a highly competitive market with a high rate of scams. There are websites like "Apples to Apples" comparison for retail competitors, but the government aggregators' rates will be published on their respective websites. Look for the list of government aggregators on the PUCO website.

Is there a map showing where CCAs exist?



What are CCAs' contributions to the Sustainable Development Goals (SDGs)?

Community Choice Aggregations support SDGs 7, 8, 9, 11, and 13 in a variety of ways, by fostering a competitive marketplace, which helps to keep energy more affordable and therefore promotes equity among populations; supporting Renewable Energy Certificates with green products, which offsets communities' carbon footprint; driving climate action and pooling together resources, which can be advantageous in the development of strategic planning and infrastructure projects.

Is this a choice for the future of the energy market?

Economic and weather conditions have a direct impact on the cost of energy, and as these factors continuously change worldwide, CCAs serve as a key opportunity for keeping energy costs competitive. Where there is more choice, there is more competition, and where there is more competition, there is generally more cost-savings, which is why CCAs continue to develop across the country and worldwide.

Can some people be against CCAs? If so, why?

Reasons why an individual or group of individuals may be against a CCA are varied. Some are against Community Choice Aggregation because they prefer a privatized marketplace and do not want local governments to influence the energy market. Others may be against CCAs because of their own personal interests; for example, they may own shares with an investor-owned utility company.

Additionally, some people are against CCAs due to financial considerations. Althougth a CCA cannot guarantee the lowest price, the overall advantages of keeping the marketplace competitive typically outweigh a snapshot in time. Some people prefer to regularly shop in the retail market to maintain the lowest price. However, doing so can result in tricky terms and conditions that will ultimately inflate the rate one pays for their energy use.

What are some of the limitations of CCAs?

The U.S. EPA sites several challenges/limitations CCAs may face, including:

- Inability to implement a CCA program if state legislation is not conducive to establishing a program
- Must pass appropriate ordinances and navigate applicable regulations successfully in order to establish and maintain CCA program
- Administrative costs can be significant in some states (and depending on the CCA structure chosen by the local government), which can impact the CCA's ability to compete effectively with the utility companies and retail markets
- Opt-in versus opt-out provisions can be confusing, making it challenging for potential participants to understand the CCA program and its benefits. This can also reduce program participation and effectiveness
- In some cases, the utilities may give push-back, since CCAs promote competition and impact the utilities' profitability

Source : Community Choice Aggregation | US EPA

Additionally, CCAs are often limited in resources, which can make it challenging to operate in an industry heavily dominated by for-profit players. Also, regulating authorities and grid operators, such as the Federal Energy Regulatory Commission (FERC), Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs), may implement new policies and pricing structures that are beyond the CCA's control, but that could have impact on its members.

Are CCAs sustainable?

Each CCA may have varying levels of sustainability focus, depending on whether it sources energy from renewable sources. Overall, CCAs harness more renewable energy than utility companies' default option (Community Choice Aggregation | State Climate Policy Dashboard).

What are some pitfalls that need to be overcome prior to joining a CCA?

The longer a CCA has been established, the more likely it has overcome challenges and improved its efficiency. Each CCA may have different enrollment processes, such as an opt-in program or an opt-out program (although most CCAs prioritize the opt-out structure). If you live in a community that offers CCA, check the program details for enrollment information and make informed decisions.

When a state is deregulated, does it mean that it has CCA?

Just because a state is deregulated does not mean it has active CCA Programs in place. The state has to first enable community aggregation. For questions on your community's energy programming, contact your local government agency.

Are community choice aggregation, community power, government aggregation, and municipal aggregation the same thing?

Each of these terms refer to the same general concept of aggregating energy through a buy-in-bulk approach. However, there may be differences in their governing structures, operational structures and their community engagement practices.

Can savings be guaranteed?

Savings cannot be guaranteed as aggregation rate may not always be lower than the utility rates. The goal of the aggregation is to deliver savings over a long period of time and the life of the community choice program against the utility provider or the IOUs. In short, savings cannot be guaranteed due to the volatility of the energy market.

Are rates fixed?

Rates change every six months in some cases, every season in others, and while some offer fixed pricing, all depends on the supplier procurement and contract terms of the aggregator and the state requirements.

FAQS FOR CCA LAUNCH

The questions below are for communities actively working to join community aggregation. A few questions on the exploration section, which may be relevant to the FAQ about CCA launch categories, are also included here.

What are some pitfalls that need to be overcome prior to joining a CCA?

The longer a CCA has been established, the more likely it is to have overcome challenges and improved its efficiency. Each CCA may have different enrollment processes, such as opt-in or opt-out programs. If you live in a community that offers CCA, check the program details for enrollment information and make informed decisions.

How do regulations differ from traditional energy suppliers?

Regulations vary by state and country. However, in the United States, each state has a Public Utilities Commission or equivalent authority that oversees the utility markets (Public Utility Commissions (PUCs) State-by-State Guide). All CCAs must abide by state and federal regulations.

Who runs the CCA?

CCAs are typically overseen by the local government bodies participating in the program, along with the state regulating agency in which the CCA is located. Some local governments also run their CCA program with the help of a third party.

How does CCA select energy suppliers?

The detailed process by which a CCA selects its energy supplier(s) can vary, but CCAs are required to go through a competitive bidding process (eCFR :: 47 CFR 54.622 -- Competitive bidding requirements and exemptions.)

Can CCAs overcome administrative challenges to renewable energy sources?

CCAs often have relationships with industry partners specializing in renewable energy sources, leveraging these networks to benefit the members they serve. By partnering with entities specializing in renewable energy sources, CCAs can sometimes offer cost reductions to end-users for renewable products, such as solar panels, thereby making these sources accessible to a wider range of people. CCAs can also help communities garner access to resources aimed at broadening local zoning ordinances to expand possibilities for the establishment of renewable generation.

However, grid reliability and oversight are still in the domain of Regional Transmission Organizations (RTOs) and Independent Service Operators (ISOs), and state and local policies are ultimately up to governing bodies. As such, while CCAs can play a role in overcoming administrative challenges to renewable energy sources, they are not a sole solution.

Do CCAs allow communities to choose generation methods along with the provider to prioritize clean energy?

Some CCAs provide members the flexibility to choose energy generated from renewable sources, while others do not. This varies depending upon the CCA and its programming and goals.

If a community establishes a CCA program, is it mandatory for residents and local businesses to participate? Is it an opt-in or an opt-out?

CCAs can be opt-in, opt-out, or they may include both opt-in and opt-out provisions. Participation in CCAs is optional and up to the discretion of the resident or business.

What are the difficulties and challenges in establishing such a mechanism? What are the downsides to this CCA mechanism?

The U.S. EPA cites several challenges/limitations CCAs may face, including:

- Inability to implement a CCA program if state legislation is not conducive to establishing a program
- Must pass appropriate ordinances and navigate applicable regulations successfully in order to establish and maintain a CCA program
- Administrative costs can be significant in some states (and depending on the CCA structure chosen by the local government), which can impact the CCA's ability to compete effectively with the utility companies and retail markets
- Opt-in versus opt-out provisions can be confusing, making it challenging for potential participants to understand the CCA program and its benefits. This can also reduce program participation and effectiveness
- In some cases, the utilities may give push-back, since CCAs promote competition and impact the utilities' profitability

Source : Community Choice Aggregation | US EPA

Additionally, CCAs are often limited in resources, which can make it challenging to operate in an industry heavily dominated by for-profit players. Also, regulating authorities and grid operators, such as the Federal Energy Regulatory Commission (FERC), Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs), may implement new policies and pricing structures that are beyond the CCA's control, but that could have impact on its members.

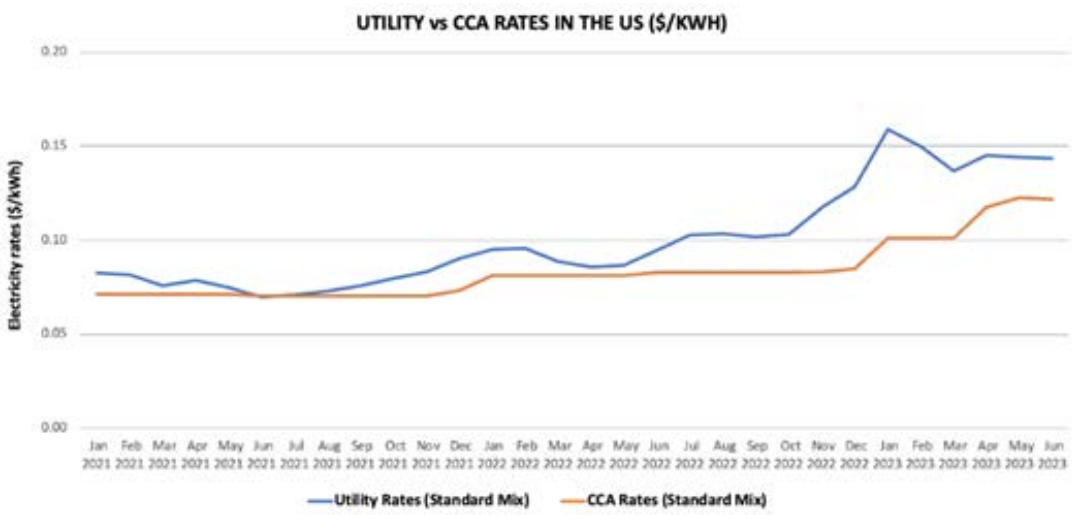
How does a CCA define a community?	When a CCA mentions the term 'community,' it typically refers to both incorporated and unincorporated towns, villages, cities, and counties that are part of the CCA's service territory.
When a state is deregulated, does it mean that it has CCA?	Just because a state is deregulated does not mean it has active CCA programs in place. The state has to first enable community aggregation. For questions on your community's energy programming, contact your local government agency.
Could you share a comparison between what a CCA offers versus a default utility?	Each CCA may offer its own pricing structure, energy supply content, term lengths, etc. By joining a CCA program, participants are able to choose a program option or offering not offered by their local utility company, which they may find more advantageous. By having a CCA, communities offer energy choice, often greener, and advanced customer protection. On the other hand, the default utility model, which operates in regulated states without the option to shop around, provides no choice for consumers and thus lacks competition.
Are there hidden fees? How can they conceal decision-making?	CCAs are required to operate transparently and therefore cannot assess hidden fees.
Who do I contact to know if my community is part of a CCA? Where do I sign up?	To find out if your community offers a CCA program, contact your local city, township, or village hall. Your community leaders should also be able to advise you as to whether the program is an opt-in or opt-out program and advise on enrollment details.

FAQS FOR CCA OPERATION

The questions below are for communities actively working to join community aggregation. A few questions on the exploration section, which may be relevant to the FAQ about CCA launch categories, are also included here.

Could you share some metrics around how satisfied participants are with these types of CCA programs?

Overall, there is satisfaction with CCA programs and their cost savings, highlighted by entities in the LEAN Energy US 2023 report.



Do CCAs save money for customers and how do they do so?

CCAs are required to operate transparently and in the best interest of the communities they serve, and the purpose of a CCA is multifaceted. CCAs are often able to render competitive energy rates for their members, while also helping communities have more control and choice for generating sources, increasing accessibility to renewable content, and making grant funding available for use at the local government level. The benefits of the CCA, including cost savings, are harnessed as a result of the power of collective purchasing.

Can you share a success story of a CCA community?

For example, a story from Ohio aggregator: NOPEC is a council of governments in Ohio and was founded in 2000. Through its grant programs, the organization provides funding of $4.5M-6M annually to promote energy efficiency while filling crucial funding gaps. These funds are not from the rate component charged to the customers but are rather a part of supplier negotiation. As part of NOPEC's Foundation, the organization has shared tremendous impact across the state. A key example was in 2024, when the NOPEC Foundation provided funding for firefighters to purchase dry suits to respond to water emergencies to alleviate funding cuts: Philanthropic utility foundation awards grant to Ohio water rescue team.

(Every aggregator can add specific stories of their success and make the response their own for this question.)

Are the communities backed up by another system in case of power shortages?

The grid in the United States is operated by Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs). It is their responsibility to ensure there is enough supply on the grid to meet daily demands. Each state's RTO or ISO helps to prevent power outages by engaging in real-time monitoring.

What are the difficulties and challenges in establishing such a mechanism? What are the downsides to this CCA mechanism?

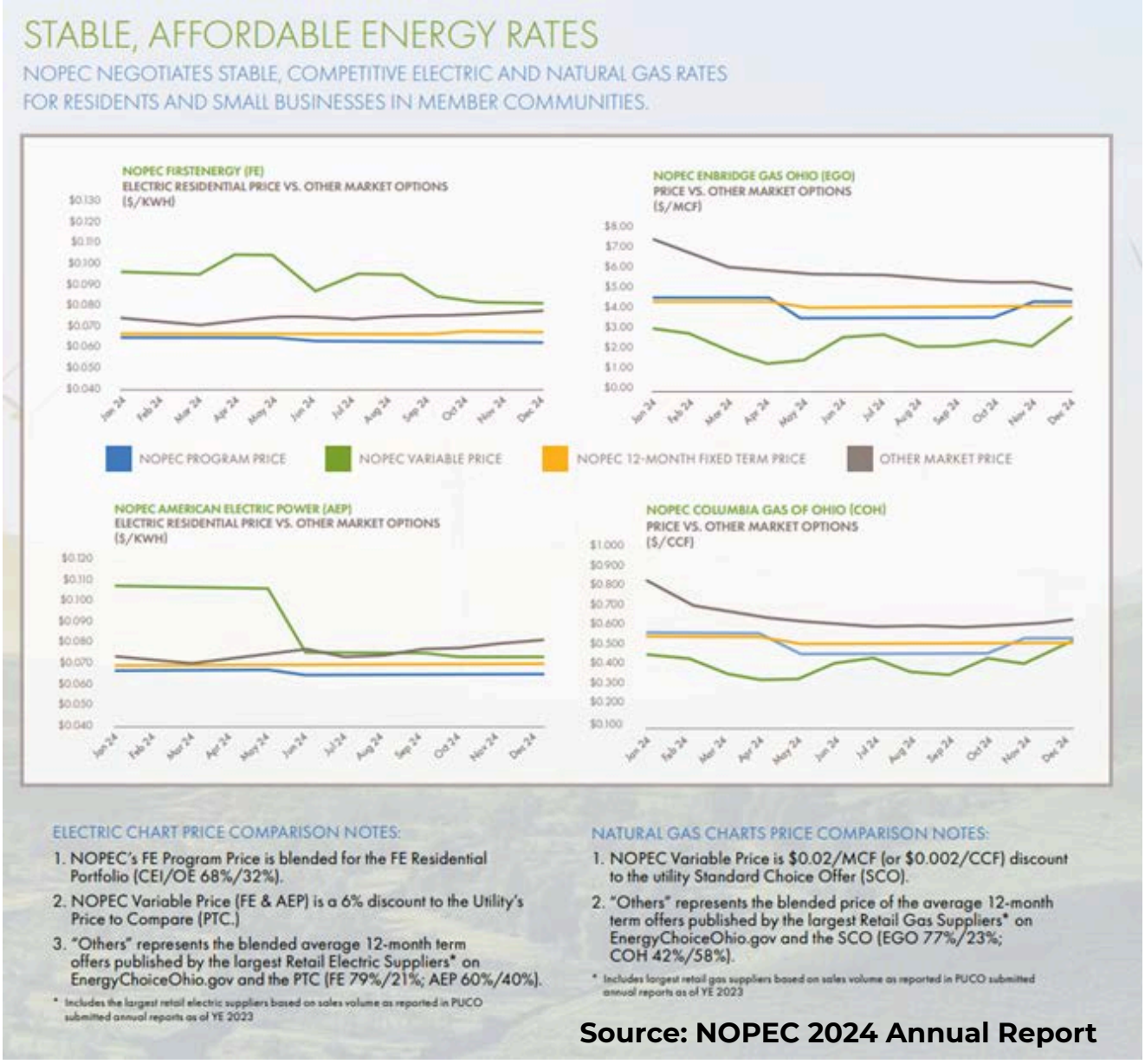
The U.S. EPA sites several challenges/limitations CCAs may face, including:

- Inability to implement a CCA program if state legislation is not conducive to establishing a program
- Must pass appropriate ordinances and navigate applicable regulations successfully in order to establish and maintain program
- Administrative costs can be significant, which can impact the CCA's ability to compete effectively with the utility companies and retail markets
- Opt-in versus opt-out provisions can be confusing, making it challenging for potential participants to understand the CCA program and its benefits. This can also reduce program participation and effectiveness
- Utilities may give excessive push-back, since CCAs promote competition and impact the utilities' profitability

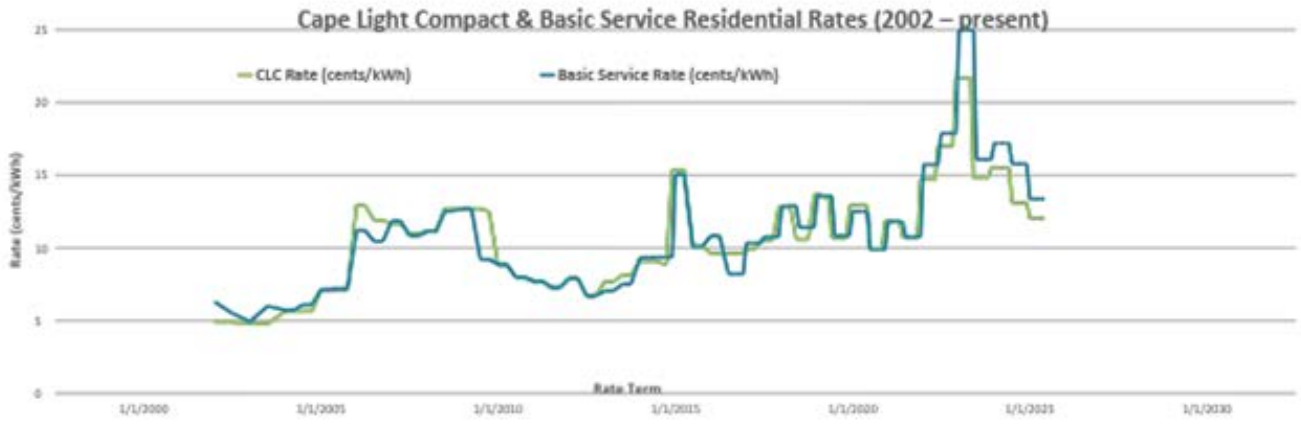
Reference: Community Choice Aggregation | US EPA

Use Cases Where Real Savings Were Demonstrated Through CCAs

Using Ohio's first CCA as an example to show electric and natural gas rate comparisons and MA's first CCA on their rate comparison over 20 years are demonstrated in the charts below.



Source: NOPEC 2024 Annual Report



Source: Supply Rates 2002-2025 CLC presentation

DELIVERABLE 02:
COMPARATIVE CASE STUDY

Prepared as a resource for existing and new CCAs

This section is compiled from a series of interviews with the founding leaders of CCA in California, a Municipal Aggregator in Massachusetts, a Government Aggregator in Ohio, and a Community Power in New Hampshire. It aims to capture the structural, political, and stakeholder dynamics, as well as the problems the states were trying to address during their creation. The journey of resilience and the lessons learned along the way will be beneficial to states pursuing aggregation and those that have already enabled it.

Communities across the ten states that have enabled CCAs find community aggregation to be a mechanism for a bottom-up approach toward local energy procurement. The legislation and regulatory requirements of each state result in models that differ in their nomenclature, organizational structure, allowable programs, special rate charges, service area expansion or non-expansion, type of competition, and more. In this section, the aggregation journey of each state will be addressed using state-specific nomenclature.

As community aggregation adheres to state-specific legislation, the governance structures referred to in the report are a direct reflection of the needs of the community, their community values, and legal constructs.

As an effort to foster peer learning among different CCAs across the country, there must be an opportunity for states to see each other as peers, which is a missing step among CCAs nationally as the mechanism is state specific with limited state to state interaction. This missing step could be addressed by this comparative study of states' aggregation journey of the first CCAs in select states, their wins, and challenges.

The consultant also recognizes that, being the state's first community aggregation program, an effort of this magnitude is never the work of a single leader or institution. It reflects the combined vision and persistence of political leaders, technical experts, policy advocates, and community champions who worked in concert to make CCA possible in their respective states. This report does not capture or fully acknowledge every leader who was instrumental in these journeys. Instead, it documents the perspectives of the founding leaders from each state, as those who were closely involved in shaping and advancing the initial aggregation efforts.

This section of the report will also highlight the problems the states were trying to solve at the time of creation, and why community aggregation was considered as the solution, leading to state legislation. There were multiple criteria that the founding community aggregators led with, such as: pricing, RPS standards, or state clean energy mandates, negotiating their source of energy generation, expanding the development of renewable energy and green jobs, accelerating clean energy deployment to ensure energy stability, consumer protection, and transparency in doing business with a community-first mindset and servant leadership as a trait.

Based on multiple interviews conducted for this section of the report, in states where aggregation is legislated, the internal champions leading the efforts are typically city managers, sustainability directors, and city officials. They are often approached as the first point of contact to explore and initiate community aggregation by elected officials or community residents. Aggregation plans are then carried forward and approved by the council members as part of the process for community participation in the aggregation. It is essential to have internal champions to forward this effort within the municipality. Sometimes it is bottom-up, where community members request aggregation as part of their climate action, but it is most common for elected officials to take the lead. Joining a CCA or establishing a municipal aggregation is a political process, and investing time early on to gain collective buy-in is crucial.

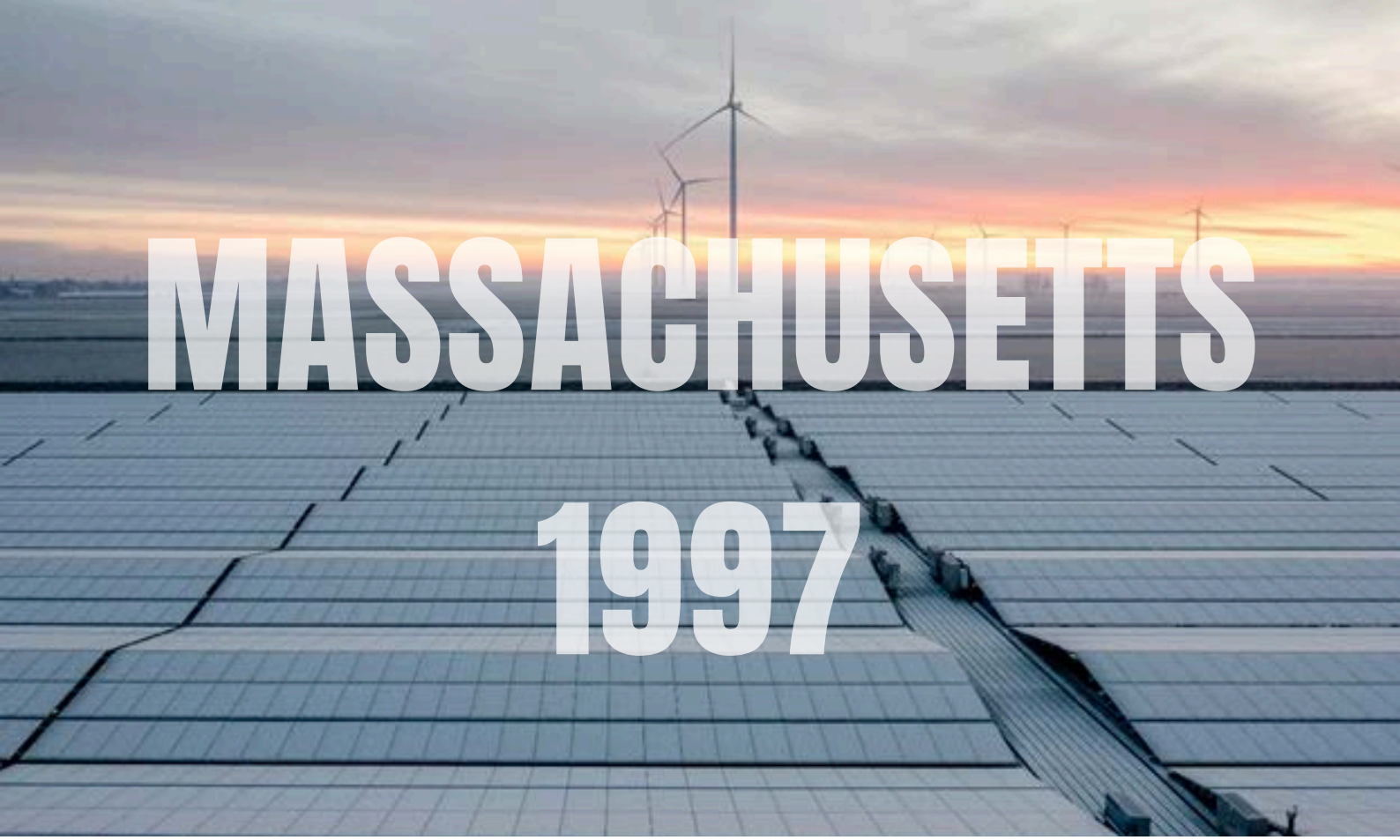
As part of the state comparison documentation, a forensic mapping tool is used to capture the journey of a change agent, the pioneers of community aggregation in every state. This tool enables documentation of how individuals respond and adapt their work in the current context, based on the process and journey of their efforts. The interview captures the actual story, with barriers and enablers presented side by side, in contrast to the usual documentation of the official story, which highlights only the milestones. The variations and patterns in how leaders work effectively in the field, their approaches, and decision pivots are captured as insights in a summary of leadership characteristics. This mapping exercise makes unconscious competencies during the journey more conscious, enabling the reader to learn the lessons practically, along with tools to navigate friction or challenges.

RATIONALE FOR STATE SELECTION

The four states selected for the state-by-state landscape analysis are Massachusetts, California, Ohio, and New Hampshire. Massachusetts was selected as it is the state where the oldest and first Municipal Aggregator was launched and is on the East Coast, California serves the most number of people served through the CCAs and is one from the West Coast, Ohio is one of the two states where the Government Aggregators are permitted by the state to serve electricity and/or natural gas and is located in the Midwest region. New Hampshire CCA is the newest and fastest-growing Community Power Aggregation, located on the East Coast.

"Forensic map is a cool graphic to capture. You are looking at a state's perspective, journey of enabling community aggregation at the state, policy, and regulatory level, and what it took to actually enable it. It is very helpful as a case study showing what it really took to establish."

Chris Castro, Chief Sustainability Officer at Climate First Bank and Former Chief of Staff and Senior Advisor, U.S. DOE



MUNICIPAL AGGREGATION OVERVIEW

The origins of the Massachusetts municipal aggregation model are tied to the broader national deregulation movement of the late 1990s. Even before municipal aggregation was legislated in the state, leaders from the Cape Cod and Martha's Vineyard regions, particularly those affiliated with Barnstable County's energy-focused committee, began mobilizing local leadership in anticipation of the opportunity for aggregation. Their vision was rooted in addressing the inequities faced by individual customers in negotiating electricity rates, contract terms, and energy choices. By forming a municipal opt-out aggregation structure, Cape Light Compact (CLC) ensured that small residential and commercial customers could access reduced rates, cleaner energy, and greater transparency (Downey, 2025). CLC is the oldest municipal aggregator in the United States, established in direct response to electric deregulation in Massachusetts, guided by the foundational Massachusetts Restructuring Act of 1997 (Barnstable County, 1996).

Nationally, in 1992, the passage of the federal Electric Policies Act mandated access for independent power suppliers to the transmission lines, thereby increasing competition at the wholesale level. Although it was certain that the large commercial and industrial sectors would greatly benefit from the wholesale market and competition, it was likely that the residents and the small businesses would be left behind due to their low consumption and the cost of servicing them.

The development of the Barnstable County Energy Management Plan in 1993-1994 was a direct result of the rising energy costs. The county began to explore the idea of collective buying power to purchase electricity (Barnstable County, 1996).

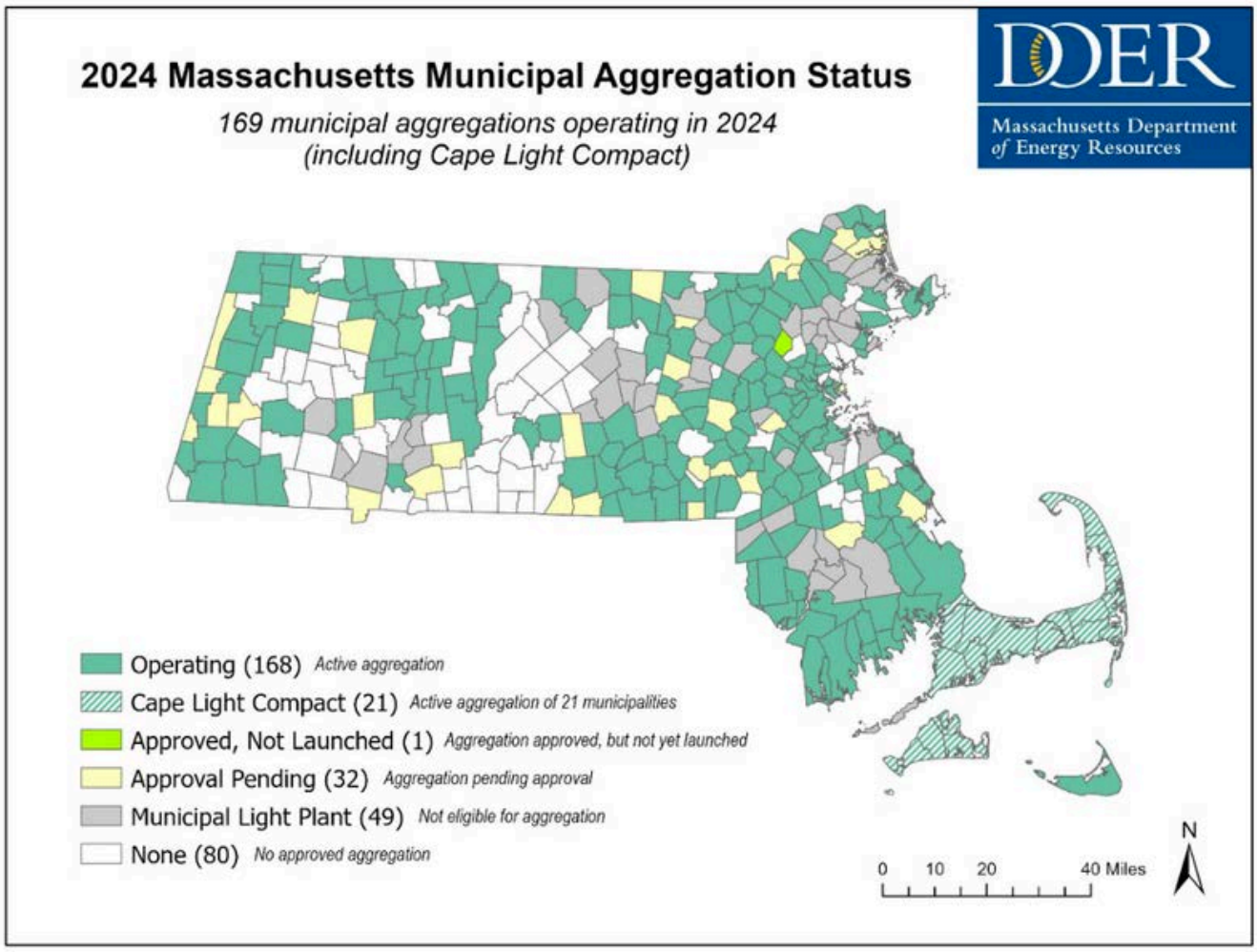
Funding from the Department of Energy (DOE) to the county in 1995 was put toward a study to explore local government partnership in the competitive electric markets. The Barnstable County Community Franchise Study concluded the following (Barnstable County, 1996):

- In order to gain the benefits of the competitive electric markets, consumers must aggregate;
- Local government had franchise powers;
- Local governments were well-positioned to serve as natural aggregators, offering non-discriminatory access to all consumers and utilizing established competitive bidding processes; and
- Energy efficiency and the goals of environmental protection could be advanced through collective local efforts

In 1995, the Massachusetts DPU issued an order on retail competition, including the use of local government franchises to aggregate consumers. Multiple rounds of hearings and legislation followed this to enable competitive retail. Barnstable County continued to hold meetings and outreach throughout 1996, and when the Massachusetts Electric Industry Restructuring Act was passed in 1997, CLC was formed with twelve Cape towns. As of 2023, CLC serves 21 towns. Valley Green Energy, established in 2023, serves three municipalities. CLC and Valley Green are the only two multi-town aggregators in the state (DOER, 2024). The governance structure of the multi-town aggregator requires a Memorandum of Understanding (MOU) or Joint Power Entity (JPE) process, in addition to filing a municipal aggregation plan.

According to a survey on municipal aggregation, also referred in MA as Community Choice Electricity (CCE) programs by the Sustainability Policy Lab at the University of Massachusetts, the three core motivating factors that drive municipalities to pursue CCE are (Sustainable Policy Lab, 2023):

- Lower electricity rates
- Increased renewable energy content; and
- Greater price stability over an extended period.



Source: (Green Energy Consumers Alliance, n.d.)

POLICY LANDSCAPE

In Massachusetts, the state selects its retail electricity provider or municipal aggregator through a legislative process in which a citizen board reviews rate options (Roy, 2024).

Many electricity consumers receive what is called “Basic Service” through one of the three investor-owned utilities (IOUs). The state refers to IOUs as Electric Distribution Companies (EDCs). The EDCs are regulated by the state Department of Public Utilities (DPU) and the state Public Utilities Commission. The EDCs deliver electricity, maintain wires, poles, and other infrastructure, provide metering to customers, and bill for usage. In Massachusetts, the EDCs offer Mass Save energy efficiency programs, which are some of the earliest energy efficiency programs in the country (DOER, 2024).

The key players in a municipal aggregation process in Massachusetts are the municipality, consultant, EDC, supplier, DPU, and DOER, who in turn serve the customers. The responsibilities of the entities are as follows (DOER, 2024):

Municipalities are primarily responsible for the formation and operation of the aggregation. They are responsible for coordinating with consultants if they engage one and are responsible for outreach and communications to residents, state agencies, and all parties noted above.

Consultants in Massachusetts are required to be licensed electricity brokers, and they often assist municipalities with the aggregation process. In 2024, almost all active municipal aggregations worked with a consultant (DOER, 2024). Every community part of the aggregation process is required to submit an annual report to the DPU, and in many cases, consultants are engaged in the process. If the aggregators serve multiple communities, one report is submitted by the municipal aggregator representing the communities served. The list of questions offered by DOER to consider as part of the consultant selection process is added to the appendix.

The Department of Energy Resources (DOER) is, by law, required to consult and review the municipal aggregation plans. The Green Communities Division of DOER is a resource for municipalities on aggregation.

The Department of Public Utilities (DPU) is the state of Massachusetts public utility commission, and it regulates municipal aggregations. All municipal aggregation plans are subject to review and approval by DPU.

Suppliers are required to be registered in the Commonwealth as competitive electricity suppliers. A contract is to be in place with the municipality to sell electricity to the municipal aggregation customers.

Electric Distribution Companies (EDCs) work with municipalities to ensure a smooth transition for customers when they launch aggregation, and they continue to provide the monthly billing for electric supply and delivery to the customers. EDCs are also responsible for the maintenance of the poles, wires, and other electricity infrastructure.

Customers receive electricity supply through aggregation.

Key Steps in the Massachusetts Municipal Aggregation Process

FORMATION	REVIEW & LAUNCH	OPERATION
Initial research and goal setting	DPU review and approval of the plan	Ongoing customer service and new enrolments
Evaluate consultant services	Energy supply procurement	Ongoing public education and outreach
Consultation with DOER	Enrollment and Opt-Out	Regulatory compliance and reporting
Municipal vote	Launch	Electricity supply contract management
Creating an Aggregation Plan		Continued energy supply procurements
		Changing or terminating an aggregation

Source: DOER, 2024

FIRST MUNICIPAL AGGREGATOR OF MA: CAPE LIGHT COMPACT (CLC)

CLC was formed as a JPE in 1997 as the first municipal aggregator in the country. CLC is the first multi-town aggregation and one of the two that operate today in Massachusetts. CLC serves 21 towns on Cape Cod, Martha's Vineyard, and Dukes County. They offer competitive energy options to consumers, energy advocacy, energy education, and are the only municipal aggregator that runs the energy efficiency program instead of the local electric utility. The governing board of CLC has a member from each community to represent each member's interest.

The Barnstable County Energy Management Plan inspired the idea of aggregating consumers and began as a collaborative effort to harness collective purchasing power. The sheer brilliance of the model led to the creation of the first Municipal Aggregation, CLC. It developed a power supply program and energy efficiency program plans and later approved by DPU, creating a catalytic effect of this effort in other states like Ohio.

MUNICIPAL AGGREGATION GROWTH AND TRAJECTORY

As of 2024, there are 169 approved municipal aggregations, and they are shown in the table below. For the first time, the customers served by municipal aggregation exceeded those served by EDCs. 49 cities and towns receive their power from municipal utilities and are not eligible for municipal aggregation. As of 2024, 64% of municipalities are either part of an aggregation or have initiated the process. As of June 2024, the data from DOER shows that there are over 1.23 million municipal aggregation customers.
(Green Energy Consumers Alliance, n.d.).

FINANCING AND FORWARDING CLEAN ENERGY PROJECTS:

Municipalities in Massachusetts use several options to advance clean energy through aggregation; they can collect funds through a rate component amount, which is a per kWh fee added to all aggregation sales collected by the municipality. The typical rate is $0.001/kWh, which translates to about $7.20 per year for a residential customer that consumes an average of 600 kWh per month (DOER, 2024). There are multiple ways the municipalities use these funds. One way is the ownership model, which takes advantage of the IRS tax credits to install solar panels on their own properties or through a Power Purchase Agreement (PPA). This approach involves using a third-party contractor to develop a solar installation on a municipal property through a lease or long-term contract.

Some municipalities also use the rate component to pursue higher contributions from the community towards the clean energy fund. The way the municipalities do this is by offering “opt-up” or “opt-down" in their rate component. For example, if customers are willing to pay 2 cents/kWh higher on an existing product, they contribute about $144 per customer per year, assuming an average monthly usage of 600 kWh. When a customer chooses “opt-down” to the minimum price of the product, they get the most affordable price, but with no contribution towards clean energy. Of the 60% of the municipal aggregations offering opt-up enrollment, only 2.63% chose this option based on the DOER data from 2022.

Additionally, municipalities can fund the creation of an energy manager position for the city through this rate component mechanism. The position could play a valuable role in advancing clean energy, where 50% of the time goes towards managing the aggregation workload. The other 50% goes towards the sustainability priorities of the municipalities (DOER, 2024). Beyond aggregation, the state has the Mass Save energy efficiency program, weatherization, EV infrastructure, and other state programs through DOER's Green Communities Division. CLC has entered into a 20-year long, 5 MW PPA as the first and only municipal aggregator in Massachusetts.

Massachusetts Snapshot	
CCA Legislation	MA Restructuring Act, Chapter 164, Section 134 (Massachusetts DPU, 2023)
Year Legislation Passed	1997 (Massachusetts DPU, 2023)
First CCA Launched	Cape Light Compact, 1998 (Cape Light Compact, 2000)
Primary Drivers	High energy prices and demand for local control (Cape Light Compact, 2000)
Focus Areas	Power supply, energy efficiency, advocacy (Cape Light Compact, 2000)
How a Community Joins	Local vote, aggregation plan, DOER review, DPU approval (Massachusetts DPU, 2023)
Municipal Aggregators (2025)	2 multi-town municipal aggregators; (Massachusetts DPU, 2023)
Communities Served	169 active municipal aggregations and part of municipal aggregation, 32 inactive (DOER, 2024)
Population Served (2025)	3 million people (estimate based on number of accounts × 2.4 average household size) (Massachusetts DPU, 2023)

Total Customer Accounts (2023)	1,230,000 accounts (DOER, 2024)
State RPS Target	40% renewables by 2030; includes Class I, II, and APS programs (Massachusetts DPU, 2023)
Annual Electricity Load	7,012,000 MWh (Massachusetts DPU, 2023)
Renewable MWh Delivered	Not aggregated; varies by CCA (Cape Light Compact, 2000)
Long-Term Contract Rule	Ranges 6–42 months; CLC is the only one to have 20-year 5 MW PPA (Cape Light Compact, 2000)
Estimated Customer Savings	~5% savings over Eversource/National Grid (Massachusetts DPU, 2023)
Governance Models in Use	JPA, single jurisdiction (Massachusetts DPU, 2023)
Regulatory Authority	Massachusetts Department of Public Utilities (Massachusetts DPU, 2023)
Default Enrollment	Opt-out (Massachusetts DPU, 2023)
Billing Model	Utility-consolidated billing (Massachusetts DPU, 2023)
Statewide Umbrella Organization	None (Massachusetts DPU, 2023)
Key Challenges	Regulatory review delays, pricing fluctuation (Massachusetts DPU, 2023)

KEY INSIGHTS OF CAPE LIGHT COMPACT (CLC)

Launch Year: Cape Light Compact was launched in 1998

Member communities and customers served: CLC serves 21 communities on the Cape and Islands, with a total of about 250,000 customers.

Governance Structure: Joint Power Entity (JPE) model, with elected officials representing the communities serving on the board.

Savings: $100M saved since launch and $358M reinvested locally towards electrification, workforce development, and local energy deployment.

Product Offering: Standard Green, CLC Local Green 50 and Local Green 100

Customer Retention: 90+ %

INTERVIEW EXCERPTS FROM
MAGGIE DOWNEY,
CEO and Founding Director of Cape Light Compact (CLC)

Can you share the origin story of your CCA? What problem were you trying to solve, and how did the formation unfold?

The enabling legislation in MA is Chapter 164, Section 134. As the legislation in MA is in a two year cycle, some of us, the energy advocates in the state knew that restructuring was coming two years prior. In 1995, the energy advocates of Barnstable County recognized an opportunity for competitive choice where community members can choose their supplier. Utilities are transitioning out of the generation business, and they are primarily going to be transmission and distribution companies. A free market would offer customer choice, leading to better rates and more cost savings.

While the idea of customer choice seemed promising, there was a real concern that individual consumers wouldn't have the negotiating power or buying clout to secure favorable terms and pricing from energy suppliers. Members of our county's energy committee saw a chance to address that specific concern by aggregating customers at the municipal level. We worked with our state senator at the time to ensure the legislation included an opt-out provision for municipal aggregation, meaning communities join aggregation by default, unless individual customers chose to opt out, once the plan was approved by their town meeting or city council through a vote.

MA for many years had systems benefit charge for energy efficiency dating back to the 1970's. A group of individuals who were forwarding the municipal aggregation at that time wanted to make sure that the funds paid in by the rate payers from the Cape and Martha's Vineyard was reinvested into the community as opposed to going into the electric distribution company/IOUs. These were the driving forces to get started, and it was a response to what happened legislatively at the state level towards deregulation.

It's important to note that, because there is no federal law governing municipal aggregation, each state has its own enabling legislation and regulatory structure. While California modeled its CCA legislation after Massachusetts, the parameters and implementation vary significantly across states.

What were some of the initial roadblocks or key enablers?

One of the major roadblocks was the seven-year transition period granted to the electric distribution companies to divest their generating assets and complete restructuring. Although the enabling legislation for municipal aggregation was passed, the market didn't truly open for municipal aggregation until 2005. During that time, 1998 - 2005, utilities artificially set low prices for their standard offer, making it difficult for aggregators to compete on price.

This market distortion, combined with overall volatility, delayed the launch of services. For nearly a decade, Cape Light Compact (CLC) remained the only active municipal aggregator in Massachusetts.

A key enabler for CLC was that its aggregation plan, approved by the Department of Public Utilities (DPU), fulfilled the state requirement. This approval allowed CLC to move forward not only with power procurement but also to administer an energy efficiency program. As a result, CLC is uniquely positioned in Massachusetts with control over the system benefits charge, enabling it to lead a comprehensive energy efficiency initiative alongside its aggregation work.

How is your CCA structured in terms of governance? Do the municipal aggregators collaborate in MA?

In Massachusetts, municipal aggregators do not collaborate for joint energy procurement. Although many are served by Eversource, utility charges vary by region. For example, Cape Light Compact (CLC) is located in the Southeast Massachusetts (SEMA) region, while Boston falls under the Northeast Massachusetts (NEMA) region. Even though both are under the same utility provider, Eversource, the rates and charges differ between regions. NEMA also has peak-hour pricing.

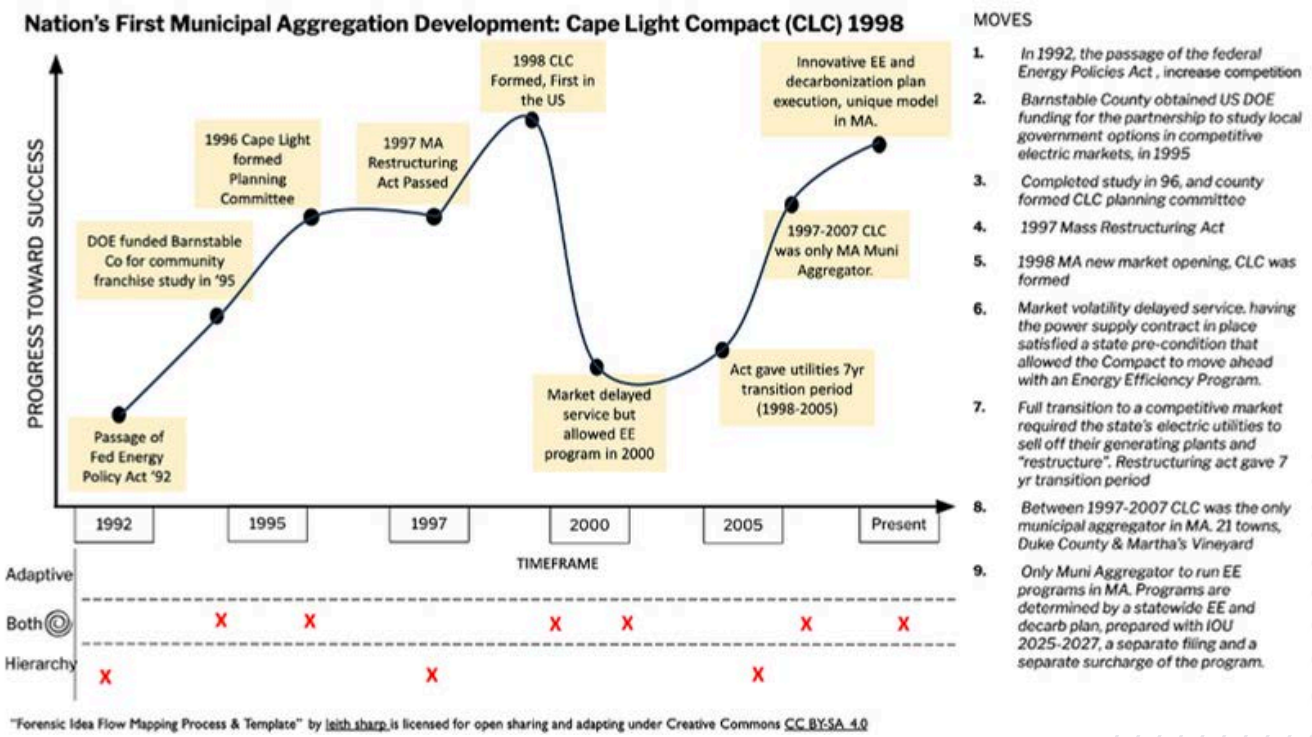
Municipal aggregators in Massachusetts are heavily regulated by the state. We are required to file a municipal aggregation plan with the Department of Public Utilities (DPU), which outlines our service territory and program details. If CLC wanted to expand its service area in the future, the DPU would require us to return to the participating towns for public meetings and legislative approvals before proceeding.

Unlike private energy suppliers, there are no termination fees, penalties, or evergreen clauses for customers who join or leave a municipal aggregation program in Massachusetts. We prioritize strong, customer-friendly contracts. Our operations are funded by a minimal charge of a mil (one-tenth of a cent), which goes to Cape Light Compact to support program administration.

What differentiates your CCA from others? Have you introduced any innovations in community benefits, local renewable development, or rate structures?

One unique feature that differentiates us from others is that, early on, we established ourselves as the administrator for the state's Mass Save energy efficiency programs in our region. This is a separate effort from being a municipal aggregator, demanding significant time invested in the regulatory process required by the DPU. CLC is the only one in the state that operates Mass Save programs for all its residents and businesses within our service area. The rate component charged by the Electric Distribution Company, Eversource, is added to the bill, collected, and then sent to CLC for administering the program.

FORENSIC MAPPING



The forensic mapping of CLC traces a journey of foresight, persistence, and community stewardship. Starting in 1995, Barnstable County leaders anticipated deregulation and, with DOE funding, studied how local governments could navigate competitive energy markets. Out of this effort, the CLC planning committee was formed in 1996, just ahead of the Massachusetts Restructuring Act of 1997. By 1998, CLC was launched with a clear vision that individual consumers lacked bargaining power, but by aggregating customers at the municipal level and embedding an opt-out provision in law, communities could secure fairer rates and reinvest local energy dollars back into the region.

The early years were challenging, as utilities had a seven-year transition period and artificially low rates to stifle competition. Yet CLC endured, securing DPU approval for its aggregation plan in 2000 and turning a regulatory requirement into an opportunity to administer local energy efficiency programs. For nearly a decade, CLC remained the only active aggregator in Massachusetts, representing 21 towns, Dukes County, and Martha's Vineyard, while leading on efficiency and decarbonization programs that set it apart statewide.

Beneath these milestones were the unconscious competencies of leadership that carried CLC forward. Leaders anticipated policy windows years before others, framed aggregation as a matter of fairness and local reinvestment and persevered through long delays without losing sight of the vision. They instinctively leveraged regulation into innovation and translated the complexity of energy policy into a trusted, community-focused narrative. These quiet but powerful competencies, foresight, framing, persistence, innovation, and translation, ensured that CLC not only survived market headwinds but also became a pioneering model of collective community power.

Common Misconceptions about MA Municipal Aggregation

Majority of the municipal aggregations in MA are modeled as a JPE, similar to CLC and there are several of them in MA. Interestingly, while 2024 marked the year in which a larger number of people were served through municipal aggregation in MA; there are only two JPE modeled multi-town aggregators in the state. While there are 140+ municipal aggregators where towns and municipalities act as one as a single jurisdiction model.

All energy efficiency program is run by the state. While it is widely true that the state runs the Mass Save energy efficiency program, and no municipal aggregator does that, there is an exception as CLC serves as the administrator of the Mass Save energy efficiency program for the towns and cities they serve.

Select Insights for Emerging CCAs from Massachussets Leaders:

A unified city council or municipal leadership is critical when establishing or joining a municipal aggregation program. If the council is divided at the outset, the municipality may still pass a resolution to proceed, but such divisions often result in higher customer opt-out rates.

Lack of consensus can create long-term challenges, especially during election cycles, when opposing council members may seek to overturn or undermine the aggregation program.

INNOVATION SPOTLIGHT: ENERGY EFFICIENCY PROGRAM OF CLC

Through the Mass Save program, CLC is phasing out fossil fuel rebates and expanding incentives for electrification, encouraging customers to adopt high-efficiency heat pumps, electric appliances, and weatherization upgrades. In 2025, it also launched Energy Coaching, offering residents one-on-one support to navigate assessments, rebates, and financing, making the clean energy transition easier and more accessible.

To address cost barriers, CLC has paired customer support with innovative financing. Its Solar Loan Program, backed by $4.9 million from the Department of Agriculture, quickly allocated all first-year funds to help Barnstable and Dukes County homeowners install solar Photovoltaic systems, with small businesses eligible in 2026. Alongside this, the Energy Saver Home Loan Program provides financing and technical assistance for a broad range of decarbonization measures from HVAC upgrades and electric appliances to health and safety repairs. Together, these initiatives demonstrate how aggregation can deliver practical, equitable solutions that accelerate Massachusetts's climate goals.

CLC has entered into a 20-year long, 5 MW PPA as the first and only municipal aggregator in Massachusetts.

OHIO GOVERNMENT AGGREGATION OVERVIEW

Before 1999, the eight investor-owned utilities (IOUs) powered over 90% of the Ohio's energy demands. The four major IOUs were Duke Energy, First Energy, Dayton Power and Light/AES Ohio, and AEP Ohio until the energy market was restructured in 1999, with the passing of Senate Bill 3 (SB3). In 1999, Ohio became the second state in the U.S. to enact community aggregation legislation as part of the state's broader electric and natural gas market deregulation. The community aggregation mechanism is referred to in Ohio law as government aggregation, and it is unique in that Ohio is the only state formed as a Council of Governments (CoG) model.

A CoG is a regional governance structure where multiple municipalities join to address everyday needs. In the energy aggregation space, a CoG serves as a Certified Retail Electric Service (CRES) provider or certified natural gas supplier for participating jurisdictions. The CoG negotiates and procures energy on behalf of all member communities, often securing better rates, price stability, greener product choices, and more added benefits than individual municipalities could achieve independently. Unlike the California CCA's not-for-profit model, the CoG model cannot incur debt, and the customers in the Percentage of Income Payment Plan (PIPP) (or households at or below 150% of the federal poverty income guidelines) are served by the IOUs (Energy Choice Ohio, n.d.).

Beyond procurement, CoGs leverage collective resources to advance energy efficiency programs, renewable energy offerings, and regional advocacy. These efforts include lobbying the Public Utilities Commission of Ohio (PUCO) or the state legislature to support community solar power, challenge unjustified rate hikes, or strengthen consumer protections. According to PUCO, there are a few hundred Ohio communities that participate in aggregation under the CoG model, compared to the more common broker model, in which municipalities contract directly with licensed brokers to secure supply. Ohio law permits two forms of government aggregation:

- Opt-in aggregation requires each consumer to enroll after the local government passes a resolution, adopts a plan of operation, holds two public hearings, and receives PUCO certification.
- Opt-out aggregation, the more common model, automatically enrolls eligible consumers unless they choose to leave the program. Opt-out aggregation requires voter approval through a referendum, followed by the adoption of a plan of operation, and at least two public hearings. Consumers must be notified of pricing, terms and conditions, and may opt out without penalty.

In both models, aggregators must be PUCO-certified and, as third-party providers in Ohio's deregulated market, must meet licensing and operational requirements similar to those of private suppliers (Direct Energy, n.d.). Ohio aggregators need a special license to service mercantile loads; otherwise, they may only serve residents and small businesses.

POLICY LANDSCAPE

Ohio's transition to a competitive energy market was formalized with the Electric Restructuring Act of 1999, which ended the complete monopoly structure of investor-owned utilities and allowed customers to choose their suppliers (Direct Energy, n.d.). PUCO oversees supplier licensing, consumer protection rules, and certification for all government aggregation programs. Ohio's deregulated framework applies to both electricity and natural gas, making it one of the few states where aggregation is authorized for both commodities.

In the Ohio market (and a few other states), customer switching, also known as churning, is common, with customers moving between utilities, retail suppliers, and aggregation programs. Aggregators, including CoGs, operate as CRES providers and compete alongside private companies for customers. Ohio rules give government aggregators flexibility to design contract terms, select renewable energy content levels, and negotiate directly with wholesale markets. Key enabling statutes include:

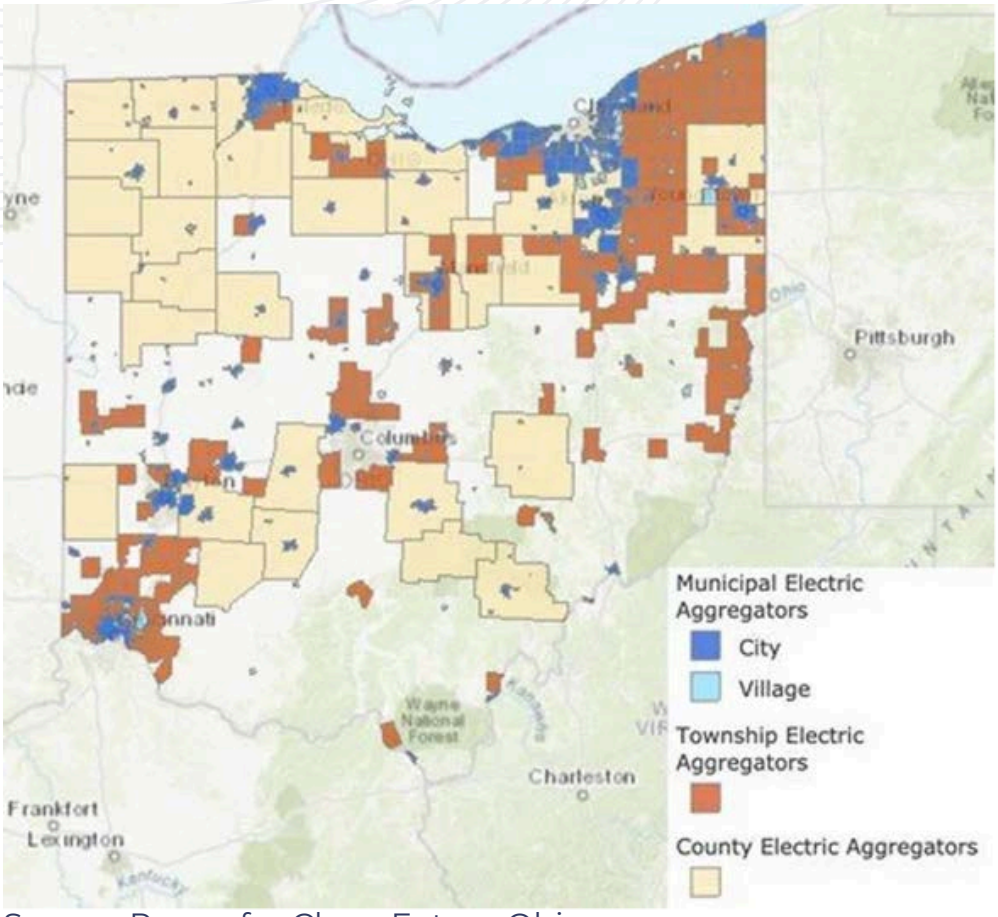
- Ohio Revised Code 4928.20, electric aggregation and 4929.26, natural gas aggregation authorize municipal aggregation programs;
- Referendum requirements for opt-out aggregation programs, ensuring voter approval before automatic enrollment;
- Mandatory opt-out opportunities (every two years for natural gas, every three years for electricity) without penalty; and
- PUCO certification standards ensure the financial and operational capacity of all suppliers (PUCO, n.d.).

The CoG model strengthens the negotiating leverage of participating communities, enabling them to secure long-term agreements, including ones for renewable energy development. However, operating in Ohio's deregulated market also exposes CCAs to wholesale price volatility, competition from private suppliers, and changes in state energy policy.

Ohio's legislative environment remains dynamic. Proposals in recent years have alternately sought to expand renewable energy opportunities for aggregators. As a result, ongoing advocacy both at PUCO and the state legislature is central to sustaining and expanding the role of government aggregation in Ohio (Direct Energy, n.d.; PUCO, n.d.). With the presence of aggregation in Ohio, the duties of IOUs can be classified as the following (Direct Energy, n.d.):

Under Ohio's deregulated market structure, the responsibilities of the investor-owned utilities (IOUs) were divided into four main roles (Direct Energy, n.d.):

- Electric Distribution Companies (EDCs) – The incumbent utilities that own and operate the transmission and distribution infrastructure, essentially, the "poles and wires" that deliver electricity. Example: AEP Ohio, FirstEnergy's Ohio Edison, Duke and Dayton Power & Light (AES Ohio).
- Retail Marketers – Licensed companies that sell electricity or natural gas directly to residential and commercial customers. There are several in Ohio and they can be found on the Energy Choice's Apples to Apples website.
- Brokers and Aggregators – Independent entities that negotiate with suppliers on behalf of a group of customers to secure favorable pricing or terms. Example: Trebel Energy, Energy Alliance.
- Government Aggregators – City, township, county, or regional governments that arrange energy supply contracts for their residents and small businesses, often through an "opt-out" program. Example: NOPEC, SOPEC, MVCC.



Source: Power for Clean Future Ohio

FIRST GOVERNMENT AGGREGATOR OF OHIO: NOPEC

The Northeast Ohio Public Energy Council (NOPEC) was established following the passage of Senate Bill 3 in 1999, which enabled municipal aggregation through Ohio Revised Code 4928.20 for electricity and 4929.26 for natural gas. Formed by a coalition of local governments seeking to protect consumers in the newly deregulated energy market, NOPEC began in 2000. It launched opt-out electric aggregation in 2001 and opt-out natural gas aggregation in 2002, making it the first in the country to offer natural gas. Built on the principle that communities could achieve better outcomes by joining together, NOPEC leveraged bulk energy purchasing to secure competitive rates and greater consumer choice. Today, it stands as the country's largest governmental aggregator by community count, serving 248 communities and 20 counties across Ohio. Through its opt-out enrollment model, NOPEC serves nearly one million accounts, managing approximately 550,000 electric customer accounts.

Ohio Snapshot	
CCA Legislation	Senate Bill 3 (1999), Ohio Revised Code 4928.20 (electric aggregation) and 4929.26 (natural gas aggregation) (PUCO, 2024)
Year Legislation Passed	1999 (PUCO, 2024)
First CCA Launched	Northeast Ohio Public Energy Council (NOPEC), offers Natural Gas since 2002 and Electricity since 2001 and Commercial & Industrial (C&I), 2025
Primary Drivers	Deregulation, retail competition, high rates, utility dissatisfaction (PUCO, 2024)
Focus Areas	Energy choices, affordability and local control
How a Community Joins	Ballot measure and council ordinance to authorize aggregation (PUCO, 2024)
Active CCAs (2025)	Consolidated list of aggregators unavailable
Communities Served (2023)	354 active communities (LEAN Energy US, 2023)
Population Served (2025)	46% (LEAN Energy US, 2023)
Total Customer Accounts (2023)	2.3 Million Accounts (LEAN Energy US, 2023)
State RPS Target	State has no RPS mandate past 2026, 8% RE in 2025 (PUCO, 2024)
Annual Electricity Load	8,500,000 MWh based on PUCO estimates (PUCO, 2024)

Renewable MWh Delivered	Statewide aggregated data unavailable
Long-Term Contract Rule	Aggregators select terms; no state requirement (PUCO, 2024)
Estimated Customer Savings	~4-6% average savings in residential (PUCO, 2023). Deregulated market in Ohio save $261/yr per household since 2011, data from white paper on savings (NOPEC, 2024)
Governance Models in Use	Council of Governments, municipal and vendor-led aggregation
Regulatory Authority	Public Utilities Commission of Ohio (PUCO, 2024)
Default Enrollment	Opt-out (PUCO, 2024)
Billing Model	Utility-consolidated billing (PUCO, 2024)
Statewide Umbrella Organization	None
Key Challenges	Legal uncertainty, barriers for utility-scale solar development limiting local RE, anti-aggregation lobbying (NOPEC, 2024; PUCO, 2024)

FINANCING AND FORWARDING CLEAN ENERGY PROJECTS BY NOPEC:

Over time, the organization has built a robust track record of financing and supporting clean energy and efficiency projects across its member communities. Through the NOPEC Energized Community (NEC) Grants, over 2,400 local energy efficiency and infrastructure projects have been completed since 2018. Helping communities lower energy consumption and reduce costs, NOPEC has invested over $40M since 2018 and over $60M since inception. These grants have become a cornerstone of NOPEC's direct community reinvestment.

Through innovation funds, NOPEC started a two-phased fully funded S.T.A.R. (Sustainability Technical Assistance Resources) Program. This initiative offers municipal leaders a clear roadmap to decarbonize and enhance energy efficiency by providing in-depth carbon inventories, solar-readiness site assessments, and hands-on sustainability guidance.

Property Assessed Clean Energy (PACE) financing provides low interest loans for major energy upgrades and the Savings Through Efficiency Program (STEP) offers smaller, low-interest loans up to $125,000 to businesses. In 2024, NOPEC secured $20M in federal funds to expand this program due to growing demand and impact. For example, the Crafted Meadery project in Portage County enabled the establishment of a countywide Energy Special Improvement District (ESID).

Ohio repealed RPS and will completely wind down any remaining Renewable Energy mandates by the end of 2026. In 2024, NOPEC created its first sustainability mission, committed to achieving Net Zero by 2050 and 50% RE electricity in its default offering to the communities by the end of 2026. As of June 2025, NOPEC's default product includes 25% RE mix across our 240+ communities served.

INTERVIEW EXCERPTS OF
CHUCK KEIPER,
Executive Director of NOPEC, Original Founding Member,
Former County Commissioner

Can you share the origin story of your CCA? What problem were you trying to solve, and how did the formation unfold?

In the 1990s, a number of very large family-owned companies, led by the Timken family, led a movement to deregulate electricity and natural gas. At that time, Ohio had the second-highest electricity rates in the country, second only to CA and the highest natural gas rates in the country. To give a personal example, I moved into a house in 1998, and the best rate I could get for natural gas was $17 per Mcf. For comparison, last year during winter, NOPEC sold natural gas on average for $4.50 per mcf, a quarter of the price it was then.

At that time, I was serving as a Portage County Commissioner and was asked to serve on the committee of the NEO Mayors and Managers Association, as a group was preparing to study deregulation. We spent close to two years as deregulation was unfolding. By 2000, the law passed and in the meantime, the group had studied two models for government involvement. At that time, the CA model was an opt-in governmental aggregation program. It was way before CCAs were established in CA. Under that approach, the government could place an issue on the ballot and ask residents to choose to join the program voluntarily or not. The model showed that only 6 - 7% would opt in.

Meanwhile, an East Coast model took the exact opposite approach, governmental opt-out aggregation. In this case, residents were automatically included unless they chose to leave the program, and similarly, only 6 - 7% opted out, while 94% stayed in. Seeing the much higher participation rate, the Ohio group decided to go after that model when the state moved forward with the legislation.

It was then that the NEO Mayors and Managers Association decided to form an organization and aggregate together. Following that I spent six to seven months visiting many communities. In Ohio, cities could join, villages could join, and counties could join on behalf of all the unincorporated areas in the county, which included townships. I visited every community in Portage County multiple times, 18 townships, four cities, and seven villages, to make the case for putting aggregation on the ballot and joining the governmental group.

We did not quite know what the organization would look like but Portage County residents overwhelmingly approved aggregation for both natural gas and electricity. NOPEC was incorporated in early 2000 with 95 communities from eight counties as initial members. Portage County was the only county where all of the townships joined countywide. At that time, the deregulation bill for natural gas and electricity was before the Ohio Senate. Then, the ranking minority member of the Senate Committee was Leigh Herington. I shared our group's research with the senator, a voice for local government, to come together to aggregate and be included in both of the Senate bills. Our attorney from the law firm had just hired Glenn Krassen, who helped us put the language together for the legislation. That's how governmental aggregation in Ohio came together. Leigh Harrington later became the first Executive Director of NOPEC, emphasizing the need for local governments to unite for better energy deals.

What were some of the initial roadblocks or key enablers?

The biggest roadblock was getting the aggregation language into the bill. In many states, political division killed the efforts, but in Ohio, bipartisan support and strong backing from top manufacturing companies that saw deregulation as a priority, created an opportunity. Most people paid little attention to natural gas and electricity, except for feeling the pain of high costs. Interest grew when communities learned bills could be cut in half.

The next obstacle was that of faith and imagination. How were we going to do this? While we were figuring this out, the notion of the Council of Governments was gestating. There were a number of people in the Mayors and Managers Association, specifically from Cuyahoga County, who had the idea of forming a group and aggregating together. I Found myself leading the Council of Government (CoG) legislation from the group and there were others supporting. It could have put an end to the effort as getting every community and their law directors on the same page about the structure, voting rights and fairness among large cities and small communities was extremely difficult, and ensuring smaller communities had a voice was critical.

The law was passed in January of 1999, and I tried to put gas and electric together on the ballot in May of 2000. Gas had passed, but electric did not in 2000. Later passed in 2001. The group, comprised of municipal leaders, began to meet every two weeks to form the CoG, and the original communities let us serve about 175,000 electric customers and 90,000 natural gas customers.

We worked on the bylaws and, across the country, there were no bylaws that existed where government aggregation was formed as a CoG, so we started working on it in 1999.

Today, are there any other aggregators in the CoG model, outside of Ohio?

I am not aware of others outside of Ohio. When the law was being passed, we were also lobbying for a part of the code that would allow us to come together. So, we were left with looking at the existing Ohio Revised Code to see how that would work, and it was Glenn who said let us look at CoG statute. It would allow us to work anywhere throughout Ohio and states that have borders that touch Ohio.

How did NOPEC create value add to the members beyond pricing?

At first, NOPEC only had a supply vendor. No programming. After three years, when I joined the NOPEC board, and as a program person, I pushed for programs. We launched one of the first energy efficiency lending programs for businesses, prior to Property Assessed Clean Energy (PACE). We formed NOPEC, Inc. in 2006 as an operating nonprofit that could run grants, programs, and risk-bearing initiatives without exposing member communities to liability. We hired our first Executive Director, Leigh Harrington, and he served for seven years. I joined NOPEC in 2011.

This structure allowed us to create a small grant program, energy efficiency financing, and renewable supply options. The law says the CoG cannot engage in any activities that would result in liability of any kind being brought to the original communities that make up the CoG. So, grants and lending programs were run through NOPEC, Inc. One of our early suppliers was Green Mountain Energy, which brought greener power into Ohio at a time when utilities were reluctant to bid our load.

Did NOPEC face any challenges from the utilities as the government aggregation was launched?

Absolutely. Investor-owned utilities, especially FirstEnergy, fought us from the beginning. They often refused to bid on our load or collude with other IOUs to not bid. That is also the biggest reason why we formed NOPEC, Inc. The first out of state generated power provided to Ohio people was through NOPEC from Green Mountain Energy. So, when deregulation happened, a docket was opened for PUCO for every one of the IOUs for their deregulation path, but the IOUs were hoping to wait out the survival of companies like ours that depend on them, causing us injury.

We intervened in those dockets and demanded settlements for the harm caused and First Energy was paying millions of dollars in fines then. The settlements provided NOPEC with funds which enabled us to invest in community programs.

Looking back, what measurable impact did NOPEC deliver through its creation?

Savings was a considerable impact the communities received and continue to receive. The energy costs would have been significantly higher if Ohio had not deregulated, considering the high rates consumers were paying in the late 90s. My highest gas bill in the peak winter month of 2024, was $118, but before deregulation and NOPEC, my regular gas bill in winter would be $490. Communities now have extra dollars in their pocket to improve energy efficiency and other priorities.

According to the recent whitepaper on "Competition Outperforms the Monopoly Regulation" by The CSU Energy Policy Center, the data shows that Ohio saves over $3 billion annually, translating to over $250 per household savings each year on average. In 2024, NOPEC's standard electricity rate averaged 30% less than the utility rate.

Key Insights of NOPEC:

Launch Year: NOPEC was formed in 2000 as Ohio's first Council of Governments (CoG) aggregator. In 2001, it launched electricity aggregation with Green Mountain Energy, an out-of-state supplier, and began an opt-in gas program with Shell Energy. By 2002, NOPEC transitioned to an opt-out gas program, securing much broader participation.

Member communities and customers served: NOPEC serves over 245 member communities with nearly 1M customer accounts

Governance Structure: Council of Governments (CoG), similar to Joint Power Authority (JPA) model, with elected officials representing the communities serving on the board.

Savings: Hundreds of millions saved since launch and reinvested $60M locally towards electrification, energy efficiency, and local energy deployment, leading to related green job creations.

Carbon Emission Reduction: NOPEC has distributed 9.9 million Renewable Energy Credits (RECs) since 2017.

Product Offering: Standard offering (25% RE), monthly variable, 12-month and 24-month fixed term, multiple RE options including 100% RE Green Community Choice Program (GCCP), and Preferred Partner Pricing (P3) for municipalities.

Customer Retention: Average customer churn is 3 - 4% and member community retention is 95% since inception.

INTERVIEW EXCERPTS OF
GLENN KRASSEN,
General Counsel at NOPEC, Original Founding Member

Can you share the timeline of NOPEC's formation and early contracts?

In 1999, Ohio passed electric deregulation with opt-out aggregation. NOPEC was formed in 2000, went to bid in the winter of 2001, and awarded its first contract to Green Mountain Energy, which began service in September 2001. At the time, NOPEC was unique as a Council of Governments (CoG); every other player in the state was either an individual supplier or community-level aggregator. What's notable is that no Ohio-based supplier bid on our load to put us out of business. We had to turn to an out-of-state supplier, Green Mountain Energy, making them the first to bring competitive power into Ohio. NOPEC continued with Green Mountain Energy until 2005.

SB 3 also created a five-year "market development period." As it ended, utilities argued that electric prices were about to skyrocket and pressed PUCO to intervene. PUCO accepted those claims, and from 2006 to 2008 shopping was effectively stalled. NOPEC and others challenged this environment and ultimately NOPEC secured a $27 million settlement, so did others. We returned the majority of our settlement, directly to customers as a 3% bill reduction, while $2 million was retained to launch NOPEC's first community programming.

On the gas side, the legislature approved opt-in aggregation in 2001.

What were the major roadblocks NOPEC had to face?

FirstEnergy fought deregulation from the very beginning. They brought in constitutional scholars to argue we were in violation of the Fifth Amendment, claiming aggregation was the taking of private property without compensation. The legislature caved to that pressure and created stranded cost recovery, which allowed utilities like FirstEnergy, AEP, Duke, and Dayton Power & Light to collect billions.

FirstEnergy alone was awarded $7 billion, recovered over ten years through a per-kWh rider. Unlike California, Ohio didn't require utilities to divest their generation, so FirstEnergy simply shifted those assets into FirstEnergy Solutions, which later went bankrupt.

They also threw up roadblocks at every turn. From 2006 to 2008, they claimed electric prices were going to skyrocket and convinced PUCO to halt shopping, even though the claims weren't true. Later, they used provisions in SB 221 to push through electric security plans that really served as security for the utility, not the customer. Their strategy was clear: make it as hard as possible for competition to survive.

NOPEC signed a contract with NextEra in 2009. But FirstEnergy worked aggressively to push them out and we had to end the contract with NextEra. In 2010, FirstEnergy Solutions offered NOPEC a nine-year contract while maneuvering against NextEra. By winter 2016, FirstEnergy had abruptly terminated NOPEC's contract entirely, hoping to absorb all of our communities and put us out of business. Chuck and I worked 60 days straight that winter negotiating a new contract with NextEra. It was exhausting, but we managed to save the aggregation and seamlessly re-enrolled all of our customers in January without a single service disruption.

The challenges didn't stop there. In 2022, when prices spiked because of the Russia–Ukraine war, we made the decision to return all our customers to the Standard Service Offer (SSO) because it was the best option due to the price hike. That decision triggered lawsuits, with Dynegy claiming we had no right to return customers and pushing to revoke our operating license. It was another moment where we had to fight for survival. PUCO eventually ruled we had done nothing wrong and had not violated any law. After this Ohio changed the law that aggregators could return the customers, but we cannot serve them for another 12 months. Ohio has always been a free-entry, free-exit market anyone can return to the SSO at any time without penalty. Again, this is not possible in many states.

Why did NOPEC choose a COG model?

Ohio doesn't have Joint Power Agencies (JPAs), but it does allow CoGs, which are separate political entities able to exercise the same powers as member governments, acting jointly. The difference is that JPAs can issue bonds or finance long-term debt, while CoGs cannot. Still, CoGs were the closest fit. Other entities in Ohio, like the Regional Income Tax Authority (RITA) and some school districts, already use this structure.

With 95 Northeast Ohio communities in 2000, NOPEC needed a framework that ensured fairness and transparency, balancing large and small communities alike. The CoG model provided that, and importantly, it is recognized under Ohio law as a public process. It also gave NOPEC flexibility. CoGs in Ohio can operate statewide and even serve in bordering states like West Virginia, Indiana, Michigan, Kentucky, and Pennsylvania.

What are the checks and balances for government aggregators in Ohio?

We hold a certificate of public convenience, which must be renewed every two years. That means demonstrating financial, technical, and managerial capability to PUCO. PUCO also regulates all competitive suppliers, and as a government aggregator we comply with the same rules on disclosures, fair practices, and customer protections. For example, we must send opt-out notices every three years for gas and every two years for electric, and file those notices with PUCO at least ten days in advance for review. Those requirements are part of the checks and balances that ensure the process is fair.

What innovations has NOPEC brought to Ohio?

NOPEC was the first aggregator in the state to offer multiple product options. Today we offer five: a standard product, a 100% renewable fixed-term product, fixed terms for 12 or 24 months, and a monthly variable rate tied to a 1% discount from the utility price-to-compare. This diversification gives customers choice and flexibility while preserving savings.

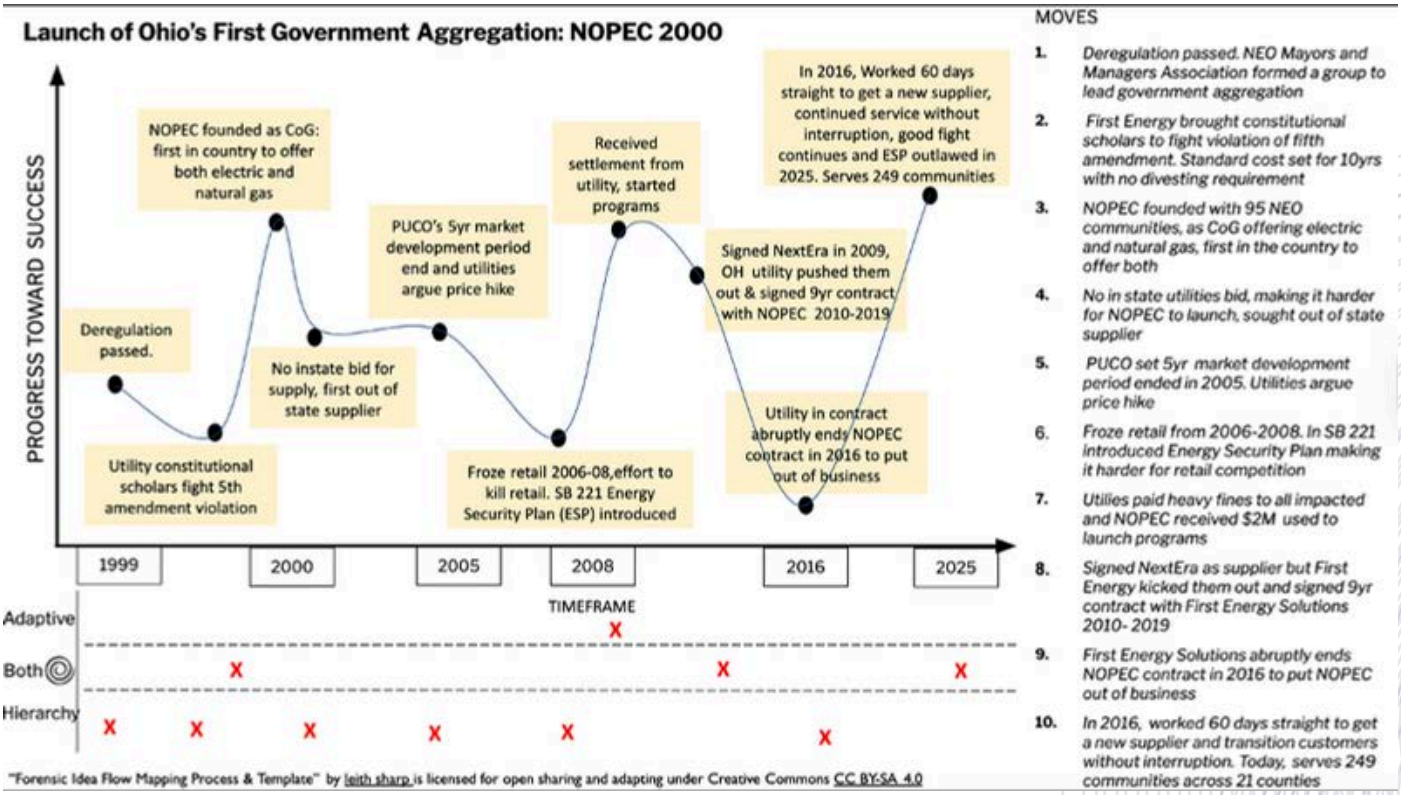
Does NOPEC work with multiple suppliers? What is the billing structure like?

We have had separate suppliers for electric and gas in the past. Ohio allows for direct utility billing, which means some utilities can bill customers directly and collect the funds, while the supplier bills the customers. We have included provisions in the contract that allow for operations in Ohio, but this would require us to address collection issues and manage working capital, adding another layer of responsibility. You will need to have a model that would allow you to borrow money for working capital.

Forensic Mapping

The forensic mapping of the change agents (interviewed above) shows a path of resilience, constant adaptation, and persistence in the face of aggressive utility resistance.

Challenges continue to emerge. Perhaps most importantly, change agents exhibited trust-building and transparency as unconscious competencies. Returning settlement money directly to customers, communicating openly about decisions such as shifting customers back to the SSO, and maintaining service continuity even during crises reinforced NOPEC's legitimacy with a 95% community retention rate. These qualities fostered strong relational capital with communities and ensured that member governments and customers remained committed even during turbulence. In effect, NOPEC's leaders created a culture of resilience - one that transformed external pressures into opportunities for deeper alignment with their mission, positioning NOPEC as a defender of fairness, customer choice, and local control, countering narratives pushed by powerful utilities. Their leadership competencies show crisis agility, persistence, framing and communicating community benefit, fairness, and building trust through communication and transparency.



Select Insights for Emerging CCAs from Ohio Leaders:

- The primary focus is to secure the best product choices at a competitive price for customers, who remain the number one priority. Achieving that is half the work of a CCA.
- Do not underestimate how much money it costs to start up a CCA. Adequate resources are essential as start-up costs are substantial.
- Opt-in models struggle with low participation; automatic enrollment with opt-out delivers meaningful scale.
- Local leadership is the key to taking ownership and building trust by visiting every community.
- In Ohio, the structure brought multiple communities together, ensuring fairness and giving small communities a seat at the table.
- IOUs are likely to resist if community aggregations are newly formed in the state, but must be prepared to litigate, negotiate, and innovate around utility obstruction.
- Bipartisan political and industrial support will unlock progress

Common Misconception about Ohio's Government Aggregation

The common misconception is that community aggregators only serve electric loads to their customers, not natural gas. NOPEC in Ohio is a dual-energy aggregator that supplies both natural gas and electricity. The only two states in the U.S. that have an opt-out natural gas option are Ohio and New York. Currently, New York Community Aggregation is exploring natural gas provision. NOPEC is the first to establish natural gas aggregation in the country since 2002. It is rare to find dual-energy choice aggregators as there are only a few.

Another common misconception is that once community aggregators are formed, they serve a fixed geography. While the Ohio model is similar to a JPA, Ohio does not have a JPA but has a CoG model and the government aggregator can serve statewide and continue to expand services to interested communities.

INNOVATION SPOTLIGHT: COMMUNITY ENGAGEMENT OF NOPEC

In partnership with the Ohio Energy Project (OEP), NOPEC engages middle school and high school students in a wind design challenge through kits that encourage hands-on STEM learning for students, and has helped over 14,000 students through sponsorship and support to OEP.

Complementing this, NOPEC's permanent wind energy exhibit at the Great Lakes Science Center provides thousands of young visitors with the opportunity to explore renewable energy concepts interactively. To ensure equitable access, NOPEC funds transportation for Title I school children, making it possible for thousands of students from underserved communities to experience these programs and spark curiosity in science and sustainability.

Also, innovation extends beyond the classroom to college career days to educate on energy-related career options. Last year, NOPEC sponsored a new Climate and Energy Innovation category at Accelerate Cleveland, the region's premier social pitch competition. This platform brought together passionate individuals from across Greater Cleveland to present groundbreaking ideas that address community challenges. By supporting everyday champions with seed funding and visibility, NOPEC is helping to cultivate a culture of innovation and collaboration that strengthens our region's future.

COMMUNITY CHOICE AGGREGATION OVERVIEW

During 2000 and 2001, California faced multiple challenges, including power shortages that led to blackouts and skyrocketing prices. PG&E, the largest utility in California, had filed for bankruptcy around the same time. Amidst the crisis, CA's San Francisco lawmaker, Carol Migden, led the state's electric restructuring and the passage of Assembly Bill 117 as a solution to address the electricity crisis (California Community Choice Association, 2022).

POLICY LANDSCAPE

Although the law was only passed in 2002 to establish CCA, interest in creating CCA had started in 1999 when energy advocates in the Bay Area began to promote the idea of CCA to accelerate the clean energy transition (California Community Choice Association, n.d.-d). In 2001-2002, the County of Marin completed its greenhouse gas inventory, which further supported the passage of the legislation. Although the legislation was passed, no municipality immediately created a CCA. A few municipalities in the Central Valley and Northern California explored the idea around the same time but were not the first to launch. Marin County led the way in California. In 2004, an initial feasibility study was published, funded by Marin County with a $30,000 grant, and was later updated in 2005. Simultaneously, the San Joaquin Valley Power Authority was the first CCA to be formed with 14 communities led by the Kings River Conservation District and the implementation plan was approved but it never launched (Marin Clean Energy, 2016).

FIRST CCA IN CALIFORNIA: MARIN CLEAN ENERGY (MCE)

Marin Clean Energy (MCE) was formed as a JPA in 2008 and was officially launched in 2010. The California Public Utilities Commission approved an implementation plan with details on electricity procurement and delivery between 2009 and 2010. Unlike the COG model, the JPA not-for-profit model enabled MCE to take on bank loans and borrow money from other sources. MCE began serving customers in 2010. A total of $3.3 million was invested by MCE between 2003 and 2010, covering studies, business plans, creation, and serving as a CCA (Marin Clean Energy, 2016).

CCA GROWTH AND TRAJECTORY

Following the creation of MCE, many CCAs were formed, and California's ability to advance CCAs was due to two significant incentives (Deng & Rotman, 2023). The first incentive was the confidence of customers in distributed energy generation as a sustainable option compared to investor-owned utilities (IOUs). Given that most IOUs own power plants, customers were not able to prioritize local generation in their procurement. The second incentive was that of the financial savings and returns as part of the CCA (Deng & Rotman, 2023). In 2011, LEAN Energy US was formed by Shawn Marshall, Founding Board Vice-Chair of MCE, as an umbrella organization to assist local governments in the expansion of CCAs. Based on the interview with the founding Director of LEAN, it was evident that in the initial years, LEAN was run by volunteers, and it was not until 2013 that LEAN was established as a non-profit.

LEAN also played a role in accelerating CCAs in California. In 2016, the California Community Choice Association (CalCCA) was formed to represent the CCAs in the state regulatory and legislative efforts as an umbrella organization with CCAs as members. Local governments interested in CCA can join as affiliate members. There has been a direct correlation between the time period of LEAN Energy US and the creation of CalCCA, as well as the increase in the number of CCAs formed in California since their inception. An all-time high of 10 CCA formations occurred in 2018. Much of this success can be directly attributed to the presence of LEAN Energy US. However, in the past decade CalCCA remain the state umbrella for the CA CCA acceleration and convening. Currently, California has 25 Community Choice Aggregators serving more than 200 communities.

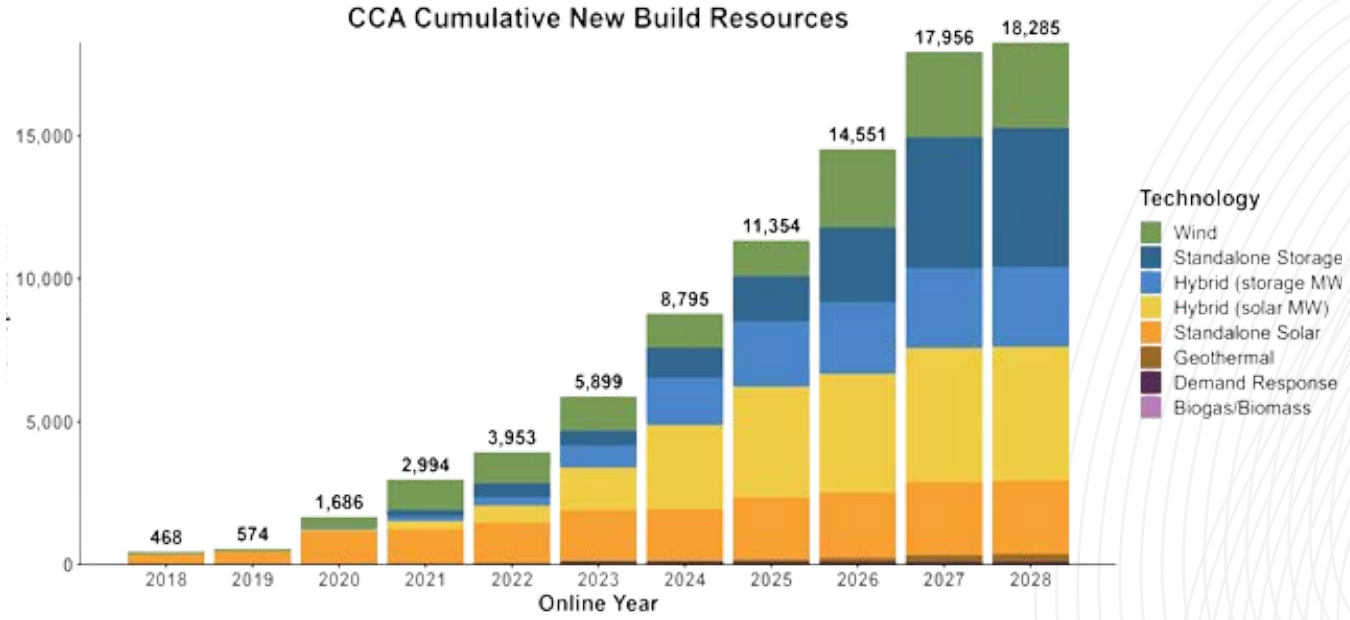

The California Community Choice Association's mission is to support the development and long-term sustainability of locally-run CCA electricity providers throughout California.
Areas of Service:
Apple Valley Choice Energy
City of Apple Valley
Ava Community Energy
Unincorporated Alameda County & 14 cities
Central Coast Community Energy
Unincorporated Monterey, San Benito, San Luis Obispo, Santa Barbara, & Santa Cruz Counties & 30 cities
Clean Energy Alliance
7 cities
Clean Power Alliance
Unincorporated Ventura & Los Angeles Counties & 33 cities
CleanPowerSF
San Francisco County
Desert Community Energy
City of Palm Springs
Energy for Palmdale's Independent Choice
City of Palmdale
King City Community Power
King City
Lancaster Energy
City of Lancaster
MCE
Unincorporated Marin, Napa, Solano, & Contra Costa Counties & 33 cities
Orange County Power Authority
3 Cities
Peninsula Clean Energy
Unincorporated San Mateo County & 21 cities
Pico Rivera Innovative Municipal Energy
City of Pico Rivera
Pioneer Community Energy
Unincorporated El Dorado & Placer Counties & 8 cities
Pomona Choice Energy
City of Pomona
Rancho Mirage Energy Authority
City of Rancho Mirage
Redwood Coast Energy Authority
Unincorporated Humboldt County and 7 Cities
San Diego Community Power
Unincorporated San Diego County and 6 cities
San Jacinto Power
City of San Jacinto
San José Clean Energy
City of San Jose
Santa Barbara Clean Energy
City of Santa Barbara
Silicon Valley Clean Energy
Unincorporated Santa Clara County & 12 cities
Sonoma Clean Power
Unincorporated Sonoma & Mendocino Counties & 11 cities
Valley Clean Energy
Unincorporated Yolo County & Cities of Winters, Woodland & Davis
CALCCA
Serving Customers
Implementation Plan Filed
Considering CCA
* Not all towns/cities within a county are served by the local CCA program. Please visit individual agency websites for more detailed service area information. To learn more about CalCCA please visit our website at cal-cca.org.

FINANCING AND FORWARDING CLEAN ENERGY PROJECTS:

One of the key distinctions that makes California's Community Choice Aggregators (CCAs) unique compared to other states is their status as Load Serving Entities (LSEs). This designation enables them to sign long-term contracts and, when necessary, take on debt capabilities that provide the financial stability developers and lenders require to move large-scale clean energy projects forward.

California CCAs advance clean energy through three interconnected approaches: financing, procurement, and programs. They not only procure power but also play a catalytic role in funding and building new solar, wind, geothermal, and energy storage projects. Collectively, they have secured over 18 gigawatts (GW) of new clean energy capacity since 2018, supported by 346 long-term power purchase agreements (PPAs) ranging from 10 to 27 years in duration. These PPAs provide the revenue certainty needed to de-risk project development, stabilize costs over decades, and attract private investment into new-build renewable infrastructure.

Several of these contracts also include multiple gigawatts of battery storage, ensuring that intermittent resources like solar and wind can deliver reliable energy during peak demand periods. The image below illustrates the annual breakdown of new clean energy build commitments by California CCAs, segmented by resource type.



Source: CalCCA, 2023

There are many programs, as well as procuring and financing mechanisms practiced by CA CCAs, including Resource Adequacy (RA) and tolling products, long-term PPAs, Feed-in Tariffs (FiT) for community scale project development, place-based investment such as MCE's brownfield solar project, Virtual Power Plants (VPP) and a 24*7 renewable energy goal by PCE that pushes boundaries in GHG reduction using sophisticated data tracking of hour by hour emissions intensity (Peninsula Clean Energy, 2023, Marin Clean Energy, n.d.)

"CCAs are not only accelerating California's clean energy transition, but they're also procuring to secure long-term reliability and reduce costs for customers."
Beth Vaughen, CEO, Cal CCA

California Snapshot	
CCA Legislation	Assembly Bill 117 (2002); Senate Bill 790 (2011 "Code of Conduct") (CalCCA, 2023)
Year Legislation Passed	2002 (CalCCA, 2023)
First CCA Launched	Marin Clean Energy (MCE), 2010 (CalCCA, 2023)
Primary Drivers	2000–01 energy crisis, rising prices, PG&E bankruptcy (CalCCA, 2023)
Focus Areas	Renewable procurement, decarbonization, cost savings (CalCCA, 2023)
How a Community Joins	Local ordinance, public hearings, CPUC notification (CPUC, 2024)
Active CCAs (2025)	25 CCAs (CalCCA, 2023)
Communities Served (2023)	218 cities and 511 unincorporated areas (CalCCA, 2023)

Population Served (2025)	~14 million customers (CalCCA, 2023)
Total Customer Accounts (2023)	6,138,465 accounts (CalCCA, 2023)
State RPS Target	60% renewables by 2030; 100% zero-carbon by 2045 (CPUC, 2024)
Annual Electricity Load	61,789,000 MWh (CalCCA, 2023)
Renewable MWh Delivered	18,000,000 MWh cumulative since 2010 (CalCCA, 2023)
Long-Term Contract Rule	≥65% of renewables must be from ≥10-year contracts (CPUC, 2024)
Estimated Customer Savings	~5% below IOU rates (CalCCA, 2023)
Governance Models in Use	JPA, single-jurisdiction, hybrid models (CalCCA, 2023)
Regulatory Authority	California Public Utilities Commission (CPUC, 2024)
Default Enrollment	Opt-out (CPUC, 2024)
Billing Model	Utility-consolidated billing (CPUC, 2024)
Statewide Umbrella Organization	CalCCA – founded 2016 (CalCCA, 2023)
Key Challenges	Utility opposition, CPUC rules, start-up capital (CalCCA, 2023; CPUC, 2024)

Key Insights of Marin Clean Energy (MCE):

Launch Year: Marin Clean Energy (MCE) was launched in 2010

Member communities and customers served: MCE serves 38 communities across four Bay Area counties, with a total of 680,000 customers.

Governance Structure: Joint Power Agency model, with elected officials representing the 38 communities on the board.

Savings: $100M saved since launch and $358M reinvested locally towards electrification, workforce development, and local energy deployment. MCE supported a total creation of 6800 green jobs.

Carbon Emission Reduction: 900,000 metric tons of carbon emissions

Product Offering: Light Green - 60% renewable energy and Deep Green - 100% renewable energy option.

Customer Retention: 89%

INTERVIEW EXCERPTS FROM DAWN WEISZ
the Founding Director of Marin Clean Energy

Can you share the origin story of your CCA and what problem you were trying to solve?

MCE was envisioned as a public agency that would empower its member communities to declare energy independence from fossil fuels and pursue an equitable and just transition toward a clean energy future. Our vision was to provide alternatives to the costly global warming impacts of fossil fuels by investing our revenues in renewable energy projects, good-paying jobs, and energy efficiency programs. This new model would deliver more than just clean power. It would offer the power of choice, the power of a transparent, publicly accountable agency, and the power of local economic reinvestment.

The passage of California's Community Choice Aggregation legislation in 2002 opened the door to turn this vision into reality. Local governments were now allowed to become the electric generation provider for their communities and on May 7, 2010, MCE started serving our first customers.

It took five years of analysis, hundreds of local public meetings, and countless planning documents to create the first community choice program in the state of California. We launched service to just under 10,000 customers, but flipping the switch to community power was only the beginning of our movement.

What were some of the initial roadblocks or key enablers?

In 2010, a PG&E-sponsored state-wide ballot initiative called Prop 16 threatened to stop CCA's just as MCE was preparing to launch. PG&E spent $45 million on the ballot initiative, but Californians ultimately rejected it at the ballot box. Regardless, the campaign led to a lot of public misconceptions about CCA's that are still lingering with some customers. In Marin County specifically, PG&E ran a phone-banking campaign to drive hundreds of customer opt-outs, tampered with MCE's early banking relationships, threatened litigation against public agencies considering partnership, mailed tens of thousands of flyers to customers with misinformation about MCE, and presented at numerous local city council meetings with misinformation and fear-based attacks on MCE's program.

Have there been continued tensions in that relationship with utilities?

Initially, the incumbent utility (PG&E) withheld customer information from MCE, delayed payments to us, and misinformed customers, regulatory bodies, and legislative representatives about how MCE works and what products we offer. Our relationship with PG&E has evolved over the years and today we work well in a number of areas, particularly around customer service and communications.

How do you manage decision-making across multiple municipalities or jurisdictions? How does your model compare to a municipally operated one (like Boston) or Public Energy Coalitions in Illinois?

As a public agency, our monthly Board meetings are open to the public. Our Board also has Executive and Technical Committees for more detailed discussions and decisions. We are a joint powers authority that operates like a special district, like other public utilities such as trash or water service.

What strategies have proven most effective in building community awareness and trust in your program?

MCE's Community Power Coalition, is a group of 40+ local community-based organizations, nonprofits, and partners that helps us better understand our community's needs and share information. MCE has a dedicated community engagement team which conducts "feet on the street" outreach in each of our communities, attends events, builds relationships with local partners. We have also established a partnership development role which helps us identify key opportunities to collaborate with trusted local partners on initiatives such as workforce development and green jobs.

How do you handle exit fees, stranded costs, or cost-sharing with utilities?

MCE customers pay a monthly fee called the Power Charge Indifference Adjustment (PCIA). This is a fee charged by PG&E to cover generation costs for power procured on behalf of customers prior to switching service to MCE. Costs for transmission and delivery are charged directly by PG&E and paid for directly by customers.

How did you manage the energy price hike during Russia-Ukraine war in 2022, when it started? Were you directly impacted?

As a Load Serving Entity, we have a responsibility to our customers to provide stable rates even if market conditions inject volatility into power markets. We do this in a number of ways. The first is having a healthy operating reserve fund that allows us to minimize rate volatility.

MCE has not raised customer rates since 2023 despite challenging power market conditions. In December 2024, Fitch upgraded MCE's credit rating to A- due in part to MCE's liquidity position. The improved credit rating allows MCE to negotiate better terms for power purchase agreements, further allowing us to manage costs for customers.

With regard to the conflict in Ukraine, there were no direct impacts to MCE's operations and service to customers. One of the many benefits of securing our energy from renewable sources is that the power is produced locally and regionally and the systemic shocks that can dramatically affect global commodity prices, like gas, do not directly impact our customers.

Does your CCA exceed the state's RPS requirements? What share of your RECs are sourced locally (e.g., Massachusetts-based)?

Met and surpassed California's clean electricity target 18 years ahead of schedule.

Can you share any notable innovations that your CCA has introduced towards community benefits, local renewable development, or rate structures?

MCE is proud to be a leader in the CCA movement in California. MCE aspires to share knowledge and best practices from our experience with other CCAs and to learn from the innovations others have developed. We have a robust CCA community in California that regularly shares knowledge through groups like CalCCA. We're proud of the path we've charted as California's first CCA, serving just a few thousand residents in Marin County, to a movement spanning 25 CCAs and serving 1 in 4 ratepayers in the state.

INTERVIEW EXCERPTS FROM
SHAWN MARSHALL
Founder of LEAN Energy US,
Founding Board Member of MCE
CEO of Peninsula Clean Energy (PCE)

Can you share the origin story of MCE as the Founding Board Member? What problem were you trying to solve, and how did the formation unfold?

When we refer to community choice aggregation, community choice energy, municipal energy aggregation, government energy aggregation, community power and the public energy council, we are talking about the same aggregation of electric power that has multiple names. The model is different in each state; CA is an outlier as CCAs are considered a load-serving entity. Essentially, we are considered a standalone utility. We are not a pass-through entity with full financial discretion and independence, a characteristic similar to the Public Energy Councils of Ohio. The law passed in 2002 was based on the Massachusetts law passed in 1997, and we modified it to fit California's requirements.

The problem California was trying to solve was to retain some version of energy choice for customers, even if it is not the full retail choice, a realization that there is a lot we could do by simply shifting how we procure power on behalf of local governments with access to the power market, while being cleaner and cheaper. CCA AB-117 was passed in 2002 to enable CCA. At the time, huge blackouts were going on, and the rates were skyrocketing. California transitioned from being a retail state to a more closed system, as it was deemed a failed experiment. However, two models survived in California: the CCA, established in 2002, and Direct Access, a limited program that allows large commercial customers to access the wholesale market. Dawn Weisz was then the county staff member tasked with the CCA's efforts.

What were some of the initial roadblocks or key enablers and the origin of LEAN Energy US?

The law to enable CCA was passed in 2002, and it took three years to write the regulation, until 2005. In just a short time since 2010, when MCE launched with a few thousand people (less than 10,000), CCA has now grown to serve 14 million people. Energy advocates were challenging the status quo, and utilities and labor were funding efforts to raise barriers to launching CCA. By 2010, MCE was launched, and I was the mayor at the time. I realized pretty quickly that there were no other organizations that existed to help local governments interested in learning about this.

We launched the Local Energy Aggregation Network (LEAN) in March 2011 as a non-profit organization trying to meet everyone's needs. We were effective in setting up the website and explaining the country's status. It was around 2014 when LEAN began supporting NY's efforts to get the program running and strengthen GEA in New Jersey, and really ramping up California CCAs from one to 25 since 2010. LEAN was involved in 10 of those start-ups in California. Between 2014 and 2020, the growth of CCAs was unprecedented.

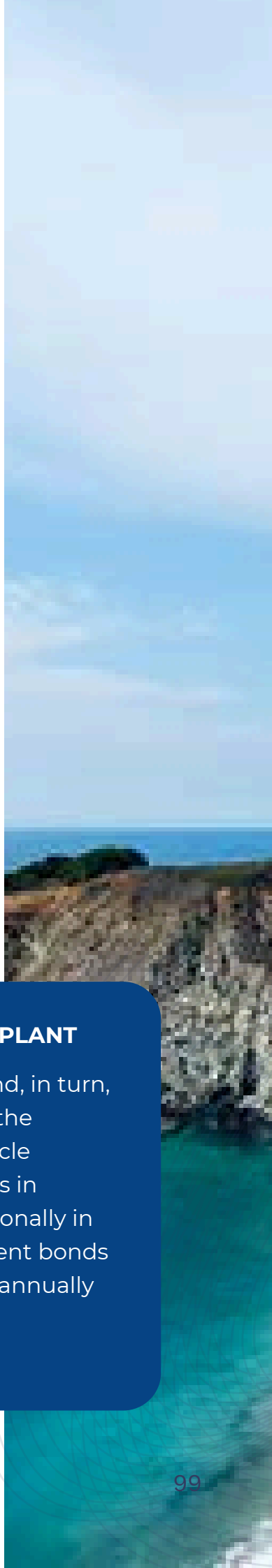
Credit must be given to the energy advocates who said CCA is something worth looking at and will make a difference on the planet. Energy advocates urged the County of Marin's Board of Supervisors to take action and move forward to enable CCA. It requires both advocates to drive demand in the local community as well as political champions who are willing to stand by their values, take the bows and arrows, and get it done. Without those two things, it would be hard to make the case. Another enabler is having proof of concept; we were saving customers money, greening the grid, and reducing GHG emissions, all of which were measurable over time. CCAs began to have their own ethos and life. When we were there early on, teaching and training, we naturally pivoted to become consultants to help governments establish the CCAs. For the next five years, LEAN did start-ups.

With all the local government priorities shifting during the COVID-19 pandemic, the EV programs took a significant hit as the CCAs were trying to bring products in from offshore, impacting renewable energy expansion.

How is California CCA structured in terms of governance?

Many states in the US had already undergone restructuring and were considered retail states. For example, Ohio is a retail state, and customers can be part of NOPEC or engage with a third-party supplier. Here in CA, CCA was a slightly closed window/partially deregulated into customer choice, and the utilities were threatened by their loss of monopoly. The utilities spent about $45M in Marin County, the initial roadblock was well funded by utilities and labor. Disrupting a monopoly utility status quo. Unlike a retail state, where they are already deregulated, there is no exit fee or cost recovery fee. That was not available in CA, as it is a partially restructured state. Customers have to pay for all of the departing load, and it is a considerable roadblock. As the market conditions change, the exit fee presents a huge roadblock.

For a new plan to be formed, they have to submit an implementation plan to the CPUC. Now, there is a 12-month hold, so the IOU has time to plan and organize, and then customers are enrolled over 60 days. Load forecasting is typically performed by CCAs themselves, either in-house or through an external entity. There is a lot of state compliance that CCAs must adhere to. Overhead for CCAs is far lower, as we have to buy the power in the wholesale market and add the exit fee.

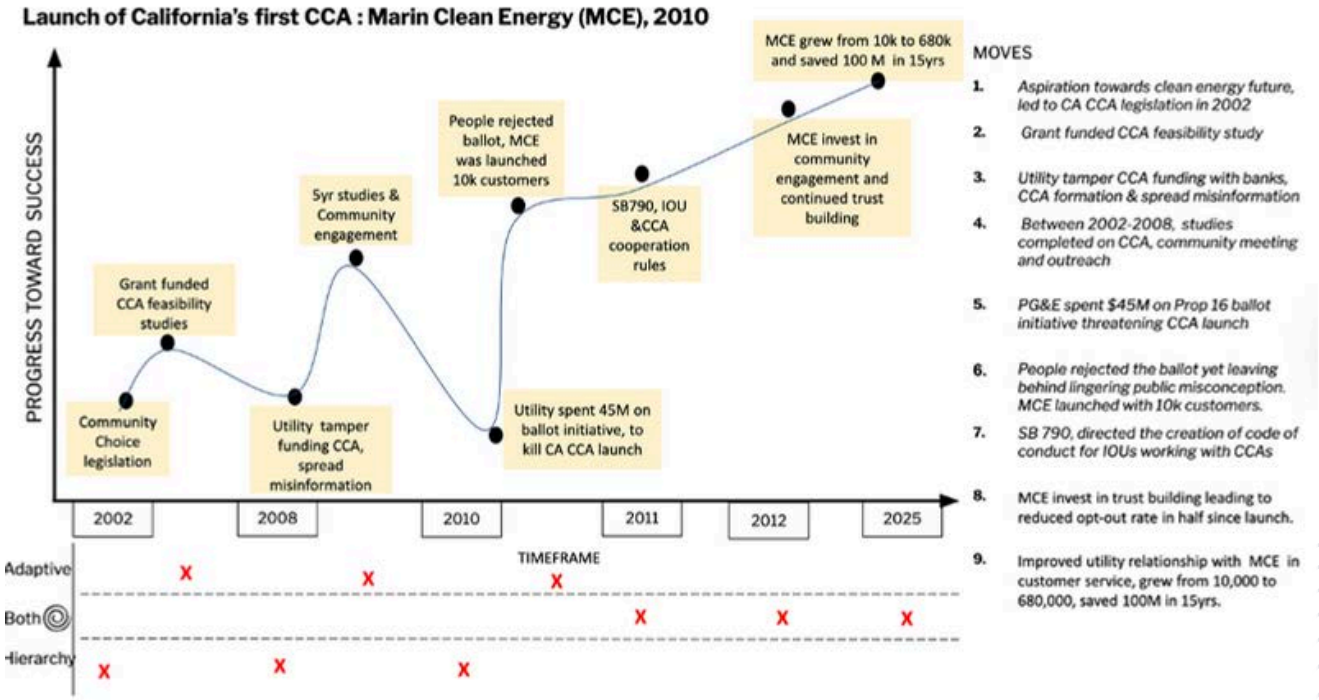


INNOVATION SPOTLIGHT: GREEN BOND, MCE VIRTUAL POWER PLANT

In 2021, to reduce CCAs' costs associated with renewable energy and, in turn, offer lower rates to consumers, five CCAs came together to create the California Community Choice Financing Authority (CCCFA). An article published by CalCCA on CCAs leveraging the power of green bonds in California featured CCCFA as the largest issuer of green bonds nationally in 2023. Since its inception, CCCFA has issued $19 billion in pre-payment bonds on behalf of California CCAs. This saves approximately $120 million annually to participating communities.
(Source: https://cal-cca.org/cca-green-bonds/)

FORENSIC MAPPING

To enable readers to better understand and appreciate the journey of how California pioneered Community Choice Aggregation, this section visually captures the journey of the state's first operational CCA, Marin Clean Energy (MCE), which was founded in 2010. Below is the forensic map of the MCE launch journey from 2002, when the CCA legislation was enacted in California. Journey captured from the brief interaction with two of the founding leaders of MCE, the founding director, Dawn Weiz, and the founding board member, Shawn Marshall, referred to as "change agents" in this forensic mapping section.



The change agents journey in this interview spans from 2008 to 2025, with some context provided by them that laid the foundation for many leaders to play a part in CCA's launch in the state. During the interview, what stood out the most were their characteristic traits of remaining calm and determined in the face of numerous challenges. Their superior ability to bring people together, sense their community needs, and reduce the risk through clear communication while fighting misconceptions spread by the utility was inspirational. The intentional, slow, consistent, and persistent trust-building process enabled them to increase the community's retention rate by nearly 10% since its launch in 2010.

The change agents' ability to cultivate strong, interdependent conditions within the core leadership team was crucial. They fostered trust, psychological safety, emotional intelligence, social influence, inclusiveness, autonomy, and collective intelligence qualities that were consistently evident throughout the conversation.

The change agents effectively aligned social conditions with organizational and external conditions, influenced by the utility against the CCA formation. Their ability to pull the team together, even during intense challenges, and to consistently find ways to address these challenges was evident. The public service background of both the leaders, coupled with their long and committed capacity within MCE for over a decade, was a massive factor in the success story. Their long-term commitment also contributed to the seamless rebuilding of the relationship with the utility and getting past the bitterness of the ballot initiative launched to kill the CCA formation.

The underlying similarity between the two founding leaders interviewed was their heightened level of sensing, de-risking, credibility, and constant innovation in their ideas, pushing the envelope, creating accountability mechanisms, also referred to as the feedback loop. In the early stages, their process had both hierarchical (top-down) and adaptive (bottom-up) approaches, while leading to the section of fair play of the two structures, once the relationship with the utility got better, post the 2011 co-operation agreement was signed. The forensic map captures the learning and journey of CCAs from the pioneers in the CCA space for the benefit of new leaders in the space, and to share lessons from the past through an illustrative image that captures the flow and friction of what worked well and what did not.

"All these leaders' journeys showcase the importance of scaling up and scaling down outreach efforts depending on ground requirements for coalition building amongst groups with diverse interests and goals. Simultaneously, it is important to make pivots as needed to ensure the coalition meets goals that will stand the test of time and grow with the industry, adopting best practices as they emerge." – **Jhelum Bagchi, Community Power Market Development, Calpine Energy Solutions**

Select Insights for Emerging CCAs from California Leaders:

- Do not wait to engage with the community in which the CCA is planning to serve; engage early and often.
- Build rate stabilization and reserves even when the state does not require it.
- The strengths of the CCAs lie in prioritizing local governance and local control; they do not outsource unless absolutely necessary.
- Build knowledge-sharing platforms. In California, there is CalCCA, which offers technical support and shared resources.
- The CCA approach in California differs from that in other states in design and implementation, and it cannot be generalized to municipalities in other states.
- CA CCAs encourage a higher degree of distributed generation, and there is a state mandate to procure 65% or more of the renewable electricity from long-term contracts of 10 years or longer; some go up to 25 years.
- Grid reliability stimulates the additionality of clean power, which is a benefit of a long-term contract, while meeting state requirements.
- For a state to enable its first CCA, it requires both the advocates to drive demand in the local community, and political champions who are willing to stand on their values, take the bows and arrows, to get it done. Without those two things, it is hard to make the case.
- Once the first CCA is established in a state, the enabler to scale up is having proof of concept of saving customers' money, greening the grid, and reducing GHG emissions, all of which are measurable. With that in place, CCAs are likely to begin to have their own ethos and life.
- California CCAs favor long-term contracts as they boost the grid, offer reliability, and stimulate additionality. Due to their diversified portfolio, CCAs are able to charge lower rates as they contract for wholesale power and then turn it into a retail product, resulting in far lower overhead than IOUs.
- Unlike OH, IL, MA and other aggregation states, CA CCAs have to pay an exit fee with no sunset date, and it makes it very hard to compete with IOU prices and keep them low at all times. So CCAs in California lead with the value addition from CCA and competitive rates but not the promise of a lower price.
- Nationally, affordability often outweighs climate ambition. It is important that CCAs maintain affordable energy options even if they don't initially lead with a low-cost promise to launch.

Common Misconceptions about California CCAs:

A common misconception is that California CCAs aim to "do it all," including owning and operating power generation infrastructure. While CCAs are designed to offer consumers more choice, competitive rates, price stability, and the ability to support local renewable generation, owning infrastructure is not a core function. Over time, it has become evident that owning and maintaining infrastructure is costly and not always beneficial. As a result, it is relatively rare for CCAs in California to own generation assets.

Another misconception arises from the national use of the term CCA in order to refer to the different forms of municipal or government aggregation across the country. Since its establishment in 2011 by California leaders, LEAN Energy US has consistently used the term "CCA" to refer to the energy procurement model through aggregation across the country. However, this broad application inadvertently overlooks state-specific terminology and models, leading to confusion in some cases. For instance, in Ohio, the state-specific term is "government aggregation," which can include aggregation of both electric and natural gas, unlike the California or MA model, which focuses primarily on electricity. This has inadvertently led to the understanding that aggregation only pertains to electricity, excluding natural gas.

It becomes essential to clarify the term "CCA" when used for California or nationwide.

COMMUNITY CHOICE AGGREGATION

Community Aggregation in New Hampshire, referred to as Community Power, was legislated in 2019. The state's first Community Power Coalition of New Hampshire (CPCNH), was formed in 2023 as a Joint Powers Agreement, a coalition to launch Community Power programs. Under CPCNH's cost-sharing agreement and member service contract, participating cities, towns, and counties can elect to receive Community Power service through the coalition.

CPCNH is currently the leading and only statewide coalition model coordinating Community Power in New Hampshire, serving 64 municipalities and four counties. Other efforts take the form of broker-supported local programs, such as in the Town of Keene, where individual municipalities contract directly with brokers to set up their own Community Power programs. These operate as standalone, single-government models rather than as part of a coalition.

POLICY LANDSCAPE

New Hampshire authorized Community Power in 2019 through RSA 53-E, enabling municipalities and counties to aggregate electricity customers. This authority was reinforced through the PUC 2200 rules and expanded by House Bill 315 in 2021, which clarified community powers despite utility opposition.

Together with proceedings like the Statewide Data Platform docket, these developments established the legal and regulatory foundation for Community Power to grow as a viable, community-driven energy option in the state (Community Power Coalition of New Hampshire, n.d.).

FOUNDATION OF COMMUNITY POWER COALITION OF NEW HAMPSHIRE

In 2019, an ad-hoc Coalition Organizing Group of municipal and county leaders began meeting to research national best practices and explore creating a shared-services public power nonprofit. The group included leadership from the City of Lebanon, Town of Hanover, City of Nashua, Cheshire County, and the Town of Harrisville.

These local leaders played a central role in shaping the coalition's design, engaging in Public Utilities Commission rulemaking, advocating in legislative hearings, and assessing best practices from community power programs in other states. Their early organizing work laid the foundation for the eventual incorporation of the Community Power Coalition of New Hampshire (CPCNH) as a Joint Powers Agency (Community Power Coalition of New Hampshire, n.d.). Technical and community advisors included Henry Herndon (interview below), Dori Drachman, Samuel Golding, Dr. Amro Farid, and Mary Day Mordecai.

COMMUNITY POWER COALITION OF NEW HAMPSHIRE GROWTH AND TRAJECTORY

This timeline snapshot of CPCNH growth and trajectory is prepared based on the interview with Henry Herndon and additional research.

- In 2019, Community Power legislation was enabled with the passage of RSA 53-E, which authorized municipalities and counties to aggregate electric customers. An ad-hoc Coalition Organizing Group of local leaders from Lebanon, Hanover, Nashua, Cheshire County, and Harrisville began meeting regularly to explore models.
- In 2020, the coalition researched multiple models, hosted a statewide Community Power Summit, and decided to pursue a statewide JPA.
- In 2021, after a legislative battle preserving Community Power, HB 315, 14 cities and towns executed the JPA.
- In 2022, CPCNH issued major RFPs for legal, technical, and market services. Service providers agreed to deferred compensation until launch, reflecting confidence in the coalition's business model.

- In April 2023, CPCNH began serving its first 10 municipalities.
- In 2024, CPCNH grew to 64 municipalities and 4 counties, representing one of the most ambitious statewide CCA coalitions in the U.S. Membership quickly expanded from 10 to 50+ towns and four counties and from 50,000 to 240,000 customers.
- In 2025 and beyond, CPCNH has long term plans to diversify suppliers, evolve into a Load Serving Entity (LSE) within ISO New England, and invest directly in new local renewable projects, starting with a planned 5MW solar facility.

FINANCING AND FORWARDING CLEAN ENERGY PROJECTS

CPCNH is a REC aggregator as it is established as a non-profit. Its ability to pay higher prices for the RECs is a great plus for participating residents. Since the program was launched in 2024, it has grown to residential, municipal and commercial PV being aggregated, reaching approximately 350 kW as program growth. CPCNH is one of the six registered aggregators in NH.

In New Hampshire, group net metering is common and CPCNH actively educates the community on the topic to forward clean energy projects. Additionally, CPCNH has partnered with Encore Renewable Energy on a 4.999 MW-AC solar project and is expected to have commercial operations in mid-2026. The project will be on 20 acres of land and is expected to generate 8.5 million kilowatt hours of clean electricity in its first year, which roughly amounts to 1,000 New Hampshire homes. The project structure is shown below (Community Power Coalition of New Hampshire, n.d.).

CCA Legislation	Senate Bill 286 (2019) RSA 53-E (CPCNH, 2024)
Year Legislation Passed	2019 (CPCNH, 2024)
First CCA Launched	Community Power Coalition of New Hampshire (CPCNH) in 2023 (CPCNH, 2024)
Primary Drivers	Demand for clean energy access, local control, and cost management (CPCNH, 2024)
Focus Areas	Community-led energy procurement and governance (CPCNH, 2024)
How a Community Joins	Municipality votes to join CPCNH or launches its own program with PUC filing (CPCNH, 2024)
Community Power Aggregators (2025)	CPCNH (55+), Standard power (10) and Colonial Power Group (1)
Communities Served	Of 234 municipalities, about 25% of the state (65+ communities)
Population Served (2025)	~500,000 residents (projected) (CPCNH, 2024)
Total Customer Accounts (2023)	~150,000 accounts projected (CPCNH, 2024)
State RPS Target	25.2% renewable energy by 2025 (CPCNH, 2024)
Annual Electricity Load	~2,000,000 MWh (projected by CPCNH and PUC filings) (CPCNH, 2024)
Renewable MWh Delivered	Not yet reported; expected to grow in 2025–2027 (CPCNH, 2024)
Long-Term Contract Rule	No contract rule for long term (CPCNH, 2024)

Estimated Customer Savings	8% estimated savings below utility (CPCNH, 2024)
Governance Models in Use	JPA, single jurisdiction- broker model
Regulatory Authority	New Hampshire Public Utilities Commission (CPCNH, 2024)
Default Enrollment	Opt-out (CPCNH, 2024)
Billing Model	Utility-consolidated billing (CPCNH, 2024)
Statewide Umbrella Organization	None
Key Challenges	PUC regulatory bottlenecks, technical planning (CPCNH, 2024)

INNOVATION SPOTLIGHT: CPCNH DISCRETIONARY ADDER FUNDS

Municipalities can choose to add a “discretionary adder” to build local project funds; this model is unique to New Hampshire. A town can apply a tenth of a cent or half a cent (e.g., $0.001/kWh), whatever they like, in addition to our minimum rate to build their discretionary fund. We have many towns that are applying an adder to capitalize and apply towards their local energy projects.

INTERVIEW EXCERPTS OF
HENRY HERNDON
Acting General Manager of CPCNH
Founding Member

Can you please share your background and the origin story of Community Power?

I started my career in energy through my master's in science degree, focusing my research on the New Hampshire Public Utilities Commission and its regulatory proceedings related to distributed energy resources. As a qualitative sociological policy researcher, spending two years observing and analyzing the Commission's net metering and grid modernization dockets, the focus was on how policymaking processes can create both adversarial and collaborative dynamics among stakeholders.

During this time, I became familiar with the small but influential community of industry stakeholders in New Hampshire - nonprofit advocates, trade associations, and lobbyists - while serving as a technical assistant to municipal governments and local energy committees. In that role, I supported towns in securing grant funding for solar and energy efficiency projects, networking, and learning how to issue solicitations for local energy initiatives. I also helped run statewide conferences that brought together municipal leaders, industry representatives, and state officials.

Through that work, I built a strong network of municipal contacts. When New Hampshire's Community Power Aggregation law was updated and became available in 2019, I was able to bring those networks together. By 2020, I had formed a working group of four municipal and county stakeholders, Hanover, Lebanon, Nashua, and Cheshire County, that became the core organizing group exploring Community Power models.

2022 was the year of comprehensive request for proposal for services and credit support. We did a big RFP to hire all the power agency functions, wholesale energy portfolio risk management, [who] would run our advanced analytics, how to hedge, when to hedge, buy power in the ISO markets, who would be our retail data management, billing and customer services, contact center, do the data transaction with the utilities for customer billing, enrollment, drops of usage, data exchange behind the scene and the other services community engagement, banking. This was structured such that all these firms agreed to defer all fees until launch and power flow. You can call it deferred compensation or at-risk contracts.

This was only possible due to the understanding of structure of these agencies and documenting effectively our technical ability and credit worthiness. Calpine deferred all fees until launch and power flow. We launched the first ten towns and cities in April of 2023, and we scaled up big time to serve 50+, from 50,000 customers to 240,000 customers.

What would you say were key enablers in the process?

There were essentially three things:

- Organizing the communities, it really engaged and organized active community leaders or having an organizer and participate with one voice effectively
- Policy expertise and capacity, including the ability to understand and engage effectively in state policy and regulation, can translate to empower and mobilizing the community.
- The third piece is technical, someone who understands the industry, the business, to empower and localize the community. Someone who knows how to write contracts and can solicit different pieces to run your power agency.

We were fortunate to have those three pieces: I focused on organizing, Clifton Below, Assistant Mayor of City of Lebanon, led policy, and Samuel Golding, President of Community Choice Partners, handled technical expertise. There are many community members who all came together but the three pieces are critical enablers.

What were the major roadblocks in the process?

Upon founding our working group in 2020, we quickly moved into the virtual world due to COVID-19, but continued to meet week after week, which allowed us to create a JPA. We secured grant funding and issued an RFP to hire a legal counsel to write our joint power agreement and bylaws. While we are doing this, we are also organizing. I had the network of municipal cities and towns, and we hosted a virtual community power summit for several dozen towns across the state. We invited the CEO of SVCE, an advanced community aggregation model, and he gave a very powerful speech and an inspiring story of how they were decarbonizing the sector, doing RE and driving innovation, giving us the vision of what a gold standard community aggregation can accomplish. As we had been doing this community organizing and education, we had something to rally around, which is the monopoly power bill introduced in 2021.

Eversource proposed legislation that would have ended Community Power. It was a serious threat as it was a very active policy campaign where cities and towns showed up. We facilitated a collaborative work session with the bill sponsor in the house, the utilities, the brokers, and arrived at a compromise that led to preserving the community power aggregation. At that time, personally, it was a nightmare as I had quit my job at the end of 2022 to try to see this move forward, and this bill shows up. In retrospect, Eversource did us a favor by doing that, and it gave everyone in the state a chance to rally around and put their political capital and emerge successful. So, by the end of 2021 and early 2022, we had 14 cities and towns execute the JPA and set up the board of directors for the first time.

How does your model compare to other municipal aggregation models?

We looked at Cape Light Compact, MA; NOPEC, OH, and SOPEC, OH as points of reference. In New Hampshire, we chose the JPA model for what we were planning to do. It is delicate to make any conclusive statement that one model is better and must be evaluated individually to suit the context and need. The JPA model had governance, enabling a collective statewide voice and the development of statewide renewable assets. We did not want to be locked into three years of buying RECs and energy at a fixed price, as it works for some contexts, but in ours, we chose this path. It was intentionally chosen; we were very active in educating the community on the difference between the broker model and the JPA model, and here is why we are pursuing it this way.

[The] main difference between the models is the governance, are community involved in the governance of the agency, active portfolio management instead of buying one contract for power and actively participating in power market and managing a portfolio of power contracts, and third difference is reserve accrual, can be in both model but certainly a possibility in JPA one and finally the other difference would be contracting for new build renewables. I am not aware of broker model community aggregation doing new build renewables.

How is CPCNH structured in terms of governance and community engagement?

We are governed by a board of directors representing 20 communities, supported by seven volunteer committees (finance, risk management, engagement, etc.). Every member town appoints a liaison. We also have a staff-led member services department responsible for education, communications, and engagement. Between governance and outreach, every community has a direct role in shaping CPCNH.

What have been the most measurable outcomes of your CCA?

The Opt-out rate of our communities is 1–2%. Since its establishment, CPCNH communities have had about $20 million in total savings, averaging about 8% lower compared to utilities. The municipalities choose their own mix of renewable energy, some at state RPS minimums, others with up to 100% renewable content, and a few chose 33% RE or 50% RE. All RECs are sourced locally from New Hampshire or New England.

Also, municipalities can choose to add a "discretionary adder" to build local project funds; this model is unique to New Hampshire. A town can apply a tenth of a cent (e.g., $0.001/kWh), whatever they like in addition to our minimum rate to build their discretionary fund. So, we have many towns that are applying an adder to capitalize and apply towards their local energy projects.

Does New Hampshire require three to six month reserve funds as part of the state CRES requirements?

There are no state requirements and a self-imposed financial reserve, with a minimum target of 60 days to 120 days as part of our risk policy. We had some hard learnings this winter on why these JPAs have dedicated risk management procedures and practices to help us protect from volatile energy markets. We had generated over $11M in community reserve funds in the first year or so. In order to maintain rate stability for the community and cover our costs, this winter we drew down a majority of the reserve fund as part of navigating the volatility and leadership transition. We are stabilizing financially and rebuilding reserves in the next 6-18 months.

Is there anything that you would do differently or recommend, knowing what you know now?

We have learned that internal technical capacity, especially someone who knows how to run a power market business, is critical. Many community aggregators rely on brokers for that expertise, and it lies outside but having it in-house strengthens control and stability. Risk management also proved more important than we realized early on.

KEY INSIGHTS OF COMMUNITY POWER COALITION OF NEW HAMPSHIRE (CPCNH):

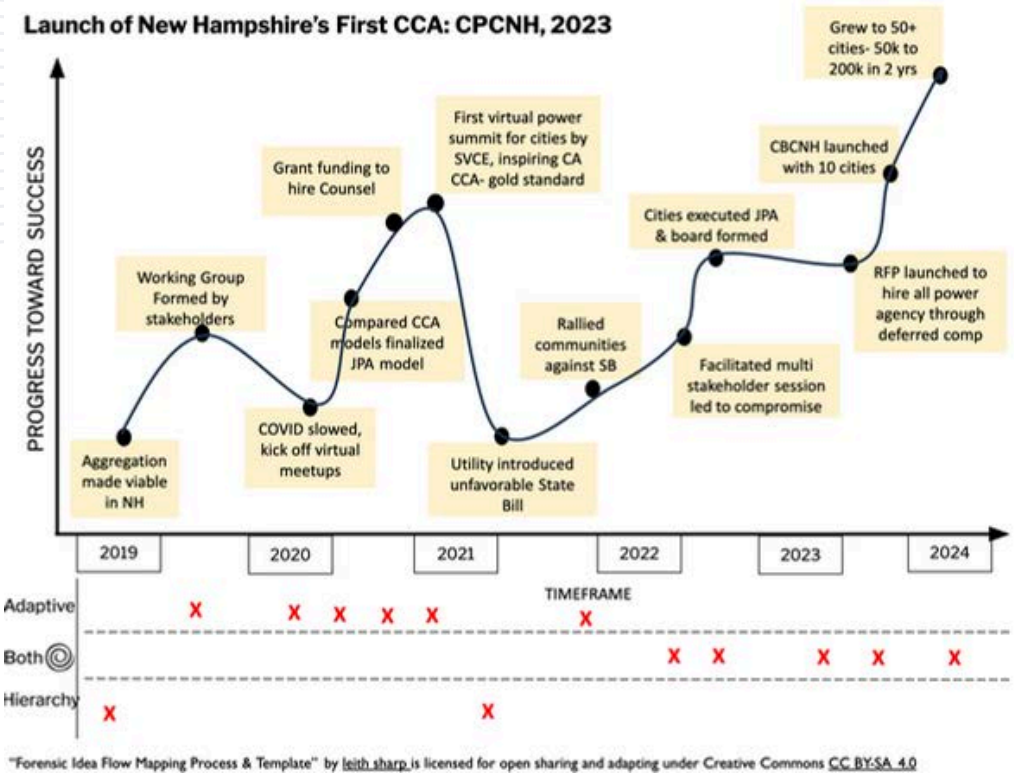
- **Launch Year:** CPCNH was launched in 2023
- **Member communities and customers served:** CPCNH serves 64 municipalities and four county members; 50 are operational, and others are in progress. Customers served are about 240,000.
- **Governance Structure:** Joint Power Entity (JPE) model, with elected officials representing the communities serving on the board.
- **Savings:** $20M saved since launch.
- **Carbon Emission Reduction:** 1,222,191 MWh of energy served by CPCNH, of which 14,676 tons of carbon reduction.
- **Product Offering:** Granite Basic (25.2% - RPS), Granite Plus 33%, Clean 50 and Clean 100
- **Customer Retention:** 98%

FORENSIC MAPPING

The forensic mapping of the Community Power Coalition of New Hampshire (CPCNH), shown below, reveals a journey shaped as much by invisible leadership competencies as by formal milestones. Beginning in 2019 with enabling legislation, the effort quickly moved into organizing a small working group of municipal stakeholders. Even when COVID disrupted in-person collaboration, the group adapted seamlessly to virtual meetings, keeping momentum alive. With the help of technical expertise, they compared governance models across states. They selected the Joint Powers Agency structure, recognizing its political capital and capacity to unify communities with one voice at the statehouse. Grants to hire legal counsel, coupled with a statewide virtual power summit that brought inspiration from California's gold-standard CCA models, deepened legitimacy and broadened awareness.

As CPCNH was preparing to launch, the effort faced a near-fatal challenge when the monopoly utility introduced a bill designed to dismantle community power. Instead of retreating, the coalition rallied municipalities across the state into a political campaign and facilitated constructive sessions with legislators, utilities, and brokers, ultimately forging a compromise that safeguarded their authority. This turning point marked CPCNH as a credible, organized, and resilient force. From there, the coalition accelerated: executing the JPA, launching with 10 communities in 2023, and scaling to more than 50 by 2024, growing from 50,000 to 200,000 customers. Even amid severe winters and volatile energy markets, CPCNH generated revenue, built reserves, and demonstrated financial resilience.

Beneath these visible moves were the unconscious competencies of leadership that enabled success. Leaders intuitively sensed timing — when to pause, when to act, and when to push for compromise. They consistently framed the coalition not as a technical project but as a unified community voice, inspiring alignment across diverse towns. They translated the complexity of policy and regulation into accessible strategies, empowering communities to act. They normalized risk-taking, adopting innovative at-risk contracts that signaled confidence and trust to partners. Most importantly, they built relationships rooted in trust and collaboration, cultivating a shared commitment that carried the coalition through uncertainty. Seen through this lens, the CPCNH journey is not only a technical or policy achievement but also a testament to adaptive leadership. This coalition thrives because of the deeply human, often unconscious, competencies of its leaders, in addition to their subject matter expertise.



MOVES

1. *Community aggregation was made viable in New Hampshire -2019*
2. *Formed working group of four municipal and county stakeholders*
3. *COVID paused working group meet ups, restarted virtually (2020)*
4. *Hired tech expert to examine governance models. Finalized JPA model for its political capital and for benefit of unified community voice.*
5. *Grant received to hire Counsel*
6. *First virtual power summit for cities held invited SVCE, inspiring CEO of CA CCA, a great model*
7. *When ready to kick off CCA, Eversource brought a bill that would have killed efforts - 2021*
8. *Rallied communities around political campaign, cities and towns showed up to reform state legislature*
9. *Facilitated collaborative work session with bill sponsor, utilities, brokers, came to compromise.*
10. *Cities and towns executed JPA and board was created -2022*
11. *Technical RFP launched to hire all power agency function, by way of at risk contract/deferred compensation*
12. *CPCNH launched with 10 cities – 2023*
13. *Launched with 10 cities grew to 50+*

Select Insights for Emerging CCAs from New Hampshire Leaders:

- Build broad-based community organizing capacity early.
- Combine policy knowledge with grassroots engagement to empower local voices.
- Invest in technical capacity in-house rather than outsourcing entirely to brokers.
- Expect and prepare for utility pushback, which can also galvanize momentum.
- Risk management procedures and reserve funds are critical for volatility.
- Governance that keeps municipalities at the center of engagement and decision making, strengthens legitimacy and long-term alignment.

"Leadership journey across the four states showcase the importance of scaling up and scaling down outreach efforts depending on ground requirements for coalition building amongst groups with diverse interests and goals. Simultaneously, it is important to make pivots as needed to ensure the coalition meets goals that will stand the test of time and grow with the industry, adopting best practices as they emerge." – **Jhelum Bagchi, Community Power Market Development, Calpine Energy Solutions**

EXCERPTS FROM THE INTERVIEW WITH THE FIELD EXPERTS

INTERVIEW EXCERPTS FROM
DR. PAUL FENN
CCA Pioneer
Founder of Local Power

The conversation with Paul ranged from the struggles in the journey of the CCA evolution in the early 1990s, attuned to state regulatory barriers, to what the future holds for CCAs. According to Paul, in ten years, CCA should provide power to over half of the US population. LEAN can help make this happen by doubling down on CCA as a no-rate-increase energy transition platform, focusing its mission and success criteria around rate stability, climate benefits, local economic development, equity benefits, and energy resilience benefits, and spreading the proven success from across states and the message that there is no better way to get there.

This excerpt presents a perspective from a leader in the space who has long been there, making compelling cases for CCA's existence, enabling CCAs and their expansion across the country. The image below, by Local Power, shows the various versions of CCAs that evolved since the initial discussion on creating the country's first CCA. According to Paul, there have been visible paradigm shifts in every version, and the progression from CLC of MA to MCE of CA represents a clear leap in climate impact, moving from buying power with RECs to building a regional renewable supply, where CCAs serve as LSEs. However, CA CCAs' wholesale market structure is not replicable in most states. Thus, according to Paul, the emerging model for the third version of CCAs intentionally considers an implementable option under diverse statutory and regulatory environments across the country.

The version, which Paul refers to as CCA 3.0, is different from the CCA 3.0 LEAN uses in its benchmarking in its latest report. Local Power's version of CCA 3.0 expands beyond electricity to address "addressable carbon" as defined by the UN, which includes power, heat, vehicles, and municipal waste (sewer and solid).

A few additional insights from Paul include:

- ·The supply of clean energy alone cannot solve climate change, but demand reduction, localization, and energy efficiency are critical. Without these, new renewable energy still requires added transmission, balancing capacity, and spinning reserves, which can inadvertently add carbon to the system.

- CCAs have a unique structural advantage. Unlike utilities with transmission debt, CCAs do not incur financial losses from reducing load (aside from potential staffing impacts). This means CCAs could lead in demand-reduction strategies without being hindered by legacy infrastructure costs.
- Financial scale vs. responsibility. CCAs function more like investment banks lightweight entities that control billions in annual revenues without balance sheet restrictions. This gives them immense potential to finance transformative projects but also calls for strong governance and a mission-driven commitment to “do the right thing.”

When asked about what lies ahead for CCAs and how he saw the evolution unfold, the response given by him is translated in the form of a table to show the potential future impact of community aggregation in the country, focusing on how differences in authority and scope shape decarbonization opportunities. It synthesizes insights from multiple expert interviews, illustrating a shift in thinking towards broader carbon reduction strategies. The table contrasts CA’s electricity-only model with Ohio’s ability to combine the offering of electricity and natural gas. The table highlights how structural differences influence market operations, heat decarbonization approaches, and the ability to act across multiple sectors in parallel, an interesting perspective to consider in decarbonization pathways.

CATEGORY	CALIFORNIA CCA LIMITATION (ELECTRIC ONLY)	OHIO CCA ADVANTAGE POTENTIAL (WITH GAS & ELECTRIC AUTHORITY)
Market structure	Wholesale	Retail
Energy types aggregated	Electric	Electric and Natural Gas
Approach to heat decarbonization	Indirect through electrification programs, depends on customer buy-in and opt-in to electrify.	Direct, can influence heating fuel choice, supply and decarbonization without depending on voluntary swaps of heating devices
Scope of emissions addressed	Primarily electricity/power sector emissions	Primarily power and heat, with a potential to address fleet and waste in the future
Potential for parallel sector decarbonization	Limited, focused on electricity	High, can decarbonize multiple sectors simultaneously. Wider level of impact as heat is one of the largest sources of emission in cold weather states.

INTERVIEW EXCERPTS FROM
DR. MATT COX
Founder and CEO of Greenlink Analytics

The conversation with Matt centered on the importance of politics, funding, and education in shaping the trajectory of Community Choice Aggregation (CCA) and the role of LEAN Energy US in strengthening the movement nationally. According to Matt, the future of CCAs will hinge less on technical questions and more on navigating the political landscape, building sustainable funding, and amplifying awareness among the public.

He emphasized that CCAs have the potential to be framed as a "people-centered" model for energy delivery combining market competitiveness with local choice and climate benefits. For this to succeed, however, national support structures such as LEAN must focus on building credibility, convening stakeholders, and advancing research that highlights the CCA model's value compared to regulated and deregulated approaches. A few additional insights from Matt include:

- The political right may accept CCAs as long as they are framed as competitive market actors rather than municipal ownership, while the political left often equates energy municipalization with government-run utilities. CCAs must carve out their own narrative to avoid being sidelined.
- LEAN can play a crucial role in commissioning and disseminating independent research comparing the CCA model with other utility structures on economic, social, and environmental grounds. Partnerships with universities and NGOs could lend credibility and broaden the evidence base.
- Educating residents that CCAs not only exist but can be leveraged to expand local choice and accelerate climate action is essential. A national platform like LEAN could amplify this message, building momentum from the ground up.

According to Matt, CCA's future success lies in combining rigorous, independent research with broader public and political understanding of what CCAs uniquely offer.

DELIVERABLE 03: STRATEGIC RECOMMENDATIONS FOR LEAN ENERGY US

Prepared for LEAN Energy US

Please note that Deliverable #3 of this report has been intentionally omitted. The omitted deliverable contains confidential information and, as such, will not be included in this public publication.

CONCLUSION

This report set out to provide LEAN Energy US with a foundational resource, a multi-state comparative analysis, and strategic recommendations to strengthen its role as the national umbrella for Community Choice Aggregation (CCA). The findings in this report reaffirm that while CCAs share core values of local control, affordability, and clean energy advancement, among others, their implementation is shaped by state-specific legislation, regulatory constructs, and market realities.

Through interviews with over 25 CCA leaders and energy experts, one thing stood out the most: there is no one universal model that exists for CCAs. What works in one state may be impossible or ineffective in another. Whether it involves customer churning in Ohio and Illinois, long-term contracts in California, or a consultant-heavy mechanism in a single jurisdiction, municipal aggregation in MA, each comes with its own set of benefits. Direct comparison without a state context risk undervaluing the legitimate, high-impact work of the CCAs.

CCA leaders are the most driven and highly capable force in the energy sector, championing community participation, clean energy acceleration, and energy democracy. Their conviction is what makes them pioneers, often leading the CCA movement in their respective state. That same conviction, however, inevitably brings strong opinions and differing perspectives.

LEAN's role as a national umbrella should not be to filter out perspectives that don't fully align but to be a place where every model and every viewpoint can be heard, debated, and learned from, without bias. To achieve this, LEAN must convene leaders not in siloed conversations but in guided collaborative sessions that foster open dialogue around its reimagined focus areas, services, and offerings. Acting as both convenor and a sponge, LEAN should capture the best ideas from across the country, broaden the conversation beyond electricity to include natural gas, transportation, and other addressable carbon sources and synthesize diverse insights into actionable strategies.

This capstone reflects that exact approach, listening deeply, comparing models across states, and identifying themes that can guide LEAN towards a greater national impact. The opportunity that lies ahead for LEAN is to unify without erasing differences, to scale without losing localism (from each state), and every community, large and small, resourced or resource-limited, can access full benefits or local energy choice and be a part of the clean energy transition.

In conclusion, if this approach is embraced fully, this path can bolster LEAN's credibility, trust, influence, and ability to accelerate equitable decarbonization and community resilience across the country.

AUTHOR'S BIO

"The power sector is complex, but my goal is to help humanize it to the best of my abilities, so that advocacy, participation, and benefits are no longer out of reach for communities."
Deepa Vedavyas, Director of Resiliency and Sustainability
Northeast Ohio Public Energy Council (NOPEC)

Deepa Vedavyas has over 20 years of cross-sector experience in architecture, urban planning, community development, academia, local government, philanthropy, and the energy sector. Deepa brings a systems-thinking approach to sustainability. She serves on multiple national advisory boards and has shared her insights globally, including at ICLEI's World Congress, the World ESG Forum, and as a delegate to COP27 and COP28.

Author's Note

When I relocated to the U.S. in 2019 after residing abroad for seven years, I joined the City of Cleveland, where I led the city's first Clean and Equitable Energy Future Plan and LEED for Cities certification. At the time, I was unaware that Cleveland had been participating in government aggregation for electricity and natural gas since 2005; certainly a missed learning and engagement opportunity around the decarbonization pathway, through the innovation and acceleration of local climate targets that government aggregation can offer. That disconnect no longer exists in my mind and, in turn, in my impact on the region.

My work at NOPEC has revealed the powerful potential of community aggregation to transform how municipalities make energy choices and define their climate futures. This realization made the project deeply personal: if I had not known about community aggregation as a first-generation immigrant, though nearly 400 communities in Ohio are served through it, it is likely that many of the community members I serve do not either. By selecting LEAN Energy US, the nation's only umbrella organization for community aggregation, as my client, I was able to contribute strategic recommendations to support their growth while also examining broader gaps in awareness, policy, and access across states.

Disclaimer

This report was prepared in my personal capacity as part of the requirements for the Master's in Sustainability at Harvard University. The views and analyses presented here are solely my own and do not represent the views of NOPEC.

Contact

deepavyas054@gmail.com

ACKNOWLEDGEMENT

This project was made possible through the generous contributions of numerous leaders and professionals who shared their time, perspectives, and expertise across the field of community energy, finance, and policy. Acknowledgements are shared in no particular order and certainly not a complete list. I am grateful for every voice of the leaders mentioned below, who have been instrumental in the completion of this project in a span of two and a half months, as part of Harvard ALM summer capstone.

My gratitude goes to Maggie Downey, Chief Administrative Officer of Cape Light Compact and Founding Director of Massachusetts' and country's first Municipal Aggregation launched in 1998, for her decades of commitment; David Musselman, Former Director of the Municipal Energy Unit at the City of Boston and Founding Director of Boston Community Choice Electricity (2019); and Larry Chretien, Executive Director of Green Energy Consumer Alliance and MiKaela McCarthy, for their leadership.

I am deeply grateful to Henry Herndon, Acting General Manager of the Community Power Coalition of New Hampshire (CPCNH), Founding Member of New Hampshire's first community power program (2023), and member of the LEAN Board of Directors. Sincere gratitude to Chuck Keiper, Chief Executive Officer of NOPEC (Northeast Ohio Public Energy Council), Former County Commissioner, and Founding Board Member of Ohio's first community choice program in 2000, and Glenn Krassen, NOPEC General Counsel and Founding member of NOPEC for their leadership in Ohio.

I am deeply grateful to Leora Vestel, Chief Experience Officer at the California Community Choice Association (CalCCA), for her pioneering work in shaping communications and customer experience in the California energy market and sharing her wealth of knowledge. Special thanks go to Dawn Weisz, Chief Executive Officer of Marin Clean Energy (MCE) and Founding Director of California's first community choice program launched in 2010, and Shawn Marshall, Chief Executive Officer of Peninsula Clean Energy, Former Mayor, Founding Director of LEAN Energy US, and Founding Board Chair of MCE. Their leadership laid the foundation for community choice aggregation in California.

I thank Sushmita Jena, Researcher III in Complex Decision Analysis at the National Renewable Energy Laboratory (NREL), Jhelum Bagchi, Community Power Market Development at Calpine Energy Solutions with a focus on New York, New Hampshire, and California, and Chris Castro, Chief Sustainability Officer at Climate First Bank and former Chief of Staff of U.S. Department of Energy Office of State and Community Energy Programs (SCEP) and Senior Advisor for Energy Efficiency & Renewable Energy (EERE), for providing research, market, and policy expertise.

ACKNOWLEDGEMENT

I also thank Julien Gattaciecca, Director of CCA Market Development and Strategic Partnerships at Calpine Energy Solutions; Dr. Paul Fenn, Founder of Local Power LLC and CCA pioneer and the creator of Green Bond model in Massachusetts, California, and New York; Mike Gordon, Treasurer of the LEAN Board of Directors and Chief Executive Officer and Co-Founder of Joule Assets in New York; Elisa Rodriguez Furey, Public Relations Officer for Power Enterprise at the San Francisco Public Utilities Commission (SFPUC); Dr. Matt Cox, Chief Executive Officer and Executive Director of Greenlink Analytics, Jon-Paul d'Aversa, Senior Energy Policy Advisor at UNPREDICTABLEcity and author of the Ohio CCA toolkit, and Joyce Parton, Executive Director of the Parton Service Group for their invaluable insights.

A special acknowledgment goes to NOPEC for generously supporting my time and helping me balance my work responsibilities, which supported the successful completion of this project. In particular, I thank Dave Jankowski, Chief Marketing and Communication Officer, and my NOPEC colleagues for their continued support and understanding in the process.

At the heart of this project, I am profoundly thankful to my client, LEAN Energy US, and especially to Cody Hooven, Chief Executive Officer of LEAN Energy US and Founding Chief Operating Officer of San Diego Community Power (SDCP) and Claire Dépit-Strömbäck, Director of Public Policy. Their trust, vision, and invaluable guidance shaped the direction of this capstone from the very beginning.

The dedication and wisdom of these individuals listed provided essential context for understanding the evolution of community choice aggregation, its challenges, and its opportunities for driving a more sustainable energy future.

Finally, my utmost gratitude to my Harvard professors, Dr. James Koehler, whose class on decarbonization of the energy sector gave me the confidence to take on this work, and to my professors in the ALM program, with special thanks to Dr. Neil Hawkins and Dr. Brad Allen for their valuable guidance throughout the pre-capstone and capstone process. I am immensely thankful to my family and friends in the capstone, ALM, and GDP program, whose encouragement, insights, and camaraderie enriched my journey and made this experience even more meaningful.

REFERENCE

REFERENCES

Agarwal, A. (2024). *Contextualizing renewable energy adoption: An examination of the role of community choice aggregation* (Doctoral dissertation, Missouri University of Science and Technology). Scholars' Mine.

California Community Choice Association. (n.d.). *Community Choice Aggregation in California*. Retrieved July 28, 2025, from https://cal-cca.org/

California Community Choice Association. (n.d.). *Model practices guide*. https://cal-cca.org/wp-content/uploads/2023/01/CalCCA-Model-Practices-Guide.pdf

California Community Choice Association. (2023). *CCAs: Mapping out a clean energy future*. https://cal-cca.org

California Community Choice Association. (2024a). *California Aggregator: Spring 2024*. https://cal-cca.org

California Community Choice Association. (2024b). *California Aggregator: Winter 2024*. https://cal-cca.org

Cape Light Compact. (2000, April). *Cape Light Compact aggregation plan*. https://www.capelightcompact.org

Canary Media. (n.d.). *Massachusetts solar heat pump battery pilot*. https://www.canarymedia.com/articles/electrification/massachusetts-solar-heat-pump-battery-pilot

Center for Climate and Energy Solutions. (n.d.). *U.S. state electricity portfolio standards*. https://www.c2es.org/document/renewable-and-alternate-energy-portfolio-standards/

Clegg, M. B. (2019). *Community choice aggregation: Technologies, institutions, and values* (Master's thesis, University of California, Santa Barbara). eScholarship Repository.

City of Mentor. (n.d.). *What is a NOPEC community?* Retrieved July 28, 2025, from https://cityofmentor.com/what-is-a-nopec-community/

City of Providence. (2023). *Community electricity aggregation program*. https://www.providenceri.gov/sustainability/community-electricity-aggregation/

Community Power Coalition of New Hampshire. (n.d.). *About CPCNH*. https://www.cpcnh.org/about

REFERENCES

Depit, C. (2023, June). Community choice aggregation: A cost-effective policy tool that accelerates competitive renewable power addition and carbon reduction at scale [White paper].

Deng, J., & Rotman, R. (2023). Does the community choice aggregation approach advance distributed generation development? A case study of municipalities in California [Case study].

Direct Energy. (n.d.). The history of electric deregulation in Ohio. Retrieved from *https://www.directenergy.com/en/learn/energy-choice/ohio-history-electric-deregulation#:~:text=But%20in%20July%201999%2C%20Ohio,deregulated%20electricity%20system%20in%20Ohio*Direct Energy

Direct Energy. (2023, December 6). The players in the Ohio electric market. Retrieved from *https://www.directenergy.com/en/learn/energy-choice/ohio-players-electric-market*

Downey, M. (n.d.). Update from the Cape Light Compact [PowerPoint slides]. Cape Light Compact / Mass Save.

Elliott, M., Gordon, P., Gromer, J., & Kelly, J. (Eds.). (n.d.). LEAN Energy US. https://www.leanenergyus.org

Energy Choice Ohio. (n.d.). What is aggregation? Retrieved from Energy Choice Ohio website: https://www.energychoice.ohio.gov/Pages/What%20is%20Aggregation.aspx

Energy Efficiency and Decarbonization Plan 2025–2027. (n.d.). https://www.capelightcompact.org/wp-content/uploads/2024/04/2025-27-Energy-Efficiency-and-Decarbonization-Plan-Draft.pdf

Farrell, J. (2020, February). Community choice energy: An alternative to electric monopolies enables communities to center people and planet. Institute for Local Self-Reliance. https://ilsr.org

Farrell, J. (2024, June). Upcharge: Hidden costs of electric utility monopoly power. Institute for Local Self-Reliance. https://ilsr.org

Faruqui, A. (2020). Factors behind the formation of community choice aggregation. The Electricity Journal, 33(10), 106878. https://doi.org/10.1016/j.tej.2020.106878

Green Energy Consumers Alliance. (2023). Municipal aggregation keeps on winning: Greener power at the lowest cost. Retrieved July 28, 2025, from https://blog.greenenergyconsumers.org/blog/municipal-aggregation-keeps-on-winning-greener-power-at-lowest-cost

REFERENCES

Illinois Commerce Commission. (n.d.). Municipal aggregation of electric load. https://www.icc.illinois.gov/electricity/reschoice/aggregation.aspx

Institute for Local Self-Reliance. (2025, February). Community power scorecard. https://ilsr.org

Lean Energy US. (n.d.-a). Home page. Retrieved from https://www.leanenergyus.org/ LEAN Energy US

Lean Energy US. (n.d.-b). Staff & leadership. Retrieved from https://www.leanenergyus.org/staff-leadership LEAN Energy US

Lean Energy US. (n.d.-c). Community choice aggregation by state. Retrieved from https://www.leanenergyus.org/cca-by-state LEAN Energy USEnvironmental Protection Agency

LEAN Energy U.S. (n.d.-d). Community Choice Aggregation in Massachusetts. Retrieved July 28, 2025, from https://www.leanenergyus.org/massachusetts

LEAN Energy U.S. (n.d.-e). Community Choice Aggregation in Ohio. Retrieved July 28, 2025, from https://www.leanenergyus.org/ohio

LEAN Energy U.S. (n.d.-f). Community Choice Energy Glossary of Terms [Glossary].
Maryland General Assembly. (2019). House Bill 961 - Electricity – Community Choice Energy. https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/hb0961

Local Power. (n.d.). Community choice aggregation: The entire story. Retrieved from https://localpower.com/CommunityChoiceAggregationEntire.html Climate Policy Dashboard

Massachusetts Department of Energy Resources. (2024, August 30). DOER municipal aggregation manual & best practices guide. https://www.mass.gov/orgs/massachusetts-department-of-energy-resources

Massachusetts Department of Public Utilities. (n.d.). Docket 12536: Municipal aggregation annual filings. Retrieved July 28, 2025, from https://eeaonline.eea.state.ma.us/dpu/fileroom/#/dockets/docket/12536

Massachusetts Department of Public Utilities. (2024, July 9). Municipal aggregation guidelines aim to streamline the application process. https://www.mass.gov/info-details/municipal-aggregation#municipal-aggregation-guidelines

Midcontinent Independent System Operator. (2021, December 14). Distributed energy resources
glossary. Retrieved from https://cdn.misoenergy.org/20211214%20DER%20Glossary513193.pdf

REFERENCES

National Renewable Energy Laboratory. (2024). NREL annual CCA program survey (2023 data). U.S. Department of Energy. https://www.nrel.gov

New Hampshire Municipal Association. (2020). Community leaders join together to build a new energy future for NH. Town and City Magazine, May/June 2020. Retrieved July 28, 2025, from https://www.nhmunicipal.org/town-city-magazine/new-hampshire-town-and-city-magazine-mayjune-2020/community-leaders-join

New Jersey Board of Public Utilities. (n.d.). Government energy aggregation. https://www.njcleanenergy.com/commercial-industrial/programs/government-energy-aggregation

New York State Energy Research and Development Authority (NYSERDA). (n.d.). Community Choice Aggregation (CCA). https://www.nyserda.ny.gov/All-Programs/Community-Choice-Aggregation

NHPR. (2024, June 3). Community power is expanding across the Upper Valley. Retrieved July 28, 2025, from https://www.nhpr.org/nh-news/2024-11-08/community-power-cornish-nh-energy-costs-upper-valley

NOPEC. (2015). 15 years of NOPEC [Report]. Northeast Ohio Public Energy Council.

NOPEC. (2024, October). Protecting our planet, thriving communities, operating with Integrity: Environmental, social, governance report—Reporting on NOPEC's ESG progress for June 2022 – June 2024. Northeast Ohio Public Energy Council. https://www.nopec.org

Ohio Public Utilities Commission. (n.d.). Government aggregation. https://puco.ohio.gov/utilities/electricity/resources/government-aggregation

Power a Clean Future Ohio. (n.d.). Community choice aggregation toolkit: A comprehensive guide on renewable energy aggregation programs for Ohio local governments. https://www.poweracleanfuture.org

Renewable Energy Markets. (2024, September 17). Equity in sustainable residential electric and multifamily housing programs [Conference presentation]. Renewable Energy Markets 2024, Denver, CO.

Rhode Island Office of Energy Resources. (2022). Community choice aggregation. https://energy.ri.gov/clean-energy/community-choice-aggregation

Sustainable Policy Lab. (2023, February). Community choice electricity programs in Massachusetts: A study of motivations, implementation, and outcomes. University of Massachusetts Amherst. https://www.mma.org/wp-content/uploads/2023/02/UMASS_cce_aggregation_final_report_3.28.23.pdf

REFERENCES

Sustainable Westchester. (n.d.). What is CCA?
https://sustainablewestchester.org/energy- supply/

Swain, M. (n.d.). DOER MA best practice guide [Guidance document].
TrueEnergy. (n.d.). Deregulated energy states.
https://truenergy.com/deregulated-energy- states/

UMass Amherst School of Public Policy & UMass Amherst College of Social and Behavioral Sciences. (2023, February 6). Community choice electricity programs: A survey of Massachusetts municipalities. University of Massachusetts Amherst.

U.S. Environmental Protection Agency. (2025, July 22). Community choice aggregation. Green Power Partnership. Retrieved from
https://www.epa.gov/green-power-markets/community-choice-aggregation#four

Valdivia, J. (2025). Draft ESS report (April 22, 2025) [Draft report].

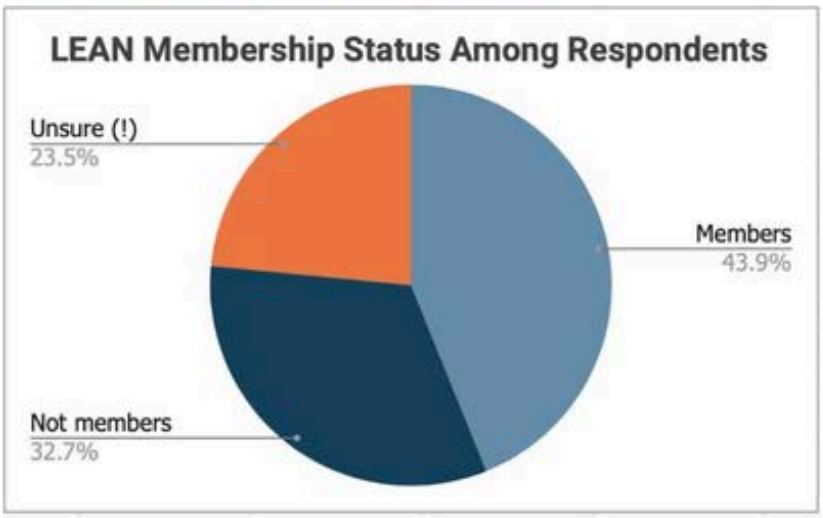
Virginia Energy. (2020). Community choice aggregation overview.
https://energy.virginia.gov/renewable-energy/community-choice.shtml

APPENDIX

Appendix 1: LEAN Energy US Member Survey Results

RESPONDENT OVERVIEW (46 RESPONSES)

1. Membership Status among Respondents:



Insight: 23% of respondents are unsure if they are members. (*Clean Power Alliance, Third*

Act CT, Town of Canton, NY, Village of Pulaski, NY, Long Beach Alliance for Clean Energy,

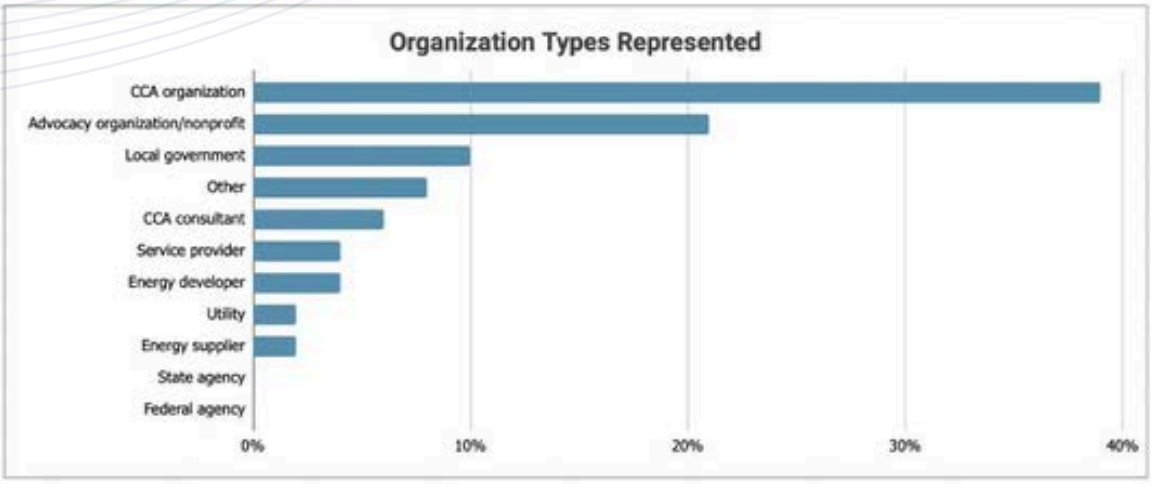
Maine Community Power Alliance, San Jose Clean Energy, People's Action for Clean Energy, Wallowa Resources, Virginia Clean Energy)

2. Engagement with LEAN:

82% of people who submitted a response have worked with LEAN, received our reports, and/or attended one of our events. For example:

- Received/used LEAN's reports,
- co-organized CCA presentations,
- attended LEAN's events (online and conference),
- joined LEAN's federal advocacy days,
- provided information to LEAN,
- joined "CCA Adopters Support Group", etc.

3. Organization Types Represented:



Insight: LEAN's core constituency remains CCA organizations and allied nonprofits.

RANKING OF CURRENT LEAN OFFERINGS

(1 = Most Valuable, 7 = Least Valuable)

Focus Area	Avg. Ranking
National Market Data Tracking	3.57
Networking	3.72
CCA Market Development & Expansion Support	3.74
Research & Studies (e.g., 2023 National Study)	3.78
Education	3.91
Federal Advocacy Support	4.54
Funding Opportunity Support	4.74

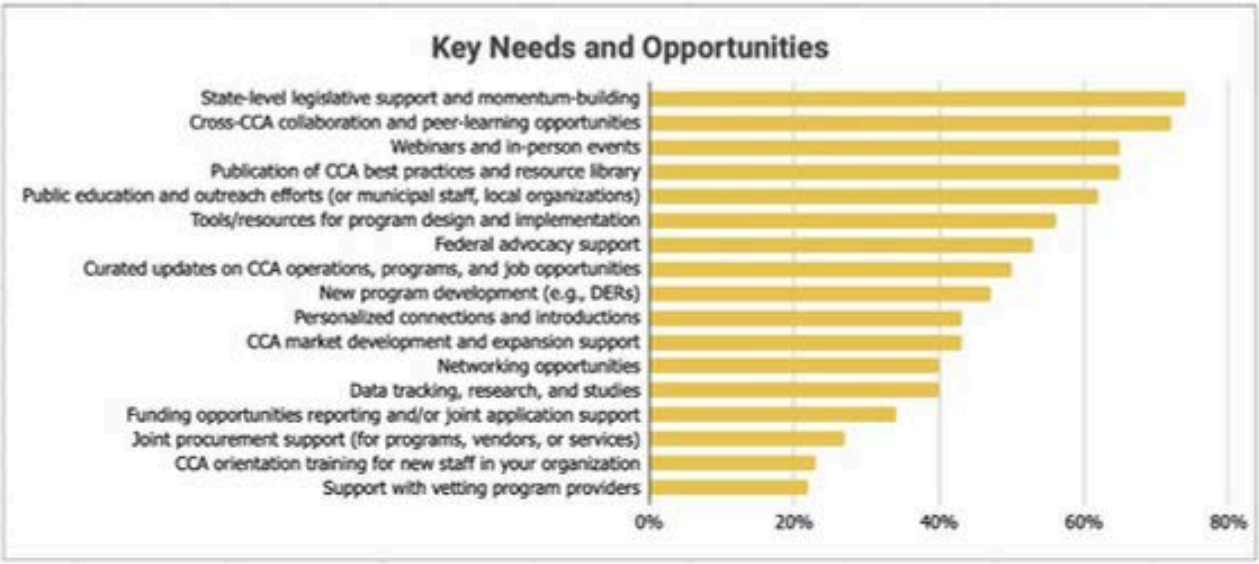
Insight: LEAN's core value lies in practical, programmatic support, with networking and research also receiving high ratings. Funding assistance and federal advocacy appear to be less prioritized by survey respondents, although they remain significant among current members.

KEY NEEDS AND OPPORTUNITIES

Top 7 opportunities for LEAN according to respondents:

1. State-level legislative support and momentum-building
2. Cross-CCA collaboration and peer-learning opportunities
3. Webinars and in-person events
4. Publication of CCA best practices and resource library

5. Public education and outreach efforts (or municipal staff, local organizations)
6. Tools/resources for program design and implementation
7. Federal advocacy support

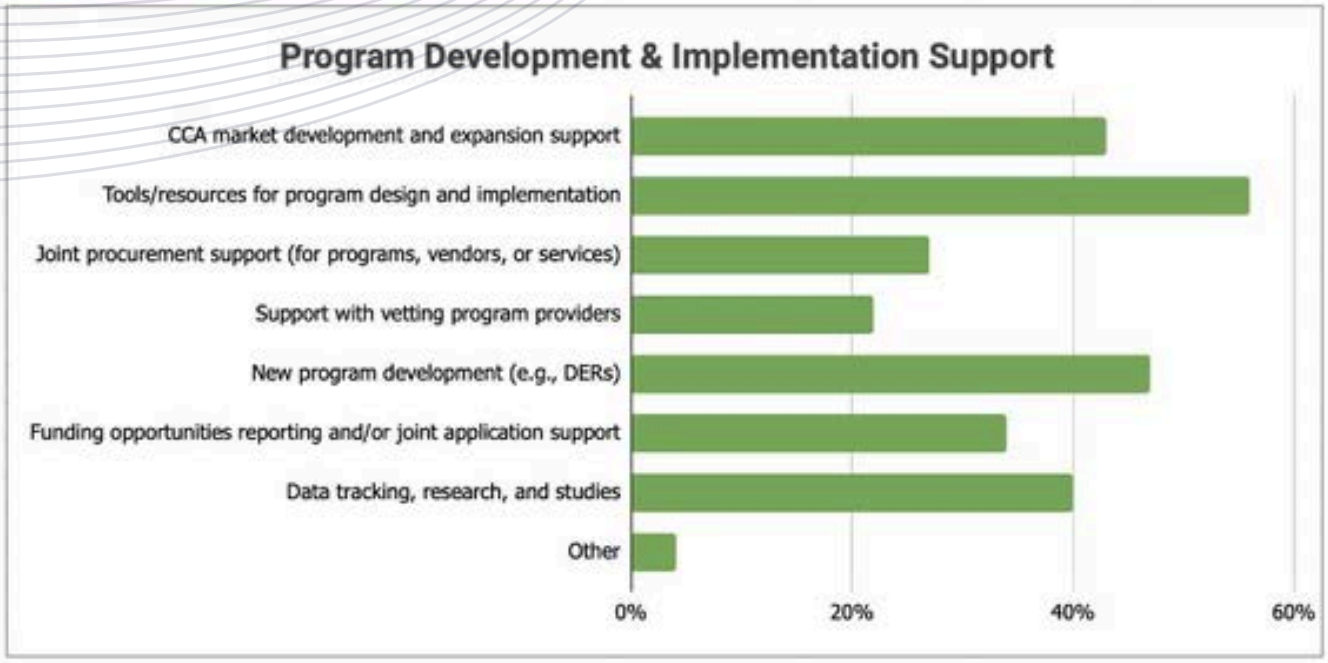


Collaboration & Knowledge Sharing

Comments:

- Demand for CCA startup *toolkits*, proformas, data use guidance, and case studies. - Frustration with CCAs becoming too similar to IOUs, losing public-centric focus.
- Share insights from meetings/webinars with trade associations, federal agencies, etc.
- LEAN is leading national opportunities for CCA collaboration and information sharing.

Program Development & Implementation



Comments:

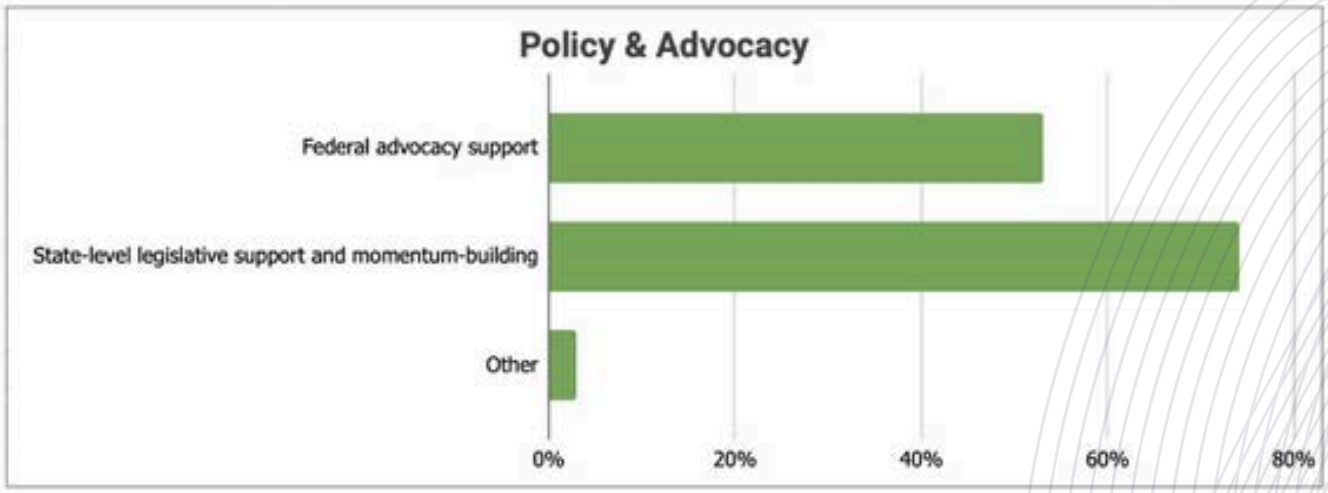
Track CCA legislation status

National coordination

Advertisement/promotion of CCA success stories (by state and nationally)

National convening of CCA state associations

Policy & Advocacy



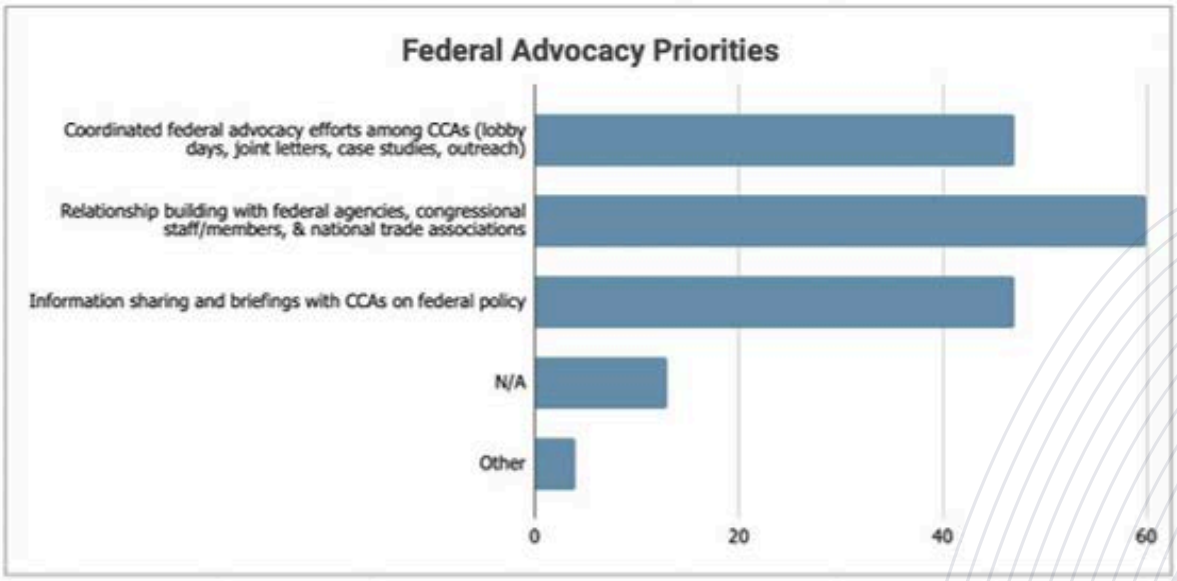
Comments:

Some skepticism toward federal focus (e.g., "Fed is dead" comments).

- Examine how to reform and restructure CCAs to promote expanded public access, engagement, control, and decision-making.
- Information on new or at-risk state or federal programs.

Education & Training

FEDERAL ADVOCACY PRIORITIES



Some respondents are deeply skeptical about federal progress in the current climate, preferring focus on state-level or regulatory issues (e.g., PUCs).

Comments:

"Stay away from the mess..."

- "Sorry, the Feds are a lost cause for a few years (hopefully only a few years). However, there is a huge need for support at the State Public Utilities Commissions, where the rubber meets the road for CCA startups."

MEMBERSHIP BARRIERS & OPPORTUNITIES

Top Reasons for Not Being a member:

- Cost: 23%
- Unclear value: 21%
- Time constraints: 8%
- Not decision-maker, not asked, or unaware of the option to join: ~20%

Suggestions to Increase Membership Value:

- Highlight federal advocacy as a core benefit
- Provide technical assistance for start-up CCAs
- Offer more direct support and coordination
- Develop media/social media presence
- Build educational materials and shared CCA resources
- Focus on leadership and governance reform models
- Emphasize distributed local renewables and DERs
- Increase support for new CCAs (toolkits, technical assistance)
- More cross-state knowledge sharing
- Lower-cost or subsidized options for small orgs/startups

CLOSING FEEDBACK

Strategic Themes:

- Regular webinars and reports

Market status and policy tracking:

Support for showcasing model differences and best practices.

Interest in more profound reflection on CCA model evolution - **"State-first" focus:**

Advocacy of Education

Engagement

Tailored support for unique state conditions requested

Toolkit demand: From startup guidance to governance reform, toolkits are in high demand.

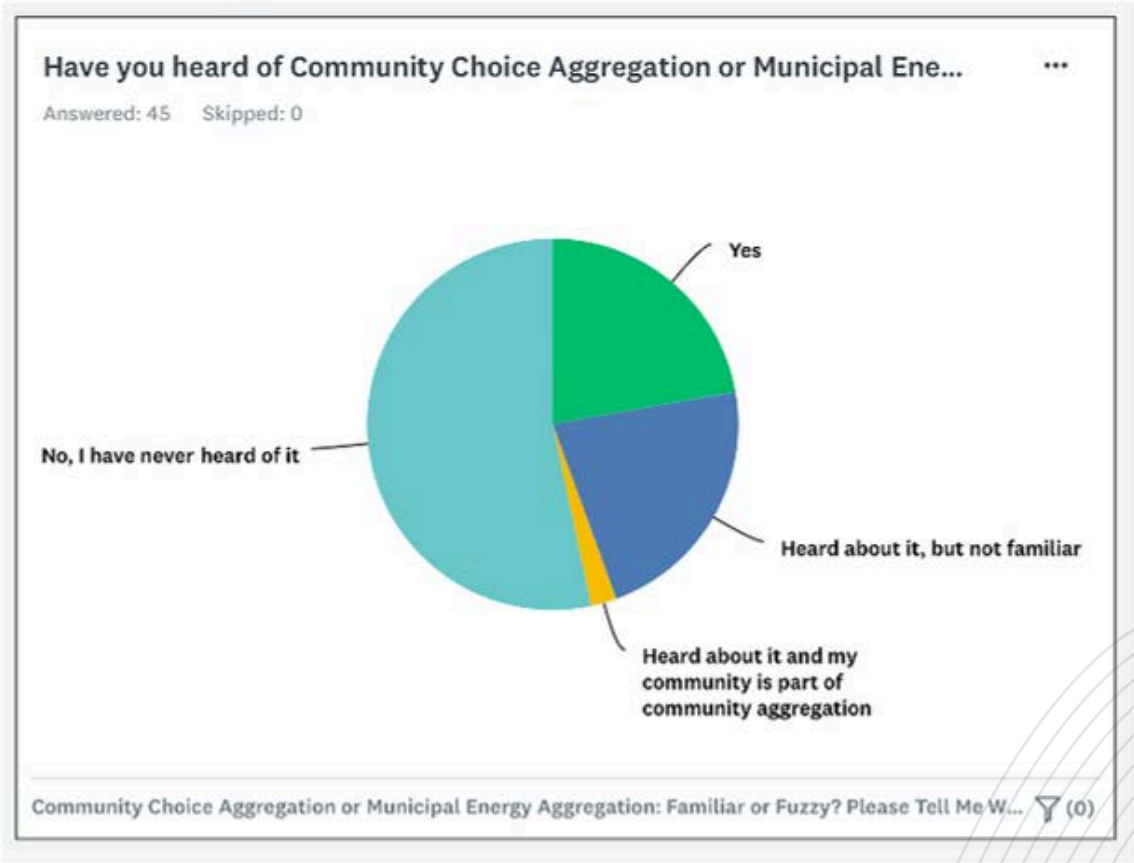
- **Messaging clarity is needed, especially** to help members understand what LEAN does differently than groups like CalCCA,
- Need for stronger cross-CCA/state coordination, especially in areas such as advocacy, procurement, and lessons learned.

Side note: strong appreciation for LEAN's leadership and events.

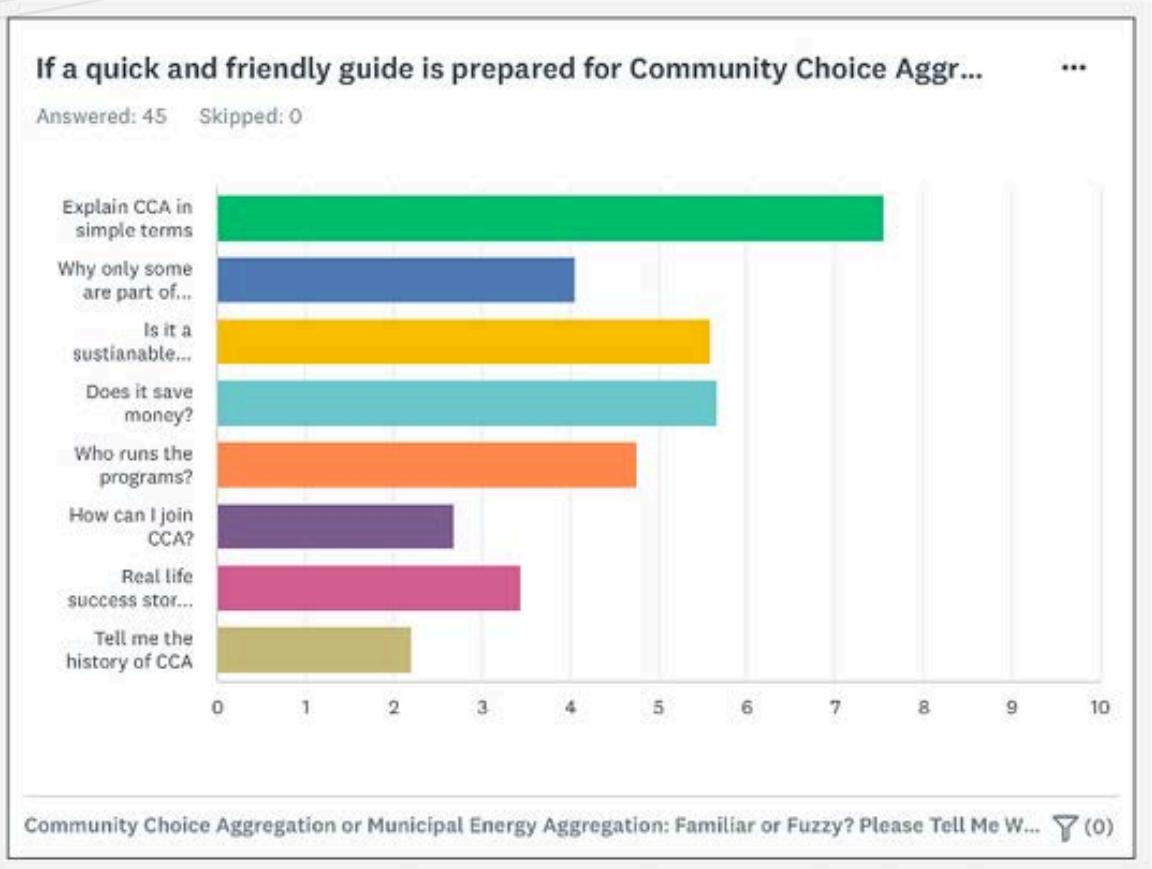
Appendix 2

Survey on CCA: familiar or fuzzy to identify how many of them have heard about CCAs and what they would like to know?

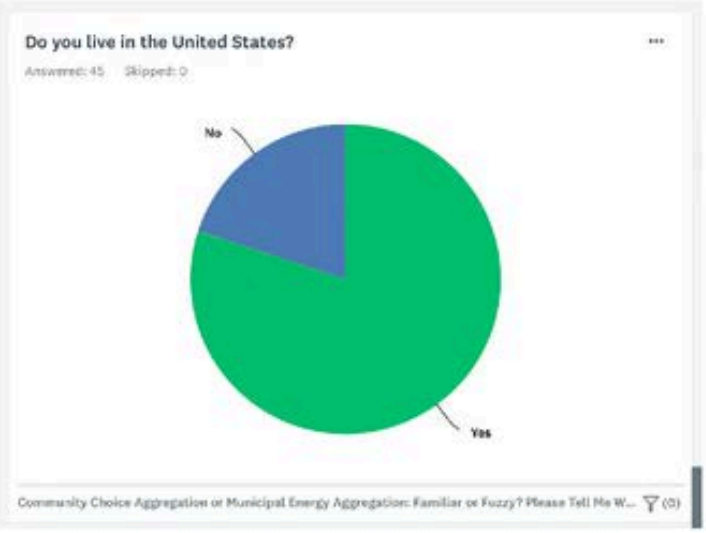
The response compilation are below:



The question on "if a quick and friendly guide is prepared for CCA what would you like to know int the order of your preference?



Of 35 of the 45 responses from people who lived in the US, 75% of the responses were from people residing in the CCA-enabled states. This shows the limited awareness among people about CCAs.



Appendix 3:

Interview questions to guide the interviews with the founding executive directors of the first community aggregators of the state:

Foundational context:

Can you share the origin story of your CCA, what problem you were trying to solve, and how the formation unfolded?

Governance and structural model:

How is your CCA structured in terms of governance?

Follow-up: How do you manage decision-making across multiple municipalities or jurisdictions?

How does your model compare to a municipally operated one (like Boston) or Public Energy Coalitions in IL?

Utility coordination and market participation:

How do you coordinate with your utility partner(s), particularly around load forecasting, customer transitions, or cost recovery mechanisms?

Follow-up: Have there been tensions or innovations in that relationship?

How do you handle exit fees, stranded costs, or cost-sharing with utilities?

How did you manage the energy price hike when /Russia-Ukraine conflict started?

Community engagement and outreach:

What strategies have proven most effective in building community awareness and trust in your program?

Follow-up: Do you design and administer outreach and education in-house, or with partners?

What is your estimated awareness rate in your customer base today/ customer survey?

Performance & Outcomes

What have been the most measurable outcomes of your CCA?

- Retention rate? Average % savings vs utility? Share of renewable energy?
- Does your CCA exceed the state's RPS requirements?
- What share of your RECs are sourced locally (e.g., MA-based)?

Innovation & Differentiators

What differentiates your CCA from others? Have you introduced any innovations in community benefits, local renewable development, or rate structures?

- Follow-up: Any upcoming initiatives you're excited about?

Lessons & Recommendations

What are 1–2 lessons you'd offer to new CCAs starting today?

- Follow-up: What would you do differently if starting over?

List of deregulated states in the US

State	Deregulated Market	CCA Legislated	Comments
Arizona	No*	Exploring	*Energy deregulation was placed on hold in 2004.
Arkansas	No*		*Energy deregulation laws were reversed in 2003.
California	Gas & Electric*	Yes	*very limited and is conducted by a lottery system called DirectAcccess
Colorado	Natural Gas only*	Exploring	*At this time, no utilities offer choice programs despite Colorado's natural gas market being deregulated.
Connecticut	Gas* & Electric	Exploring	*only partially deregulated and very limited
Delaware	Electric only		Gas was deregulated on a trial basis and later discontinued.
Florida	Natural Gas only		
Georgia	Natural Gas only		
Illinois	Gas* & Electric	Yes	*deregulated for approximately 75% of the state
Indiana	Natural Gas only*	No	*deregulated for NIPSCO customers only
Iowa	Natural Gas only*	No	*limited and available only to a small number of consumers
Kentucky	Natural Gas only	No	
Maine	Gas* & Electric	No	*only deregulated for Industrial and Commercial consumers

Maryland	Gas* & Electric	Yes	*Certain areas not deregulated
Massachusetts	Gas & Electric	Yes	
Michigan	Gas & Electric	Exploring	
Montana	Natural Gas only	No	
Nebraska	Natural Gas only	No	
New Hampshire	Gas* & Electric	Yes	*Not deregulated for residential customers
New Jersey	Gas & Electric	Yes	
New Mexico	Natural Gas only*	Exploring	*Very limited
New York	Gas & Electric	Yes	
Ohio	Gas & Electric	Yes	
Oregon	Electric only	No	
Pennsylvania	Gas & Electric	Exploring	
Rhode Island	Gas & Electric	Yes	
South Dakota	Natural Gas only		
Texas	Gas* & Electric*	No	*Gas choice is not available for residential customers, and only for commercial consumers whose annual usage exceeds 3,650 MCF. *Electric choice is available for 85% of state.
Virginia	Gas* & Electric*	Yes	*Deregulation of both Gas and Electric is limited for residential consumers.
Washington DC	Gas & Electric		
West Virginia	Natural Gas only*		*Very limited
Wisconsin	No*		*Deregulation was tried but discontinued
Wyoming	Natural Gas only*		*Very limited and only available through one utility

Source: (TrueEnergy, n.d.)

Appendix 4:

The following is a list of illustrative questions that municipal leaders may consider asking prospective consultants, compiled by DOER of Massachusetts

Electric Supply Rates

1. What will likely determine the electric supply rates we will receive as a municipal aggregation?
2. What characteristics of our municipality will be important in determining the electric supply rates we receive?
3. How do you help municipal aggregations to secure competitive electric supply rates for municipal aggregations?
4. How can we ensure affordable rates for low-income and environmental justice residents in an aggregation and reduce the energy burden for residents?
5. How do you think future technological changes like the deployment of Advanced Metering Infrastructure (AMI) could impact rate setting for municipal aggregations?

Supply Product Options

6. What do you see as the biggest risks in energy supply procurement, and how do you propose to help us mitigate them?
7. How can we best pursue clean energy and climate goals through aggregation?
8. What types of RECs do you recommend to municipal aggregations interested in increasing the share of renewable energy, and why?
9. How can we ensure the additionality of the RECs we are purchasing?
10. How can we ensure cost-effective rates for renewable energy? How do you work to secure competitive rates for RECs?

Outreach and Communications

11. Please describe your community engagement plan for each step of the aggregation process.
12. How do you tailor your outreach and communications based on the specifics of the local community you're working with?
13. How would you plan to solicit and incorporate feedback from our residents and businesses into plans for procurement, rate setting, and customer support?
14. How do you work to promote participation in "opt-up" green products for communities you work with?
15. What common challenges do you encounter with communications and outreach on aggregations, and how do you address them?
16. How do you manage customer support once an aggregation is operational?

Administrative

17. How much effort will aggregation require for town administrators? How much staff should we plan to allocate for aggregation during the development, launch, and operations

periods? How do you plan to support and work with municipal staff?

18. What has been the timeline from initiation to launch for recent municipal aggregations that you've worked with?

19. What do you do to ensure municipal aggregation plans comply with all DPU requirements and what steps do you take to help improve the DPU's review timeline of a plan?

20. How do you plan to monitor and report on your performance to us?

Payment & Contracting

21. How do you structure payment for municipal aggregation services?

22. If using an administrative fee on aggregation sales to fund consulting services, could you explain your fee? Does it change over time?

23. How long typically does a contract for consultant services last? What services and contract length would you recommend for a municipality like mine?

24. What elements of ongoing operations and customer service will the municipality be responsible for after launch?

Referrals

25. Can you put us in touch with other municipal aggregations that you've worked with to discuss their experience working with you?