COMMUNITY CHOICE AGGREGATION AND CALIFORNIA'S CLEAN ENERGY FUTURE

A DISCUSSION PAPER BY GRIDWORKS WITH SUPPORT FROM THE ENERGY FOUNDATION

GRIDWORKS

ENERGY FOUNDATION

COMMUNITY CHOICE AGGREGATION AND CALIFORNIA'S CLEAN ENERGY FUTURE

JUNE 2018

INTRODUCTION

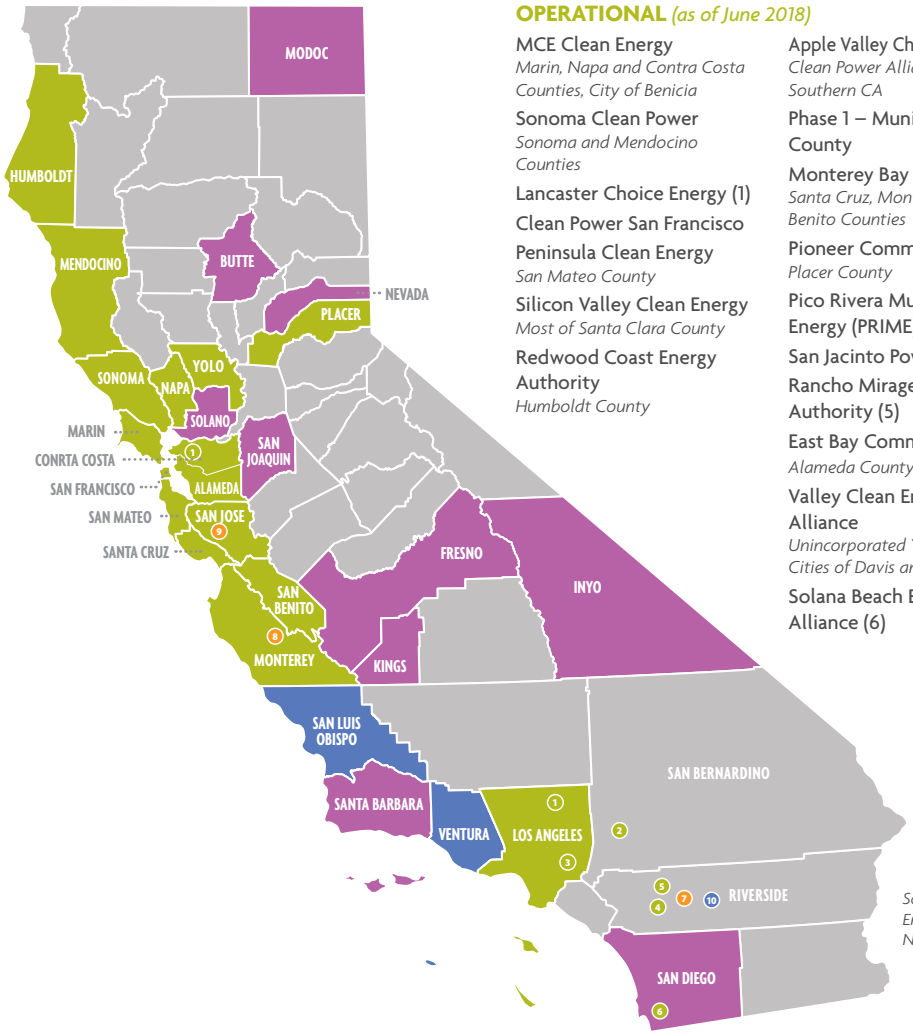
California continues to exercise national and global leadership in rapidly decarbonizing its economy to mitigate the environmental impacts of fossil fuels. At the same time, there is a growing trend by local governments to adopt Community Choice Aggregation (CCA) as the means to exercise greater local decision-making on energy matters. Today there is much uncertainty and miscommunication among California stakeholders as to whether and to what extent the decisions made by CCAs will align with and support – or possibly diverge from – the state's energy and environmental goals. On the other hand, stakeholders are actively considering whether and to what extent the state's energy and environmental policies help or hinder CCA contributions toward those goals.

The purpose of this paper is to generate discussion and support creative thinking among California stakeholders considering CCAs' impact on the state's energy and environmental goals and how state policies may be improved to further those goals.

The paper includes the following:

- A brief summary of the state of CCA formation in California,
- An overview of the policies of CCAs, imposed both by the state and by local boards,
- An orientation to how policy-making has been conducted in California and how that may change going forward,
- A summary of key contested issues surrounding CCAs, and
- Key emerging questions.

CONTENTS



Source: Local Energy Action Network

OPERATIONAL *(as of June 2018)*

MCE Clean Energy
Marin, Napa and Contra Costa Counties, City of Benicia

Sonoma Clean Power
Sonoma and Mendocino Counties

Lancaster Choice Energy (1)

Clean Power San Francisco

Peninsula Clean Energy
San Mateo County

Silicon Valley Clean Energy
Most of Santa Clara County

Redwood Coast Energy Authority
Humboldt County

Apple Valley Choice Energy (2)
Clean Power Alliance of Southern CA

Phase 1 – Municipal LA County

Monterey Bay Clean Power
Santa Cruz, Monterey, San Benito Counties

Pioneer Community Energy
Placer County

Pico Rivera Municipal Energy (PRIME) (3)

San Jacinto Power (4)

Rancho Mirage Energy Authority (5)

East Bay Community Energy
Alameda County

Valley Clean Energy Alliance
Unincorporated Yolo County, Cities of Davis and Woodland

Solana Beach Energy Alliance (6)

2018 LAUNCH *(anticipated)*

Clean Power Alliance of So CA
Phase 2 – Unincorporated LA County, South Pasadena, Rolling Hills

Desert Community Energy (7)
Cities of Palm Springs, Cathedral City, Palm Desert

King City (8)

San Jose Clean Energy (9)
Phase 1

2019/2020 LAUNCH *(anticipated)*

Clean Power Alliance So CA
Ventura County and 28+ additional cities

San Jose Clean Energy
Phase 2

San Luis Obispo/Morro Bay

Unincorporated Riverside County

Western Community Energy / WRCOG (10)

INVESTIGATING

Cities of:	**Counties of:**
Baldwin Park	Butte
Carlsbad	Fresno
Commerce	King
Del Mar	Modoc
El Monte	Nevada
Encinitas	San Joaquin
Hanford	Santa Barbara
Oceanside	Solano
Pomona	
San Diego	
Santa Paula	

THE STATE OF CCA FORMATION IN CALIFORNIA

OVERVIEW

The California Public Utilities Code defines a CCA as a city and/or county whose governing board elects to combine the loads of its residents, businesses, and municipal facilities in a communitywide electricity buyers' program or joint powers authority.[1] CCAs effectively replace the incumbent utility as the Load Serving Entity (LSE) and the default buyer of electricity for customers within the defined service territory.[2]

Currently, 14 CCAs are providing service in California, with several more poised to begin this year. The above figure from Local Energy Action Network shows the locations of the current and proposed CCAs.

The currently operational CCAs represent 18 counties and as many as 1.85 million customer accounts. Over the next few years, the number of customers represented may expand exponentially. Currently an additional 11 are expected to launch, amounting to a majority share of the state's electric load.

CCA BUSINESS MODELS

CCAs are tasked with the challenge of administering procurement portfolios, meeting regulatory compliance obligations, and conducting risk management, all as a start-up organization. CCAs have taken various approaches to managing this challenge. A key difference between the approaches has been the activities outsourced to third parties compared to those managed "in house." Some CCA business models have relied on Energy Service Providers to compile their energy portfolios and manage compliance with regulatory obligations, others manage these responsivities internally. Further evolution may include cooperation among CCAs to pool resources.

For example, Sonoma Clean Power relied on consultants for procurement and initial compliant document preparation prior to serving customers and transitioned immediately to providing all of those services with staff beginning in

1 PU Code 331(a) and (b)

2 Customers within CCA territory are automatically opted in to joining the CCA; all CCAs must also offer all customers the option to opt out and keep the incumbent utility as their generation provider

2014. East Bay Community Energy (EBCE), which is beginning operations in 2018, will partner with the Northern California Power Agency (NCPA), a joint powers agency, to conduct portfolio management, contracting, and compliance and with the Sacramento Municipal Utility District (SMUD) for data management, billing, and call center services. As CCA business models settle, one key question will be how their respective approaches impact their ability to support California's clean energy goals.

POLICIES OF THE STATE AND CCAS

As LSEs California CCAs have certain obligations to support California's clean energy goals under both the Public Utilities Code and adopted policies of the California Public Utilities Commission (CPUC). Many of those obligations mirror those of California's Investor Owned Utilities (IOU), while others do not. In addition, some CCAs have adopted incremental policies to complement, accelerate or exceed state policies. The following section compiles the key obligations of CCAs and IOUs, as well as a sample of CCA policies which are incremental to state policies. Comparing those obligations reveals where different obligations under existing policy may complement or frustrate California in achieving its energy policy goals.

This section is broken into several sections: energy, capacity adequacy, rate design, and distributed energy resources. While CCAs and IOUs face obligations beyond what we include within these categories, this sample offers a reasonable reflection of the key policies impacting the state's decarbonization goals.

ENERGY

State Policy

The core obligation of all LSEs is to furnish customers with energy to meet their consumption needs. With regard to decarbonization, one of California's key energy policy drivers is the renewables portfolio standard (RPS). Under PUC Code Sections 399.11 and 399.12 both CCAs and IOUs have the obligation to serve 33% of their load with renewable energy by 2020 and 50% by 2030. Further, both CCAs and IOUs face the same CPUC and CEC obligations for complying with that requirement, including key questions of what products are eligible. Both IOUs and CCAs have comparable obligations to furnish the CPUC with their procurement plans and compliance reports.[3] Finally, beginning in 2021 both CCAs and IOUs face an obligation to meet 65% of their RPS obligations through long-term (>10 year) contracts, per SB 350.

Below this overarching umbrella policy, the obligations of CCAs and IOUs differ. In compiling their renewable portfolios, the IOUs have been obligated to meet their RPS targets using mechanisms specified by both the PU Code and CPUC policy. Key obligations include use of the Renewable Auction Mechanism (RAM), Renewable Market Adjusting Tariff (ReMAT), Bio-ReMAT, and the utility owned Solar PV Program (SPVP). As discussed further below, the above-market costs of some of these programs may be collected from non-utility customers. Another example of a policy directed at IOUs, Senate Bill 43 (Wolk, 2014) required IOUs to offer a 100% renewable energy option, which led to the Green Tariff Shared Renewables Program. As an opt-in, this program requires IOUs to go beyond their minimum obligations for customers who elect a larger share of renewable energy and pay extra for this service.

In comparison, CCAs do not need to have their renewable energy procurement mechanisms approved by the CPUC; they are relatively free to determine their own mechanisms for renewable procurement.

Finally, with regard to energy obligations, where an IOU previously complied with an obligation to procure energy on behalf of customers who subsequently departed to another load serving entity in its footprint, the IOU may share the costs of that obligation with the departing customer. This sharing of costs would occur through the Power Charge Indifference Adjustment (PCIA), a regulatory mechanism through which the above-market costs of such contracts are allocated on a pro rata basis to CCA or Energy Service Provider customers. CCAs generally lack the ability to recover costs from departing customers. This policy and its implications are discussed further below.

Example CCA Policies

CCAs have adopted policies exceeding and accelerating the obligations of Code. Currently, all CCAs serving load offer customers the option to opt-into a portfolio that provides customers with 100% renewable energy. Other options include a renewable energy portfolio that is more ambitious than what the utilities currently procure (e.g., SCP's portfolio includes 45% renewable energy; CleanPower SF offers a 40% renewable energy option). Taking a slightly different approach, EBCE will evaluate their portfolio to determine how much of that portfolio is "carbon-free." Its "Bright Choice" option is listed as "85% clean energy," which includes 38% renewable energy and 47% carbon-free energy, such as hydroelectricity.[4]

CCAs have offered other options to encourage renewable energy generation locally. For example, MCE differentiates its competitive procurement and Feed-in Tariffs (FIT) for 1) renewable energy, 2) local renewable energy, and 3) energy storage.[5] Based on the procured portfolio, MCE customers have the choice to opt into locally produced renewable energy. The "Deep Green" portfolio uses 50% wind and 50% solar, both currently produced in California. This portfolio costs an additional $0.01/kWh, half of which contributes to the development of local solar projects within MCE service territory. Currently, MCE has developed 19 MW of new,

3 D.17-12-007

4 https://ebce.org/residents/

5 https://www.mcecleanenergy.org/energy-procurement/

local renewable energy projects. MCE additionally offers a portfolio that only procures 100% local solar, sourced from a new community solar farm. Similarly, Sonoma Clean Power currently offers a FIT for medium size solar installations [6] and East Bay Community Energy aims to spur local renewable energy generation with their Local Development Business Plans.[7]

CAPACITY

As LSEs, both CCAs and IOUs have a Resource Adequacy (RA) obligation under Section 380 of the PU Code. In practice, this amounts to an obligation to demonstrate sufficient capacity (as opposed to energy) under contract to meet system, local, and flexible obligations on a year- and month-ahead basis. These obligations are determined by the CPUC in concert with the California Independent System Operator and allocated to CCAs and IOUs based on their contributions to coincident peak load.

While the year- and month-ahead obligations have been relatively cut and dry, forward, longer-term capacity obligations have not. In the context of Integrated Resource Planning, CCAs and their representatives argue the PU Code does not obligate them to enter into long-term contracts and that the CPUC lacks the authority to impose such an obligation. In its Decision 18-02-018, the CPUC disagreed, asserting authority to impose such obligations under PU Code 454.51 and 454.52. Whether this decision stands on appeal or whether it leads to actual obligations remains unknown at this time.

Finally, with regard to capacity obligations, the IOUs may be charged by the CPUC with procuring long-term capacity on behalf of other load serving entities in their footprints. The cost of such obligations may be subject to the Cost Allocation Mechanism (CAM), a regulatory mechanism through which the capacity costs and RA value of such contracts are allocated on a pro rata basis to CCA or ESP customers.

RATES

With regard to retail rate design, the IOU and CCAs differ greatly in their obligations, but so far very little in practice. One key obligation the IOUs and CCAs share falls under PU Code Section 739.1, providing for a discount to low income customers. This obligation applies to the California Alternate Rates for Energy (CARE), Family Electric Rate Assistance (FERA), and Medical Baseline programs via the Public Purpose Participation charge. The discount is provided through distribution rates, which are the same for all customers regardless of retail service provider.

Beyond this CARE obligation, CCAs are largely free to recover costs through rates of their own design. However, in practice CCA rates have largely mirrored IOU rate designs. One reason for this trend may be the limits of IOU billing systems, on which the CCAs rely. Also, CCAs may be constrained from providing certain cross-subsidies by the provisions of Proposition 26, which does not apply to IOUs.

CCAs that have published a comparison of their retail rates online have found that enrolled customers have saved anywhere from 1.5-5% on their total electricity costs, when compared to the default IOU option. Most notably, Peninsula Clean Energy (PCE) customers enrolled in the 50% renewable energy option on average have retail rates that are 5% below PG&E's current rates.[8]

With regard to time of use (TOU) rates, while all IOU customers are expected to be defaulted into TOU rates by 2019, CCA customers do not have this requirement. They may elect to adopt the TOU rates of the utility or develop their own TOU rate structures, so long as the utility billing system can accommodate them. Currently, no CCAs have developed a TOU rate for their service territory, though MCE and SCP are participating in a default TOU pilot program.[9]

DISTRIBUTED ENERGY RESOURCES

State Policy

In the context of distributed energy resources, a term used here to broadly represent options available to a customer to alter their energy consumption and/or self-generate, IOUs and CCAs face differing obligations. Under CPUC policy, many rooted in Code, IOUs are obligated to offer a wide range of incentives to encourage customer adoption of energy efficiency, demand response, self-generation, net metering, community solar, electric vehicle charging support, and energy storage.

CCAs share some of these obligations. First, per CPUC D.13-10-040, CCAs must meet 1% of their coincident peak load with storage resources, a somewhat lower level than the IOUs' obligations. Second, per PU Code Section 2827, CCAs are obligated to provide eligible customer-generators a standard contract or tariff providing for net energy metering.

Energy efficiency is an example where state policy differentiates between IOUs and CCAs. Pursuant to state law and CPUC regulations, IOUs have been tasked with achieving all cost-effective energy efficiency in their service territory; they have an obligation to administer programs to achieve this EE target. CCAs do not have an obligation to administer such programs, but may elect to, as detailed below. Importantly, while CCAs do not have the obligation to achieve the state's EE goals, their customers do pay CPUC-imposed fees to support such programs. In short, CCA customers pay IOUs to administer efficiency programs until the CCA asks and receives CPUC approval to administer some of the funds.

6 https://sonomacleanpower.org/profit-program/
7 https://ebce.org/local-development-business-plan/
8 https://www.peninsulacleanenergy.com/wp-content/uploads/2018/03/PCE-Rates-Effective-3.15.18-1.pdf
9 http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/CCABackgroundPaperv2.pdf

CCA Policy

Beyond obligations imposed by the state, CCAs may in practice offer a wide variety of DER incentives. A CCA may opt to do so for many reasons, such as customer satisfaction, local economic development, power price arbitrage, or relieving local grid constraints. The following highlights illustrate several CCA approaches to doing so.

Net energy metering (NEM): Many CCAs offer a NEM incentive program that offers additional customer options beyond those offered by IOUs, by paying a premium retail rate to purchase excess electricity, as well as a premium credit to customers exporting to the grid. Some CCAs have focused programs that encourage specific communities to participate in NEM. MCE offers rebates to low-income customers installing solar, while EBCE is looking to develop NEM programs for a variety of customers.

Energy efficiency (EE) programs: CCAs can either participate in IOU-designed and administered energy efficiency programs, or elect/apply to administer and design their own programs, both for CCA-only customers and opt-out customers within their territory. Currently, MCE and Lancaster Choice Energy (LCE) are the only CCAs authorized by the CPUC to administer energy efficiency programs. To its customers, MCE offers low-cost financing programs for energy upgrade projects, and additionally offers free energy assessments, rebates and discounts, and assistance in seeking out PACE financing for energy efficiency projects. LCE just received CPUC approval to administer a Small Commercial Direct Install Program and a Residential Energy Advisor Program.

Other CCAs have played an active role in communicating EE savings options to customers. For example, SCP actively provides information for low-income customers, as well as for weatherization assistance, the Energy Savings Assistance Program, and highlights a third-party rebate-finder tool. SCP has developed a "DIY Energy and Water Savings Toolkit" pamphlet distributed in public areas.

Transportation electrification: While CCAs have no state-imposed obligation to support the electrification of transportation, some CCAs are taking initiative. SCP actively promotes EV adoption through multiple programs. "Drive EverGreen 2.0" provides incentives for customers to purchase or lease EVs. SCP customers can also apply for a free EV smart charger. Lancaster Choice Energy (LCE), in partnership with the local Antelope Valley Transit authority (AVTA), is not only home to the country's first 100% electric bus fleet but is additionally developing a Bus-to-Grid Integration pilot demonstrating emerging vehicle-grid-integration technology and local optimization. In addition to these programs, many CCAs offer an EV rate consistent with their IOU counterparts.

Demand response: CCAs have no obligation under state law to support demand response, but some incentives are offered. For example, SCP runs a demand response program called "Grid Savvy." This innovative program aims to create a local distribution grid reliability resource that will qualify for RA, once sufficient scale is reached. The program provides nearly free Level 2 EV charging equipment and enrolls participating customers in an effort to impact hourly load shaping.

Local benefits: A key area where adopted CCA policies go beyond statewide obligations is in creating local benefits. CCAs have framed "local benefits" to include local workforce development, local project development, and local clean energy benefits, including reducing carbon emissions and health-related pollutants. Whereas no statewide policies have historically aimed to yield such local benefits, CCAs have numerous focused policies. CCAs aim to achieve these goals by using locally-based contractors and locating distributed energy resources close to their point of use. The strongest example is Marin Clean Energy's Solar One partnership, which developed 10.5 MW of solar in Richmond on a 60 acre remediated brownfield site. The Solar One project additionally engaged Richmond-based contractors and mandated a 50% local resident workforce requirement.[10]

Targeted local DER deployment may create value for the grid serving that location, by relieving local congestion and/or deferring the need for investment in the grid. At present, the value creation resulting from such targeted DER deployment would not accrue to the CCA, as the distribution rates incurred by CCAs are the result of a "peanut buttering" of costs through the CPUC's ratemaking process. Whether this practice continues or is changed may be worth further consideration.

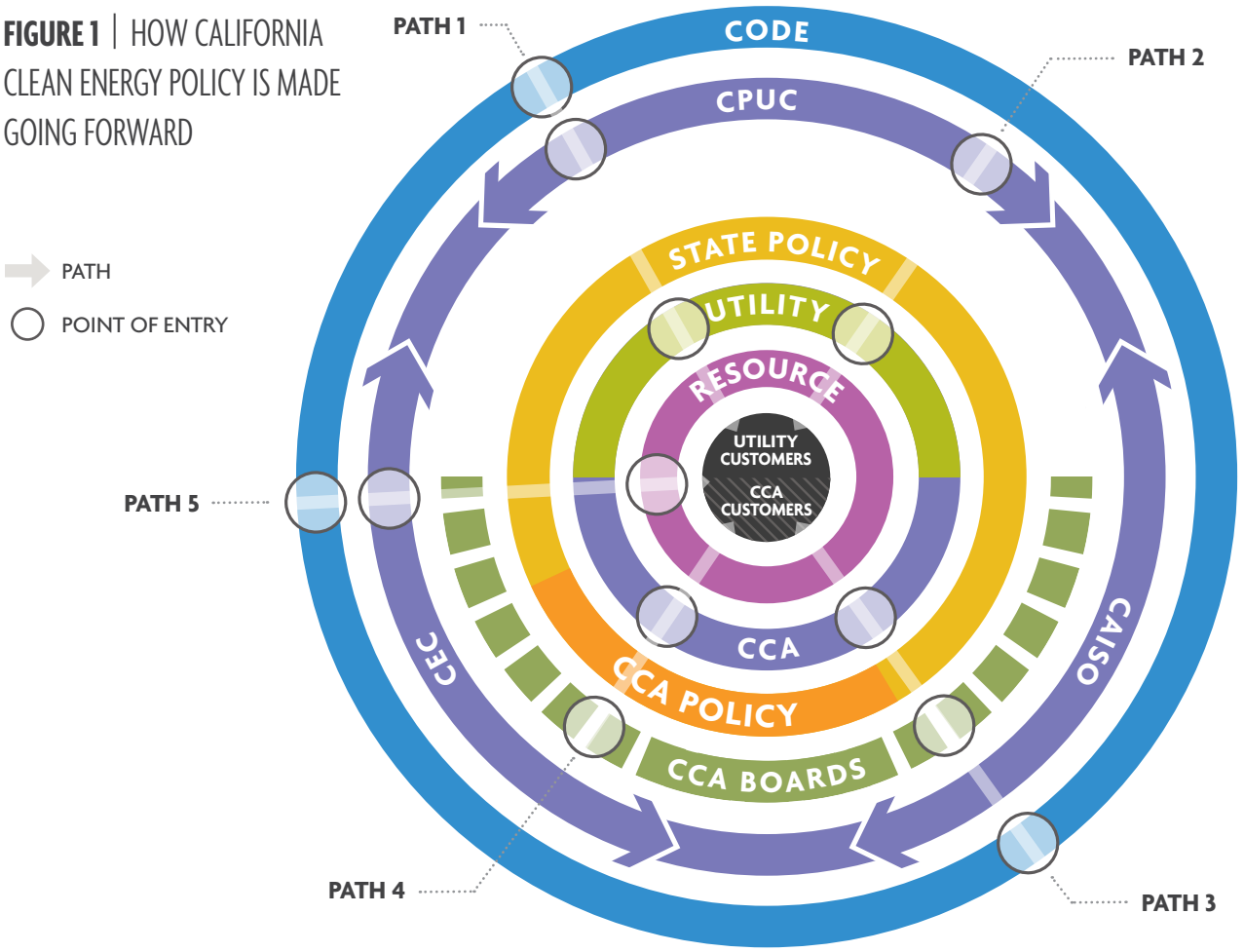
KEY POLICY DIFFERENCES

With regard to how CCA action will impact achievement of California's clean energy goals, this comparison of the obligations of CCAs and IOUs reveals some important differences, including:

- While the obligation to procure renewable energy is shared, the obligation to include in the portfolio older vintage contracts, smaller generators, and more expensive sources is not necessarily shared, although the more established CCAs may also have more expensive legacy contracts. IOU portfolios have been required to procure earlier, in a range of sizes and technologies, potentially leading to relatively expensive portfolios. While the differences in vintage should be captured by PCIA charges, some of these constraints will result in a relatively expensive portfolio cost for IOU customers.
- CCAs face decidedly different obligations imposed by local governments. For example, EBCE's obligation to impact local economic conditions presents challenges not borne by PG&E.
- The obligations of IOUs to offer DER incentives heavily outweigh those of CCAs. On a purely cost basis, these obligations may present a disadvantage to IOUs. However,

10 https://www.mcecleanenergy.org/local-projects/

FIGURE 1 | HOW CALIFORNIA CLEAN ENERGY POLICY IS MADE GOING FORWARD



in contrast to the "purely cost" logic, many CCAs see offering incentives for DER as something they can do to compete with IOUs, providing their customers with a desired service and value. Whether the obligations of IOUs in this regard amount to a key difference remains to be seen.

- Finally, one important difference is that a CCA can fail financially, while the IOUs are likely to be protected from failure by regulatory intervention.

This sample of differences in policies impacting IOUs and CCAs does not imply preference for either group. Instead, these observations aim to spur thinking about existing differences in the approach and how they may impact the achievement of California's clean energy goals.

HOW POLICY-MAKING IS EVOLVING

The emergence of CCAs decentralizes much of the historic clean energy policy-making process in California, introducing new complexity and opportunity. The following section provides an overview of how policy has been made and how that may change going forward.

Figure 1 illustrates five paths through which a clean energy policy may be made, interpreted and implemented before impacting how customers are served. The arrows signify the path, while the circles mark points of entry for those wishing to impact a policy. **Paths 1 and 2** show policies emerging from well-established sources: code (e.g., RPS) and state agencies (e.g., Demand Response Auction Mechanism). These paths provide stakeholders (e.g., utilities, advocates, vendors) three points of entry where they may impact the policy, its interpretation, and its implementation: the legislative, agency (including CAISO), and utility levels. At those points of entry lie relatively known, centralized actors with established policy-making processes and oversight. Finally, the customers impacted by these paths may be IOU or CCA.

Going forward, CCA introduces new pathways and actors, as illustrated in **Paths 3 and 4**. Like **Path 1, Path 3** represents a policy emerging from legislation, but instead of being interpreted and implemented by state agencies and implemented by utilities new actors are filling this role: CCA governing boards and CCAs. For example, a CCA Board may elect to exceed minimum RPS obligations as a matter of policy. **Path 4** shows a policy which emerges from a CCA governing board on its own authority. The examples of policies promoting local benefits reported above exemplify this path. These paths provide the same number of points

of entry; however, note that instead of three agencies interpreting the code you have a larger number of governing boards, each with its own priorities. For example, the same statewide RPS obligation has already resulted in a wide range of procurement targets across CCAs: the RPS provides an effective floor, but above that floor the renewable energy content of IOU and CCA portfolios may vary substantially. These paths only directly impact CCA customers.

Finally, **Path 5** illustrates a different channel though which policies are interpreted by a state agency before being prescribed to a CCA board and paid for by CCA customers. This path has some characteristics in common with Paths 1 and 2, but is highlighted due to its potential to create debate about authority. One example of this would be the CAISO's implementation of the Capacity Procurement Mechanism, through which it exercises authority under federal law to impose procurement costs on effected LSEs.

After a policy is made it must be implemented. **Figure 1** illustrates that, in addition to three investor owned utilities, California now has 14 CCAs (plus 11 more under active consideration) responsible for implementing policy. Again, taking the example of RPS, this change means 14 compliance monitoring efforts, instead of three.

In sum, what were already complex policy-making, interpretation and implementation processes are becoming more complex: more policies, more agencies, and more customer blocks. This shake up presents new challenges and opportunities to consider. Considering this evolution from the point of view of policy advocates, a few key questions emerge:

- A stated advantage of CCAs is bringing the decision-making authority closer to customers: how will this advantage materialize? If CCAs result in more customer-oriented policy making, what will be the impact on achieving California's clean energy goals?
- How will advocates intervene in interpretation and implementation under new policy pathways?
- How will advocates adapt their strategy to 13+ agencies making their own incremental clean energy policy?
- Where policies are interpreted by a state agency before being prescribed to a CCA board, the possibility of turf wars emerges. In such cases, how will the state maximize the productivity of clean energy advocates, agencies, and implementers?
- How will California ensure it all adds up to reliable, safe, and affordable service that meets our clean energy goals? Who will be responsible for ensuring it does?

This new, more diverse policy-making process will require strategic navigation, the success of which may impact whether California continues to succeed in its clean energy goals.

KEY CONTESTED ISSUES SURROUNDING CCAS

The emergence of CCA has introduced a number of higher and lower profile regulatory issues in California today of which clean energy advocates should be aware. Some of these may be "life and death" for at least some of the CCAs, while others would more likely fall into the category of inconveniences. The following section introduces key issues.

IOU EXIT FEES/PCIA

As introduced above, customers that leave the utility and take service from a CCA are required by law to pay a non-bypassable charge to the utility to ensure that the remaining bundled service customers do not suffer increased rates as a result of the departure. The CPUC has implemented this requirement by adopting a mechanism called the PCIA, which is recalculated in each utility's annual Energy Resource Recovery Account (ERRA) proceeding and imposed on CCA customers. In theory the PCIA is supposed to capture the "above-market" costs of the utility's existing supply portfolio (assets and contractual obligations) which would become "stranded" if not recovered from the departing load. The PCIA is "vintaged" so that departing customers pay only for the costs of utility commitments entered into before their departure.

In practice the PCIA has become extremely controversial in recent years, at least in part because the underlying rate calculations have not been transparent to the customers that must pay them. The rate has also been volatile over time, with large increases sometimes occurring in a single year. Naturally the CCAs, who have not had access to the data and calculations, are suspicious that the IOUs may have anti-competitive motives for hiking up the exit fee.

The CPUC is currently in the midst of a proceeding to re-evaluate the PCIA. This proceeding could result in an increase, decrease, or no change to the current PCIA charge. In addition, the IOUs have proposed that departing customers "take with them" a share of the RA and RPS credits acquired by utilities to serve the customers' load when they were on bundled service. This transfer of RA and RPS credits might be helpful to a new CCA that faces the prospect of having to acquire a large portfolio of resources and meet a variety of legal requirements immediately upon start-up. On the other hand, especially for established CCAs, the prospect of being assigned an unknown quantity of RA and RPS credits from the IOUs, potentially with very little notice, can be disruptive and result in expensive double procurement.

Both the size of the exit fee and the issue of whether it comes with RPS and RA credits will be decided by the CPUC. A higher PCIA could make it more difficult for new CCAs to form, or for existing CCAs to remain competitive with the utility's rates. On the other hand, a reduced PCIA may spur even greater CCA activity around the state.

THE RISK OF A "BAD" CCA

The CCAs that have been formed thus far in California have typically eagerly embraced the state's clean energy and decarbonization policies, and sought to advance them even further than the state's legal requirements, while developing local clean energy initiatives as well. But what would happen if a CCA were created that was only interested in achieving the lowest possible cost for its customers, and avoided any environmental or social obligations to the maximum extent possible? Arguably such an approach might reflect the desires and values of the local community, but it could also undermine statewide efforts to transform the energy sector. Can/should anything be done to prevent this type of outcome? How and by whom?

DECENTRALIZATION OF PROCUREMENT AUTHORITY

One of the attractions of a CCA for local governments and activists is the ability for a community to make its own choices in energy procurement. As referenced already, many existing CCAs have established higher RPS targets and/or greater GHG reduction goals than required by law. CCAs have also encouraged local renewable resources for economic development and other reasons. Local entities may be better positioned than the state in some cases to promote electric vehicle adoption and charging, improved land use planning, and building electrification. At the same time, concerns have been voiced by state-level decision-makers and regulators that the fragmentation of procurement authority, as conceptualized above in Figure 1, among a greater number of jurisdictions may lead to reduced or dispersed momentum for change, gaps in procurement, or unbalanced portfolios that collectively do not fully meet the state's needs.

A recent example of the fragmentation issue was the designation of the Calpine Metcalf plant as "Reliability Must-Run" (RMR) unit by the CAISO. All Load-Serving Entities, including CCAs, are required to meet the same system, local and flexible RA requirements as the IOUs. In the San Francisco Bay Area, there are many generating resources available for LSEs to procure to meet their local Bay Area RA requirements, but even if every LSE procures enough Local RA, the CAISO still must perform a detailed study to make sure that the procured resources collectively meet the overall area and local sub-area reliability needs. For 2018, the CAISO determined that the Metcalf plant (a 500+ MW combined cycle natural gas generator) was needed to meet a local sub-area need in the San Jose area, and therefore placed it under an expensive RMR contract, with the costs allocated to the customers of all LSEs via transmission rates. For many LSEs, this resulted in a double payment—once for the local RA they had already purchased, and an additional charge for the Metcalf RMR.

When CCAs were very few in number and served a limited amount of load, it was common for the IOUs to figure out when plants such as Metcalf would be needed and make sure that they were procured, even if they might incur somewhat higher costs as a result. They did this both because they knew the system well enough to anticipate the need and because it was ultimately cheaper to pay a little more for a needed unit than to leave it uncontracted and risk an RMR designation by the CAISO that would increase their costs even more. But with the recent growth in CCA load, especially in the PG&E service area, that calculus no longer holds. No one is individually responsible for making sure that strategically-located plants are procured, and LSEs may not even know there is a need in a particular place until after the fact.

Similar problems can arise in the context of RPS procurement. When a single entity is procuring for a large geographic area, it can view its entire portfolio and avoid over-concentration on one type of resource in one part of the territory. But multiple smaller LSEs do not know what others are procuring, so there may be no way to assure an overall balanced portfolio of renewables, either by technology or by location. Higher cost renewables, such as geothermal and biomass, may have broader social or environmental benefits but not be procured by any one entity individually. This is one of the concerns noted by CPUC staff in the Integrated Resource Planning (IRP) process—that the individual parts may not add up to a coherent whole. How to achieve a balanced portfolio of RA and RPS resources for the state as a whole remains in question, and may lead to increased friction between state and local interests if not coordinated successfully.

Is there a way to provide local autonomy over energy choices, while still ensuring that the system as a whole meets required reliability standards and contains a reasonably workable portfolio of resources when viewed as a whole? And how can this be achieved at the lowest overall cost? Is some degree of centralized procurement necessary, and if so, how would it be structured? As new CCAs are formed and existing ones grow, these questions are likely to become a key focus of the energy conversation in California.

CREDITWORTHINESS

Given that CCAs are brand new entities typically separate from the local governments that establish them, there have been concerns voiced in some quarters about their ongoing financial viability. This often arises in the context of the need for new renewable resource developers to obtain long-term contracts with creditworthy counter-parties in order to secure project financing. Some progress on this front has been made. MCE secured an investment-grade credit rating this year. Meanwhile, significant commercial activity has emerged from CCAs with no known hindrance due to perceived creditworthiness. As introduced above under the title "Evolving CCA Business Models," some CCAs have begun working with established entities, such as SMUD and Northern California Power Agency (NCPA), that already have good credit ratings, to help with their early procurement efforts. Nevertheless, these concerns linger. If even a single

CCA were to fail financially, it could have serious impacts on the entire market. Is this a serious issue or has the problem already been solved?

ENERGY EFFICIENCY

CCAs are entitled by law to elect to administer energy efficiency programs with the public goods charge funds collected by the utility from their customers, except for those funds devoted to broader statewide and regional programs. CCAs may also apply to the CPUC for the ability to administer such programs using general energy efficiency funding, even outside their services areas. This has already occurred, at least on a limited basis. There may be concerns about CCAs acting in this capacity, because CCAs are not subject to decoupling, and thus could benefit financially from increasing the sales of electricity to their customers, although this has not been shown to be a problem thus far. What is the future of energy efficiency in an increasingly decentralized electricity landscape? Can the ambitious goals of SB 350 be achieved in this environment?

LOAD PROFILES FOR SMALL CUSTOMERS

Despite the roll-out of smart meters to most customers several years ago, hourly smart meter data is not necessarily used for the purpose of settling an LSE's purchases from the CAISO market, at least in the PG&E service territory. Rather, system-wide load profiles for the entire service territory are the basis for assigning customers' monthly usage to hourly periods within that month. As a result, a CCA that is successful in encouraging its customers to improve their monthly usage patterns by using more power during low-priced periods and less power during high-priced periods does not capture the benefit of the associated cost savings. Rather, the load profile for the entire IOU service area is improved and the benefits are effectively socialized system-wide.

This practice creates an obvious disincentive for CCAs to adopt programs that improve their customers' load shapes. It would be possible, at least in theory, for the IOUs and the CAISO to move away from load profiles and use actual hourly usage data for settlements. Aside from the additional cost of managing a much greater volume of data, one concern with this approach may be that it would tend to "de-average" energy costs across an IOU service territory, such that CCAs serving areas with moderate climates would experience lower energy costs, and those serving climate zones with more extreme weather patterns would pay higher rates, even absent any change in usage patterns. Such rate de-averaging has historically been disfavored in California, and it could lead to "adverse selection," of customers (or entire communities) electing to depart IOU bundled service, with lower-cost customers incented to leave the larger pool and higher-cost customers remaining behind. It will be challenging to reconcile this concern with the desire for LSEs to capture the benefits of improving their customer load shapes.

DISTRIBUTED ENERGY RESOURCE ALTERNATIVES

In recent years the CPUC has been increasingly focused on encouraging the utilities to consider targeted procurement of DERs to displace the need for conventional generation and transmission assets, as well as distribution system upgrades. If a CCA is serving the retail load in an area targeted for such alternatives, can the CCA and the wires utility collaborate to facilitate the development of DER alternatives? Are there successful examples of such cooperative resource development that can serve as models? Is transmission or distribution deferral a potential additional revenue source for CCAs, or a distraction from their primary goals?

Another interesting issue arises with respect to transportation and building electrification support activities. Some CCAs, such as Sonoma Clean Power, have been active in this area. Should we anticipate a different reaction to such efforts from electric-only utilities, which stand to gain load and revenue from increased electrification, and combined utilities that will lose gas load as electrification increases? Does this potentially suggest different strategies for CCAs, depending on the interests of the IOUs in their area?

DATA ACCESS

Some CCAs still report difficulty in obtaining the detailed customer usage data (to which they are entitled) from the utilities. At the same time, some CCAs have been successful in obtaining all or at least most of the data that they need. Is this a technical problem, a policy problem, or simply the result of institutional inertia? What more needs to be done to resolve the problem?

REGULATORY TRANSACTION COSTS

Some advocates have expressed concerns about the potential for increased difficulty and cost in advancing their institutional agendas as the number of forums for discussion of energy issues proliferates. Already advocates may have to deal with the CPUC, the CAISO, the CEC, CARB and/or the Legislature, as well as perhaps at least the larger municipal utilities. As the number of CCAs grow, will it become more difficult for clean energy advocates to reach all the important audiences with their messages and expertise? Is there a potential solution to this problem?

CONCLUDING KEY QUESTIONS

California's clean energy future and the future of CCAs are deeply linked. The purpose of this paper is to generate discussion and support creative thinking among California stakeholders as they consider this link.

As a conclusion, the following questions will be critical to California's next steps.

- How can clean energy advocates and CCAs stay better

informed about each other's activities and programs?

- How can advocates participate in the discussion and implementation of new policies under consideration by CCAs?
- How can parties and the State as a whole ensure that independent procurement by multiple different entities will all add up to reliable, safe, and affordable service that meets our clean energy goals? Put another way, is it possible to provide local autonomy over energy choices while still ensuring that the system as whole meets required reliability standards and contains a reasonably workable portfolio of resources when viewed as a whole?
- How could a regulatory system that provides coordination among LSEs and light-handed oversight be structured so as to avoid destroying the very innovation that is one of the goals of CCA creation?
- How can CCAs' unique relationship with customers drive greater adoption of DER in support of state goals?
- How can CCAs gain appropriate compensation for the deployment of DERs that avoid utility transmission and distribution upgrades? Is it possible for IOUs and CCAs to collaborate in identifying and addressing these situations?
- Can and should anything be done to prevent the risk of a "bad" CCA that does not accept the state's clean energy goals?
- Can/will CCAs act as ratepayer advocates in CPUC proceedings? How might this differ from the work of more traditional consumer advocates?
- Is the prevention of utility disconnections for non-payment a potential area of collaboration for CCAs and consumer advocates?
- Are CCAs uniquely positioned to drive electrification of transportation and buildings? If so, how can CCAs and advocates collaborate on such efforts?
- What is the appropriate mechanism, if any, for supporting the procurement of large, long-lived projects like pumped storage hydro, out-of-state wind, or Imperial Valley geothermal in a market with many small-to-moderate sized entities serving load? Is voluntary cooperation the only option?

GRIDWORKS

Gridworks' mission is to convene, educate and empower stakeholders working to decarbonize electricity grids.

www.gridworks.org | info@gridworks.org

1111 Broadway, 3rd Floor
Oakland CA 94607