

Community Choice Energy: Democratizing Municipal-Scale Power



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Introduction

On June 21, 2016, Pacific Gas and Electric (PG&E), the largest electrical utility in California, and one of the largest in the country, announced that it would be shuttering its Diablo Canyon nuclear power plant, the last remaining nuclear facility in the state.

In announcing its decision to forego operation of the plant beyond its current 2025 license, PG&E referred to a number of factors that capture the rapidly changing electric power landscape in the state and across the country. It cited new developments that “will significantly reduce the need for Diablo Canyon’s electricity output.” These included state mandates for renewable energy and energy efficiency and the growth of distributed energy resources. But PG&E also cited “potential increases in the departure of PG&E’s retail load customers to Community Choice Aggregation.”¹

Hidden in that brief mention, is a pitched battle that has been taking place in California over recent years between advocates of community-controlled renewable energy systems and the state’s three investor-owned monopoly utilities. In announcing the 2025 closure of Diablo Canyon, PG&E essentially admitted that it is losing that battle, acknowledging that due to the expected loss of customers to Community Choice energy programs in California, there would be insufficient demand in the future for PG&E’s nuclear power.

So what is Community Choice energy, and what is its potential for establishing a new energy model that can democratize energy, both in California and in other states?

A Public Energy Services Provider

For more than a century, electricity supply has been virtually a monopoly enterprise, and consumers have had little say in how their electricity was procured and delivered. That has now changed for energy consumers in California and a few other states.

Community Choice Aggregation, as it is sometimes called, is a mechanism that allows cities, counties and a few other government entities to aggregate individual electricity customers within a defined service area for the purpose of providing electricity and related energy services. Six states besides California (Illinois, Ohio, Massachusetts, Rhode Island, New Jersey, and most recently, New York) allow local governments to procure their own electricity supplies in this way, while the incumbent utility continues to operate the electricity transmission and distribution infrastructure. Community Choice programs are “opt-out” initiatives, meaning that the program can automatically enroll electricity customers in their jurisdiction, but those customers can choose to opt out and stay with the incumbent utility at any time.

Community Choice programs provide local control over energy supply (but are distinct from municipal utilities, which also own the distribution infrastructure). However, these programs are not limited to buying and selling electricity. They are also about managing a community’s energy resources (both for reducing electricity demand and for generating electricity) to meet local objectives. Woody Hastings of the Center for Climate Protection in Sonoma County, California, one of the jurisdictions that has opted for a Community Choice energy program, puts it this way:

“Community Choice puts our community in control of the most important part of our electricity system. That means we can purchase more renewable and greenhouse-gas-free energy on the market than PG&E offered us. But more importantly, we can build renewable energy assets right here in the County. We not only get the benefits of low carbon electricity, but we get the economic benefits—the business opportunities and clean energy jobs—that come from investing in our own community.”²

Sonoma County's Community Choice customers get power that is 30% lower in greenhouse gases than that of PG&E. They also pay up to 9% less on average than PG&E customers. In addition, electricity net revenues go back into the community rather than into the pockets of PG&E shareholders and highly paid executives.

Sonoma County is one of five communities that, as of this writing, have established Community Choice programs in California, and it is estimated that as many as 60 percent of utility customers could depart to Community Choice programs during the next five years.^{3 4}

Based on local preferences for increased levels of renewable energy sources, Community Choice programs can spur investment in local energy resource development, reduce greenhouse gases, procure electricity at lower prices, enhance community resilience and provide the impetus to modernize the electricity grid.

To be more explicit, Community Choice programs in California, offer a number of potential benefits for local communities:

- **Local Control:** Community Choice gives communities control over where their electricity comes from and how their electricity dollars are spent. A Community Choice agency would be governed by a public board of directors. Through this public governance structure, communities can have a say in the program's goals, how it operates, and the types of resources it procures. Surplus revenues can be leveraged to stimulate development in the community: investments can be made in demand reduction (such as energy efficiency), renewable energy development, energy storage, and so forth. In this way, local citizens can participate in shaping the program to address community needs.
- **Local Choice:** Community Choice programs are essentially about giving consumers the choice of an alternative electricity service provider they would not otherwise have. Under the current investor-owned utility model, most consumers can buy power from only one company, with no say about where that power comes from or how the revenues are used. This means that consumers unhappy with the utility have nowhere to turn except to a state's regulatory body, such as the California Public Utility Commission (CPUC), which generally serves utility interests, not ratepayer interests.
- **Local Economic Development Benefits:** Community Choice programs have the ability to develop demand reduction and storage resources, as well as solar, wind and other renewable resources in or near their service areas. Unlike traditional utility electricity sources that are remote from communities (and send power over long-distance transmission lines), locally developed resources represent investment in the local economy. This investment can create meaningful economic benefits, including growth in clean energy jobs.

Because Community Choice agencies can generally finance projects with tax-exempt revenue bonds⁵ (which incur lower financing costs than private financing) and do not have to pay dividends to shareholders, more net revenues from a local development program would stay within the local



Figure 1. Staffers Carlos Zambrano and Jessica Tovar of the Local Clean Energy Alliance demonstrate a prop used for community outreach, February 2015.

community. The community can decide how these proceeds are utilized (for example, to lower electricity rates, or to create new incentive programs, or to build a contingency reserve).

Finally, local economic benefits accrue also to local property owners and businesses from energy savings and on-site electricity generation that can be encouraged by the Community Choice program. For many commercial building owners, renewable energy development can mean increased revenues, both from direct investment or by offering leasing rights to project developers.

- ***Environmental Benefits:*** By reducing demand and procuring more electricity from renewable resources, the Community Choice program can substantially reduce greenhouse gas (GHG) emissions associated with electricity consumption. As many municipal climate action plans have indicated, a major source of GHG emissions is from electricity generated by fossil fuel combustion in power plants.⁶
- ***New Local Energy Programs:*** A Community Choice agency can develop programs for demand reduction and new renewable generation that are very difficult to achieve at the state level. For example, the agency can promote energy efficiency and demand response programs, above and beyond what the incumbent utility offers. These programs can be designed specifically to meet the needs of the community.

In addition, the Community Choice program can incentivize local renewable electricity generation through well-designed net-metering⁷, feed-in tariff⁸, and shared renewables⁹ programs, as well as other ways of aggregating, collectivizing, and financing new energy resources.

- ***Rate Stability and Lower Prices:*** By focusing on demand reduction and the deployment of renewable resources, a Community Choice program offers the advantage of greater rate stability. Local assets reduce the risks of a volatile energy market. In addition, the continued decline in renewable power generating costs can translate into *lower* rates over the long term.

These benefits reflect the vision of Community Choice as a municipal-scale, public, electricity services provider responsive to the economic, environmental, and equity needs of communities. It is an alternative in which community-controlled and owned electricity services become an important expression of energy democracy and the creation of a new renewable energy model.

A New Renewable Energy Model

As indicated above, some of the main potential benefits of a Community Choice program derive from the development of community-based renewable energy resources. This new model of energy development—the decentralized renewable energy model—stands in contrast to the legacy model of fossil fuel electrical energy production, the centralized energy model of coal, natural gas, and nuclear power plants.

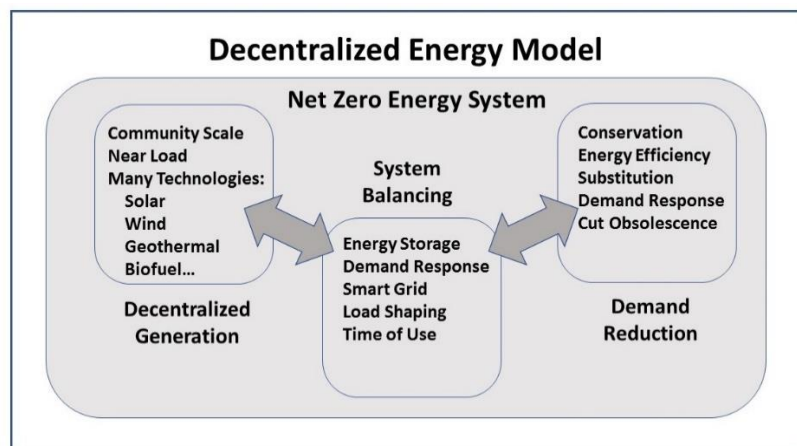
The centralized energy model, even when applied to *renewable* energy, is based on large-scale, centralized generating systems—big solar plantations and large wind farms—that are the product of concentrated financial and economic power. In most cases, centralized energy development represents the interests of powerful economic forces aligned with investor-owned utilities and aided by a corporate state apparatus unfettered by democratic restraints.¹⁰

By contrast, the decentralized renewable energy model enables community-based renewable energy development. It fosters the economically sustainable, ecologically sound, and equitable relationships needed by communities to address the current economic and climate crisis.

Thus the decentralized renewable energy model enables not only the shift from fossil fuel power to renewable power, but also the shift from corporate control of energy systems to more democratically controlled energy systems. This provides a basis for community-based *decentralized* development of distributed energy resources (such as solar energy, wind, geothermal energy, energy conservation, energy efficiency, energy storage, and demand response systems) at the local level through popular initiatives.

Physically speaking, decentralized energy systems consist of three kinds of distributed energy resource (often referred to as DER) components: decentralized electricity generation, demand reduction, and system balancing, as shown in Figure 2.

Figure 2: Graphical Representation of a Decentralized Energy System



- **Decentralized Generation:** This component refers to renewable electricity generation, usually smaller scale, located on existing structures or vacant or contaminated land close to the point of electricity consumption, so that the high cost and energy loss of high-voltage transmission lines is not required. The renewable energy source can be whatever is naturally available in the geographical region, for example, solar, wind, geothermal, small hydro, combined heat and power, or biomass/biogas.

In the case of solar photovoltaic generation, for example, the energy source can consist of installations on rooftops, parking lots, brownfields, rail or highway rights-of-way, and so forth. It might be as small as a system of a few Kilowatts on a residential building, a 1 Megawatt system on a large commercial building (like a large box store), or a ground-mounted 5 Megawatt or larger system built on degraded industrial land.

- **Demand Reduction:** This component refers to the many technologies for reducing the consumption of electricity. It might include, for example, conservation (turning off the lights), energy efficiency (more-efficient light bulbs), substitution (use of natural light when possible), demand response (not everyone turns on the lights at the same time), and simply eliminating built-in obsolescence or other forms of waste that consume electricity (one good light that lasts as long as ten poor ones).

Demand reduction is perhaps the most important component of a decentralized energy system. The cheapest electricity is the electricity that is never produced. For example, the cost, over time, of retrofitting buildings, to conserve energy, can be much less than the cost of generating the equivalent amount of electricity. Reducing electricity consumption is also the most ecological way to phase out fossil fuel electricity.

- **System Balancing:** This component refers to the coordination of supply and demand. Because generation from renewable sources varies over the course of the day and year and electricity consumption follows patterns of peaks and lows throughout the day and year, it is necessary to balance the generation and consumption of electricity to optimize energy resources.

The balancing involves a number of strategies and technologies. Increasingly competitive battery storage is a key element in filling the voids between variable energy generation and demand. However, demand response technology—by which consumption is altered according to the availability of supply—provides a huge opportunity to better utilize generating capacity and reduce costs. Many communication and grid stabilization technologies—called “smart grid” technologies—are under development. These will allow the electrical distribution system to support demand response technologies and provide the bidirectional flow of electricity and information needed for balancing a decentralized energy system.

Decentralized energy systems are designed to utilize local energy resources—both demand reduction and new generation—along with energy storage and smart system balancing, to meet the electricity needs of their host communities.¹¹ While this approach requires a great deal of new investment to achieve net-zero energy targets (that is, the community generates what it consumes), the investment can be readily paid off through overall system savings and energy independence.

The decentralized renewable energy model provides a powerful alternative to the traditional nondistributed, nonintegrated centralized energy model. The decentralized model is one that is more ecologically sound, more economically beneficial to communities, more effective in creating local employment, more sustainable, and more *open to community participation in the control of its energy resources*.¹² Community Choice energy programs are a natural vehicle for implementing this new energy model.

More Than Just Another Utility

The above discussion has tried to make the case that Community Choice energy, by placing control of the electricity system in community hands, provides a vehicle for creating the kind of decentralized energy system that can deliver a host of economic, environmental, and equity benefits to our communities.

That is not to say that such benefits are a foregone conclusion.

In fact, many Community Choice energy programs have led to quite different results. Take the case of Illinois, for example, where a few years ago hundreds of communities established Community Choice programs, and on that basis were able to shift their purchase of electricity from Consolidated Edison, which had procured relatively costly coal-based electricity sources, to new electricity providers based on cheaper fracked natural gas electricity-generating sources. That meant cheaper electricity for those communities; it also meant an expansion of the extreme fossil fuel extraction method called fracking.

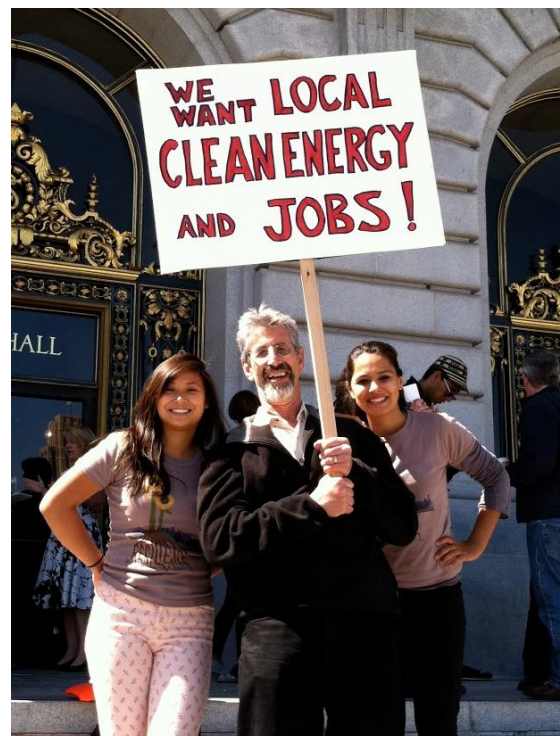


Figure 3. Advocates at San Francisco city hall calling for city's Community Choice program to prioritize local development and jobs, September 18, 2012

Many of these communities, in an effort to claim that they were reducing greenhouse gas emissions, purchased large numbers of unbundled renewable energy certificates (RECs) ¹³ on what is called the voluntary REC market. Basically, these unbundled RECs are simply paper certificates, and do not add to new renewable energy production. In fact, in Illinois, because these RECs were used to greenwash fossil fuel-sourced energy, the market for real renewable power nearly evaporated, suppressing wind energy production in the state.

So the impact of Community Choice in Illinois was not only to encourage fracking, but to suppress wind-powered renewable energy in the region, as well.

The lesson of this story is that Community Choice is merely a vehicle; it is not a destination. Without a clear destination and a good driver, this vehicle can take us in the wrong direction to the wrong place.

For a Community Choice program to deliver economic, environmental, and equity benefits to our communities, it cannot be seen as just another locally based utility that simply buys and sells electricity to residents and businesses. Nevertheless, a number of Community Choice programs in California, like those in Illinois, are based primarily on purchasing electricity on the market or from remote generating sources for sale to their customers. This approach is known as Community Choice Version 1.0.

To achieve the kind of decentralized energy system that can deliver economic, environmental, and equity benefits to our communities requires a different community-development approach, known as Community Choice Version 2.0.¹⁴

Community Choice Version 2.0 is substantially different from the standard utility model, as shown in Table 1:

Table 1: Comparison of Community Choice Version 2.0 with Investor-owned Utility Model

Community Choice Version 2.0	Investor-owned Utility
Non-profit public agency	For-profit private corporation
Purpose is to maximize community benefits: meet GHG reduction, economic development, good clean energy jobs, rate stability, social equity, local ownership and control of energy, and other community benefit goals	Purpose is, by law, to maximize shareholder returns
Net electricity revenues remain in the community: to expand services, invest in new assets, build reserves, or reduce rates	Net electricity revenues leave the community as utility profits and shareholder dividends
Based on an Energy Service Provider model: provides optimum energy services to community: cuts waste, reduces demand, lowers overall system costs of electricity service	Based on a Utility model: buys and sells electricity to ratepayers; the more electricity delivered, the better ¹⁵
Implements a decentralized renewable energy model: local distributed energy resources are developed to optimize the electricity system, provide stability, and achieve net zero energy	Implements a centralized renewable energy model: emphasis is on expanding infrastructure investment
Encourages strong community participation in shaping the program and in governance	Decisions made by utility executives and state regulatory bodies serving the utilities

The Strategy: Put the Community in Community Choice

The powerful potential of Community Choice Version 2.0 energy programs to deliver economic, environmental, and equity benefits to our communities rests with our communities exercising real control of these programs. While Community Choice represents a shift of energy decision making away from the incumbent private utility and placing it in a public agency, that institutional restructuring will represent a democratization of energy only if our communities are actively involved in shaping Community Choice programs.

Hence, the basic strategy is to build a public constituency strong enough to achieve the establishment of a Community Choice Version 2.0 program and hold those governing that program accountable to serving community needs.

For that to happen, the program must provide real value to the community. It must be an economic development platform that can build community wealth—business opportunities and jobs—and do so in a way that reverses historical patterns of discrimination, all while addressing the impacts of climate change.

But that kind of program requires building a political base in those communities that would benefit most from such a program—a base centered in working-class communities, low-income communities, and communities of color. It requires a political constituency strong enough to shape the electricity system, and make renewable energy a resource for empowering local communities.

That political constituency is a broad cross-class alliance, but led by those sectors that have the most stake in social justice, equity, resilient communities, and life-sustaining economies.



Figure 4. Representatives of community organizations who participated in a December 15, 2015 briefing session on how an East Bay Community Choice energy program could achieve community benefits

Principles of Democratized Energy Development

A number of principles express how local energy development can advance democracy and promote the empowerment of working-class communities, low-income communities, and communities of color. Development of community-based decentralized energy under a Community Choice energy program can be guided by the following broad principles:

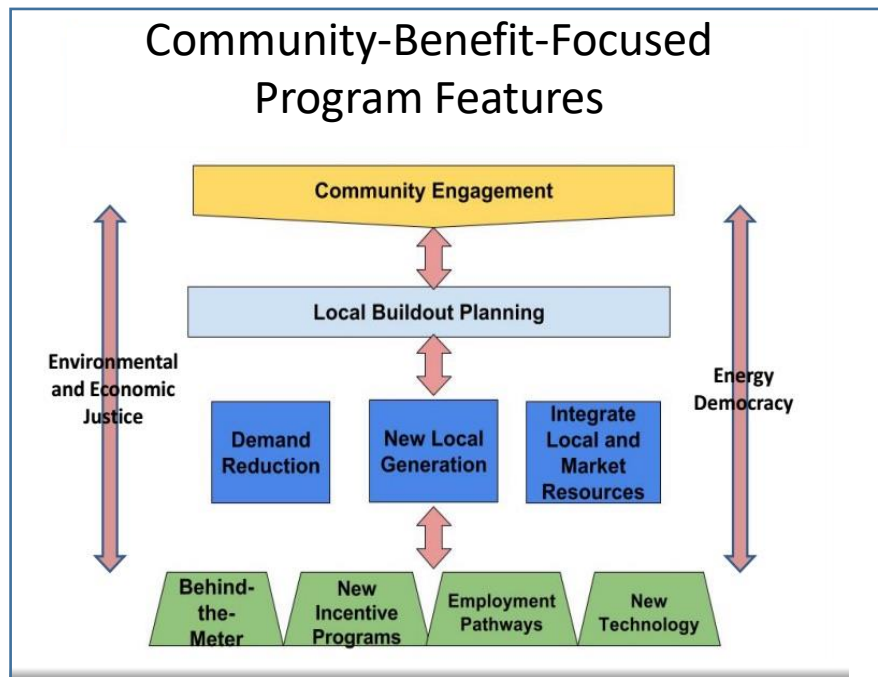
1. **Social Justice and Equity:** Making sure that local energy resources benefit working-class communities, low-income communities, Indigenous communities, and communities of color.
2. **Energy Democracy:** Enabling community ownership and control of energy resources, with shared leadership and decision-making authority that involves all stakeholder communities.
3. **Clean Energy Jobs and Family-Sustaining Livelihoods:** Creating local jobs, new businesses, and new ownership opportunities that help improve the environment and restore the economies of our communities.
4. **Workforce Development:** Committing to workforce development programs that create family-sustaining jobs for local residents, especially for those historically disadvantaged and most vulnerable to poverty and pollution.
5. **Sustainability:** Respecting ecological interdependence and the limited restorative capacity of the biosphere, while creating the environmental conditions needed to support present and future generations.
6. **Healthy Communities:** Supporting locally resilient, healthy foods systems; affordable, reliable, and accessible public transportation; clean air; clean water; and safe, efficient, affordable housing.
7. **Community Resilience:** Strengthening vulnerable communities to withstand the impacts of climate change, including disaster scenarios.
8. **Social Safety Net:** Making special provisions for those people unable to afford energy services at normal rates, providing energy security.
9. **Precautionary Principle:** Accepting that a project, policy, or decision should not be pursued if its impact on human or environmental health is risky or unknown.

On the basis of these principles, communities can advocate for Community Choice energy programs that contribute to vibrant and equitable regional economies. For example, Appendix A shows the specific Community Choice energy program goals put forward by the East Bay Clean Power Alliance, reflecting these principles.

Design and Planning of the Community Choice Program

To be able to deliver economic, environmental, and equity benefits to our communities, as described earlier, a Community Choice program needs to serve as a platform for developing a decentralized renewable energy system. That means building community-based demand reduction and new generation assets, and optimizing the system through energy storage, load shaping, and demand response technologies. The basic features of such a Version 2.0 Community Choice program are illustrated in Figure 5.

Figure 5: Features of a Community Choice Program Focused on Community Benefits



In this concept illustration, the community is engaged in setting goals that inform a business plan for the build-out of local renewable energy resources. That plan is based upon the building of local demand reduction assets and local renewable generation assets over time, and integrating those assets with one another and with the decreasing amounts of energy procured on the market as local assets are built out.

The development and integration of these energy resources is then implemented through a number of initiatives shown at the bottom of Figure 5:

- Developing customer-side (behind-the-meter) resources¹⁶
- Encouraging community-scale development through incentive programs like feed-in tariffs, shared renewable facilities, and energy cooperatives development, as well as through financing programs like Property Assessed Clean Energy (PACE)¹⁷ and on-bill repayment¹⁸
- Establishing workforce development programs and labor standards to prepare community members for the new clean energy jobs being created
- Encouraging technological innovation and new business development

Appendix B shows the impact on the community of the features described above.

The program design concept of Figure 5 is meant to facilitate feedback between the various levels shown in the illustration, so that the community is involved in shaping the Community Choice program to address environmental and economic justice. Community engagement in the shaping and governance of the program represents the democratizing of energy made possible through Community Choice.

Continuous Engagement of the Community

As mentioned earlier, building a strong political constituency is key to establishing a Community Choice energy program of the type being described.



Figure 6. Workshop session on Community Choice energy at event in East Oakland, April 5, 2014

However, it is equally important that the community be engaged in an ongoing basis over the lifetime of such a program. We have seen many examples of public (municipal) utilities that have acted no differently from investor-owned utilities, and of rural electric cooperatives—such as those formed under the Rural Electrification Program during the 1930’s—that have developed ossified governing boards that have lost all touch with the needs of their members.

For a Community Choice energy program to meet community needs, community stakeholder

engagement needs to be institutionalized in the program. This implies a governance structure that represents the diverse interests of the community. It also implies strong involvement, both directly and through elected representation, of the community in decision making regarding the design, implementation, and operations of the Community Choice program.

Often the governing board of a Community Choice program will create community advisory committees to provide input to decision makers. More significant would be direct representation from community stakeholder interests on the governing board itself, perhaps as ex officio (nonvoting) members in cases where the law requires that only elected officials serve on the board.

Challenges to Democratizing Municipal-Scale Power

The vision of Community Choice being described in this paper is not easy to implement. There are challenges at every turn.

Take the experience of those advocating for Community Choice in California, as an example.

The first challenge is opposition from the legacy centralized energy system—the institutions and the ideology that support it. The investor-owned utilities are fighting hard to maintain their monopoly control, with the willing assistance of the state regulatory bodies that support these utilities.

While the Community Choice Aggregation law, Assembly Bill (AB) 117, was passed in 2002, the first Community Choice program in the state, in Marin County, was not established until eight years later, due in large part to a blistering attack by PG&E, the local investor-owned utility, to derail these efforts.

In 2010, PG&E launched a state ballot initiative that would have changed the California Constitution in such a way as to make Community Choice programs all but impossible to establish. Despite PG&E’s spending about \$50 million on that effort—outspending the grassroots opposition by 5,000 to one—the ballot initiative was defeated. This David-versus-Goliath victory gave a great boost to Community Choice advocates.

Not to be deterred, however, Goliath struck again in 2014, this time with a legislative effort—AB 2145—also designed to kill Community Choice in California. PG&E’s union, IBEW Local 1245, and the California Labor Federation, led the charge in supporting the monopoly utilities.

Again, grassroots advocates fought back, emphasizing the community and jobs benefits possible under Community Choice. They formed a "No on AB 2145" campaign supported by 200 organizations across the state, including environmental justice organizations, local governments, and rooftop solar businesses. The campaign created such a storm of protest that the bill, after being passed in the California Assembly, never got introduced on the floor of the California Senate. This victory gave another big boost to Community Choice initiatives throughout the state.

There are now more than seventy jurisdictions in the state, individually or collectively, investigating or establishing Community Choice programs. Five programs are currently up and running and a larger number are expecting to launch in 2017, despite determined efforts by the monopoly utilities to crush this emerging movement.

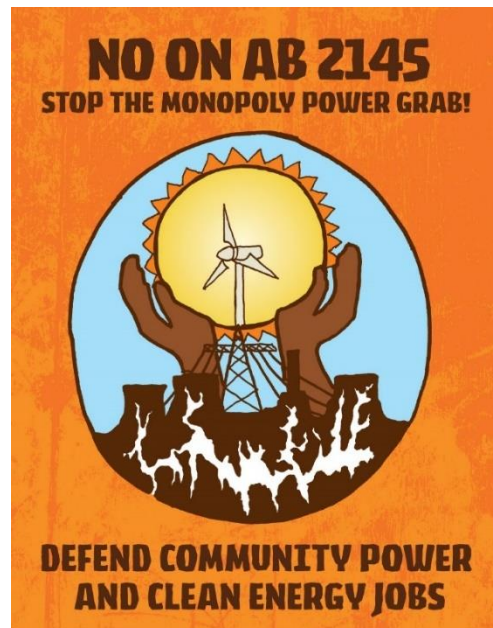


Figure 7. Poster used to oppose the monopoly utilities’ legislative effort to kill Community Choice, July 2014

The California Public Utilities Commission (CPUC)

The utilities are aided in their efforts by the CPUC, the state agency set up to regulate the monopoly utilities.

Michael Picker, president of the CPUC, reflecting the regulating body’s stance, has expressed open hostility to Community Choice,¹⁹ using the pejorative term “*forced collectivization*” to characterize the Community Choice alternative to investor-owned utilities. Picker’s view is that the prime role of the CPUC is to defend, protect and perpetuate investor-owned monopoly utilities in the state:

“And the question is, where do we need to maintain that monopoly? That’s what my agency does. We award monopolies where there’s not a market and then we protect them against ruinous or calamitous competition. That’s the language that’s embedded in our bone and in our blood from the 1910s. There was a thought that that was the best way to mobilize capital—you created a monopoly and you enforced it.”²⁰

In a few words, Picker explicitly states what critics of the CPUC have long alleged—that the CPUC is a captive agency, serving monopoly utility shareholders, and putting investor-owned utility interests ahead of the California public’s interest in community-based clean power development.

Picker’s views have been manifested in actions detrimental to Community Choice. In 2016, the CPUC doubled the Power Charge Indifference Adjustment (PCIA) awarded to PG&E. The PCIA is an ongoing fee assessed on departing Community Choice customers to compensate the utility for stranded contract costs, and the fee will increase again in 2017, making it more difficult for Community Choice programs in PG&E’s service territory to compete with the utility.

And on August 18, 2016, the CPUC gave the green light to San Diego Gas and Electric (SDG&E) to market against Community Choice energy programs in Southern California, a practice prohibited by the 2002 Community Choice law.

Furthermore, as Community Choice has gained momentum, the CPUC has approved monopoly utility proposals to shift billions of dollars in costs, in order to artificially lower utility electricity charges on customers' bills. For example, in PG&E's 2011 General Rate Case, the CPUC approved \$3 billion in cost shifting from the generation portion of the electricity bill to the transmission side of the ledger, in order to make PG&E's electricity charges relatively lower compared to Community Choice electricity charges.

Such actions by the CPUC undermine the viability of Community Choice energy programs in California.

Other state regulatory agencies have also been problematic. The California Independent System Operator (CAISO), for example, has failed to correct a market distortion by which all electricity customers pay for high-voltage transmission infrastructure, even when their electricity is not delivered through the transmission system. This means that transmission cost savings of local electricity generation are denied to ratepayers, and communities lose one of the key benefits of local energy development. This distortion makes it more difficult for Community Choice programs to prioritize the development of local renewable energy resources.

Local Challenges

A decentralized, community-based energy system and the possibility of a community-controlled public electricity services agency are hard for many to imagine after many years of a monopoly-dominated electricity system. Electricity is seen as a commodity by most people, not as a basic resource for meeting community and human needs. Hence there are strong conceptual barriers for communities to overcome when advocating for a democratized energy system.

In addition, local governments and public agencies tend to be very cautious, opting in most cases for the easiest and quickest approach to Community Choice—Version 1.0: simply purchasing renewable energy at most favorable prices on the market. A Community Choice program that focuses on prioritizing local renewable resource development—Version 2.0—requires upfront planning and design and a strong

commitment to community benefit goals. It takes a kind of vision and courage not often found among local politicians.

Version 2.0 also takes persistent organized advocacy from community members. For low-income communities and communities of color, affordable housing and displacement, police brutality and neighborhood safety, pollution and hunger, and a host of other immediate issues take priority over energy concerns and long-term economic development.



Figure 8. Panelists speaking on the significance of Community Choice energy as a driver for local job creation at April 5, 2014 event in East Oakland (from left): Dominic Ware (OUR Walmart), Margie Castillano (Castlemont High School), Agustin Cervantes (ILWU Local 6), Jakhiyra McDaniel (Youth Uprising), and Nile Malloy (Communities for a Better Environment).

These factors make it hard to build the strong political base needed to democratize energy.

Beyond these political difficulties are the challenges of financial markets that are vested in large-scale centralized energy development and local banking institutions that are averse to investing in new energy models.

In short, there are many challenges to building a constituency with the vision, resources, technological savvy, and commitment needed to force local governments to establish Community Choice energy programs that can deliver economic, environmental, and equity benefits to our communities. This is especially true in the face of strong opposition from the state's monopoly utilities and their regulatory henchmen.

Accomplishments in California

The five existing Community Choice programs in California, and many of the initiatives to establish new ones, do not yet reflect the transformative vision described in this paper.

Nevertheless, as noted earlier, two statewide efforts on the part of the investor-owned utilities to kill Community Choice—one a state proposition and the other a state legislative bill—have been defeated against all odds. In the aftermath of these victories, the California Alliance for Community Energy was created to promote community-based renewable energy development in the state and defend against attacks like those mentioned. The Alliance pulls together most Community Choice advocates across the state who agree with its mission to “support and defend Community Choice energy programs in California that advance local clean energy for the environmental and economic benefit of our communities.”²¹

Organizations like the Local Clean Energy Alliance and the California Environmental Justice Alliance have upheld the centrality of equity and community decision making in these efforts, an important counter to the natural tendency of public agencies to become bureaucratized and undemocratic.

In the San Francisco Bay Area, a coalition of Community Choice advocates, the East Bay Clean Power Alliance, has organized to bring a Community Choice Version 2.0 program to Alameda County. A several-year campaign, based on mobilizing community organizations, has gained traction based on principles of democracy and equity. On October 4, 2016, pressured by East Bay activists, including the Alameda Labor Council, the Alameda County Board of Supervisors voted to approve establishing a Community Choice

energy program with a commitment to maximizing community benefits and including community input in the governance of the program. Supervisors called for development, within eight months of agency formation, of a business plan for achieving local renewable energy development, union and family-supporting jobs, and other community benefits.



Figure 9. Martha Kuhl, First Vice-President of the Alameda Labor Council and leader of the California Nurses Association, speaks in favor of community/labor Unity Proposal at press conference, October 4, 2016 outside County administration building.

A similar effort in South Bay Los Angeles has pulled together twenty cities in Los Angeles County to establish a Community Choice program with similar goals. That effort has the strong support of several unions and has also leveraged research of the University of California at Los Angeles (UCLA).

A New Development: Community Choice in New York State

In April 2016, exercising its regulatory authority over the state’s electricity system, the New York Public Service Commission (PSC) authorized the formation and operation of Community Choice Aggregation Programs in New York State.²²

In taking this action, the PSC envisioned Community Choice as a way to advance its plan to reshape the electricity system in New York State—a plan known as Reforming the Energy Vision (REV).²³ REV is a response to a number of factors. Most prominent was Hurricane Sandy and the resulting disruptions in electricity service and the price escalations. REV is also an attempt to address an aging electrical infrastructure, the call for more renewable energy, and price gouging by energy service companies (ESCOs) in the state.

New York’s REV is a bold effort to create a more modern, reliable, and efficient energy system for the state. It intends to augment the state’s centralized fossil fuel electricity system with distributed energy resources (DERs), including renewable energy, energy efficiency, storage, and demand response technologies.

Within this vision, investor-owned utilities continue to play a dominant role. However, rather than pursuing their traditional business model of state-guaranteed return on infrastructure investments, the utilities will derive revenues from their role as distributed service platform providers, collecting fees from the DER services they support.

To make all this viable, REV is hoping to spur the development of a large new market for DER services, with a significant expansion in the number of ESCOs that provide renewable energy, energy efficiency, energy storage, automated control technologies, and other products to millions of electricity consumers across the state. In this way, REV anticipates the DER market tidal wave that is beginning to sweep across the country—what the California Distributed Energy Summit calls “a maelstrom of change that will have profound impacts on strategic directions and (business and procurement) opportunities for utilities, solar PV, energy storage, demand response, and customers on multiple fronts.”²⁴

Enter Community Choice

Within this utility-supporting market growth strategy, REV sees Community Choice as playing a key role: by aggregating electricity customers on a municipal scale, the ESCOs no longer need to market to millions of individual consumers. Instead, they can enter into contracts with Community Choice administrators who are acting on behalf of energy customers within their respective jurisdictions.

The April PSC order establishing Community Choice aggregation in New York defines the role of aggregators as brokers for services—“where the municipality acts as an aggregator and broker for the sale of energy and other services to residents but does not take ownership of the energy itself.”²⁵ This language implies that Community Choice aggregators play a limited role: they do not represent new public, energy service providers who could develop new energy resources in the community, create programs to expand community ownership and control of energy, design community-scale decentralized energy systems, or as public energy agencies address the economic, environmental, and equity needs of their communities. Rather, Community Choice aggregators are designated as middle parties, or brokers, for mass marketing energy services in a rapidly growing DER marketplace.

This limited role appears to be reinforced by financial constraints on the Community Choice aggregator. In return for brokering service contracts the Community Choice administrator can collect a fee negotiated for each such contract. However, the Community Choice aggregator cannot establish a tariff on customers' energy bills to pay for a broader program.²⁶ If the Community Choice aggregator is not a load-serving entity—if it does not sell electricity or services to customers—it cannot set rates or collect revenue. Under these circumstances, the Community Choice aggregator has no apparent financial base for designing and developing energy assets in the community or for creating new programs for spurring local energy resource development.

Despite the limitations of the PSC order establishing Community Choice in New York State, many Community Choice Version 2.0 advocates are working to broaden and extend the role of Community Choice energy programs through the state's Clean Energy Standard (which suggests opportunities for Community Choice "self-initiated power purchase agreements with renewable energy generators or deployment of renewable energy resources"²⁷) and through the state's Clean Energy Advisory Council.

One possible approach would be for a Community Choice aggregator to become an ESCO, thereby making it a load-serving entity that can enter into power purchase agreements for local energy development or directly develop and own renewable energy assets. Perhaps the solution is an ESCO of a new type—a public, not-for-profit ESCO that has the latitude to function as a Community Choice aggregator.

In any case, Community Choice is in its infancy in New York State, and many are trying to make it a vehicle for the design and implementation of DER systems at a municipal scale.

The Significance of Community Choice in a More Unified Energy Democracy Movement

Community Choice energy programs can provide a powerful vehicle for democratizing municipal-scale energy systems. As this paper has attempted to point out, to capture this potential requires mobilizing the community to shape the Community Choice program to provide economic, environmental, and equity benefits to the community.

Accordingly, a Community Choice program can be the basis for community engagement on the individual, group, and neighborhood levels. The program can encourage and promote community-based energy initiatives such as behind-the-meter installations, energy cooperatives, shared renewable systems, microgrids, and other collective and neighborhood-based energy projects that strengthen community ownership and control of energy. It can also develop municipal-scale projects and build publicly owned energy assets. In this way, a Community Choice program can serve as a development platform for democratizing energy and strengthening community resilience, especially in those communities hardest hit by the economic and environmental impacts of climate change.

Community Choice programs of this kind can also serve as the leading edge for transforming electricity systems at a statewide level. In California, for example, Community Choice is increasingly seen as a preferred electricity procurement model by communities across the state.

This shift draws into question the traditional role of state-regulated monopoly utilities as being the providers of last resort and guarantors of electricity system reliability. With the conditions of departing load represented by the expansion of Community Choice programs, alternative approaches to addressing system reliability are needed, and new public institutions for managing the electricity grid are being called for. The proliferation of Community Choice programs is not only democratizing energy at the municipal power level, but also challenging the power and control of the monopoly utilities at the state level.

We know that with the rush to develop huge new markets for distributed energy resources, as is taking place in New York and California, that our communities can be easily bypassed—if not exploited—by this technological tsunami, unless the power of the monopoly utilities is sharply curtailed and the power of public institutions serving our communities greatly enhanced.

The democratization of municipal-scale power and the creation of a new decentralized energy paradigm is key to meeting this challenge. Not only can it unleash our communities to take control of their energy futures at the local level, but it is essential to building the public institutions, resources, leadership, and vision needed to shape and control our electricity systems at the state level.

This, in turn, advances our ability to strengthen energy democracy nationally, by demonstrating the power of community-based renewable energy development to address the economic, environmental, and equity needs of our communities.

Clean Power to the People!



Figure 10. Attendees at “Growing Clean Energy Jobs in Oakland” event to explore potential for Community Choice energy to stimulate community economic development, April 5, 2014.

Appendix A:

Proposed Goals for an Alameda County Community Choice Program



We need bold action to address escalating climate destabilization and increasing economic hardship and inequality in our communities.

An Alameda County Community Choice Energy program that prioritizes and invests in the development of local renewable energy resources can be a powerful tool to reduce greenhouse gas emissions, speed up the switch to 100% renewable sources of energy, and address equitable economic development. Investing in local clean energy development builds wealth in our communities and helps create family-sustaining jobs. County-managed development projects can increase union participation in the renewable energy sector and offer opportunities to disadvantaged job seekers in Alameda County.

We seek to establish a Community Choice program that serves the residents and businesses of Alameda County in the following ways (not in any order of priority):

1. Provides competitively priced electricity to customers, at more stable and lower rates than Pacific Gas & Electric (PG&E).
2. Prioritizes the development of local renewable resources, including reduced energy consumption and renewable electrical generation, with goals of at least 18% reduction in electricity demand through conservation and energy efficiency, and at least 50% of renewable energy being locally generated, all within ten years of the start of the program.²⁸
3. Achieves Alameda County's Climate Action Plan greenhouse gas reduction goals and comparable goals of all participating jurisdictions, while also exceeding the California renewable portfolio standard (RPS) and the renewable portfolio of PG&E.
4. Generates family-sustaining, high-quality, clean energy jobs through local renewable resource development that prioritizes union jobs, spurs local workforce development, overcomes barriers to employment in historically disadvantaged communities, and includes local small businesses, diverse business enterprises,²⁹ and cooperative enterprises.
5. Promotes local and community ownership and control of renewable resources, spurring equitable economic development and increased resilience, especially in low-income communities and communities of color, which are most impacted by climate change.
6. Improves community health and safety by reducing pollution from fossil fuel power generation and by electrifying vehicle transportation.
7. Includes community stakeholders in the decision-making process of the Community Choice program and ensures inclusive representation.

12/14/14

Appendix B

East Bay Clean Power Alliance Vision: A Community-Development-Focused East Bay Community Energy Program



We envision an East Bay Community Energy (EBCE) program in Alameda County that prioritizes the development of local renewable energy resources (both demand reduction and new generation) as a way to meet its stated community benefit goals.

This kind of community-development-focused Community Choice program differs in some substantial ways from an investor-owned utility. In addition, this kind of Community Choice program would include a number of features to help it meet its community benefit goals, as outlined below.

Features of a community-development-focused program

The following table shows the features of a community-development-focused East Bay Community Energy program and the impacts these features would have on meeting community benefit goals.

Feature	Impact
Implements a local build-out plan for renewable energy resource development: <ul style="list-style-type: none">• Builds and Integrates local renewable resources• Integrates local resources with market procurement• Specifies 10 year build-out scenarios to meet portfolio targets• Identifies financing/capitalization requirements, sources, and mechanisms, as well as return on investment	Builds economic development platform, which includes: <ul style="list-style-type: none">• greenhouse gas reduction• clean energy jobs• rate stability• social equity• local ownership and control of energy• community resilience• other community benefit goals
Flattens electricity load profile: reduces/spreads out peak loads: <ul style="list-style-type: none">• Uses load data to identify sources of peak loads• Designs programs to reduce/eliminate peaks• Uses storage, demand response, etc, to shift peak loads	Significantly lowers overall system costs of electricity by reducing expensive peak-load electricity
Reduces overall electricity load: <ul style="list-style-type: none">• Promotes conservation, energy efficiency, demand response, building retrofits, etc.• Provides energy efficiency services for commercial, residential, non-profit, and public buildings, and monetizes the savings• Creates neighborhood-based programs to foster ratepayer consciousness of electricity consumption/waste• Promotes building retrofit financing for low-income property owners and multifamily residences	<ul style="list-style-type: none">• Saves money for ratepayers• Increases economic development in energy efficiency and demand reduction• Reduces local greenhouse gas emissions• Creates local clean energy jobs• Increases social equity• Increases community energy consciousness
High renewable portfolio content: Exceeds California renewable portfolio standard (RPS)	Maximizes reduction of greenhouse gas emissions

Feature	Impact
<p>High local renewable portfolio content: Prioritizes community-based renewable generation</p> <ul style="list-style-type: none"> Identifies prospective sites for development and initiates development projects Invests in building local assets Builds technical capacity of new local businesses as renewable energy project developers and contractors Incentivizes cooperatives, minority businesses, and collective enterprise development 	<ul style="list-style-type: none"> Reduces local greenhouse gas emissions Increases local business development Creates local clean energy jobs Builds a more reliable, disaster-secure, and resilient electricity system Increases social equity Stabilizes electricity rates
<p>Integrated power planning: scheduling local and market-purchased power to lower costs, hedge against market volatility, and provide adequate reserves</p>	<ul style="list-style-type: none"> Increases reliability Lowers overall system costs of electricity
<p>Promotes behind-the-meter development: energy efficiency and renewable generation resources:</p> <ul style="list-style-type: none"> Markets behind-the-meter services and financing to building owners Creates neighborhood or sector-based programs to promote building upgrades Establishes easy financing mechanisms 	<ul style="list-style-type: none"> Increases local ownership of energy Increases social equity Increases community resilience saves money for building owners
<p>New programs to incentivize local build-out:</p> <ul style="list-style-type: none"> Prices for excess net-metering production that encourage maximum rooftop installation Feed-in Tariff program for new generation Shared renewables program (virtual net-metering) PACE financing On-bill repayment Streamlined solar permitting for all participating municipalities Incentives for demand response implementations 	<ul style="list-style-type: none"> Reduces local greenhouse gas emissions Builds local business Generates ratepayer savings Increases social equity Increases local ownership of energy assets Creates local clean energy jobs
<p>Labor, workforce development, and performance standards for EBCE projects:</p> <ul style="list-style-type: none"> Negotiates EBCE Community Workforce Agreements (or project labor agreements) Aggregates large numbers of small projects into larger projects done under Community Workforce Agreement Builds pathways for local residents and disadvantaged communities into family-sustaining jobs 	<ul style="list-style-type: none"> Improves wages and benefits for clean energy jobs: increasing skill level of workers, increasing union jobs, and building union strength Stabilizes communities Increases social equity Reduces costs of unemployment, crime, health care and other safety net programs
<p>Experimental/pilot programs for new technologies: micro-grid development, new local business development, neighborhood involvement, and partnerships with the water districts (like EBMUD) and transportation agencies (like BART)</p>	<ul style="list-style-type: none"> Increases new business development and innovation increases local economic development creates local clean energy jobs builds a more reliable, disaster-secure, and resilient electricity system

Feature	Impact
Builds synergy with electric vehicles: for public transportation, goods movement, private travel, etc.	<ul style="list-style-type: none"> • Lowers pollution and greenhouse gas emissions • Makes optimum use of resources • Improves local health
Social Equity: Programs to benefit communities most impacted by environmental and economic injustice: <ul style="list-style-type: none"> • Incentive programs and financing tailored to needs of low-income communities • Local hire and workforce development programs for disadvantaged communities • Minority and small business development programs • Opposition to utility shut-offs 	<ul style="list-style-type: none"> • All neighborhoods benefit from energy resource development and improved environmental health • Historically disadvantaged communities benefit from local business growth and clean energy employment development
Promotes community participation in shaping and implementing the EBCE program.	<ul style="list-style-type: none"> • Empowers communities • Increases social equity • Increases democracy

11/18/15

End Notes

¹ PG&E news release, June 21, 2016.

[https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20160621_in_step_with_californias_evolving_energy_policy_pge_labor_and_environmental_groups_announce_proposal_to_increase_energy_efficiency_renewables_and_storage_while_phasing_out_nuclear_power_over_the_next_decade]

² Quoted in Al Weinrub, *Energy Democracy: Inside Californians' Game-Changing Plan for Community-Owned Power*, *Yes! Magazine*, November 12, 2015.

³ “Meet the latest disruption for utilities: community power,” *EnergyWire*, June 9, 2016, <http://www.eenews.net/stories/1060038517>.

⁴ An [interactive map](#) of Community Choice initiatives in California is available at the [Clean Power Exchange](#) web site

⁵ Revenue bonds are repaid through revenues generated by public investment rather than through increased taxes.

⁶ According to the Santa Rosa Climate Action Plan, for example, the authors determined it would be extremely difficult for the city to meet its climate action goals unless it dealt directly with electricity consumption, and this was one of the rationales for the city council voting to join Sonoma Clean Power.

⁷ A net metering program charges customers who have behind-the-meter (rooftop) solar facilities for net energy they consume from the grid and credits them for any net energy they generate into the grid.

⁸ A feed-in tariff program incentivizes new renewable energy generation through standardized purchase contracts that guarantee a set payment for all generated electricity for a set duration of time (usually twenty years)

⁹ A shared renewables (usually solar) program allows for multiple investors and/ or subscribers of a renewable energy-generating facility to share the benefits of the electricity generated; as a way for renters and others unable to own their own solar system to reap the benefits of a solar generating facility

¹⁰ Two days after the historic 2014 People’s Climate March in New York City calling for climate action, federal and California State officials released an 8,000-page proposal for private renewable energy development on 22.5 million acres of California desert. See Carolyn Lochhead, *Energy plan calls for big renewables projects in state’s deserts*, September 23, 2014 [<http://www.sfgate.com/green/article/Sprawling-solar-farms-OKd-near-desert-national-5775871.php>]

¹¹ There are many studies that reflect the technical potential of decentralized energy systems. For example, see *U.S. Renewable Energy Technical Potentials*, National Renewable Energy Laboratory, July 2012 [<http://www.nrel.gov/docs/fy12osti/51946.pdf>] and *Bay Area Smart Energy 2020*, March 2012 [<http://pacificenvironment.org/-/1-87>]

¹² For detailed arguments about the benefits of decentralized energy systems, see: *Community Power: Decentralized Renewable Energy in California* [<http://communitypowerbook.com/>]

¹³ For an explanation of renewable energy certificates and their relationship to Community Choice, see: *What the Heck Is a REC?* [<http://www.localcleanenergy.org/what-the-heck-is-a-rec>]

¹⁴ Paul Fenn, a founder of the Community Choice movement, and author of California’s Community Choice law, was instrumental in drawing the distinction between Version 1.0 and Version 2.0

¹⁵ The standard regulated investor-owned utility model does not allow the utility to profit directly from electricity sales, only from the delivery of electricity, based on a guaranteed return on investments in distribution and transmission infrastructure.

¹⁶ “Behind the meter” refers to the customer’s side of an electricity meter (as opposed to the grid side): electricity generated or demand reduced on-site, so it is not measured by the meter (for example, rooftop solar generation, energy efficiency upgrades, Energy Star appliances, and so forth)

¹⁷ Program by which loans to homeowners or business owners for solar installations or energy efficiency retrofits are paid back over time through their property tax bills

¹⁸ Incentive program that allows customers to pay off the initial cost of a home solar installation or energy

efficiency retrofit through their monthly utility bill

¹⁹ *California's Distributed Energy Future, Fireside Chat*, March 16, 2016, Timestamp: 12:37 to 13:38

[<http://www.greentechmedia.com/multimedia/view/fireside-chat>]

“One of the bigger shifts that we see at the policy level is, is people clamoring for these clean community aggregators. ...These CCA's are really just a coup. It's local governments making decisions to carve off a piece of the customer [base] and sort of in a forced collectivization.”

²⁰ *Ibid*, Timestamp: 10:32 to 12:27

²¹ California Alliance for Community Energy website [<http://cacommunityenergy.org>]

²² NYS Public Service Commission, *Order Authorizing Framework for Community Choice Aggregation Opt-Out Program*, April 21, 2016 [<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B38EFD3B0-48BC-400E-9795-98CB5EFAE0FA%7D>]

²³ NYS Department of Public Service Staff Report and Proposal, *Reforming the Energy Vision*, April 24, 2014 [[http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/26be8a93967e604785257cc40066b91a/\\$FILE/ATTK0J3L.pdf/Reforming%20The%20Energy%20Vision%20\(REV\)%20REPORT%204.25.%2014.pdf](http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/26be8a93967e604785257cc40066b91a/$FILE/ATTK0J3L.pdf/Reforming%20The%20Energy%20Vision%20(REV)%20REPORT%204.25.%2014.pdf)]

²⁴ Seize Opportunities in California's Emerging DER Market [<http://infocastinc.com/event/california-distributed-energy/>]

²⁵ NYS Public Service Commission, *Order Authorizing Framework*, page 49.

²⁶ *Ibid.*, page 36.

²⁷ *Ibid.*, page 37.

²⁸ Targets taken from scenario in, [*East Bay Community Choice Energy: From Concept to Implementation*](#).

²⁹ Includes minority-owned, women-owned, and disabled veteran-owned businesses, and other such enterprises.