Case Study:
Marin Clean Energy

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University of Colorado-Denver | Studio II | May 3, 2011

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This case study of Marin Clean Energy was produced by members of the Spring 2011 graduate planning studio class in the Masters of Urban and Regional Planning Program at the University of Colorado Denver. For case studies of Cape Cod, Portland and the executive summary, please go to: http://cudenverenergystudio.weebly.com/.

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List of Acronyms

CCA	Community Choice Aggregation
MCE	Marin Clean Energy
MEA	Marin Energy Authority
GHG	Greenhouse Gas Emission
RPS	Renewable Portfolio Standard
IOU	Investor-Owned Utility
JPA	Joint Powers Agency
CPUC	California Public Utilities Commission

[Source: PublicDomainPictures.net]

1. Introduction

When California passed Assembly Bill 117 allowing cities and counties to aggregate the buying power of their communities for the procurement of electricity (also known as "community choice aggregation" or "CCA"), Marin County saw an opportunity to move toward a clean energy future. AB 117 set the stage for jurisdictions and local organizations to explore the potential for energy transition in their communities, creating opportunities for greater renewable energy as well as local generation. After an extensive process of collaborative planning that included feasibility studies, surveys, workshops, stakeholder meetings, and public hearings, Marin County drafted a business plan for Marin Clean Energy (MCE), a program that would take advantage of community choice aggregation to increase Marin County's renewable energy mix. Marin Energy Authority (MEA) was formed as a joint powers agency consisting of seven Marin communities to administer MCE, and MEA made headlines when it launched California's first CCA program on May 7, 2010.

This case study examines the process in which MEA challenged incumbent utility, Pacific Gas & Electric (PG&E) to become the supplier of electricity to Marin County residents. Affluent and progressive, Marin County prides itself in being an early adopter of new ideas and technologies on clean energy initiatives. PG&E, California's largest and most powerful utility, was determined to maintain its foothold as the top energy provider in California, after suffering from previous bankruptcy and an embattled public reputation. Given this backdrop, how was Marin County able to successfully establish and implement MCE? What strategies did PG&E employ to counter Marin County's efforts? What lessons can be learned? In the following pages, this case study seeks to address these questions and offer recommendations to the City of Boulder which is similarly pursuing clean energy goals amid the dominant presence of incumbent investor-owned utility Xcel Energy.

[Source: City-Data.com]

Marin County is located north of San Fransisco, across the Golden Gate Bridge. The county seat is San Rafael and in 2009, Marin County had the fifth highest income per capita in the U.S., at $91,483 (Census.gov). The County lies in a zone of extremely high biodiversity and endemicism with multiple ecosystems present, including oak woodland, mixed evergreen forest, riparian, and coastal strand (wikipedia, 2010).

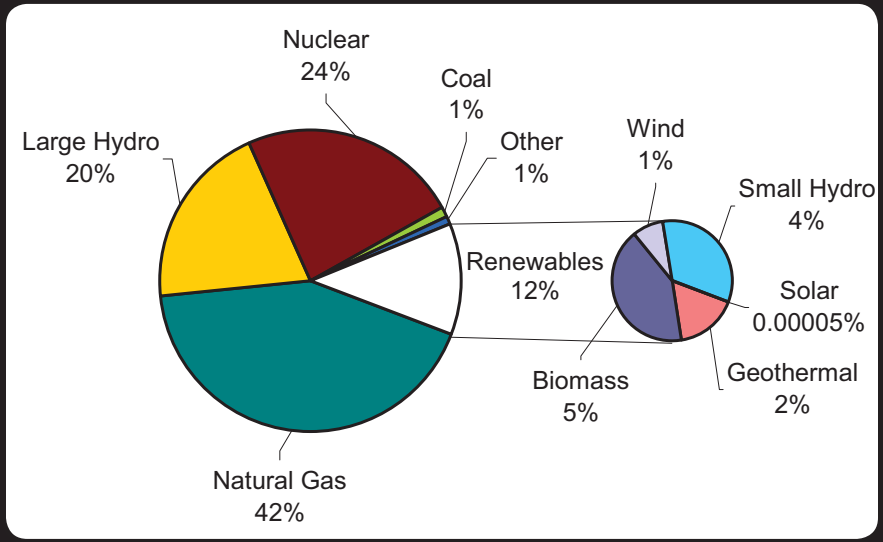
2. Clean Energy Goal

The story of MCE began in 2001 when Marin County staff and local citizens were exploring alternatives to reduce greenhouse gas ("GHG") emissions and improve sustainability in their communities. The passage of AB 117, which occurred during this investigatory period, created an opportunity for the county to seriously address GHG emission reduction and increase the percentage of renewable energy supplied to residents. After considering a number of "climate solution" alternatives, county staff and community groups quickly supported the creation of a CCA program as the best option to reduce GHG emissions.[1] Marin County favored CCA because it would have a more immediate and widespread impact than the other incremental options being considered.[2] The county wanted something more comprehensive with a faster timetable to achieve its goals for clean energy.

Marin County's mission was to reduce GHG emissions by increasing renewable energy supply.[3] In 2008, PG&E's energy mix consisted of only 12 percent renewable energy,[4] which Marin County considered "slow progress"[5] toward California's Renewable Portfolio Standards (RPS) of 20 percent by 2010.* Marin County's goal was more ambitious. It wanted to achieve 80 percent renewable energy supply by 2014. [6]

Through CCA, Marin also saw an opportunity to establish greater local control and stability in its energy supply. Prior to the creation of MCE, Marin County relied on electricity services solely from PG&E, one of the largest investor-owned utilities in the United States. PG&E supplies energy to 15 million residents in northern and central California across a 70,000 square mile coverage area.[7] For many years, residents of Marin County were "bundled" service customers of PG&E which provided all the traditional services of an electric utility: electricity, delivery, metering, billing, collection, and customer services. When Marin County faced supply disruptions and price increases during the energy crisis in California 2000-2001, it realized the vulnerability in relying on PG&E as its sole provider of electricity.[8]

Figure 1: PG&E Electricity Sources, 2005



[Source: Marin Countywide Plan, 2006]

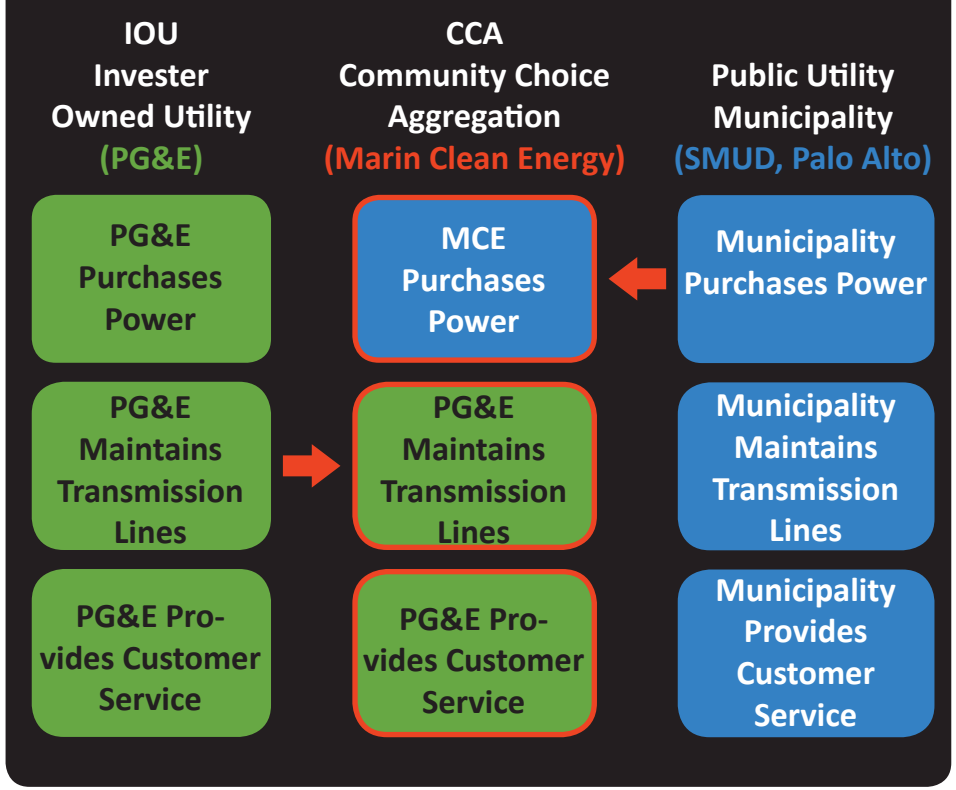
* In 2008, the RPS standard was increased to 33% by 2010

3. Community Choice Aggregation

With the creation of a CCA program, a process of "de-bundling" of retail electric services takes place. A local government becomes an "aggregator" for electric utility generation by purchasing electricity on the open market for resale to local residents. Through CCA, the local government has the flexibility to procure electricity from a variety of preferred sources such as renewable energy suppliers. Unlike municipal utilities which entail ownership and distribution, CCA programs need not include distribution facilities to serve electric loads. Rather, incumbent utilities like PG&E continue to own the transmission lines and are required to provide delivery services, as well as metering and billing, to CCA customers. In other words, CCA programs are a "hybrid" of traditional investor-owned utilities ("IOU") and public or municipal utilities. See Figure 2.

Once CCA is adopted by a city or county, all customers currently receiving electric generation services from PG&E would be automatically enrolled in the program, unless the customer notifies the city or county of its desire to "opt-out" and remain a bundled service customer of PG&E.[9]

Figure 2: Energy Options Compared



[Source: Marin Clean Energy Briefing Booklet, 2010]

4. Feasibility Studies

Beginning in 2004, Marin County, all Marin municipalities (see Figure 3) and two public water districts within the county initiated a process to investigate the risks and benefits of forming a CCA.[10] Marin County became a participant in the Local Government Commission (LGC) Community Choice Aggregation Demonstration Project, which was administered by the California Energy Commission and the United States Department of Energy to assist local governments in evaluating and implementing CCA.[11] LGC is a non-partisan, non-profit organization whose members include local elected officials, city and county staff, planners, architects and community leaders.[12] Working with Navigant Consulting, Inc., LGC assisted Marin County in conducting feasibility studies to identify the benefits and risks of creating a CCA program.[13] The results of the feasibility studies indicated that through CCA, Marin County could greatly increase the supply of renewable energy while providing electric rate stability, and possibly even lower electric rates compared to PG&E.[14]

Marin County's goal was to provide a greater percentage of renewable energy than currently offered by PG&E at rates competitive with PG&E.[15] The question was whether this would be economically feasible. For Marin County, the greatest risk in forming a CCA program was the potential for rates to exceed those charged by PG&E, causing customers to become dissatisfied and return to PG&E for service.[16] But the financial risks of a CCA program are fundamentally different than for a traditional electric utility which provides services at cost-based rates.[17] Unlike PG&E, whose rates are tied to revenue requirements, a CCA program would only need to consider the electric energy commodity since PG&E would continue to provide the other services – delivery over its existing distribution system, end-consumer metering, billing, collection, and all traditional retail customer services. Therefore, when Marin County evaluated the economic feasibility of a CCA program, only costs associated with wholesale electricity procurement and related business expenses were taken into account.[18]

Figure 3: Marin Communities

Cities Involved in Initial Study	Population (2009)
*Belvedere	2,057
Corte Madera	9,289
*Fairfax	7,099
Larkspur	11,799
*Mill Valley	13,404
Novato	53,450
Ross	2,287
*San Anselmo	12,058
*San Rafael	55,902
*Sausalito	7,199
*Tiburon	8,731

* Denotes current MCE members

[Source: Census.gov]

[Source: PublicDomainPictures.net]

In 2005, Navigant Consulting, Inc. conducted a financial evaluation to determine what cost savings, if any, would result from Marin County's transition to CCA. It modeled a supply portfolio for Marin County that contained a diverse mix of resources that would reflect the county's commitment to renewable energy.[19] The resource types in the portfolio included spot market purchases, contract purchases, natural gas power production, renewable energy purchases, renewable energy power production, and "off system" sales of excess energy into the spot market.[20] The total cost of service for the CCA program was calculated and compared to the generation costs charged by PG&E.[21] In addition, tax incentives, credits, and subsidies for renewable energy development were also taken into account since these could serve to offset costs.[22]

In short, the feasibility studies indicated that with appropriate risk mitigation and phased-in implementation measures, Marin County could reach its renewable energy target with no rate increases for customers if it was willing to finance renewable resource development to supply the CCA program.[23] The next step would entail drafting a business plan to determine how a CCA program would be organized, funded, and operated.[24] But before Marin County could move forward with a business plan, it had to first pitch the idea of creating a CCA program to the public. Economic feasibility alone was not enough to guarantee the adoption of CCA. Other factors, such as political will, would come into play to create the opportunities for change.

Figure 4: Summary of Electric Cost Savings from CCA Base Case Scenario

Year	Total CCA Costs	PG&E Charges	Savings	Percentage of Total Bill
2005	-	-	0.0	0%
2006	108.3	107.2	(1.0)	-1%
2007	108.8	109.1	0.3	0%
2008	116.7	113.1	(3.5)	-2%
2009	111.7	115.9	4.2	2%
2010	118.5	121.8	3.4	2%
2015	125.8	131.3	5.5	2%
2020	156.4	166.2	9.8	3%
2024	168.1	182.2	14.1	4%
TOTAL	**2,522.3**	**2,651.8**	**129.5**	**3%**

[Source: Base Case Feasibility Evaluation, 2005]

5. Grassroots Support

Marin County's transition to CCA was aided by strong support of local organizations who demonstrated commitment in the early stages.[25] Community input leading to the launch of MCE was essential. As county staff continued to monitor the status of AB 117 in the California state legislature, community groups in Marin were actively advocating for CCA.

The CCA development process in Marin County benefitted from the support of an alliance of local organizations such as Sustainable Marin and the local chapter of the Sierra Club, for extensive public outreach and communication to county residents.[26] A handful of leaders from these community groups helped to organize public meetings and coordinate activities for precinct walking, door-to-door advertising, mailers, and high profile visibility at farmers markets and parades.[27]

Organizational and networking capacity was a strong feature among these groups. It enabled an ad hoc alliance of leaders to form and work together effectively. An important role of these group leaders was to serve as an intermediary between the county and the public, for channeling support from prominent local businesses and national environmental organizations. Endorsements from such entities resonated well with the media and the public, helping to attract regional and national attention and amplify overall support for the project.[28]

Key leaders from Marin County, including Charles McGlashan, Marin County Supervisor and MEA Chair, and Dawn Weisz, Planner for Marin County and current Executive Officer for MEA, were also fundamental during the planning and implementation phases of MCE. These leaders maintained consistent public engagement and conveyed important information about MCE to the different municipalities within the county. Specifically, they worked closely with city managers, the "gatekeepers" who provided information to their city councils on decision-making matters.[29] Gaining support from city managers, who held considerable influence over their city councils, was vital for moving the project forward.

Seeing the strong grassroots push toward a greener, more sustainable community, Marin County sought to gauge the interest of residents in CCA by conducting a countywide survey in 2007.[30] Thousands of residents were contacted and the overwhelming response was positive. Ninety percent indicated that reduction of GHGs was important to them, seventy-four percent indicated that they would support local government in becoming a provider of "greener" energy sources, and sixty-nine percent indicated that they would be willing to pay up to 5 percent more in their electricity bills for greener energy.[31]

More than 200 public meetings and hearings were held in Marin County to discuss and review the development of a CCA program.[32] During an extensive collaborative planning process, representatives of participating municipalities, independent consultants, local experts, community and business groups, and other stakeholders worked together to draft a business plan for the CCA program which was released in April 2008.

[Source: SanfranciscoBay.SierraClub.org]

6. Business Plan

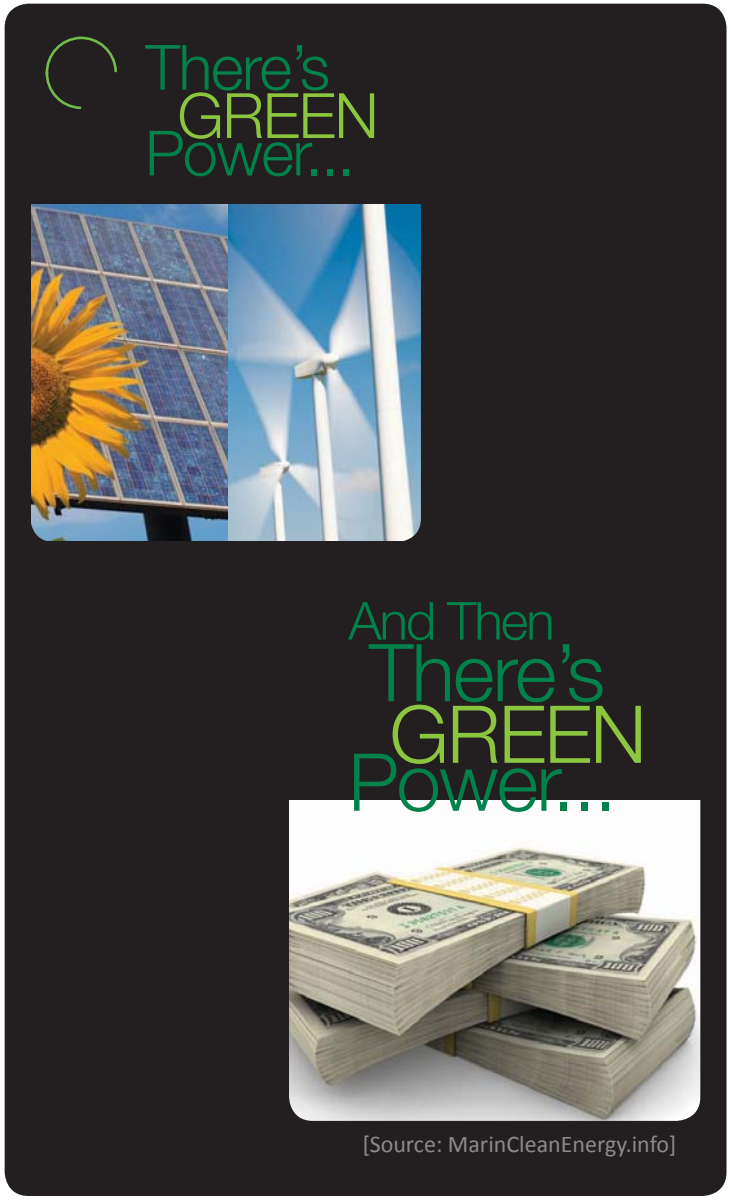
According to the business plan, MCE would phase in customer enrollment in three stages beginning with municipal accounts, then commercial and industrial customers, and finally all remaining customers.[33] At full implementation in 2011, MCE was expected to serve over 111,000 retail customers and have annual electricity sales of over 1,300 Gwh. Annual revenues were projected to be approximately $128 million.[34]

Beginning with Phase 1 customers, MCE would contract with a third party electric supplier and establish specific renewable standards that the supplier must meet depending on how many customers participate and at which rate tariff they selected.[35] Over a period of time, MCE would continue to increase the renewable energy level provided by the supplier until MCE is able to develop its own renewable generation capacity.[36]

MCE would develop two distinct rate tariffs between which customers may choose. The first rate tariff would supply 100 percent renewable energy at an estimated 1.9 cents/kWh* while the second rate tariff would offer a graduated renewable energy supply option at a rate equivalent to incumbent utility, PG&E.[37]

For the four-year implementation period, it was estimated that MCE would need to procure power supply at an average cost of 8.8 cents per kWh to be able to offer rates equal to those of PG&E. Startup costs associated with Phases 1 and 2 were estimated at $6.4 million and MCE's capital requirements for Phase 3 would increase to approximately $15.8 million.[38] Financing to support development of MCE's renewable generation capacity would require an approximately $475 million issuance of revenue bonds.

The business plan noted that the above estimated costs and revenue projections were only illustrative and were subject to change based on responses to requests for proposals from third party electric suppliers.[39]



[Source: MarinCleanEnergy.info]

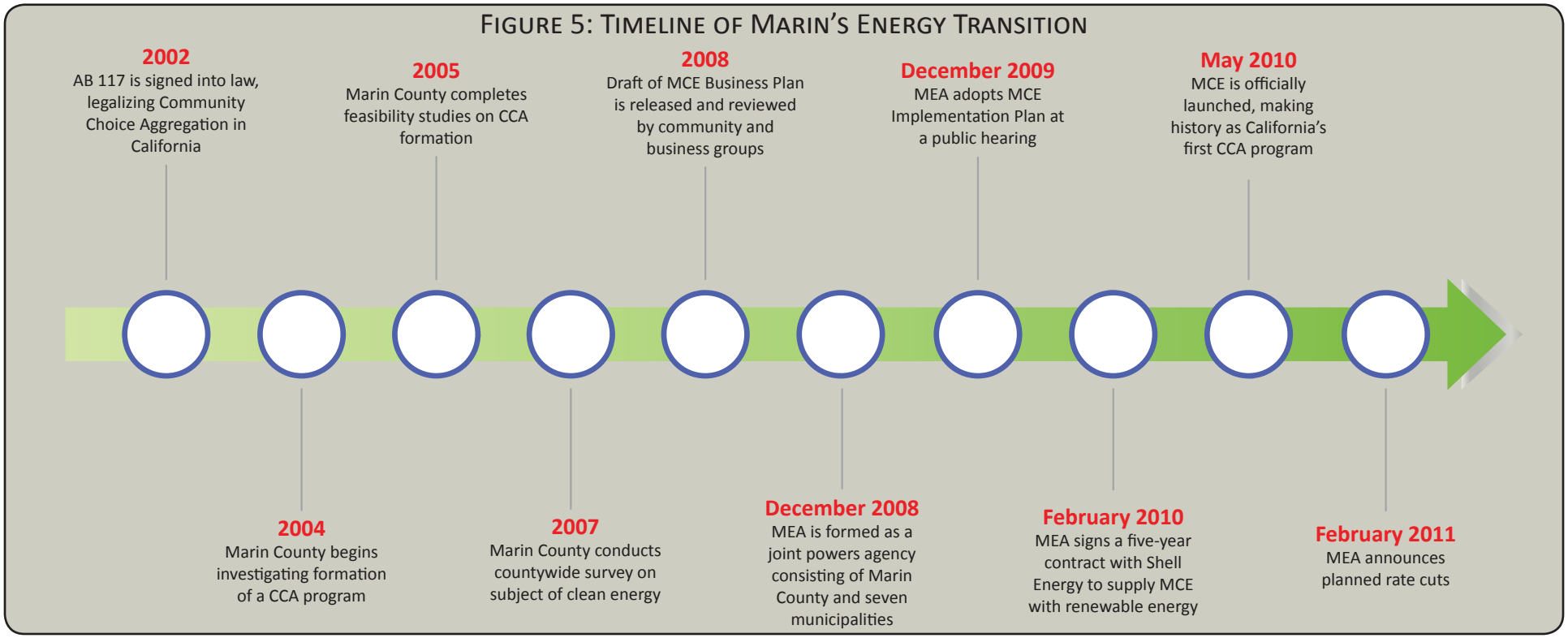
* The deep green program premium is now at 1 cent/kWh

7. Marin Energy Authority

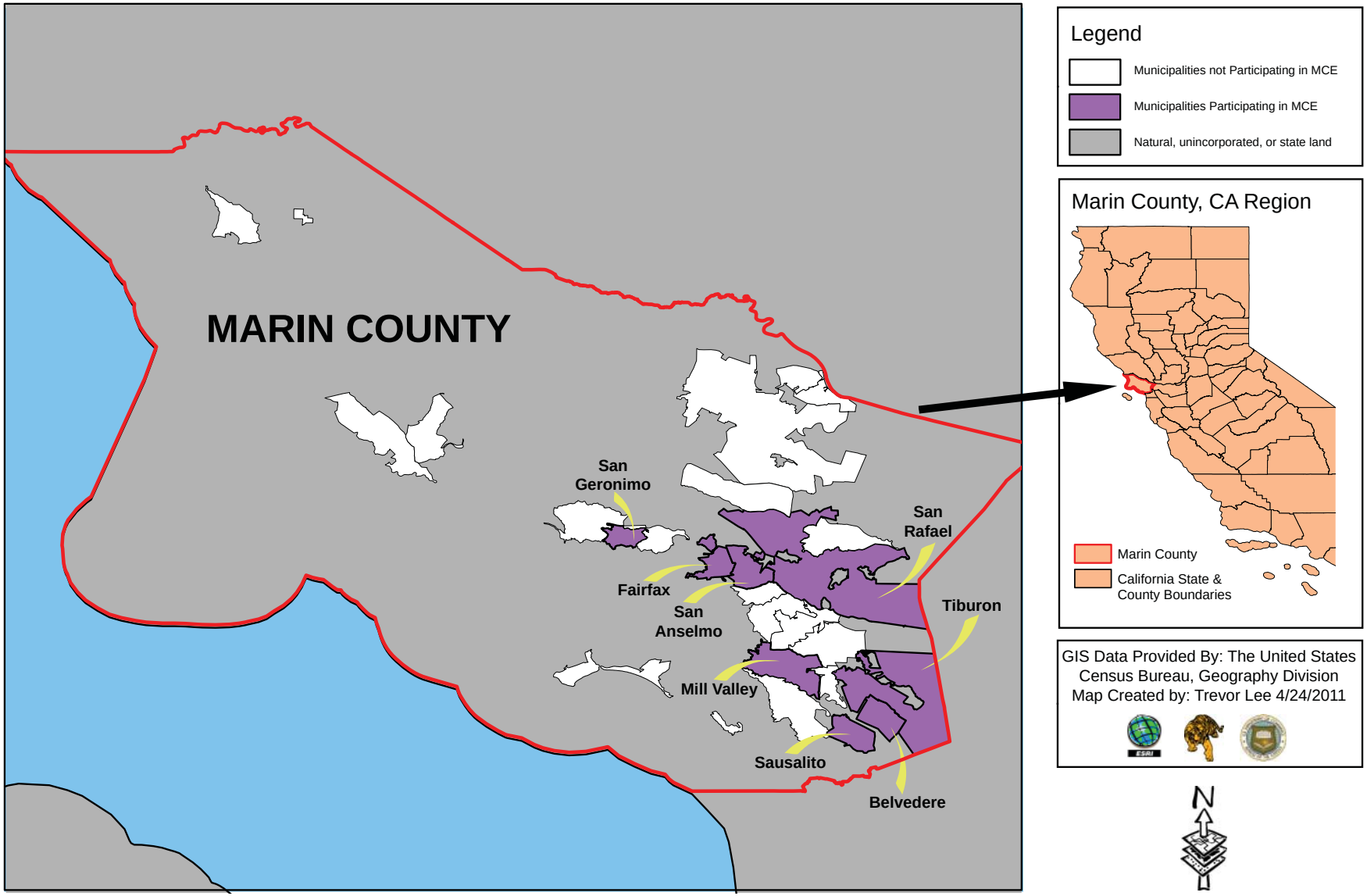
MEA was formed in December 2008 as the independent entity consisting of Marin County and seven Marin municipalities that would administer MCE. Of the original twelve jurisdictions that participated in the investigation of CCA adoption, Marin County, City of Belvedere, Town of Fairfax, City of Mill Valley, Town of San Anselmo, City of San Rafael, City of Sausalito, and the Town of Tiburon decided to join MEA. The municipalities of Novato, Corte Madera, Larkspur, and Ross opted not to become members of MEA.

MEA was established as a joint powers agency (JPA). JPAs are common legal structures that combine city and county jurisdictions for the procurement of long-term power contracts. The JPA structure was presented as an attractive mechanism for Marin County to offer electricity in a more economical manner.[40] The benefits of JPAs include the authority to issue low cost bonds for financing and minimization of direct exposure to risk of member jurisdictions.[41]

MEA officially launched MCE on May 7, 2010. It made headlines as the first community in California to adopt CCA.



Marin Clean Energy Member Communities



8. Opposition to Marin Clean Energy

While Marin County continued to build overwhelming community support for CCA, it was not without opponents. The Marin Republican Party passed a resolution urging the Marin County Board of Supervisors to withdraw its support for MCE citing high startup and operating costs in the wake of the county's estimated budged shortfall.[42] Eleven former Mill Valley mayors signed a letter asking the city council to withdraw from MEA and not participate in MCE, arguing that the program is unfair to the residents of Mill Valley as it poses financial risks to the city and its taxpayers.[43]

One of the most vocal opponents to MCE was the Marin Common Sense Coalition.* Largely funded by PG&E and represented by former California assemblyman Joe Nation and former Marin County supervisor Gary Giacomini, the Marin Common Sense Coalition argued that MCE carried too many financial risks for Marin County governments, residents, and businesses and rejected the notion that MEA could sustain its promise to offer customers prices equivalent to what they were paying to PG&E and claimed that MEA could and would likely raise rates in the future.[44] Moreover, the Marin County Common Sense Coalition argued that since MEA would not be regulated by the California Public Utilities Commission, it would leave "politicians" responsible for determining how much MCE customers would be charged.[45]

Many of the voices opposed to MCE cited the December 2009 report issued by the Civil Grand Jury, an independent, court-appointed, government watchdog which recommended that the MCE program be abandoned due to "undefined costs" and "minimal benefits".[46] The Civil Grand Jury appeared to take on a middleman role in the debate over the clean energy program. In the report, the Civil Grand Jury pleaded with MEA to "step away" from its "adversarial public posturing" and try to meaningfully work with PG&E.[47] To PG&E, the Civil Grand Jury demanded the utility to "return to the table"

[Source: MarinIJ.com]

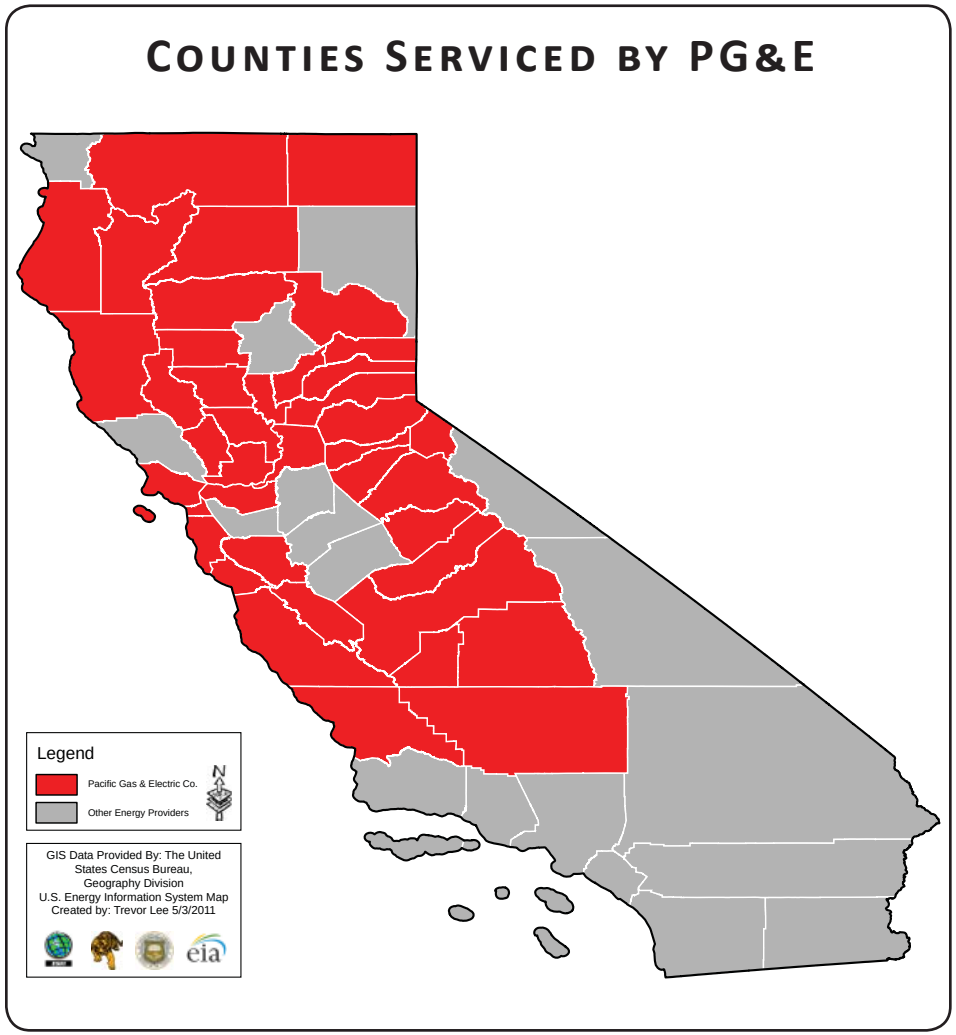
and work with Marin County to become a "model" partnership for GHG emissions reduction.[48] The problem, however, was the inability of MEA and PG&E to agree on any real solutions.

Beginning in 2006, the greatest challenge for MEA was its increasingly rocky relationship with PG&E. When Marin County began investigating the possibility of forming a CCA program, it had hoped to develop a working relationship with all its closest stakeholders, including PG&E.[49] During the process, Marin County reached out and sought to form a new relationship with PG&E. The utility had initially supported the passing of CCA legislation in California and spoken in favor of CCA adoption for Marin County, viewing it as a better alternative than municipalization. At the outset, PG&E offered to work with Marin County to reach clean energy standards. MEA suggested that PG&E create a special program for Marin County to develop energy services but PG&E declined.[50] The problem was that PG&E was con-

* www.commonsensemarin.com

strained in its ability to supply the amount of renewable energy desired by Marin County. When MEA released a Request for Proposal (RFP), it invited PG&E to bid and present ideas for renewable energy. PG&E responded to the RFP bid with what Marin County considered a "weak" proposal for energy and system changes.[51] Soon after, Marin County's relationship with PG&E began to sour and according to Marin County, PG&E became increasingly hostile to its plans for CCA adoption.[52]

One reason for the difficulty of MEA and PG&E to work together was the nature of their relationship as both competitors and partners.[53] Development of a CCA program would necessarily involve a loss of business for PG&E as MEA would procure and sell energy to Marin residents in direct competition with PG&E. At the same time, MEA and PG&E would have to become partners in the CCA program as PG&E would be required to provide delivery services for MCE. Under CCA laws, PG&E would be forced to operate its transmission lines to deliver MCE-supplied power to MCE customers. In short, the dichotomy of being both partners and competitors would only frustrate the relationship between the two parties.



9. PG&E's Anti-CCA Campaign

AB 117 clearly states that investor-owned utilities must cooperate with efforts to form CCA programs.[54]

> "All electrical corporations shall cooperate fully with any community choice aggregators that investigate, pursue, or implement community choice aggregation."
> *-Ca. AB 117, § 366.2(c)(9))*

Despite wording in AB 117 requiring utility cooperation with CCA, PG&E embarked on a campaign to challenge the implementation of MCE. PG&E threatened to suspend delivery of electricity to MCE customers over its power lines,[55] offered a toll free number for prospective MCE customers to call to opt out before the beginning of the statutory notification period,[56] used phone banks to call customers and convince them to not affiliate with MCE[57], sent fliers to households throughout Marin warning of MCE's "risky energy scheme", and also threatened to launch a legal challenge against MEA based on CEQA. [58]

Such activities prompted community groups in Marin County to contact the California Public Utilities (CPUC) regarding PG&E's behavior.[59] In response, the CPUC sent a warning on May 3, 2010 ordering PG&E to "immediately cease" using telephone and direct mail tactics that "thwart MEA's efforts to launch the new CCA".[60] The CPUC noted that PG&E was under statutory obligation to abide by the CCA law which requires electrical corporations to cooperate with community choice aggregators and threatened to impose fines if PG&E were to violate the CCA process laid out in AB 117. PG&E's opposition was formidable. According to MEA, tactics used to "derail" MCE included the following:

- "Manipulating local council members and other decision makers to pressure municipalities to not participate in MCE"
- "Refusing to sign the CCA Service Agreement to deliver electricity to MCE customers, as required by the CPUC"
- "Organizing untruthful and misleading anti-MCE marketing to thousands of potential customers"
- "Collecting opt outs before program commencement, outside of the statutory opt out period"
- "Contacting thousands of customers by phone to aggressively encourage opt outs outside of the statutory opt out period"
- "Threatening to file a CEQA lawsuit against MCE's first power purchase agreement"[61]

One Marin County Supervisor publicly stated that he considered PG&E's opposition to MCE to be the biggest threat to its survival.[62] Four Marin municipalities – Novato, Corte Madera, Larkspur, and Ross ultimately decided not to join MEA – due to "financial risks".[63] In reality, these communities may have been co-opted by PG&E. According to MEA, PG&E worked tirelessly to limit participation from individual municipalities in the county. Such strategies included illegally offering one particular city a sustainability staff employee if they chose not the join the CCA program. The staff employee never materialized, but the city had already voted not to join MEA.[64]

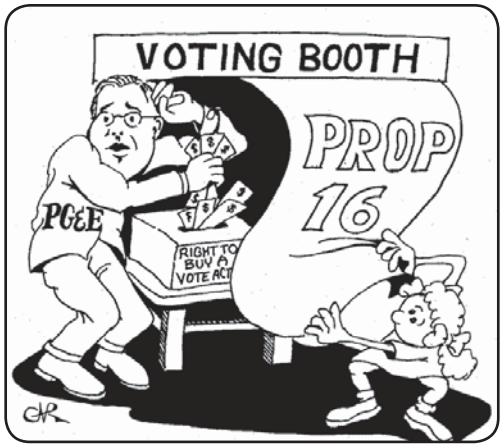
The substantial anti-CCA marketing effor ts by PG&E created a difficult obstacle for MEA. The result of PG&E's campaign was a significant amount of customer opt-outs and some tarnished perceptions of MEA. Still, project organizers were able to maintain enough support to ultimately finalize and implement MCE. Factors in maintaining this support included the following: key leadership from Marin County and constant communication with local city managers who were highly influential in city council decision-making the alliance of leaders from community organizations who provided positive outreach for the program and engagement with the media and widespread support from well-known organizations and prominent local businesses.

> *"PG&E is the reason [MCE] has eight members instead of twelve."*
> *-Dawn Weisz, MCE*

A shift in public attitude also occurred during PG&E's anti-CCA campaign. While PG&E's marketing efforts convinced some people that it could deliver clean energy, others saw PG&E's anti-CCA stance as hypocritical to its stated green objectives causing some MCE skeptics to abandon their initial support for PG&E.[65] Many customers that initially sided with PG&E were finally put-off by the extreme tactics employed by the utility.[66]

PG&E's most expensive campaign was funding Proposition 16, a state ballot initiative that would have made it more difficult for communities in California to adopt CCA. PG&E reportedly spent $46 million on this campaign which included mailers and slate cards targeting both Democratic and Republican voters, television and radio commercials across the state, warning of government plans to take over electric service.[67] Through Proposition 16, PG&E sought to create a constitutional amendment that would require local governments to win the approval of two-thirds of their voters before creating a CCA program. According to opponents of Proposition 16, requiring supermajority approval for public power efforts was excessive and PG&E's funding of the initiative only demonstrated its political attempt to protect its monopoly and buy its own amendment to the state Constitution.[68] Ultimately, Proposition 16 failed. It was noted that PG&E lost by wider margins in counties where they actually serve customers.[69]

[Source: SFPublicPress.org



[Source: BerkeleyDailyPlanet.com]

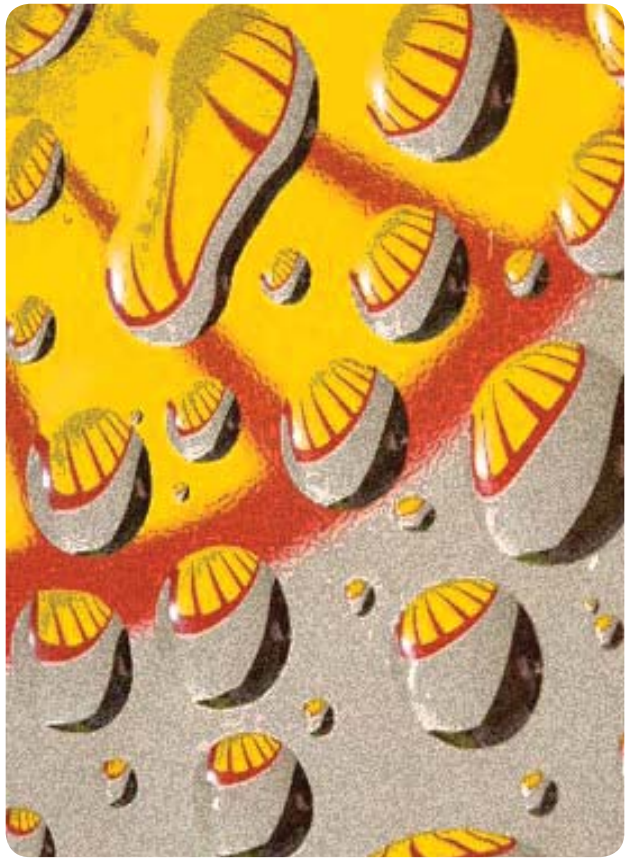
[Source: TransitionWestMarin]

11. Continuing Challenges

In 2009, MEA faced a number of other challenges include defending its first power contract with Shell Energy. After releasing an RFP and hosting a pre-bidders conference in May 2009, MEA selected Shell Energy for a five-year contract of renewable energy purchase. MEA's commitment to clean energy was momentarily questioned when some local activists pointed out the irony of MCE purchasing "clean" energy from "one of the dirtiest corporations on the planet".[70] However, MEA was quickly able to achieve buy-in from Marin's "progressive public" regarding the Shell contract. MCE's transparent process enabled clean energy activists to participate in discussions and better understand the reasoning behind and the tradeoffs involved in the decision to choose Shell.[71] County officials explained that the Shell contract was a "means to a greater end" of eventually generating enough revenue to invest in renewable energy projects without Shell.[72] MEA chose Shell because of its ability to provide renewable energy at lower rates than what others could offer. Under the Shell contract customers would be able to purchase electricity generated from 25 percent renewable sources at the same price that PG&E is currently charging customers.[73]

The Shell contract also came under attack from PG&E. PG&E argued that Shell emits more GHGs overall than does PG&E which obtains energy from nuclear plants and hydroelectric projects (according to PG&E, these are carbon-neutral sources), and therefore MEA was required to conduct an environmental impact assessment under the California Environmental Quality Act (CEQA).[74] To address this issue, MEA included a new provision in its contract with Shell in which Shell pledges to provide energy with a carbon content equal to or less than the carbon content of energy supplied by PG&E. MEA did not, however, concede that PG&E was correct in its argument. Rather, the inclusion of the new provision was merely a means to "blunt any possible legal challenge" by PG&E.[75]

While MEA's relationship with PG&E remains somewhat rocky, things between the two parties have "functionally improved" since implementation of MCE.[76] MEA is working on a legislative proposal to improve reporting by the CPUC on PG&E's cooperation with CCA programs. While MCE continues to experience technical glitches in its system, continued partnership with PG&E remains essential to the smooth functioning of its program.



[Source: Guardian.co.uk]

12. Indicators of Success

Challenges notwithstanding, MEA has achieved a metric of success with its clean energy program. By doubling the amount of renewable energy its customer base was consuming with PG&E while keeping rates equal to PG&E's, MEA has met its initial goals.

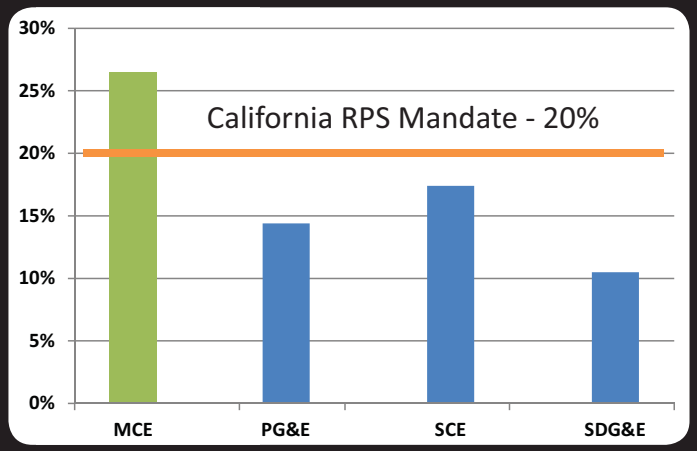
MCE provides two energy supply options to customers. The "Light Green" option, in which customers are automatically enrolled in unless they opt out, guarantees that 25 percent of the electricity comes from renewable sources at rates equal to or less than PG&E's rates. The "Deep Green" option offers 100 percent renewable energy at rates approximately 7 percent above PG&E's rates. Currently, the rate for the Deep Green option is 1 cent/kWh, which is considered very reasonable.[77] While most customers have been enrolled in the Light Green, a large number of Marin residents have become interested in the Deep Green. In fact, MEA had to create a waiting list for the Deep Green program due to a higher than expected demand.[78] As soon as MEA purchased more clean energy, it was able to reopen the Deep Green program to those on the waiting list. Currently, 7 percent of MCE customers are enrolled in the Deep Green program.[79]

MCE is outpacing PG&E and other California investor-owned utilities in the level of renewable energy content it supplies to its customers.[80] MCE's renewable portfolio exceeds that of PG&E, Southern California Edison, and San Diego Gas & Electric by approximately 50 percent, 35 percent, and 90 percent, respectively.[81]

MCE provides 78 percent carbon-free power from a variety of sources including solar, wind, hydroelectric, and geothermal sources.[82] Once MCE is fully implemented across the utility's coverage area, it is expected to cut countywide carbon emissions by up to 500,000 tons, or 13 percent.[83]

In August 2010, the U.S. Environmental Protection Agency recognized MEA as one of the top clean power providers in the country, ranking MEA among the top twenty green-power purchasers.[84]

Figure 6: Renewables Portfolio Standard Procurement 2010



[Source: Marin Clean Energy, 2010]

In short, Marin County's transition to a clean energy program was considered by its facilitators to be a large success that exceeded most financial and energy targets. A significant challenge associated with the transition, from both a functional and marketability standpoint, was the ability for MCE to maintain comparable rates with PG&E. MCE was able to meet this goal and deliver power to customers at rates competitive with PG&E's. To date, these rates have yet to undergo any increases since MCE's inception. The Deep Green program, which charges a 1kwh premium for 100 percent renewable energy, accounts for seven percent of MCE's customers. This is a sizeable percentage when compared to the one percent of PG&E's customers participating in PG&E's own clean energy program.[85]

13. Discussion

From the beginning, Marin County had a vision of a clean energy future. Turning a vision into reality, however was no easy feat. Deep-seated interests of a powerful and long-standing utility made it a challenge to move forward. Yet, despite the obstacles, several factors contributed to Marin County's successful energy transition: the presence of a committed network of grassroots community groups, the input of a team of competent and reliable technical consultants and advisors, the dedicated leadership of key individuals, and the openness and transparency of the entire planning process.

From the outset, community groups were active in supporting the idea of CCA in Marin County. These groups, and especially key leaders within these organizations, were important in pushing CCA as the preferred method for increasing renewable energy and reducing greenhouse gas emissions. Well-organized and well-established, these groups which included local chapters of national environmental organizations, were able to offer a level of expertise and professionalism, assisting county staff with public outreach and communication. Letters of support from groups such as the Sierra Club Marin Chapter helped legitimize the aims of MEA in public forums and meetings. The relationship between these grassroots groups and county staff involved one of mutual support. Together, they organized numerous public workshops and stakeholder meetings to discuss the formation of MCE. The public nature of these events helped to build public trust and confidence. Grassroots groups were also critical in improving perceptions of MEA during PG&E's anti-CCA campaign.

[Source: Guardian.co.uk]

Technical work from consultants and other experts was another driver of MCE's success. The feasibility studies and the technical analyses produced during the evaluation stage were important in not only identifying the risks, costs, and benefits of the project, but also served to lend authority and legitimacy in the face of a powerful energy company. The copious production of technical work became pivotal for advancing CCA development as it provided reliable information about a potentially changed energy future.

One notable aspect of the planning process was the presence of key leaders and important figures who demonstrated commitment to the success of MCE. Two staff members from Marin County, Charles McGlashan and Dawn Weisz, provided significant leadership and dedicated much of their personal time facilitating meetings and serving as representatives for the clean energy program. Roughly twelve other individuals from local community groups were also identified as key leaders, showing similar dedication to the push for CCA.

Transparency and openness in communications to the public was another important feature of the planning process. A professional website was developed for MCE and many key documents were placed on the website, easily accessible to the public. MCE leaders were amenable to disclosing information, sharing ideas and actively involving the community in the process. Again, this had the effect of helping to build trust in the public and to counter some of the opposing marketing claims about the program's viability.

> "The outcome with MCE was much stronger because of their openness to involvement from the public"
> *-Megan Matsen, Mainstreet Moms*

Many of the lessons learned from Marin County's experience are transferable to other communities pursuing a clean energy program. The City of Boulder, in particular, shares a similar demographic population as Marin County: a progressive and well-informed activist community. And like Marin County, the City of Boulder faces a formidable challenge in overcoming likely opposition from an incumbent investor-owned utility.

While CCA is not currently available in Colorado, the lessons from Marin County remain the same: building grassroots support, mobilizing key leaders, networking with stakeholders, and ensuring transparency throughout the entire planning process. Equally important was providing reliable technical information and analyses so that public officials could make informed decisions about CCA. All these factors were perhaps more important than the CCA structure itself which can create divisiveness between parties as was the case with MEA and PG&E.

With its goal of localization, the City of Boulder has the opportunity to fashion a clean energy program different from Marin County's, but one that still incorporates the good practices of community organizing, public outreach, and stakeholder involvement.

When the California state legislature passed AB 117, a window of opportunity was opened. Though important, CCA legislation alone was not enough to push the clean energy program forward. Overcoming opposition from a powerful incumbent utility was the difficult battle for Marin County. PG&E fought back aggressively perhaps because it believed that the success of Marin County's CCA program would encourage other California communities to follow the same path. Funding the state ballot initiative, Proposition 16, was PG&E's way of trying to deter other communities from adopting CCA so that it could maintain its stronghold on the market. While Marin County's relationship with PG&E has improved, PG&E's marketing campaign still influences many attitudes about MCE.

MCE is a step toward a more resilient community for Marin County which makes clean energy and sustainability a top priority in its agenda. Citizens were very interested in a clean energy program and community groups were effective in building and shaping this interest into action. While PG&E waged a difficult battle against MCE, the regional capacity-building achieved through effective communication and partnerships among county officials and local organizations was robust enough to largely overcome these oppositional barriers and allow Marin County to achieve its objectives for the CCA program. It seemed that everything needed for a successful transition was present to make it happen – leadership, community, and political will.

[Source: SierraSun.com]

[Source: WomensEnergyMatters.org]

Women's Energy Matters (WEM) is one of the many citizen groups that supported Community Choice Aggregation in Marin County. WEM advocates for clean energy, healthy food, and caring communities.

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