



Energy Commission

INFORMATION CALENDAR

February 25, 2014

To: Honorable Mayor and Members of the City Council
 From: Berkeley Energy Commission
 Submitted by: Scott Murtishaw, Chairperson, Berkeley Energy Commission
 Subject: Update on CCA Activity in Other Jurisdictions

INTRODUCTION

In November, 2010 the Berkeley Energy Commission submitted a report the City Council entitled "[Potential Benefits and Risks of Implementing Community Choice Energy](http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Energy/BEC_CCA_FinalReport.pdf)" (http://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Energy/BEC_CCA_FinalReport.pdf) (the 2010 CCA report). This report serves to update the Council on recent activity and developments regarding Community Choice Aggregation (CCA) formation.

CURRENT SITUATION AND ITS EFFECTS

Since the publication of the 2010 CCA report, Marin's CCA has significantly expanded its operations and experience, Sonoma County has authorized and begun implementation of its own CCA, and several other jurisdictions have moved along the path of developing their own programs as well. In addition to Marin and Sonoma, San Francisco has also developed a CCA program, although it is currently unable to move forward with implementation. We will cover background for each of the California examples below, and where information is available discuss governance, financing, supply portfolio details, GHG emissions, and electricity rates.

BACKGROUND

CCA, also known as community choice energy, is a provision of California law that allows cities, counties or joint powers agencies to purchase electricity or related services on behalf of the customers in their jurisdictions. A CCA is not a municipal utility in that it does not own the distribution infrastructure. The regulated investor owned utility (IOU), in Berkeley's case PG&E, would continue to own and operate the distribution grid, as well as to provide transmission, billing and other customer services. The CCA would determine the energy supply mix and rate structures.

On December 18, 2013 the Commission acted to approve the CCA report as amended and to direct staff to write a companion staff report to deliver the CCA report to City Council (motion: Murtishaw; second: James; ayes: Bell, Constantine, James, Lee, Murray, Murtishaw, Wang, Schlachter; nays: none).

POSSIBLE FUTURE ACTION

The Commission will continue to monitor CCAs and provide periodic reports to Council.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Unknown at this time.

CONTACT PERSON

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Attachments:

1: Update to Berkeley City Council on CCA Activity in Other Jurisdictions

Update to Berkeley City Council on CCA Activity in Other Jurisdictions

1 Introduction

In November, 2010 the Berkeley Energy Commission submitted a report to the City Council entitled “Potential Benefits and Risks of Implementing Community Choice Energy” (the 2010 CCA report). This memo serves to update the Council on recent activity and developments regarding Community Choice Aggregation (CCA) formation. CCA, also known as community choice energy, is a provision of California law that allows cities, counties or joint powers agencies to purchase electricity and provide energy efficiency and related services on behalf of the customers in their jurisdiction. A CCA is not a municipal utility in that it does not own the distribution infrastructure. The regulated investor owned utility (IOU), in Berkeley’s case PG&E, would continue to own and operate the distribution grid, as well as to provide transmission, billing and other customer services. The CCA would determine the energy supply mix and rate structures.

Since the publication of the 2010 CCA report, Marin’s CCA has significantly expanded its operations and experience, Sonoma County has authorized and begun implementation of its own CCA, and several other jurisdictions have moved along the path of developing their own programs as well. In addition to Marin and Sonoma, San Francisco has also developed a CCA program, although it is currently unable to move forward with implementation. We will cover background for each of the California examples below, and where information is available discuss governance, financing, supply portfolio details, GHG emissions, and electricity rates.

In making their portfolio decisions and setting rates, CCAs have several key considerations to make. In order to reach their targeted clean energy and emission reduction goals, each CCA will procure some combination of fully bundled renewable energy, renewable energy credits or certificates (RECs), and traditional electricity supply. Fully bundled renewable energy means that the CCA has purchased both the electricity itself and the renewable attributes of the generation. These purchases *replace* traditional fossil-fueled generation. RECs represent the renewable attributes of the electricity generation, although the electricity commodity itself may not be consumed by the purchaser of the REC. These can be used to *offset* non-renewable generation. Whatever portion of the CCA demand is not replaced or offset by renewable energy must be procured through traditional electricity purchases, or by a mix of conservation, efficiency and other demand side resources. Furthermore, a CCA must consider whether it is creating new renewable resources or simply diverting existing ones. A common criticism of Marin’s CCA in its early days was that it was not creating any new renewable generation and simply paying a premium for clean energy from existing facilities. This may simply be a question of timing and availability as it takes time to develop adequate generation facilities. Other critical questions concern the California

RPS eligibility of the resource, and whether it counts as a “local” project or not.¹ Some would argue, for example, that a CCA should focus on building clean generation primarily within its service territory even at the risk of a price premium, while others contend that an economically rational decision would seek the renewable resources with the least cost no matter where they are located on the Transmission and Distribution grid. Finally, when setting rates, the CCAs must acknowledge the impact of these purchases on the generation component of rates. All other things equal, if the cost of generation goes up because of a heavy reliance on renewable sources, total rates will go up as well. How to mitigate this upward pressure is a key issue for the CCAs.

2 Marin Energy Authority/Marin Clean Energy

2.1 Background, Governance and Start-Up Financing

Marin Energy Authority (MEA) operates the only functioning CCA in California. The program, known as Marin Clean Energy (MCE), has been serving customers since 2010. MCE currently provides service to customers in all cities located in Marin County, unincorporated Marin County, and, beginning July 1, 2013 to the City of Richmond. With the expansion to Richmond, MCE now provides service to approximately 125,000 customers. Customer opt-out rates have averaged approximately 23% since MCE first began offering service.

MEA’s Board of Directors is composed of one member from each of the 13 participating jurisdictions. Each member has a voting share that is a hybrid of an equal vote per jurisdiction and a vote weighted in proportion to each jurisdiction’s share of annual energy consumption.

At MEA’s September 2013 Board retreat, the Board of Directors adopted a policy to structure expansion of MCE’s service territory to include jurisdictions located within 30 miles of the existing boundaries and having less than 40,000 accounts. MEA has had preliminary discussions with other jurisdictions about joining MCE including Napa County and the cities of Albany, El Cerrito and San Ramon.^{2, 3} At MEA’s December 5, 2013 Board of Directors meeting, the Board approved preliminary membership requests by the City of Albany and Napa County. MEA staff will conduct a rate impact analysis, for which Albany and Napa County must each reimburse MEA an estimated \$35,000, to determine whether accession of Albany and Napa County customers could raise MCE’s rates. If the

¹ The California Public Resources Code Section 25741, Subdivision (a)(2)(B) lists the eligibility requirements for resources to count towards a retail electricity provider’s RPS targets. The two major exclusions for eligibility are hydroelectric facilities with a capacity greater than 30 megawatts and out of state facilities that commenced operations prior to January 1, 2005 unless they were already under contract as of January 1, 2010.

² Seidman, Peter. “Upfront: Today Marin Clean Energy, Tomorrow the World!” Pacific Sun, November 22, 2013. http://www.pacificsun.com/news/environment/article_2cd64d10-5182-11e3-9731-001a4bcf6878.html

³ Gneckow, Eric. “Napa County Considers Clean Energy.” North Bay Business Journal. November 4, 2013. <http://www.northbaybusinessjournal.com/82325/napa-explores-service-from-mce-clean-energy/>

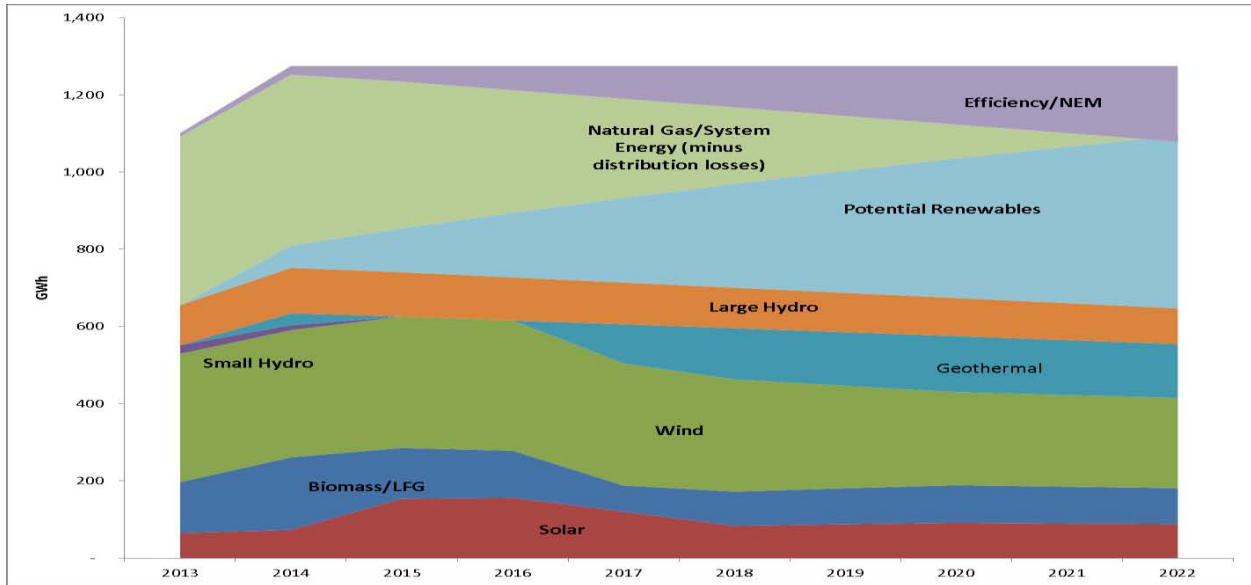
analysis concludes that addition of new members will not raise MCE's rates, the Board may approve these two new jurisdictions for membership. San Francisco Supervisors have also inquired with MEA about the possibility of San Francisco joining MCE as one possible solution to breaking the impasse with the San Francisco Public Utilities Commission (discussed below in Section 3).

Funds for MEA's initial start-up came primarily from two sources. The County of Marin loaned MEA a total of \$540,000 without interest. MEA also issued promissory notes to three individuals for loans totaling \$750,000. Each note required interest at 5.75% per year. In order to provide working capital needed for the start of operations, MEA obtained a bank loan totaling \$1,450,000 from River City Bank with guarantees from the County of Marin and Town of Fairfax. MEA states that it paid the three individual loans back and released the guarantees from the bank loan within the first year of operations.

2.2 MCE's Resource Portfolio and GHG Emissions Rate

MCE's power consists of 51% renewable energy overall. MCE projects that 27% of its energy delivered in 2013 will consist of RPS-eligible energy. By 2020, MCE plans to meet the required RPS-eligible renewable target of 33% by 2020, with a minimum of 55% total renewable content. The figures below depict MCE's projected portfolio out to 2021 using two different classifications. Figure 1 disaggregates the projected portfolio mix by generation resource type. "Efficiency/NEM" refers to the amount of energy MCE expects to avoid serving due to energy efficiency and self-generation (primarily solar) that occurs under the state's Net Energy Metering program. "System Energy" describes purchases of generic wholesale energy, which consists mostly of gas-fired generation but may include some hydro from the Northwest during high hydro generation periods in the spring. The section of the chart labeled "Potential Renewables" refers to intended purchases of bundled renewable energy. While MCE states a preference to procure renewables going forward, MCE does not commit itself to any specific split between the "System Energy" and "Potential Renewables" shares of its projected resource mix.

Figure 1. MCE Projected Resource Mix to 2022 by Resource Type



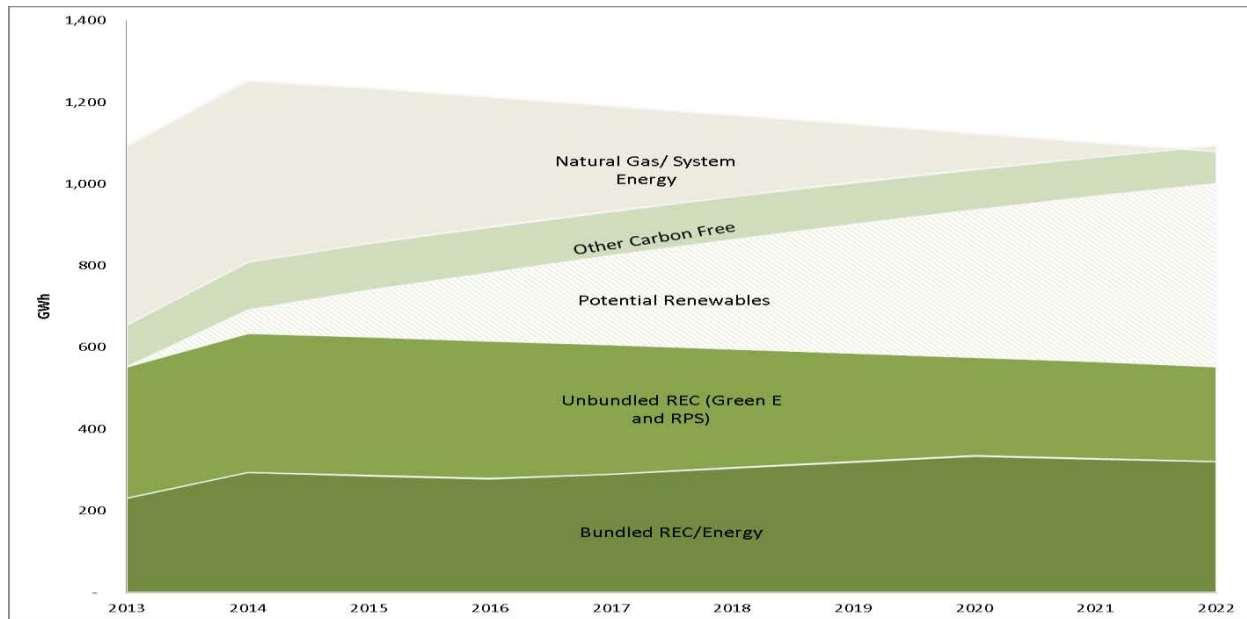
Source: MEA 2013 Integrated Resource Plan.

http://www.marinenenergyauthority.com/sites/default/files/2013_Integrated_Resource_Plan.pdf

Of the committed renewable and large hydro resources depicted in Figure 1, the tranches labeled wind, large hydro, small hydro, and geothermal are generated from existing resources. Additionally, roughly a quarter of the biomass/LFG tranche will come from an existing facility. Development of new resources has stemmed mainly from the execution of power purchase agreements with two large solar projects.

Figure 2 shows the same projection of total generation but with the committed renewable portion of generation disaggregated by purchases of bundled RECs and energy and unbundled RECs. Wind facilities sited in various locations in the Western Interconnect generate nearly all of the unbundled RECs purchased by MCE. As the chart indicates, MCE plans to gradually ramp down its purchases of unbundled RECs over time. MCE currently has power purchase agreements with six renewable energy facilities that are online or are expected to achieve commercial operation by late 2015. These facilities constitute the committed “Bundled REC/Energy” tranche shown in Figure 2 and, with the exception of the 1 MW San Rafael Airport solar PV project that resulted from a feed-in tariff, were selected through competitive solicitations. Together these facilities total 57 megawatts of capacity. Of that total, 46 MW are solar PV, of which 2 MW are located in Marin County. The remaining 44 MW are located in Kern County and Kings County. Three landfill gas projects (located in Placer, Solano and Yuba Counties) contribute 8 MW of capacity, and the remaining 3 MW come from The Geysers geothermal facility in Sonoma County.

Figure 2. MCE Projected Resource Mix to 2022 by Bundled vs. Unbundled Renewable Transactions



Source: MEA 2013 Integrated Resource Plan.

http://www.marinenenergyauthority.com/sites/default/files/2013_Integrated_Resource_Plan.pdf

MCE offers a feed-in tariff for projects located in member territories. Total program capacity is capped at 10 MW, but MCE’s resource plan indicates that once the cap is reached, MCE will conduct a review of the program and consider expanding the capacity beyond the 10 MW cap. To date, the San Rafael Airport is the only project that has subscribed to the feed-in tariff. The feed-in tariff limits individual project sizes to 1 MW. Because projects sized up to 1 MW are also eligible for net energy metering, it is possible that uptake has been limited because compensation under net energy metering is more attractive.

Using a mutually accepted accounting methodology, PG&E and MCE provide a comparison of their respective 2011 GHG emission rates on PG&E’s website.⁴ The table on PG&E’s website indicates that PG&E’s emission rate was 393 lbs CO₂/MWh compared to MCE’s default “Light Green” option with an emission rate of 389 lbs CO₂/MWh. MCE’s 100% renewable “Deep Green” option is attributed no GHG emissions.

2.3 MCE and PG&E Rate Comparison

MCE customers continue to pay PG&E for electricity delivery services. Thus, they compete against PG&E on the electricity generation portion of the total rate. In addition to the standard delivery charges that all PG&E customers pay, CCA customers must also pay for various stranded costs, a term that

⁴ The comparison of PG&E’s and MCE’s 2011 GHG emission rates and 2012 resource portfolios can be accessed at <http://pge.com/includes/docs/pdfs/myhome/customerservice/energychoice/communitychoiceaggregation/gen%20portfolio.pdf>

refers to above-market resources (that is, resources that are more expensive than current market prices) in the incumbent utility’s portfolio at the time CCA customers switch to CCA service. PG&E recovers these stranded costs through various departing load charges authorized by statute or by the CPUC. The rationale for such departing load charges is that commitments to the above-market resources were executed at a time that the CCA customers were bundled utility customers, and allowing CCA customers to avoid these costs incurred on their behalf would unfairly shift stranded costs to the remaining bundled customers. A page on MCE’s website provides a side-by-side comparison of all PG&E and MCE rate schedules. Table 1 below lists the individual rate elements and total rates for the primary residential and small business tariffs. The table indicates that MCE’s residential rates for its Light Green product exceeds PG&E’s residential rate by roughly one percent. The Deep Green product exceeds PG&E’s rate six percent. MCE’s light green small commercial rate is actually four percent lower than PG&E’s rate, and its deep green small commercial rate is one percent higher than PG&E’s rate.

Table 1. MCE and PG&E Residential and Small Business Rates (¢/kWh) as of June 2013

	PG&E	MCE Light Green (50% renewable)	MCE Deep Green (100% renewable)
Residential (schedule E-1/RES-1)			
Generation	\$0.0788	\$0.0740	\$0.084
PG&E Delivery	\$0.1252	\$0.1252	\$0.1252
Departing Load Charge	n/a	\$0.0066	\$0.0066
Total	\$0.2041	\$0.2059	\$0.2159
Commercial (schedule A-6/COM-6)			
Generation	\$0.0866	\$0.0728	\$0.0828
PG&E Delivery	\$0.1046	\$0.1046	\$0.1046
Departing Load Charge	n/a	\$0.0055	\$0.0055
Total	\$0.1912	\$0.1829	\$0.1929

Source: <https://mcecleanenergy.com/rates>

3 CleanPowerSF

Though San Francisco’s CCA program, CleanPowerSF, was approved in September 2012 by the

Board of Supervisors, the program has reached an impasse. In order for the staff at the San Francisco Public Utilities Commission (SFPUC) to move forward with program implementation, the SFPUC Commissioners must approve a maximum rate. However, at the Commission's August 13 meeting, on a 3 to 2 vote it failed to approve a motion to set a maximum rate.⁵ As a result, the city is unable to proceed with its five-year, \$19.5 million contract with Shell Energy North America to buy electricity for the program.

The program had proposed to offer San Francisco ratepayers the ability to purchase 100 percent of their electricity from renewable energy sources at a maximum rate of 11.5 cents per kilowatt hour. At PG&E's current delivery rates and departing load charges (see Table 1), CleanPowerSF's residential rate would have exceeded PG&E's rate by 21 percent, assuming that the actual rate equaled the maximum rate allowed. Roughly 25 percent of the electricity would be procured as bundled renewable energy, and the remaining electricity would have consisted of generic system energy matched with renewable energy credits from a large hydroelectric dam, which would not have qualified as an eligible renewable energy source under the state renewable portfolio standard. The program aspired to gradually replace its use of unbundled RECs by building local renewable energy facilities and create local jobs in the process. Approximately 200,000 customers would have been automatically enrolled, with the hope of retaining 90,000 customers in the beginning phase of the program.

Because the program is effectively in limbo, SFPUC staff is no longer working on the program. San Francisco Supervisor John Avalos stated that he is considering introducing a Charter amendment that would allow the Board of Supervisors to set a maximum rate if the PUC does not do so within a certain period of time.⁶ Alternatively, San Francisco could join MCE, and staff from San Francisco's Local Agency Formation Commission have contacted MEA to explore the possibility.⁷ As noted above, MEA has adopted a policy for adding jurisdictions to MCE with 40,000 accounts or less, but it may be some time before MEA is prepared to incorporate a jurisdiction the size of San Francisco, which according to PG&E has 475,000 total accounts.

4 Sonoma Clean Power

Formation of a CCA for Sonoma County has been led by the Sonoma County Water Agency. The Water Agency Board of Directors instructed the water agency staff to begin exploring the formation of a CCA in March 2011. After nearly two years of study and preparation, the Board approved the

⁵ Riley, Neal J. "PUC Fails to Set Rates for CleanPowerSF." San Francisco Chronicle, August 13, 2013. <http://www.sfgate.com/bayarea/article/PUC-fails-to-set-rates-for-CleanPowerSF-4730442.php>

⁶ Ibid.

⁷ Halstead, Richard. "San Francisco Flirts with Idea of Joining Marin Energy Authority." Marin Independent Journal, November 17, 2013.

http://www.marinij.com/marinnews/ci_24534246/san-francisco-flirts-idea-joining-marin-energy-authority

creation of a joint powers authority on December 4, 2012.⁸ The CPUC approved Sonoma County's CCA Implementation Plan on October 4, 2013. The CCA is referred to as Sonoma Clean Power and is governed by an eight-member board, with two members from the county Board of Supervisors, two members from Santa Rosa,⁹ and one member from each of the four other member municipalities.¹⁰

The First Community Bank provided start-up financing for Sonoma Clean Power's operations in two separate tranches. The first tranche consisted of a \$2.5 million line of credit, which was guaranteed by Sonoma County. Subsequently, First Community Bank extended a \$7.5 million line of credit, for which it requires no guaranty from Sonoma Clean Power or its member jurisdictions.

On November 19, 2013 Sonoma Clean Power signed a three-year supply and scheduling contract for most of its electricity with Constellation, which is a subsidiary of Exelon, one of the largest electricity and natural gas supply companies in the United States. Sonoma Clean Power will serve its first wave of 20,000, mostly commercial, customers in May 2014. The default power product will consist of 33 percent renewable energy, increasing to 50 percent renewable by 2018. The exact sources of generation underlying the Constellation contract have not been publicly disclosed, but the contract specifies that at least 70 percent of the electricity in the portfolio must come from carbon-free sources, compared to approximately 51 percent in PG&E's portfolio.^{11, 12} Assuming that the remaining 30 percent of the portfolio were supplied by gas-fired system power, the GHG emissions rate of Sonoma Clean Power's electricity supply would equal approximately 300 lbs CO₂/MWh. In a separate agreement signed shortly after the Constellation contract, Sonoma Clean Power entered into a 10-year power purchase contract with Calpine Corp. to buy electricity from The Geysers geothermal facility.¹³

Sonoma Clean Power has not set final retail rates at the time of this writing. However, based on PG&E's expected 2014 rates and the terms of the contracts signed with Calpine and Constellation, Sonoma Clean Power expects to offer rates that meet or beat PG&E's rates.¹⁴

⁸ Sonoma Clean Power. http://www.sonomacleanpower.org/app_pages/view/21

⁹ Because Santa Rosa's population is much larger than the other Sonoma County cities, the city council insisted on having representation equal to the county's as a precondition for joining. See <http://www.northbaybusinessjournal.com/77463/governing-board-takes-shape-for-sonoma-clean-power/>.

¹⁰ Current members include Sonoma County and the cities of Cotati, Sonoma, Windsor, Santa Rosa, and Sebastopol.

¹¹ Wilkison, Brett. "Sonoma Clean Power Officials Say New Deal will Beat PG&E's Rates." The Press Democrat. November 19, 2013. <http://www.pressdemocrat.com/article/20131119/articles/131119507#page=1>

¹² PG&E November 2013 Bill Inserts.

<http://www.pge.com/en/myhome/myaccount/explanationofbill/billinserts/previous/2013/november.page>

¹³ Wilkison, Brett. "Sonoma Clean Power OKs Geysers Deal." The Press Democrat. November 21, 2013. <http://www.pressdemocrat.com/article/20131121/articles/131129857#page=1>

¹⁴ Wilkison, Brett. "Sonoma Clean Power Officials Say New Deal will Beat PG&E's Rates." The Press Democrat. November 19, 2013. <http://www.pressdemocrat.com/article/20131119/articles/131119507#page=1>