



Jerry Brown  
Governor

**RENEWABLE ENERGY SECURE  
COMMUNITY SONOMA COUNTY  
TASK 2.2  
RENEWABLE ENERGY PORTFOLIO  
DESIGN COORDINATION  
TASK 3.0  
DATA COLLECTION REPORT**

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## Preface

The Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program, managed by the California Energy Commission (Energy Commission), conducts public interest research, development, and demonstration (RD&D) projects to benefit California.

The PIER program strives to conduct the most promising public interest energy research by partnering with RD&D entities, including individuals, businesses, utilities, and public or private research institutions.

PIER funding efforts are focused on the following RD&D program areas:

- Buildings End-Use Energy Efficiency
- Energy Innovations Small Grants
- Energy-Related Environmental Research
- Energy Systems Integration
- Environmentally Preferred Advanced Generation
- Industrial/Agricultural/Water End-Use Energy Efficiency
- Renewable Energy Technologies
- Transportation

*Renewable Energy Secure Sonoma County Renewable Energy Design Portfolio Documentation and Data Collection Report* is the final report for the Renewable Energy Secure Sonoma County project Task 2 and Task 3 (PIR-08-038) conducted by the Sonoma County Water Agency. The information from this project contributes to PIER's Renewable Energy Technologies Program.

For more information about the PIER Program, please visit the Energy Commission's website at [www.energy.ca.gov/pier](http://www.energy.ca.gov/pier) or contact the Energy Commission at 916-654-5164.

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## Table of Contents

1.0	Executive Summary .....	1
2.0	Introduction .....	5
2.1.	Background .....	5
2.2.	Objectives .....	5
3.0	Local Data Request Methodology.....	7
3.1.	Data Request Formulation .....	7
3.2.	Data Request Chronology .....	10
3.3.	Summary of Data Received .....	11
4.0	PG&E Data Collection Methodology .....	23
4.1.	Availability of Data .....	23
4.2.	Data Request Methodology .....	25
4.3.	Summary of Data Received .....	27
4.4.	Summary of Data Requested But Not Obtained.....	29
4.5.	Data Integration.....	30
5.0	State and Federal Data Requests.....	31
6.0	Barriers to Data Access.....	32
6.1.	Local Data Barriers.....	32
6.2.	Barriers to PG&E Data Access .....	33
6.3.	Barriers to Federal Data Access.....	33
7.0	Conclusions and Recommendations .....	36
7.1.	Local Data Adequacy.....	36
7.2.	PG&E Data Adequacy .....	37
7.3.	Federal Data Adequacy .....	39
7.4.	Local and State Data Collection Recommendations.....	40
7.5.	PG&E Data Collection Recommendations.....	41

Appendix 1: Data Request Memo to Cities

Appendix 2: Email request to County Agencies

Appendix 3: Chronology of CPUC Rulemaking R03-10-003

Appendix 4: Chronology of Negotiations to Secure PG&E Data (2008/09)

Appendix 5: Data Request Letter to PG&E

Appendix 6: PG&E Letter Regarding Data Provision

Appendix 7: Samples of Data Integration

Appendix 8: CEC Protocol for Requesting GIS Data

Appendix 9: Minutes from Meetings to Discuss Ongoing Coordination Issues

Appendix 10: Data and Modeling Requirements Lists from Renewable Energy Portfolio  
Team and Systems Dynamics Team

- Attachment 1: LPI Letter to PG&E December 19, 2008
- Attachment 2: LPI Letter to PG&E March 16, 2009
- Attachment 3: PG&E Letter to LPI March 24, 2009
- Attachment 4: PG&E Letter to LPI June 16, 2009
- Attachment 5: LPI Letter to PG&E September 14, 2009

## List of Tables

Table 1. Airport Treatment Plant Parameter Names .....	9
Table 2. Power Monitoring Points.....	9
Table 3: RESCO Data Requests Submitted and Received .....	12

## **Abstract**

This report describes the methodology and findings of the extensive data collection phase for the Renewable Energy Secure (RESCO) Sonoma County project. Data were collected from a variety of sources including local, state and federal government agencies and customer use data from the County's investor-owned utility. It summarizes the barriers to data collection and recommendations. This report also includes some preliminary samples of the analyses that will be possible with these data, including a number of maps and tables that illustrate the recent history of energy use, as well as the unique patterns of energy use, throughout all sectors of Sonoma County's community and economy.

**Keywords:** renewable energy portfolio, data collection, local government, GIS, database, Renewable Energy Secure Sonoma County, RESCO

# 1.0 Executive Summary

## ***Introduction***

In 2008, the Sonoma County Community Climate Action Plan (CCAP) was released<sup>1</sup>. It was funded by all nine Sonoma County cities and the County of Sonoma, and produced by two of the partners in the Renewable Energy Secure Sonoma County (RESOCO) project, the Climate Protection Campaign (CPC) and Local Power, Inc. (LPI). The CCAP provided a blueprint for achieving the County's greenhouse gas reduction target of 25% below 1990 levels by 2015. A central component of the CCAP was an integrated, community-scale renewable energy portfolio that would provide approximately 46% of the emissions reductions.

The renewable energy portfolio in the CCAP was prepared based on publicly available aggregate energy and carbon emissions. While this provided the basis for preparation of a carbon model that could be used to design a proposed new energy infrastructure to serve Sonoma communities, a greater, more accurate data set was needed to refine the portfolio model that was developed and confirm the price-competitiveness and carbon impacts of the proposed infrastructure.

## ***Purpose***

The data collected using the methodology described herein will be integrated and analyzed and form the basis for the production of a high resolution renewable energy portfolio with the following characteristics:

- Low carbon
- Integrated and diverse
- Community-scale
- Resources cited in and near Sonoma County
- Cost effective

## ***Project Objectives***

The objective of this project was to collect data from local, state and federal sources as well as from the incumbent investor-owned utility in order to refine the accuracy and resolution of the renewable portfolio proposed in the CCAP.

## ***Project Outcomes***

This report includes a description of the data collection methodology, results, barriers and recommendations regarding data collection from local, state, and federal government agencies as well as from Sonoma County's investor-owned utility, Pacific Gas & Electric (PG&E). It also includes some samples of the analyses that will be possible with these data, including a number of maps and tables that illustrate the recent history of energy use, as well as the unique patterns of energy use, throughout all

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1. <http://www.coolplan.org/>

sectors of Sonoma County's community and economy. Finally, the methodology employed by the research team was refined as data collection proceeded, and this project also developed a set of recommendations to facilitate similar projects in other communities.

### ***Conclusions***

A great deal of data was obtained to characterize, analyze and refine the CCAP renewable energy portfolio. However, several barriers prevented the research team from obtaining several key forms of data, and therefore the analysis will be limited in some ways. The types of barriers and challenges to the research team included unavailability of data in electronic format; lack of centralized data access between Sonoma County governments; the refusal of PG&E to provide any data not covered by its Schedule E CCA-INFO tariff; bureaucratic obstacles; lack of capacity of the research team given the scope and timeframe of the project.

Nonetheless, the data that was obtained by the researchers will enable them to proceed with an analysis that will provide:

- An unprecedented, high quality, renewable portfolio design
- A methodology for the design, evaluation, and implementation of this portfolio
- A portfolio characterized by being composed of integrated, interoperable local generation, storage and load control facilities across a California county.
- An individual meter-based view of the multi-user and single-user economic bypass path
- An economic feasibility model for both a chosen individual customer and high energy intensity neighborhoods throughout the urban and rural areas of Sonoma County

### ***Recommendations***

Ideally, real-time monitoring data of all end uses of both electricity and natural gas would be available. A more localized profile of demand data, broken down by residential and non-residential sectors, would provide a higher degree of resolution of the demand and facilitate a more refined portfolio.

On the supply side, the analysis would benefit from more detailed studies done in the following areas:

- Detailed studies of wind availability over urban areas, particularly at the 100M level, and higher resolution studies of offshore wind availability in areas where wind turbine construction
- Resource assessments for small-scale hydro, biomass and low temperature geothermal
- More detailed studies of geothermally heated water availability in areas of known geothermal activity

The following additional recommendations are offered to communities seeking local data for the purpose of designing a community-scale renewable energy portfolio:

- Hire a GIS expert
- Conduct a survey of publicly available GIS data and interview local government agency experts to identify data
- Expect delays in responses
- Expect that approvals and non-disclosure agreements will be necessary in order to access data with privacy implications

Regarding the availability of local customer use data, PG&E declined to provide some key data necessary for microgrid-level or “neighborhood” analysis of energy use. The researchers recommend that communities seeking to implement RESCO programs petition the California Public Utilities Commission to modify PG&E’s CCA-INFO tariff to allow for expanded local government access to local data as described in this report.

The researchers also recommend a set of general guidelines to facilitate data collection by local California governments from their incumbent utility.

### ***Benefits to California***

The data collected in this report represents an unprecedented granularity and breadth of energy usage data that makes possible perhaps one of the most sophisticated models for the rapid conversion of regional communities to Renewable-Based Energy Secure Communities. This report provides a summary of the process used to collect data from a variety of sources for the purpose of designing a highly refined community-scale renewable energy portfolio. The complexities of collecting relevant data from local government agencies, state and federal entities, and the incumbent investor-owned utility are described, and a set of recommendations is provided as the basis for developing a standard methodology.

As more California communities attempt to design and implement diverse, integrated, local renewable energy resources, the barriers articulated in this report and recommendations for other communities should facilitate more rapid and efficient application of an evolving methodology. Thus, this report provides a rare and powerful informational model and methodology for contributing to the state of California’s implementation adopted loading order, complying with the Renewable Portfolio Standard law (SB 1078, 2002), and improving conditions for a successful implementation of California’s greenhouse gas reduction law (AB 32).

Finally, the analysis, mapping and modeling made possible by this collection of data will illustrate the technical and economic potential of energy localization in California as

it relates to achieving accelerated greenhouse gas reductions and improved renewable-based energy security on California's rural and urban communities.

## **2.0 Introduction**

### **2.1. Background**

In 2008, the Sonoma County Community Climate Action Plan (CCAP) was released<sup>2</sup>. It was funded by all nine Sonoma County cities and the County of Sonoma, and produced by two of the partners on this RESCO project, the Climate Protection Campaign (CPC) and Local Power, Inc. (LPI). The CCAP provided a blueprint for achieving the County's greenhouse gas reduction target of 25% below 1990 levels by 2015. A central component of the CCAP was an integrated, community-scale renewable energy portfolio that would provide approximately 46% of the emissions reductions.

The renewable energy portfolio in the CCAP was prepared based on publicly available aggregate energy and carbon emissions. While this provided the basis for preparation of a carbon model that could be used to design a proposed new energy infrastructure to serve Sonoma communities, a greater, more accurate data set was needed to refine the portfolio model that was developed and confirm the price-competitiveness and carbon impacts of the proposed infrastructure.

The data collection methodology described in this report was designed to provide an enhanced analysis of regional energy demand, design replacement infrastructure and configure technologies, choose locations, and design efficient and cost-effective applications. The revised renewable energy portfolio will provide the basis for analysis by another project partner, Los Alamos National Laboratories (LANL), to conduct systems dynamics modeling of the impacts of the portfolio.

This report includes a description of the data collection methodology, results, barriers and recommendations regarding data collection from local, state, and federal government agencies as well as from Sonoma County's investor-owned utility, Pacific Gas & Electric (PG&E). It also includes some samples of the analyses that will be possible with these data, including a number of maps and tables that illustrate the recent history of energy use, as well as the unique patterns of energy use, throughout all sectors of Sonoma County's community and economy.

### **2.2. Objectives**

#### **2.2.1. Collection of Local Data**

The initial data request to local government agencies was constructed based on survey techniques that were developed for the CCAP Energy Element<sup>3</sup>. Local agencies were

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2. <http://www.coolplan.org/>

3. <http://www.coolplan.org/ccap-report/source-material/1%20Energy.pdf>



approached to determine what data they had available in electronic format (GIS or standard database format). The general objectives of the local data requests were to:

- Identify existing energy infrastructure considerations
- Obtain geographic information to evaluate resource availability
- Obtain site-specific information required for locating resource types such as wind, solar (thermal and photovoltaic), biomass, small scale hydro, wave/tidal, landfill gas and storage technologies such as pumped hydro and compressed air
- Identify opportunities for specific deployment strategies such as district heating, microgrids and islanding
- Identify legal barriers to development such as permit or zoning restrictions
- Characterize factors influencing the feasibility of resource development such as land ownership, land use regulations and permit jurisdictions

### **2.2.2. Collection of PG&E Data**

Recent California law has created an unprecedented opportunity for local governments designing and preparing to implement Climate Action Plans to enjoy a privileged level of access to highly granular regional electricity use data. Local governments are entitled to request from their incumbent electricity utilities detailed and complete databases of customer-specific as well as aggregate and climate-based energy use data, including retail power meter data which is carefully protected confidential customer information formerly limited to the power company and its consultants. The legal authority to collect monthly and in some cases interval time-of-use power meter data provided Sonoma County with the opportunity to obtain this detailed data.

The Sonoma County data collected from PG&E includes monthly reports from approximately 230,000 meters and more frequent interval reports from 20,000 interval meters. Access to this data will allow the research team to refine the accuracy and resolution of the renewable portfolio proposed in the CCAP.

The collection of the data involved two years of effort and over a year negotiating with PG&E prior to the actual provision of any data. This report provides an explanation of the laws and regulations required for Sonoma County to be able to obtain the data, a history of the Sonoma County's data collection process, a description and samples of the data received from PG&E, and makes recommendations for other communities undergoing similar analyses.

Under the auspices of the Sonoma County RESCO project, the research team has since imported the data into a single database, transferred files onto its secure server, run preliminary regional load analyses using non-confidential information, geo-coded confidential customer address information and developed initial maps, samples of which are included in Appendix 7 of this report. This report also includes appendices with sample charts generated using the data obtained.

### **2.2.3. Relationship of Local Data and PG&E Data**

One of the goals of the Renewable Energy Secure Sonoma County project is to create a repository of quantitative data representing multi-year electricity use in the county. An important project activity is correlation of the electricity use data with geospatial information, with the ultimate goal of identifying potential sites for renewable energy production and interfaces with distribution infrastructure. Thus a key objective of the project is to create a comprehensive database of relevant geospatial information (“layers”) in a form usable for Geographic Information System (GIS) processing. This database will also include attributes associated with geographic features that may impact the availability or suitability of a given site for development. These attributes include regulatory restrictions, as well as features associated with geography, demand side characteristics, existing infrastructure, and other considerations related to potential renewable energy supply or measures on the customer side of the meter.

## **3.0 Local Data Request Methodology**

### **3.1. Data Request Formulation**

The initial data request made to Sonoma County’s nine cities and the County was comprised of the following items organized into four categories:

1. Land Use and Ownership
  - Zoning maps and regulations for each zone
  - Assessor's parcel database
  - City owned property
  - Information regarding coastal lands and offshore development limits, activities, etc. that might be relevant to onshore or offshore renewables
  - Environmental protection zones and regulations, i.e., biotic resource zones, environmentally sensitive areas
  - Agricultural lands & what is growing on it with view for biomass or rural energy siting
  - Permit databases, including permits for generation facilities such as PV
  - Locations of dairies or livestock cultivation of any type
2. Existing Energy-Related Infrastructure
  - Utility rights of way
  - Substation locations
  - Landfill locations, capacities, LFG recovery system types, compost facilities
  - Natural gas pipeline routes
  - Existing generation facilities, public or private

- Any existing, or plans the city has for new, renewable projects or efficiency/demand side
  - Known cogeneration facilities (combined heat and power, usually commercial/industrial)
  - Information on reservoirs, pipes or other facilities that might be suitable for pumped storage or in-conduit energy recovery
3. Other Existing Infrastructure (including large municipal or private loads)
- Railroad rights of way
  - Water supplies and treatment facilities
  - Locations of facilities that might have large thermal load, including process heat, industrial/manufacturing heat, large space/water heat, cooling, etc. as potential sites for cogeneration
  - Wastewater treatment facilities, locations, capacities
4. Other Geographic Features or Energy-Related Studies
- Hydrological feature maps, streams, lakes, rivers with altitudes and flow rates
  - Any studies that the city has regarding renewable energy or efficiency potential

### **3.1.1. Task 7 (Pilot Project) Data Collection**

The research team determined that, in order to properly integrate development of the Pilot Project with findings from Task 5 (Analysis and Modeling), data specific to the Pilot Project should be incorporated into the data collection process.

There are three sites involved in the Pilot Project:

- Airport Treatment Plant
- Sonoma Valley Treatment Plant
- Wohler Road Pumping Station

These data fell into these categories:

- Operational data available from the Water Agency
- Data collected directly from onsite measurement
- GIS data and environmental data

The parameters shown in Table 1 were collected from the SCADA system for the Airport Treatment Plant. These are operational parameters, primarily flow rates, that indicate the amount of wastewater the plant is processing. These parameters were collected at 15-minute intervals over a period of 5 weeks in February-March, 2010.

**Table 1. Airport Treatment Plant Parameter Names**

<b>ATP Parameter Name</b>
S48_A_10in_Bypass_Flow
S48_A_Dissolved_O2
S48_A_Influent_Flow
S48_A_Influent_WetWell_Level
S48_A_Irrigation_Flow
S48_A_Transfer_Flow
S72_EXP_A_Effluent_WetWell_Level
S72_EXP_A_Feed_HDR_Pressure_PV
S72_EXP_A_Filtrate_Flow
S72_EXP_A_Transfer_WetWell_Level
S72_EXP_D_Effluent_Pump1_Run
S72_EXP_D_Effluent_Pump2_Run
S72_EXP_D_Effluent_Pump3_Run
S72_EXP_D_Feed_Pump1_Run
S72_EXP_D_Feed_Pump2_Run
S72_EXP_D_Feed_Pump3_Run
S48_D_Influent_Pump1_Run
S48_D_Influent_Pump2_Run
S48_D_Influent_Pump3_Run
S48_D_Influent_Pump4_Run

Over a corresponding time period, power data monitors/loggers were installed on critical equipment in the Airport Treatment Plant to record power usage. The data loggers recorded the following parameters at 15-minute intervals:

- Voltage
- Current
- Power
- Power Factor

The monitoring points on plant equipment are shown in Table 2.

**Table 2. Power Monitoring Points**

<b>ATP Equipment Name</b>
Influent Pump 1
Influent Pump 2
Influent Pump 3
Pond 3 Paddle Aerator
Pond 3 Egg Beater Aerator
Filter Motor Control Center

Detailed production information was obtained for photovoltaic arrays installed at the Airport Treatment Plant.

In addition to the above, the researchers also obtained GIS maps of the Airport Treatment Plant and its service territory, including reclaimed water delivery area.

## **3.2. Data Request Chronology**

Initially, the approach of the research team was to contact individual cities in the County with a general request for all relevant data. It was expected that different cities would have different levels of data availability, and would be able to pick and choose what they were able to supply. This initial strategy was revised as described below.

### **3.2.1. Initial Request**

An initial request with the above items was prepared (Appendix 1). Our partner organization, Regional Climate Protection Authority, submitted this request to the City Managers of the nine cities of Sonoma County. The request was submitted in writing, and the request was also explained verbally during a regular meeting of the City Managers. The Managers of the nine cities in Sonoma County routinely meet to discuss items of interest to all cities. The request was made on November 9, 2009, and a response was requested by the end of November 2009.

### **3.2.2. Initial Response**

By the end of November, only the cities of Windsor and Petaluma had responded. Data were also received from the Sonoma County Water Agency, one of the Sonoma County RESCO partners.

#### ***Town of Windsor***

The Town of Windsor had outsourced their mapping capabilities to a private consultant, Brelje and Race. Windsor was able to provide PDF files containing graphic representations of maps, but was unable to provide the underlying data used to generate the maps. They referred the research team to their consultant to obtain the underlying data.

#### ***City of Petaluma***

The City of Petaluma has a GIS specialist in house. The research team met with him and he was able to help us modify the strategy for obtaining data. The GIS expert on the RESCO project was able to work with the Petaluma specialist to identify Sonoma County agencies that possess GIS data that covers the entire county. Based on this information, the research team modified the data request strategy as described below.

### **3.2.3. Data request strategy modification**

Based on discussions with the Petaluma GIS specialist, along with experience the RESCO project GIS specialist had in Sonoma County, the research team identified all the County agencies with GIS and other relevant databases. These agencies are as follows:

- County GIS department
- Permit and Resource Management Department
- Open Space Authority
- County Agricultural Commissioner

The research team then arranged a meeting with the GIS specialists from the first two departments, along with the GIS specialist for the Water Agency, to discuss which GIS and database resources were available and a procedure for obtaining them. During the meeting, the GIS specialists made known two issues: 1) the request for data needed to be authorized by a County agency; 2) the request needed to specify that any confidential data such as names and addresses not appear in any public reports. A follow up written request for the data was then made (see Appendix 2).

Following this meeting, the research team was able to determine which of the items on the data request list were only obtainable from the cities directly. The research team then collected all of the data from the cities that were available (summarized in Section 3.3 below).

### **3.3. Summary of Data Received**

Table 3 summarizes the status of local data collection to date from the County of Sonoma and the cities of Santa Rosa, Sonoma, Petaluma and Rohnert Park. Data was requested from Cloverdale, Windsor, Cotati and Sebastopol, but, with exception of Cotati, was not received in a form that could be used in GIS. A central GIS server in Santa Rosa is used by several municipalities, but utilizing this resource was beyond the capacity of this project.

**Table 3: RESCO Data Requests Submitted and Received**

November 9, 2008 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Zoning maps and regulations for each zone						03/10/10	G:/RESCO/PRMD
Assessor's parcel database						03/10/10	G:/RESCO/Sonoma County ISD
Utility rights of way				Not Available			
Substation locations	CEC			Homeland Security	Sarah Shaeffer		
Railroad rights of way							
Water supplies and treatment facilities	Dave Erickson has this				Dave Erickson	03/09/10	G:/RESCO/SCWA
Wastewater treatment facilities, locations, capacities,						03/09/10	G:/RESCO/SCWA
Permit databases, including permits for generation facilities such as PV							
Natural gas pipeline routes	PG&E			special request			
City owned property	Cities					03/10/10	G:/RESCO/Sonoma County ISD
Environmental protection zones and regulations, ie. , biotic resource zones, environmentally sensitive areas	Cities						

Existing generation facilities, public or private	PRMD						
Landfill locations, capacities, LFG recovery system types, compost facilities	PRMD						
Locations of diaries or livestock cultivation of any type	PRMD					03/09/10	G:/RESCO/SCWA
Hydrological feature maps, streams, lakes, rivers with altitudes and flow rates	USGS	Seamless data download website	United States	Web site	Joe Honton	already have	G:/National Hydrography Dataset
Agricultural lands & what is growing on it with view for biomass or rural energy siting	SCAPOS		Sonoma County	Available			
Any studies that the city has regarding renewable energy or efficiency potential				Not Available			
Any existing, or plans the city has for new, renewable projects or efficiency/demand side				Not Available			
Known cogeneration facilities (combined heat and power, usually commercial/industrial)				Not Available			
Locations of facilities that might have large thermal load, including process heat, industrial/manufacturing heat, large space/water heat, cooling, etc. as potential sites for cogeneration	California Geologic Survey		State of California	Available			



Information regarding coastal lands and offshore development limits, activities, etc. that might be relevant to onshore or offshore renewables							
Information on reservoirs, pipes or other facilities that might be suitable for pumped storage or in-conduit energy recovery							
January 7, 2010 request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Petaluma city boundary	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	03/10/10	G:/RESCO/PRMD
Petaluma urban growth boundary	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	03/10/10	G:/RESCO/PRMD
Petaluma base zoning	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	04/01/10	G:/RESCO/petaluma
Petaluma facilities	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	04/01/10	a
Petaluma brownfield sites	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	04/01/10	
Petaluma existing land use (not the same as the county land use code)	Petaluma	Trae Cooper	Petaluma	available	Dave Erickson	04/01/10	
Petaluma street light database	Petaluma	Trae Cooper	Petaluma	special request	deferred		
Petaluma street light database	Petaluma	Trae Cooper	Petaluma	special request	deferred		
Step-down pressure for natural gas pipelines (also potential energy recovery)	Utility						

January 28, 2010 request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Transmission lines	CEC	Eric Veium / Jacque Gilbreath	Sonoma County	Homeland Security	Sarah Shaeffer	04/27/10	G:/RESCO/CEC
Transmission substations	CEC	Eric Veium / Jacque Gilbreath	Sonoma County	Homeland Security	Sarah Shaeffer	04/27/10	G:/RESCO/CEC
February 8, 2010 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Air Quality Control Board Districts	SoCo PRMD	Shelly L. Bianchi- Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Area and Specific Plans	SoCo PRMD	Shelly L. Bianchi- Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
City Limits	SoCo PRMD	Shelly L. Bianchi- Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
City Spheres of Influence	SoCo PRMD	Shelly L. Bianchi- Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
City Urban Growth	SoCo PRMD	Shelly L. Bianchi-	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD

Williamson							
Fire Protection Responsibility Areas	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Flood Prone Urban Areas	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Land Use by Area	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Land Use Policy	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Community Separators	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Existing Parks	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Future Parks	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Habitat Connectivity Corridors	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Marshes and Wetlands	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD

General Plan Open Space Scenic Corridors	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Landscape units	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
General Plan Open Space Planning Area Policies	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Local Area Development Guidelines	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Parcels	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Planning Areas	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Redevelopment plans	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Urban service areas	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Waiver prohibition areas	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Wet weather zones	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD

Williamson Act land contracts	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Zoning by Area	SoCo PRMD	Shelly L. Bianchi-Williamson	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/PRMD
Streets	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
Parcels without property characteristics	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
Public lands	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
School districts	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
Supervisor districts	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
USGS Streams	SoCo GIS Central	Tim Pudoff	Sonoma County	Web site	Joe Honton	03/10/10	G:/RESCO/Sonoma County ISD
Assessor's parcel database with property characteristics	SoCo GIS Central	Tim Pudoff	Sonoma County	special request	Dave Erickson	02/24/10	
Water supplies and treatment facilities	SoCo GIS Central	Tim Pudoff	Sonoma County	special request	Dave Erickson	03/09/10	G:/RESCO/SCWA
County-owned property, plus land leased through General Services	SoCo GIS Central	Tim Pudoff	Sonoma County	special request	Dave Erickson	03/09/10	G:/RESCO/SCWA
Small water features developed for Fire Run Map	SoCo GIS Central	Tim Pudoff	Sonoma County	special request	Dave Erickson	02/24/10	
Special Address Layer developed for Public Safety Consortium	SoCo GIS Central	Tim Pudoff	Sonoma County	special request	Dave Erickson	02/24/10	

Sonoma County Aerial Photography (single file)	SCWA	Courtney Ellerbusch	Sonoma County	special request	Dave Erickson		
County owned parcels (internal use)	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Recycled water agreements	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Flood Control Easements	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Sanitation easements	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Water transfer easements	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Sonoma Valley Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Russian River Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Penngrove Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Occidental Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Geyserville Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Airport Sanitation District boundary	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Sonoma Valley Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA

Russian River Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Penngrove Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Occidental Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Geyserville Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Airport Sanitation District pipes	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Treatment facilities	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Aqueduct Center Lines	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Collectors	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Tanks	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Dairy and Poultry feed lots	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
SCWA Streams	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Water bodies	SCWA	Courtney Ellerbusch	Sonoma County	FTP	Dave Erickson	03/09/10	G:/RESCO/SCWA
Digital Elevation Model	USGS		Sonoma County	already have	Joe Honton		G:/USGS-DEM/Combined NAD83

February 9, 2010 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Windsor city data	Brelje & Race	Sheila Wolski (Brelje & Race)	Windsor	CAD only	Dave Erickson		
February 19, 2010 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Reservoir data – Russian River Watershed	SCWA	Todd Schram, Nathan Baskett, Heather Kelly	Russian River Watershed	available	Dale Roberts	02/19/10	G:/RESCO/SCWA
February 22, 2010 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Aggregated electricity use	PG&E		Sonoma County	email	Dave Erickson	02/22/10	G:/RESCO/PG&E
February 23, 2010 Request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored



Zip codes	US Census		Sonoma County	Download	Joe Honton	02/23/10	G:/RESCO/US Census
March 7, 2010 request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Known geothermal areas	CEC	Eric Veium / Jacque Gilbreath	Sonoma County	Homeland Security	Dave Erickson	04/27/10	G:\RESCO\CEC
Concentrating Solar Resource Areas	CEC	Eric Veium / Jacque Gilbreath	Sonoma County	Homeland Security	Dave Erickson	04/27/10	G:\RESCO\CEC
Wind Resource Potential	CEC	Eric Veium / Jacque Gilbreath	Sonoma County	Homeland Security	Dave Erickson	04/27/10	G:\RESCO\CEC
June 24, 2010 request	Which organization has the data?	Who is the contact person at that organization?	What geographic area does it cover?	Is it easily available or do we need to make a special request?	Who on the RESCO team is following up to make sure we get it?	Date of receipt	Server directory where data is stored
Santa Rosa City Data	Santa Rosa	Mike Hargreaves	Santa Rosa	Available	Dave Erickson	06/27/10	

## 4.0 PG&E Data Collection Methodology

### 4.1. Availability of Data

#### 4.1.1. Assembly Bill 117

Assembly Bill 117 (Migden, 2002) was adopted by the legislature and signed by Governor Gray Davis during the second year of California's energy crisis. AB 117 was designed as a means of offering choice to ratepayers, within a suspended Direct Access market under emergency measures to implement damage control. These extreme measures were required in reaction to the market failures caused by California's electric industry restructuring law, AB 1980, which had been adopted in 1996 and implemented between 1998 and 2000<sup>4</sup>. Specifically, AB 117 authorized local governments investigating, pursuing or implementing Community Choice Aggregation (CCA) — a means of municipal community-wide retail electricity procurement — to collect electricity end-user data from California's investor-owned utilities PG&E, Southern California Edison, and San Diego Gas & Electric<sup>5</sup>.

In order to enable CCAs to procure energy efficiency services and design local energy facilities, AB 117 required utilities to provide CCAs with customer usage data:

*“(9) All electrical corporations shall cooperate fully with any community choice aggregators that investigate, pursue, or implement community choice aggregation programs. Cooperation shall include providing the entities with appropriate billing and electrical load data, including, but not limited to, data detailing electricity needs and patterns of usage, as determined by the commission, and in accordance with procedures established by the commission.”*<sup>6</sup>

#### 4.1.2. California Public Utilities Commission Rulemaking

Pursuant to AB117, the California Public Utilities Commission (CPUC) was responsible for implementing the rules, and specifically to decide what constitutes “appropriate billing data” under the definition in the ordinance. The statute specifies that “appropriate” includes data to establish patterns of usage: this is the basic standard of data that we need to design and install energy efficiency, solar photovoltaic, conservation, storage, and load management systems that have measurable load reductions at the interval meter and substation level.

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4. The AB1890 market failed to serve 95% customers who were left on default service and overdependent on spot market power, and suppliers manipulated those markets to bring about a catastrophic impact on California's default service rates, in effect costing the State of California \$100B over just a couple of years, followed by major bailouts of both PG&E's for its bankruptcy and also Southern California Edison's for its pre-bankruptcy bailout.

5. AB117 (Migden, 2002 – Chapter 838).

6. California Public Utilities Code Section 366.2(c) (9), Chapter 838, Page 6.

During the CPUC's CCA rulemaking R.03-10-003 (a complete chronology is provided in Appendix 3), CCA advocates argued, and the CPUC agreed, that CCA is not just purchasing bulk power contracts off the grid: as Section 381.1 establishes that community choice aggregators may apply to administer energy efficiency programs. Thus, CCAs are specifically empowered to implement not only green power procurement on the grid but also to design, build and purchase power from CCA-owned renewable energy facilities, including not only renewable power facilities but also energy efficiency<sup>7</sup>. Under the structure created by AB 117, fully integrated resources planning is the actual purpose of the entity, as an organization of ratepayers as opposed to a wholesale generator or retail marketer. Thus, access to data was framed by Judge Kim Malcolm, the Administrative Law Judge in R.03-10-003 and author of the original draft decisions that were edited and adopted by the CPUC in 2004 and 2005, but also continuing to this day.

The point successfully raised by advocates at the CPUC was that a city council, county board of supervisors or joint powers authority needed access to this data in order to negotiate an acceptable package with an Electric Service Provider (ESP). With the data, local governments would have sufficient information to compare the economics, greenness and localization factor (such as carbon or jobs) of an ESP's bid to PG&E's existing service — including multiple service components — and decide whether to pass the ordinance switching participants to a CCA.

Data is thus used both for location-specific CCA portfolio design, and for time modeling according to uptake rate assumptions that take into account substantial market barriers that have to this day prevented the global renewable energy industry from fully penetrating into the monopoly-dominated, supply-side oriented retail electricity markets of the United States.

In the case of the Sonoma County RESCO project, the value of data received from PG&E and other non-confidential regional sources is to evaluate and refine the portfolio of resources outlined in the 2007 Sonoma County CCAP Energy Element<sup>8</sup>.

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7. Reflecting this fact, CCA revenue bond authorities such as San Francisco's are specifically authorized to finance "energy conservation measures" in addition to renewable electricity generation. See City and County of San Francisco, Charter Section 9.107.8, (Proposition H, 2001, Ammiano), as well as Ordinance 86-04 (2004, Ammiano) and the CCA Program Design, Draft CCA Implementation Plan and H Bond Action Plan, attached to Ordinance 147-07 (2007, Mirkarimi).

8. Prepared by Paul Fenn, Robert Freehling and John Cutler with David Erickson of the Climate Action Campaign. Mr. Erickson has since joined LPI.

## 4.2. Data Request Methodology

During the summer of 2008, the County of Sonoma decided to collect PG&E data pursuant to AB 117. The County of Sonoma and all nine incorporated cities in Sonoma County had previously funded the Climate Protection Campaign to develop the CCAP detailing the actions needed to meet the community's greenhouse gas emission reduction goal of 25% below 1990 levels by 2015. The CCAP included a recommendation to investigate the potential for community choice aggregation (CCA) in Sonoma County to achieve greenhouse gas (GHG) emissions reductions in the energy sector.

LPI and CPC, with assistance from the Sonoma County Water Agency, undertook a 16-month long effort to satisfy PG&E's requirements under its Schedule E CCA-INFO tariff protocol<sup>9</sup> to the satisfaction of its counsel (complete chronology summarized in Appendix 4). During the summer of 2008, the County of Sonoma determined that it wished to collect PG&E data pursuant to AB 117. CPC managed the collection of required signatures and authorizations among local municipalities and helped the County prepare its package for submission to PG&E. In May, 2008 the Sonoma County Administrator submitted an official data request letter to PG&E, identifying LPI as the entity representing the County and responsible for the requested data in August, 2008 (see Appendix 5).

The data request involved numerous letters, telephone conference calls, emails, formal telephone calls and informal discussions. LPI was assisted by its counsel, Howard Golub, former General Counsel of PG&E, who provided legal advice to LPI regarding its correspondence with PG&E, drafted and read a number of PG&E letters, and physically participated in the actual meeting with PG&E at its headquarters in San Francisco in the Summer of 2009.

While PG&E has a protocol for releasing Schedule E data, the Sonoma County request included data in addition to what PG&E has established precedent and protocols for providing. Appendix 6 provides a letter from PG&E to the County of Sonoma dated September 25, 2009 summarizing the data they agreed to provide under Schedule E, and a rationale for refusing to provide the remaining data requested.

### **4.2.1. Data Requested in Addition to CCA-INFO Tariff**

In order to determine CCA opportunities within the County of Sonoma through a thorough determination of energy (kWh) and demand (kW) load information throughout the year, the County had requested the past five years of hourly reporting, where available, of all electrical data by all Time of Use (TOU) residential, agricultural, commercial, industrial and governmental PG&E customers in the County of Sonoma. Also included in the request was all related customer contact information and an

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9. See PG&E, CCA-INFO Tariff. [https://www.pge.com/tariffs/tm2/pdf/ELEC\\_SCHEDS\\_E-CCAINFO.pdf](https://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_E-CCAINFO.pdf)

indication of the control meter level linking the data to the correct billing entity. Specifically, it was requested that all billing accounts should identify the billing entity, and also the premise and the control meter tied to that premise. The County also requested all data relating to low-income CARE customers within Sonoma County, including rates, number of customers, kilowatt-hours, and billing collections.

Per item 13 in the data request tariff schedule, the County requested the maximum and minimum day load profile curves for Sonoma County, as well as a representative week of load curve data for the county for each of the four seasons. Maximum and minimum load curves should specify what date each occurred. Load profiles broken down by customer class were also requested. The County requested all data relating to demand response/interruptible load agreements within Sonoma County, including customers, capacity, hours per year, and what category of program each customer is participating in, including the kilowatts of commitment in each category.

The County requested the list of all net metering customers, including contact information, and type and capacity of equipment installed.

The County preferred all file raw data in an ASCII format, with data definition descriptions covering all data items. At a minimum:

- Detailed descriptions of files (field names and adequate documentation/ description of meaning, field delimiters, fixed record length bytes and field begin-end bytes if applicable, record delimiters, etc.)
- Primary key descriptors
- Referential integrity constraints

The County also sought all PG&E data dictionaries relevant to load performance, billing, marketing and grid structure, monitoring systems and performance and any other data dictionaries relevant to intelligence and historical performance of the customer base and grid in Sonoma County. The County assumed that all data dictionaries would be complete according to existing practices within PG&E. Pertaining to grid monitoring and performance, for purposes of determining the ability of the grid to support new business models initiated by Sonoma County or its representative related to CCA please provide all data addressing the historical five year and current capacities and performance of the Substation and grid infrastructure within Sonoma County. This would include a listing of specifications and throughput data for every known data monitoring and measuring device and system on the PG&E system impacting the County, as well as associated network and internet technology specifications related to SCADA systems, time-of-use and real-time metering. Such specifications should include margin of error/accuracy of all types of meters used to derive data and date of installation, as well as deployment or schedule for future Advanced or “Smart” metering including their capabilities and characteristics.

### 4.3. Summary of Data Received

The first disks data were delivered to the research team in September 2009 and the data was imported into a new single database in November 2009. PG&E charged \$22,705.00 to supply the County of Sonoma with CCA-INFO tariff for the years 2005, 2006, 2007 and half of 2008. The total number of customers for each year of data provided was:

- 2005: 264,336
- 2006: 261,776
- 2007: 262,614
- 2008: 266,061

The following is a description of the data that was received from PG&E under its Schedule E CC-INFO tariff.

#### Non-Confidential Data:

- Aggregate monthly usage (kWh) by rate schedule
- Annual proportional share of energy efficiency funds for a CCA's proposed territory
- System wide residential and nonresidential load shapes by climate band for the most recent year for which PG&E has completed information
- Aggregate monthly usage (kWh) by zip code within a city code
- Public Goods Charge customer payment by city code
- Number of service agreements in each rate schedule within a CCA's territory or proposed territory
- Estimated annual generation revenues by CCA territory
- Fitting CCA annual usage to climate band load shapes; estimation of peak coincident and non-coincident demands

#### Confidential Data:

- Total annual kWh loads of bundled and direct access customers on a monthly basis and secondly on a rate schedule basis within the CCA's territory
- Aggregated residential annual kWh usage for a particular year in a format by tier for each rate schedule
- For the TOU rates, provide further separation by summer/winter peak, partial peak, and off peak periods and summer/winter period
- Aggregate monthly usage (kWh) by zip code within a city code
- Customer-specific information consisting of: service agreement number, name on agreement, service address with zip code, mailing address with zip code,

- monthly kWh usage, monthly maximum demand where available, and monthly rate schedule for all accounts within the CCA's territory
- Customer-specific information consisting of: service agreement number, monthly interval meter data where available, and rate schedule for all accounts within the CCA's territory

The last two items above pertain to individual customer data, the focal point of the request, providing very high analytical granularity. The number of data records for which data was collected in each PG&E rate class in 2007 was:

A1	217,704
A10P	60
A10PX	5
A10S	28,361
A10SL	51
A10SX	1,155
A10SXL	12
A1L	144
A6	13,518
A6L	12
AG1A	20,387
AG1B	3,718
AG4A	2,901
AG4B	760
AG4C	36
AG5A	1,264
AG5B	1,920
AG5C	58
AGRA	34
AGRB	12
AGVA	124
AGVB	72
E1	1,623,009
E19P	108
E19PV	21
E19S	627
E19SV	2,821
E1L	321,073
E1M	11,302
E1ML	35
E1S	126
E1SL	60
E1SR	56

E1SRL	16
E1T	156
E1TL	805
E20P	141
E20S	64
E20T	20
E3A	5
E3B	10
E3BL	6
E6	1,103
E6L	41
E7	51,956
E7L	3,175
E8	35,178
E8L	3,072
E9A	47
LS1	5,770
LS2	2,989
LS3	977
OL1	10,204
OL1L	7
STOUP	12
STOUS	12
STOUT	108
TC1	6,338

#### **4.4. Summary of Data Requested But Not Obtained**

The researchers requested natural gas consumption data from PG&E in order to provide a sufficiently accurate volumetric basis for modeling uptake rates for the development of renewable heat and hot water products as a related product offering of the CCA.

To date, PG&E has not indicated that it will provide the requested data. As the CCA-INFO tariff does not include provisions for the sharing of retail natural gas sales to homes and businesses, PG&E may elect not to share the data as it refused to do on those of the researchers' data requests that included data not provided for specifically in the CCA-INFO tariff.

In the event that PG&E refuses to provide natural gas data, the researchers will include a disclaimer in the renewable heat and hot water portions of the portfolio to clarify that the uptake rate assumptions must be more varied and unpredictable than the other, more detailed data points related to retail electricity consumption provide by the CCA-INFO tariff data request of PG&E confidential customer-specific data provided as per



AB117 and R.03-10-003 Phase I Decision of the California Public Utilities Commission (CPUC, December 17, 2004).

## **4.5. Data Integration**

Under the auspices of the Secure Sonoma County RESCO project, the research team has imported the PG&E data into a single database, transferred files onto its secure server, run preliminary regional load analyses using non-confidential information, geo-coded confidential customer address information and developed initial maps. Appendix 7 includes the following samples:

- Sonoma County Residential Load Profile — Total hourly residential load for various dates throughout 2008, illustrating seasonal variation.
- Geospatial display of load data — Total monthly residential load as a proportion of annual load for each zip code in Sonoma County, enabling comparison of the seasonal load profiles of locations.

The complete results of data integration and analyses will be reported in future documents for this RESCO project.

## 5.0 State and Federal Data Requests

The research team determined that some useful data was available either from state or federal sources, such as National Renewable Energy Laboratory and the California Energy Commission. Many of the federal data sources are available on line, without a fee, such as zip code maps and topographic information.

The Energy Commission has GIS datasets for natural gas pipeline, electrical transmission line and substation locations, as well as other potentially useful datasets. The research team initiated contact with the Commission and found that these datasets are subject to security controls. Our GIS technician was informed by the Commission staff that a) the request for this data had to come from a government entity; b) all persons with access to the data were required to sign a Non-Disclosure Agreement. Appendix 8 includes communication with Commission staff describing their protocol for requesting GIS data.

The necessary approvals and NDAs were received and a package submitted to the Energy Commission by the Sonoma County Water Agency. The datasets requested and received are:

- Transmission line locations and types
- Substation locations
- Known geothermal areas
- Wind resource potential
- Wind speed and power
- Power plant siting

## **6.0 Barriers to Data Access**

### **6.1. Local Data Barriers**

#### **6.1.1. Legal/Regulatory**

No legal or regulatory barriers existed in obtaining local data, except for confidentiality of address data. The research team was required to keep any name/address information confidential, and not use it in any public reports. Researchers were required to sign non-disclosure agreements for all people with access to certain data received from the Energy Commission and to keep the data secure, i.e., controlled access.

#### **6.1.2. Institutional/Cultural**

A barrier was presented by the variety and number of different organizational entities that keep data that is related to energy use at the local level. The research team discovered that the County of Sonoma has significant resources to supply datasets, but these resources are distributed over at least two, and up to four departments. Researchers also discovered that each entity required a personal contact, with an explanation of the project for which the data was being used.

The primary division, in terms of data availability, exists between the cities and the County. Each city has its own apparatus for maintaining city-specific data. In some cases, the city-specific data had been outsourced to private contractors that provide access to the city's data on a time and materials basis.

Ideally, there would be a single portal for all data in the County, which would cross governmental boundaries. It would present a "clearinghouse" view where both countywide and city-specific data could be accessed with appropriate authorization.

#### **6.1.3. Technical**

Technical barriers at the present time simply have to do with the availability of data in electronic format. So far, the research team has encountered only one city dataset that requires a format conversion from an existing file format into one that is useful for project purposes<sup>10</sup>. There may be occasions where data will need to be entered manually, but so far this has not been necessary.

#### **6.1.4. Financial**

The only financial barrier encountered so far is in the case of the Town of Windsor, where a private engineering contractor requires reimbursement to organize and package the source materials for zoning maps. The research team proceeded with the request and has asked the Town to pay the contractor for their time to produce the source materials, but have not resolved this barrier at the time of the writing of this report.

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10. AutoCad DWG files for the Town of Windsor must be converted to GIS shapefiles.

## **6.2. Barriers to PG&E Data Access**

PG&E refused to provide any data not covered by its Schedule E CCA-INFO tariff. This includes substation and transmission data for Sonoma County. PG&E claimed that it was liable for jeopardizing national security by releasing data not included in its CCA-INFO tariff.

The lack of transmission and substation meter data harms the accuracy and blurs the resolution of regional and microgrid load modeling. The lack of PG&E transmission and substation data eliminates the opportunity to analyze grid and microgrid heat loss and congestion conditions, which are important criteria for region and microgrid evaluation.

As a result of the involvement of LANL in this Sonoma County RESCO project, the research team will have modeling results of substation conditions. These model results include estimated substation service areas and simulations of service area response to examples of distributed generation, which will help in technology and site selection.

The researchers encountered a similar barrier in securing natural gas consumption data from PG&E. Natural gas data is a key component in modeling RESCO applications to provide a sufficiently accurate volumetric basis for modeling uptake rates for the development of renewable heat and hot water products as a related product offering of the CCA. As the CCA-INFO tariff does not include provisions for securing natural gas data in Sonoma County, the researchers worked with Sonoma County RESCO partners on alternative ways of securing this data. To date, PG&E has not indicated that it will provide the requested data. As the CCA-INFO tariff does not include provisions for the sharing of retail natural gas sales to homes and businesses, PG&E may elect not to share the data as it refused to do on those of the researchers' data requests that included data not provided for specifically in the CCA-INFO tariff.

In the event that PG&E refuses to provide natural gas data, the researchers will include a disclaimer in the renewable heat and hot water portions of the CCAP to clarify that the uptake rate assumptions must be more varied and unpredictable than the other, more detailed data points related to retail electricity consumption provide by the CCA-INFO tariff data request of PG&E confidential customer-specific data provided as per AB117 and R.03-10-003 Phase I Decision of the California Public Utilities Commission (CPUC, December 17, 2004).

## **6.3. Barriers to Federal Data Access**

### **6.3.1. Power Model Accuracy**

LANL is providing modeling results regarding substation service area estimation and response to examples of distributed generation insertion. This will help the researchers understand dynamics of Sonoma County peak loads and regional conditions to provide a demand to substation level model.

The value of the substation polygon data is that it will provide for a clear verification of the Sonoma County regional demand curve and focus the grid security-related benefits prediction and accuracy of such prediction. Specifically, it will provide opportunity to analyze the correlation between substation conditions, transmission system conditions, and local load conditions. To an extent this is known “vertically” based on the load curve and individual monthly volume meter data used as the radical basis of this analysis – the 250,000 meters for several years that provide novel opportunity to “see” energy use and related greenhouse gas and security or resilience impacts that would be achievable through a specific localization of power generation to exclusively renewable and demand-side technologies, the goal being a 67% physical replacement of the annualized power demand schedule.

### **6.3.2. Security**

LANL will provide comments on the potential security impacts of the renewable energy portfolio rollout based on volumes and locations of examples from the portfolio. By linking proposed facilities to specific substations, the researchers can provide LANL with the data basis for assessing the implications for examples of integrated interoperable neighborhood renewable energy facilities relative to regional grid stability, substation load, and , potentially, transmission congestion dynamics. In order to make such an assessment, LANL has estimates of substation polygons, as referenced above, which it is providing the researchers so that candidate sites are coded to reflect a known substation associated with surveyed development candidates.

While security impacts occur at the transmission level, reflected by conditions at each substation of the grid serving retail electricity customers located within Sonoma County, upgrades also occur within neighborhood sites that are interoperable and physically serve specific customers in islanded sectors. The researchers will assess these security benefits based on the site selection criteria that guide the design of the renewable energy portfolio. Depending on the level of data made available to the researchers by LANL, grid benefit analysis may be included in these tasks. A transmission benefit occurs when the peak or other load reduction is registered adequately to reduce the Independent System Operator (ISO) status of a substation or reduce resource adequacy requirements for a Load Serving Entity (LSE) providing service to the program.

A microgrid or neighborhood security benefit will be identified when a functional multi-customer sharing of onsite capacity and or renewable power storage or renewably generated heat that may be configured to provide such capacity with or without PG&E system power. “Blackout protection” opportunities will be assessed in the forms of (a) onsite or neighborhood storage and (b) integrated use of islanding and monitoring and control technologies.

As a reduced functional load curve is the primary revenue source to support scheduled accelerated conversion of loads to the new capacity in the model, knowledge of the substation polygons for a countywide survey of two hundred thousand meters would be greatly enhanced by this LANL data. Surveying thousands of sites, and major CEQA type projects at up to hundreds of sites, the research team is focused upon the regional clustering of customers by “use complementary” on high-energy intensity areas and other targets that offer an adequate volume of sites in proximity to security-priority public facilities.

Capacity sharing would involve co-use of a facility between two different kinds of customers using the facility in a different, complementary way. For example, government critical loads and commercial critical loads and even residential critical loads could thus share a power facility with a large commercial customer with significant daytime load and an eligible onsite rooftop for solar photovoltaic technology.

The sharing arrangement would involve one party consuming the power onsite and mostly during the morning and afternoon hours of the work week, under a routine of mostly nonresidential load that corresponds with the hours of day that generate solar photovoltaic power.

The difference in use would be arranged between customers interested in cooperating in such a manner, and would be offered through a special rate that includes the service or facility ownership being received. Thus, specification of a sufficiently broad survey of sites in Sonoma County in later reports of this project will contribute to greater certainty as to the uptake rate and greenhouse gas reduction rate that will be physically caused if the revised CCAP is implemented by Sonoma County and local governments.

The researchers will assess onsite customer security and public security benefits of each site based on existing data, but will depend upon provision of LANL data to provide analysis or modeling of substation (and, potentially, transmission security) benefits. The researchers will provide analysis of ISO carrying capacity/dispatchability standards relative to onsite renewable resources, and provide commentary on any changes that might be appropriate to better reflect the enhanced capacity value of integrated interoperable multi-customer, multi-rate class neighborhood renewables compared to supply-only and single-customer only onsite renewable generation.

## 7.0 Conclusions and Recommendations

### 7.1. Local Data Adequacy

As data has become available, gaps in the datasets have been revealed that will ultimately need to be filled. The following is a list of data that has been challenging to obtain but which would fulfill an important role in the overall project.

#### **7.1.1. *Data does not exist***

Detailed energy monitoring data on end use applications is very scarce, and labor intensive to develop. For targeted, specific situations, data collection can be done using power logging equipment. Some data of this type has been developed at the Pilot Project location. This monitoring is described more fully in the section on data collection for Task 7.

Ideally, real-time monitoring data of all end uses of both electricity and natural gas would be available. A more localized profile of demand data, broken down by residential and non-residential sectors, would provide a higher degree of resolution of the demand and facilitate a more refined portfolio. As smart meters become available, this data should become accessible. For this project, the analysis will use load profile information supplied by PG&E that applies to the entire county.

On the supply side, the analysis would benefit from more detailed studies done in the following areas:

- Local wind resource maps are available from the Energy Commission. However, detailed studies of wind availability over urban areas, particularly at the 100M level, would be particularly useful. Higher resolution studies of offshore wind availability in areas where wind turbine construction is feasible are needed.
- Resource assessments for small-scale hydro, biomass and low temperature geothermal.
- In areas of known geothermal activity, including well sites with elevated temperatures, more detailed studies of geothermally heated water availability should be done.

#### **7.1.2. *Data exists but is not available***

The research team has not attempted to obtain proprietary data held by private firms or associations. Although PG&E has some unknown amount of data related to distribution network local operations, they declined to release it. In addition, associations that track certain data in the county such as the Farm Bureau, the Wine Growers Association and the Dairy Association could and may be approached for additional data. City-specific data, owned by the cities, such as zoning maps and permit databases do exist, but may not be in the proper format for GIS analysis. Requests for these types of data should be

made, but the analysis team should be able to convert or otherwise make the data usable by GIS or database tools.

### **7.1.3. Data exists but has not yet been requested**

The research team has not yet requested data on the following areas, and will assess the necessity of obtaining these data as the project develops:

- Transportation patterns, transportation fuel use or any county or regional level transportation demand modeling.
- Historical natural gas and propane use in the residential and commercial sectors, disaggregated by city. Some of this data has been obtained in the course of preparing the Sonoma County CCAP. This will be brought in as necessary. Follow up data requests will be initiated within the course of the data analysis phase, as required.
- Other related resource use, such as water use, wastewater processing, municipal solid waste. These data have been collected as part of the CCAP development and will be used as required. If follow up data is required this will be initiated within the course of the analysis phase.
- The Sonoma County Agriculture Preservation and Open Space District may have detailed GIS data related primarily to forestry stocks for sequestration and biomass.

## **7.2. PG&E Data Adequacy**

Generally, the requested data have provided a sufficient basis for analysis and production of a model renewable portfolio. The initial development of this renewable portfolio was based upon preliminary work in the Sonoma County CCAP Energy Element. One outcome of the Sonoma County RESCO project is to provide the necessary specifications for a regional greenhouse gas reduction electric supply construction project. The data acquired in this phase are adequate to make a solid beginning on those specifications.

Acquiring energy use history for 250,000 meters for an entire California county creates an unprecedented opportunity. It affords a unique opportunity to design an optimized, interoperable RESCO system integrated from top to bottom – the “top” being regional energy demand curve that forms the cost basis of all power sold to Sonoma residents, businesses and institutions, and the “bottom” being the economic situation at the meter of each individual customer based on the demand history at each meter. The collection of some data encountered barriers that limit some granularity in the portfolio design. However this limitation will not in any way harm the researchers to provide:

- An unprecedented, high quality, renewable portfolio design
- A methodology for the design, evaluation, and implementation of this portfolio



- A portfolio characterized by being composed of integrated, interoperable local generation, storage and load control facilities across a California county.
- An individual meter-based view of the multi-user and single-user economic bypass path
- An economic feasibility model for both a chosen individual customer and high energy intensity neighborhoods throughout the urban and rural areas of Sonoma County.

As described above and in Appendix 5, the research team's data collection from PG&E did not yield a complete data set. PG&E declined to provide some key data necessary for microgrid-level or "neighborhood" analysis of energy use. Specifically, PG&E refused to give the research team hourly load shape data at the substation, or any substation-level data. The researchers received load profile data that apply to the entire baseline climate zone. Key to load shape analysis is the ability to understand variations in load on a very high resolution geospatial grid, and substation-level load profiles or even feeder-level load profiles should ideally be considered in the RESCO project.

The researchers are applying a transition process model that integrates temporal and financial variables in two areas:

- Region-wide energy use patterns
- Specification and development of a large number of local renewable energy and customer-owned smart grid development projects.

In order for the research team to make decisions on a factual basis regarding the most cost effective combination of efficiency, demand response and renewable generation to effectively serve every customer in the county, the substation level data must be obtained at some point.

Due to unavailability of substation level load profiles, the researchers are unable to perform certain types of modeling such as:

- Identifying the effects of micro-climatic and seasonal variations in customer load located within Sonoma County
- Strategic heating and air conditioning load comparisons between residential, commercial and industrial customers located in various micro-climates that exist in regions of Sonoma County.
- Distinguishing probable end uses that give rise to commercial and industrial load shapes

Nonetheless, the data sample obtained by the researchers is being subjected to highly detailed utility-level data analysis and modeling at a very small geographic scale. Thus,

the researchers expect accurate modeling of temporal and financial implications for an energy “re-localization.” The objectives of this analysis are:

- Placement of resources close to the customer load to avoid the need for new transmission
- Design and management of those resources at a much smaller scale than IOUs or municipal utilities
- Maximization of local resource use and customer energy independence
- Identification of a rollout strategy and specific candidate sites and resource for development
- Answering the key question facing implementation of the recommended renewable portfolio: Will it be economically feasible for customers and local governments?

In addition, the researchers are identifying methods for technology transfer to other communities seeking to meet carbon reduction targets and/or improve their community’s local energy resilience through the fuel independence that integrated and interoperable RE/DSM can offer.

### **7.3. Federal Data Adequacy**

The researcher’s partner, Los Alamos National Laboratories, is providing estimated substation polygons (GIS regions indicating areas served by each substation). Substation polygon data will provide the researchers with information on the loads, energy intensity zones, neighborhoods and individual loads evaluated that are being served by each substation.

Depending on the level of detail of model simulation that the LANL team is able to achieve, this simulation may provide the ability to refine the identification, evaluation, and candidate resource site selection, as well as predict different resource allocations between various geographic locations within Sonoma County.

LANL modeling of the researcher’s proposed renewable portfolio deployment would ideally include an assessment of the substation-level impacts of the portfolio deployment. This is planned via simulation of specific example distributed generation sites and their effects on substation service areas. Should LANL be unable to include this level of analysis, the researchers may have the opportunity to perform this analysis during performance assessment of the portfolio.

However, if LANL is unable to provide portfolio simulation data to the researchers there will be some reduction in the researcher’s ability to evaluate some sites. While in many cases the area served by a substation on the researcher’s maps appears fairly obvious, this is not always the case. The researchers will still be able to assess onsite and over-

the-fence security benefits of proposed facilities. However a simulation is necessary to estimate or predict the potential substation-level impacts from geographically clustered, multi-site facility developments on identified candidate sites.

## **7.4. Local and State Data Collection Recommendations**

Collection of local and state government data was both interesting and instructive. Sonoma County's local governments have proved to be valuable sources for all types of data that will be essential for the success of this project and others like it.

The strategy for requesting and obtaining data from public sources should be planned in advance for best results. In the case of Sonoma County, an overall survey of the available data would have been a valuable step. Rather than determining in advance what data would be required and making a blanket request of all cities and the county, a survey of available data starting at the state level would have been more immediately productive.

The Sonoma County government has a dedicated GIS department that will service special requests. However, many GIS datasets have been placed online on a website and are available for download. In the case of Sonoma County, the Permit and Resource Management Department (PRMD) maintains a website with many useful GIS datasets.

Once a survey is completed of countywide data available from County government entities, a more customized approach to identifying city-specific data can be undertaken. Generally, city-specific datasets are best obtained by personal contact, starting at the City Manager level.

California state government, in particular, the Energy Commission, can provide essential infrastructure data, including transmission line and substation locations, natural gas pipelines and the like. Although subject to security controls, these datasets are relatively easily obtained by government entities. The Commission also maintains datasets related to the regional availability of renewable energy resources.

The following additional recommendations should be considered by other communities seeking local data for the purpose of designing a community-scale renewable energy portfolio:

- Hire a GIS expert
- Conduct a survey of publicly available GIS data including data that may be subject to confidentiality restrictions
- Interview local government agency experts to identify additional data
- Expect delays in responses
- Expect that approvals will be necessary in order to access data with privacy implications, such as address databases. Non-disclosure agreements and

government entity involvement is required in order to receive data with homeland security implications, such as transmission line and substation locations.

## **7.5. PG&E Data Collection Recommendations**

As indicated above, PG&E refused to provide any data not covered by its Schedule E CCA-INFO tariff, which excludes a range of analytical and modeling activities from this analysis that will ultimately be necessary for an implementation of the revised CCAP. Because CPUC regulations provide that a local government, not an investor-owned utility, may decide what constitutes “appropriate data” under AB 117 regulations, the researchers recommend that Sonoma County and local governments consider petitioning the CPUC for modifications of PG&E’s CCA-INFO tariff. The CPUC should be made aware of this gap in data needed to produce analyze data at a very small, local scale, and amend the tariff to include the necessary data.

Specifically, the researchers recommend that PG&E’s tariff should be changed to allow for (1) permanent live 24/7 data access to PG&E’s entire database for every meter and measuring device in or near Sonoma County; (2) any form of data including the entire contents of the PG&E database, at cost; and, (3) natural gas data to the greatest detail allowed by law and regulation.

AB 117 requires utilities to “cooperate fully” with CCA data requests specifically, and the Commission threatened utilities with shareholder penalties should they fail to cooperate with CCAs studying, investigating or implementing Community Choice Aggregation. PG&E’s current CCA-INFO tariff excludes the following, and a tariff change should be requested by the State of California, to include the following changes to PG&E’s CCA-INFO Tariff, and to make similar changes to similar tariffs of the other investor-owned utilities in California.

- Include natural gas data for customers within the jurisdiction(s) of the agency
- Utility distribution impedance maps
- Substation and transmission system data and all meters for PG&E transmission and distribution system serving the local government agency

The researchers also recommend the following general guidelines for data collection by local California governments from their incumbent utility:

- Use a consultant familiar with both CPUC regulations regarding CCA data access (R.03-10-003, especially D.04-12-046) as well as PG&E’s CCA-INFO tariff data request protocol.
- Organize the data collection strategy around analysis of the local investor-owned utility’s CCA data tariff, which differs by utility, and consider supporting actions of other local governments to create greater, more flexible access to customer-

usage data, including all customer-specific customer usage data but also including other data outlined above.

- Make two separate requests to the investor-owned utility. The first request should include only the CCA-INFO tariff data, which should be available readily from PG&E. The second request should cover the remaining data that was contested by PG&E in the case of Sonoma County.
- Have an attorney present during negotiations on data requests.
- Keep written record of all communications and use registered mail for all paper correspondence.
- Select a data specialist as the main contact point for negotiation
- Assume a six-month to one-year turnaround for CCA-INFO tariff data, and one to three years for non-tariff PG&E data

## Appendix 1

### Data Request Memo to Cities

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490 Mendocino Avenue, Suite 206  
Santa Rosa, CA 95401  
[www.sctainfo.org](http://www.sctainfo.org)  
(707) 565-5373

November 9, 2009

To: City Managers  
From: Dave Brennan, Program Manager  
Re: Request for Data for RESCO project

You may recall that a PIER grant was awarded to the Sonoma County Water Agency in partnership with Los Alamos Lab, Climate Protection Campaign and SCTA under the RESCO program to develop a model for locating, designing and constructing renewable energy facilities on a community scale. The project has been initiated and will be completed in early 2012. As part of the project a significant amount of data needs to be collected for site selection considerations. We are requesting that the following data be provided by your jurisdiction:

1. Zoning maps and regulations for each zone
2. Assessor's parcel database
3. Utility rights of way
4. Substation locations
5. Railroad rights of way
6. Water supplies and treatment facilities
7. Wastewater treatment facilities, locations, capacities,
8. Permit databases, including permits for generation facilities such as PV
9. Natural gas pipeline routes
10. City owned property
11. Environmental protection zones and regulations, i.e., biotic resource zones, environmentally sensitive areas
12. Existing generation facilities, public or private
13. Landfill locations, capacities, LFG recovery system types, compost facilities
14. Locations of dairies or livestock cultivation of any type
15. Hydrological feature maps, streams, lakes, rivers with altitudes and flow rates
16. Agricultural lands & what is growing on it with view for biomass or rural energy siting
17. Any studies that the city has regarding renewable energy or efficiency potential
18. Any existing, or plans the city has for new, renewable projects or efficiency/demand side
19. Known cogeneration facilities (combined heat and power, usually commercial/industrial)

20. Locations of facilities that might have large thermal load, including process heat, industrial/manufacturing heat, large space/water heat, cooling, etc. as potential sites for cogeneration

21. Information regarding coastal lands and offshore development limits, activities, etc. that might be relevant to onshore or offshore renewables

22. Information on reservoirs, pipes or other facilities that might be suitable for pumped storage or in-conduit energy recovery

It is preferred that the data be provided electronically either as a GIS layer, or any other form the county or cities might have.

Should your staff have any questions please have them contact Dave Erickson at [jdaviderickson@comcast.net](mailto:jdaviderickson@comcast.net)

A response that provides the data, identifies the absence of data or directs the inquiry to other sources would be appreciated by the end of November.

## **Appendix 2**

### **Email request to County Agencies**

February 9, 2010

Tim, David, Shelly, Nathan, and Mark,

Sonoma County Water Agency is partnered with Sonoma County Transportation Authority, Climate Protection Campaign/Local Power Inc., and Los Alamos National Labs in a project entitled Renewable-based Energy Secure Communities (RESCO) project. This project is partially funded by a grant from the California Energy Commission. The purpose of this project is to develop a renewable energy portfolio using local resources, along with tools and techniques for identifying resources and sites, and development of financial and political framework in which such a portfolio can be implemented. The research work requires that we collect within reason any and all relevant data that can be used in portfolio development. One of the project participants, Local Power Inc. (LPI), may be contacting you to request data, including GIS data, for the project. LPI staff would likely be Joe Honton, Dave Erickson, or Sarah Shaeffer. We would appreciate any data you could provide in the timeframe requested.

There may be concerns over costs of extracting and compiling the data, as well as the confidentiality of some of the information in the datasets. If you incur labor costs extracting and compiling data, we can authorize up to eight hours (meaning eight hours to each of your respective domains of authority and responsibility for a total of 40 hours) of labor costs if you send an invoice to the Water Agency (care of Marta Peavy, Accountant II) denoting agency project number 7403-14. Marta will prepare a journal voucher to reimburse your department/division.

Regarding datasets that contain personal and/or confidential information, for the purposes of the RESCO project activities, any public reports will have all customer-specific information removed, and any database containing name and address information will be stored on a secure server. We expect to use only highly aggregated data in all of our reports, and have no real need to use data from specific customers in any final reports. If such a need arises, we expect to obtain permission from the customer to use that information.

LPI has already received PG&E customer billing data for all power meters in Sonoma County. LPI signed non-disclosure agreements with PG&E and implemented data security measures to maintain customer privacy.

Any datasets supplied to RESCO partners named above by any County agencies that contains name and address information will be treated as confidential according to the protocol described above. If you have a confidentiality non-disclosure template form that you would like us to sign, please let us know. If you have any questions, or would like additional information regarding the project or this request, please contact me at 707 547-1979 or at the email above.

Thank you,  
Dale Roberts, P.E., Project Manager  
Sonoma County Water Agency



### **Appendix 3**

## **Chronology of California Public Utilities Commission Rulemaking R03-10-003**

In its 2004 Phase I decision in the CCA rulemaking, the California Public Utilities clarified the meaning of AB117 with respect to the meaning of the word “appropriate” in defining what data would be made available by investor-owned utilities, including any information is useful to them, provided a statement of intent and nondisclosure agreement.

CCA Advocates spent one year securing access to the data, culminating in a successful decision of the CPUC on December 16, 2004, including the following steps<sup>11</sup>: Where are steps 1-4 below?

5. On October 20, 2003 filed a Petition to Intervene with Comments on the Commission's Order.
6. On November 17, 2003 filed a Motion to Accept Late Filed Comments; with Comments Attached.
7. On December 1, 2003 filed its Notice of Intent to Claim Compensation.
8. On January 9, 2004 participated in the first CCA CPUC Workshop.
9. On January 30, 2004 participated in the second Workshop on the utility reports on data issues.
10. On February 13, 2004: filed its "Comments on Joint Utility Report on Community Choice Aggregation Information Issues"), and on February 20, 2004 filed a Motion “to Accept Late Filed Comments on Joint Utility Report on Community Choice Aggregation Information Issues,” which was granted by Judge Malcolm.
11. On February 20, 2004 filed a Motion to Reconsider ALJ's Ruling Modifying Schedule and Outlining Workshop Issues.
12. On March 2, 2004 participated in a Pre Hearing Conference on Local Power Motion Second Workshop on CRS - DWR.
13. On April 15, 2004 filed a “Comments on Electric Utility Procurement Plan Outlines and the Imposition of Customer Responsibility Surcharges on Customers Participating in Community Choice Aggregation,” accepted by Judge Malcolm as Paul Fenn’s Testimony. In particular, Local Power included "Attachment 1: Widespread Adoption Utility Forecasting

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<sup>11</sup> CPUC Evidentiary Hearing Transcripts presided over by Administrative Law Judge Kim Malcolm all of Local Power’s 2004 and 2005 filings, including our request for compensation, are posted with the Phase I Decision at <http://www.local.org/0310003.html>

Community Choice Scenario (PDF)" a Spreadsheet analysis of seven counties in which local governments are now investigating, pursuing or implementing Community Choice Aggregation.

14. On May 28, 2004 submitted a R.03-10-003 Response to PG&E Data Request.
15. Between June 2 and 10 and on June 24, 2004, participated in Evidentiary Hearings, Cross Examined most witnesses, and at the last day of Hearings. Advocate's Witness was Cross-Examined by Utilities and other parties to R.03-10-003. Advocates submitted the Qualifications of their witness as well as San Francisco Board of Supervisors' unanimously adopted Energy Independence Ordinance 86-04 (May 11, 2004, Ammiano) as evidence to Judge Malcolm.
16. On June 15, 2004: Submitted their Witness Paul Fenn's Reply Testimony on "The Prepared Testimony of Thomas K. Clarke on Behalf of the Inland Valley Development Agency" (Parts subsequently stricken by Judge).
17. On June 24, 2005 submitted the Qualifications of Paul Fenn.
18. On July 9, 2004 filed is Initial Brief.
19. On July 23, 2004 filed its Reply Brief.
20. On August 10, 2004: Submitted a "Draft Settlement Agreement for Consideration by Community Choice Aggregators" to clarify the issues between CCAs.
21. On November 18, 2004: filed its Comments Judge Malcolm's Proposed Decision Resolving Phase I Issues on Pricing and Costs Attributable to Community Choice Aggregators and Related Matters.
22. On November 23, 2004: filed Reply Comments on Proposed Decisions Resolving Phase I Issues on Pricing and Costs Attributable to Community Choice Aggregators and Related Matters.
23. On November 24, 2004 filed a Motion to Accept Filing Exceeding Page Limitation Regarding Reply Comments of Local Power on Proposed Decision Resolving Phase I Issues On Pricing and Costs Attributable to Community Choice Aggregators and Related Matters (1 page, motion denied, one day).

The Phase I decision was voted on by the Commission on December 16, 2004 – providing the context for the Sonoma RESCO project.<sup>12</sup>

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<sup>12</sup> The California Public Utilities Commission has an Intervenor Compensation program, which allowed Local Power to participate at risk in the proceedings, but later, at the decision of the judge, to receive retroactive payment based on a determination of Local Power's contribution to the Phase I decision, at staff's extant client billing rate. Local Power received approximately \$50K in intervenor compensation in the Phase I decision for 2004. States that have intervenor compensation programs are a conducive environment for achieving desirable CCA regulations and procedures for details like access to customer data, which outside of AB117 and similar laws in other states is otherwise unavailable to nearly all local governments in the United States.

In R.03-10-003, CCA advocates emphasized that CCAs are local government institutions, which unlike Electric Service Providers are accountable to the public and may be entrusted with their welfare. Because CCA's are governed by ordinance as per Section 366.2(c)(10) and (11) of the Public Utilities Code, a local public process subject to sunset ordinances and meeting laws rather than internal agency solicitations maximizes both public official accountability and the public education and participation benefits that come with public hearings. In contrast, the utilities argued that confidential customer data should not be made any more available to municipalities than it would be made to power retailers or traders like Enron.

At the January 30, 2004 Workshop on Data Issues at PG&E, the Commission clarified that the range of policies on CCA information to be included in the Utility Report on Data Issues should include a policy under which all data, including customer-specific data, would be made available to CCAs.

Throughout the Phase I evidentiary comments, hearings and in testimony, reply and rebuttal testimony, CCA advocates argued that the utilities' objection to giving CCA unlimited power data access based on confidentiality protection was not only false but self-contradictory. PG&E and the utilities had argued that the CPUC's "15/15" Rule<sup>13</sup> restricting Direct Access energy suppliers' ability to secure individual ratepayer energy usage data should also be applied to Community Choice Aggregators –as if CCAs were suppliers, like utilities or Electric Service Providers. CCA advocates countered that the 15/15 rule was written for a Direct Access environment in which the ratepayers' energy usage information was appropriately shielded against abuse by the potentially predatory practices of energy suppliers. In contrast, AB117 defines CCAs as organizations of ratepayers combining to negotiate together as consumers, not as producers – and so AB117 made the confidential information available. Confidentiality rules rightly protect ratepayers against suppliers, but do not protect ratepayers against themselves.

R.03-10-003 confirmed that AB117 requires customer billing data to made available to CCAs that investigate, pursue and implement Community Choice Aggregation: In D.04-12-046, the Commission acknowledged the interpretation that AB117 requires utilities to provide CCAs with customer-specific billing data:

“Local Power believes the statute is clear with regard to its requirement that utilities provide all relevant information to CCAs that are “investigating, pursuing or implementing” CCA programs and suggests that confidentiality concerns may be addressed by imposing limits on the CCA’s use of the information it gets” (p.49).

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<sup>13</sup> The 15/15 rule is discussed on PG&E's CCA-INFO Tariff - source referenced below.

The Commission agreed that certain types of data are needed for CCAs to investigate, pursue or implement CCA:

“CCAs must have certain types of information in order to plan their procurement strategies, assess the viability of offering energy services, and to contact customers. Section 366.2(c)(9) anticipates the needs of CCAs for certain types of customer data and information” (p.50)

The Commission agreed that the data is needed in advance of actual CCA implementation:

“AB 117 is clear in its intent to require the utilities to provide CCAs all customer and usage data that is relevant to CCA operations even before the CCA begins offering service. In addressing the informational needs of CCAs, Section 366.2(c)(9) provides that the utilities shall “cooperate” with CCAs that “investigate or pursue” CCA programs. Because a CCA is most likely to “investigate or pursue” CCA programs before it begins offering service, we read the plain language of the statute to mean relevant information must be provided on demand, without distinguishing between a customer who is still with the utility or a customer of the CCA or between the time a CCA is created and the time it provides service. By law, CCAs are entitled to receive certain types of information as long as they are investigating, pursuing or implementing a CCA program”(pp.49-50).

The Commission said that the CCA customer notification requirements would depend on access to customer-specific information:

“LA/CV and Local Power also observe that AB 117 requires the CCA to notify utility customers of the CCA’s plan to offer service, a requirement the CCA cannot satisfy without customer billing information” (p.49).

The Commission agreed:

“Section 366.2(c)(13) (A) supports this finding in its requirement that CCAs provide opt-out notifications to prospective customers prior to cut-over. Although Section 366(2) (13)(B) gives the CCAs the option to request utility assistance with the notifications, each CCA must assume ultimate responsibility for the notices. The CCA cannot satisfy this responsibility without access to customer names and addresses. Thus, if the Legislature had intended for customer information to remain with the utility, it would have not required the CCA to issue the opt-out notices”(p.50).

The Commission agreed that Ab117 requires CCAs to have access to data that would be considered confidential under Direct Access rules:

“The information the CCAs may need from the utilities may be confidential, for example, (1) basic load and usage data required to estimate energy procurement needs and (2) customer information needed to contact customers and provide services, including name, address, and meter information”(p.47).

The Commission rejected utility arguments that Direct Access confidentiality rules should apply, “primarily because the statute itself directs the provision of customer information to a CCA”:

“Moreover, unlike a district attorney investigating criminal activity. The statute permits the CCA to receive such information. Unlike the unwilling subject of a criminal investigation, the customers for whom the CCA seeks information have implicitly agreed to permit the CCA to aggregate their energy requirements and offer service. We believe AB 117 assumes, as we do, that CCAs can be entrusted with confidential customer information. Unlike energy service providers offering direct access, CCAs are government agencies. As long as some basic protections are in place, the risks of providing confidential information to these entities is outweighed by the dictates of the statute and the potential benefits CCA customers would realize only if CCAs have the information they need to make fully informed decisions regarding energy resource planning decisions” (p.51)

Note the observation that “CCAs can be entrusted.” Moreover, as argued by Local Power, the Commission cites AB117 rather than any policy argument of the other parties to confirm that even customer-specific billing data (as opposed to masked load data) must be made available to CCAs:

“In addition to its requirement that utilities provide information to CCAs before and after they initiate operations, AB 117 specifies the types of information the utilities must provide to CCAs. Section 366. 2(c)(9) refers to “appropriate billing and electrical load data, including, but not limited to, data detailing electricity needs and patterns of usage.” The statute specifically refers to “billing” data as distinct from “electrical load data.” We are not aware how aggregated or masked billing data could satisfy the statutory requirement. Again, the plain language of the law means that the CCA is entitled to any and all billing data that is reasonably useful to the CCA. It also refers to information “detailing” electricity needs and patterns of usage. Use of such specific terms reflect the Legislature’s intent for CCAs to have information that is neither masked nor aggregated, to the extent such information is required by CCAs that would reasonably “investigate, pursue or implement” a CCA program”(p.52)

The Commission followed Local Power’s cross-examination of SDG&E’s witness on whether city and county tax rolls include renters, who would be utility customers who must be notified by the CCA:

“We are not convinced by utility testimony that city and county tax rolls will provide the kind of information CCAs need to accomplish those ends” (p.52)

The Commission then adopted Local Power’s suggestion that confidentiality concerns may be addressed by imposing limits on the CCA’s use of the information it gets, by requiring CCA nondisclosure agreements:

“We direct the utilities to provide all relevant usage information, load data and customer information to CCAs. The CCA shall sign nondisclosure agreements for any confidential information that is not masked or aggregated. We will also require that all notices relevant to CCA programs inform customers that the utility may share customer information with the CCA and that the CCA may not use the utility’s information for any purpose other than to facilitate provision of energy services” (p.52)

Finally, the Commission stated its “intent to enforce the law with respect to its requirement that the utilities ‘cooperate’ with CCAs in the provision of all relevant information, a term which we interpret broadly”:

“The utilities may not determine what information is “relevant” to CCA operations as long as the utility is reimbursed for the reasonable costs of providing the information. While we welcome the utilities’ tariff proposals for the secure and cost-effective sharing of information, we will not tolerate utility actions or delays that may affect the provision of information to CCAs or CCA services to customers” (p.53).

The Commission’s Findings of Fact, Conclusions of Law and Orders reflected its key reliance on Local Power’s argument that AB117 itself requires a full disclosure, interpreted broadly, with a CCA nondisclosure agreement to protect confidentiality of customers:

**Finding of Fact # 38:** “CCAs would ‘investigate or pursue’ CCA programs prior to offering service and a CCA would need relevant customer and load data in order to conduct a meaningful investigation of CCA programs” (p.62).

**Finding of Fact # 39:** “A CCA cannot notify customers of its intent to offer electrical service if it does not have access to relevant customer information” (p.62).

**Finding of Fact # 40:** “In the CCA’s effort to satisfy customer notice requirements, tax rolls are not a reasonable substitute for customer information held by utilities partly because property owners would not necessarily be a utility customer of record” (p.63).

**Finding of Fact # 41:** “Nondisclosure agreements would provide reasonable protections against the disclosure by a CCA of a utility’s customer information.

**Finding of Fact # 42:** “CCAs may need specific customer information in order to market energy services and tailor those services to individual customers or groups of customers” (p.63).

**Finding of Fact #43:** “CCAs need load data in order to develop cost-effective and reliable energy procurement strategies” (p.63).

**Finding of Fact # 44:** “Customers would benefit from notification that contact information and usage data may be shared with the CCA and may not be disclosed to others” (p.63).

**Conclusion of Law #30:** “Section 366.2(c)(9) requires the utilities to provide all relevant information required by CCAs to “investigate, pursue or implement” meaningful programs. This requirement does not permit the utilities to deny CCAs access to relevant customer or load information” (p.67).

**Conclusion of Law #31:** “Section 366.2(c)(13)(A) requires CCAs to provide customer notice of their intent to provide service, a requirement a CCA cannot satisfy without relevant customer information. Read in conjunction with Section 366.2(c)(9), this requirement presumes that the CCA will have access to certain customer information held by the utility”(pp.67-8).

**Conclusion of Law #32:** “Section 366.2(c)(9) requires the provision of detailed billing and load data to CCAs that are investigating, pursuing or implementing CCA programs” (p.68).

**Conclusion of Law #33:** “The utilities should require CCAs to sign nondisclosure agreements when they share confidential information about customers or electricity load and should require a county or city’s chief administrative officer to attest that it is “investigating” or “pursuing” status as a CCA as a precondition to receiving confidential customer information” (p.68).

**Conclusion of Law #34:** “Notices to prospective CCA customers should inform customers that the utility may share customer information with the CCA and that the information may not be used for any purpose other than to facilitate the provision of energy services to the customer by the CCA” (p.68).

**Conclusion of Law #35:** “Utility tariffs should provide that the CCA must indemnify utilities from liability for the disclosure of confidential customer information in cases where the utility has take all reasonable precautions to prevent that disclosure” (p.68).

**Commission Order #5:** “PG&E, SDG&E, and SCE’s proposed tariffs shall include... (12) the offer to provide access to all relevant customer information, billing information, usage and load information, consistent with this order and which shall be provided to the CCA at cost except that those information services already approved in D.03-07-034 shall be provided at no cost to the CCA; (13) a requirement that all confidential utility information shall be provided subject to nondisclosure agreement and a requirement that the chief administrative officer of a city or county attest that the city or county is investigating or pursuing status as a CCA as a precondition of receiving confidential customer information; (14) a requirement that customer notifications about prospective CCA operations inform the customer that customer information may be provided to the CCA subject to nondisclosure for any purpose other than those related to facilitating the CCA’s services; (15) a provision for CCAs to indemnify the utilities from liabilities associated with the CCA’s disclosure of confidential customer information where the utility has taken all reasonable steps to prevent such disclosure” (pp.70-71).



## **Appendix 4**

### **Chronology of Negotiations to Secure PG&E Data (2008/09)**

Local Power and the Climate Protection Campaign, with assistance from the Sonoma County Water Agency, undertook a year-long effort to satisfy PG&E's requirements to the satisfaction of its Counsel so that the first disks data could be delivered to Local Power's San Francisco office in September, 2009 and the data finally imported into a new single database under LPI's management<sup>14</sup> in November, 2009.

The data request involved numerous letters, telephone conference calls, emails, formal telephone calls and informal discussions. Local Power was assisted by its Counsel, Howard Golub, General Counsel of PG&E until 1994, who provided legal advice to LPI regarding its correspondence with PG&E, drafted and read a number of PG&E letters, and physically participated in the actual meeting with PG&E at its headquarters in San Francisco in the Summer of 2009.

- On August 25, 2008 Local Power submitted by certified mail the original data request (signed by County Administrator Bob Deis), requesting both data from PG&E's CCAINFO tariff<sup>15</sup>, including Declarations for cities signed by authorized city officials of each jurisdiction were included in the letter. This was certified received September 3, 2008.
- On September 22, 2008 PG&E Senior System Info Analyst (Service & Sales) Marlo Martin telephoned Paul Fenn, requiring him to submit a signed Nondisclosure Agreement. Fenn faxed and mailed the NDA, and Ms. Martin replied by email (also 9/22) that "Thanks Paul. I'll be sure your data request is processed."
- On October 6, 2008 Local Power sent an email to Ms. Martin requesting an update on progress of the data request and repeating the request for a meeting date.
- Receiving no response, on October 9 2008 Local Power sent another email repeating the same request.
- On October 13 Local Power received an email from Ms. Martin saying "I had been on vacation at the time this request came through and had recently located it and will be processing your request. I will give you a call to schedule a meeting." Ms. Martin never called.

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<sup>14</sup> As required by referenced CPUC regulations and the CCA-INFO tariff, LPI's technical group members each signed the PG&E NDA prior to being given access to this confidential data.

<sup>15</sup> Pacific Gas & Electric Company, CCA-INFO Tariff, Advice Letter No: 2784-E-A, Filed November 29, 2006, Effective November 9, 2006. See [http://www.pge.com/tariffs/tm2/pdf/ELEC\\_SCHEDS\\_E-CCAINFO.pdf](http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_E-CCAINFO.pdf)

- On November 24, 2008 PG&E replied with a letter detailing required documents before providing data:
  - Signed declarations from the mayors for each of the listed cities in Sonoma County;
  - Signed CCA Non-Disclosure Agreements (NDAs) for each of the listed cities in Sonoma County;
  - NDA from Paul Fenn;
  - Exhibit A of the CCA NDA signed by each individual that will be handling the data;
  - Written confirmation of the specific years and acceptance of charges.
  
- Also on November 24, Local Power received an email from Ms. Martin indicating that “Yes, that is correct. Upon review of the data request and such with all the other parties, it was determined that I would need signed non-disclosure forms from all those who would be handling the data. Data gathering for this request has already been underway.” This was the last communication Local Power has received from Ms. Martin.
  
- On December 19, 2008 Local Power replied by certified mail<sup>16</sup> to PG&E’s letter dated November 24, 2008 in response to the County of Sonoma’s CCA Data Request letter including the following responses and new documents:
  - Pointed out that the mayors’ declarations requested had been provided with the August 25 data request.
  - Pointed out the NDA requested from Paul Fenn had already been provided by fax and U.S. Mail to Ms. Martin
  - NDA’s signed by the authorized officials of each jurisdiction, including the following individuals:
 

Nina D. Regor, City Manager, City of Cloverdale  
 Dianne Thompson, City Manager, City of Cotati  
 Marjie Pettus, Asst. City Manager, City of Healdsburg  
 Vincent Marengo, Director Public Works, City of Petaluma  
 Stephen Danley, City Manager, City of Rohnert Park  
 Dell Tredinnick, Project Development Manager, City of Santa Rosa  
 Susan Kelly, Engineering Director, City of Sebastopol  
 Linda Kelly, City Manager, City of Sonoma  
 Matthew Mullan, Town Manager, Town of Windsor
  - Signed NDAs of Exhibit A CCA - NDAs by each individual that will (or may) be handling the data: John David Erickson, Technical Director, Climate Protection Campaign, Santa Rosa
  - Cordel Stillman, Deputy Chief Engineer, Sonoma County Water Agency

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<sup>16</sup> See Attachment 1

- November 24, 2008. Receiving no response, Sonoma Climate Action Campaign representative Ann Hancock contacted Joe Nation in mid-November to request assistance. Local Power has had the following interaction with Mr. Nation:
  - On Jan 14, Local Power received an email from Mr. Nation saying “Let's talk tariffs asap. Best days for me are Tues., Thurs., or Fri. Can you suggest a couple of dates, and I'll coordinate with the PG&E folks?”
  - January 16, Local Power was copied an email from Mr. Nation to Sonoma Climate Action Campaign representative Ann Hancock saying “Ann, Just to avoid any crossed lines, I'll be the point of contact for all of your dealings with PG&E. Could you ask Paul to contact me directly? Thanks. Joe”
  - On January 21, 2009, Local Power received an email from Mr. Nation saying “Thanks, Paul. Let me coordinate with Marlo Martin at PG&E and get back with a time. I'm open all day Thursday or Friday next week. Work for you?”
  - January 25, 2009 Local Power received an email from Mr. Nation saying “I am still wide open on Thursday, but I have not yet connected with the appropriate persons at PG&E. I'll try to make that happen tomorrow.”
  - On January 27, 2009 Local Power received an email from Mr. Nation saying “I'm sorry that our attempt to meet this Thursday is not going to work. We apparently are still missing NDAs from several mayors, which is at least part of the reason for the delay. Once I sort out exactly which ones are missing (it looks like the majority), I'll let you know. Again, my apologies for not being able to meet Thursday.”
- March 16, 2009 Local Power sent a letter to PG&E<sup>17</sup> requesting non-confidential information while the confidential CCA-INFO tariff data was being disputed, including non-Confidential data for Sonoma county and generic information requested by Sonoma County's data request, as well as Santa Rosa and Sonoma County Unincorporated Areas Confidential Data, as NDAs had already been signed by the County CAO and the Mayor of Santa Rosa.
- March 24, 2009 Local Power received a letter from PG&E and LPI Counsel Howard Golub received a letter from PG&E Counsel<sup>18</sup> indicating that no data would be provided without the NDAs, and that PG&E would not submit the Santa Rosa and Sonoma County unincorporated area data, and other non-confidential data, separate from the other overall data request.

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<sup>17</sup> See Attachment 2

<sup>18</sup> See Attachment 3

- June 16, 2009 Local Power received a letter from PG&E restating requirement for mayors to sign the NDA.<sup>19</sup>
- August 31, 2009 Local Power Inc's team (Paul Fenn, Counsel Howard Golub, CIO Art Medlar, and database specialists Larry Schiffer and Jeff Lohrmann) and SCCCAP met with PG&E technical database staff, lobbyists (including Joe Nation) at PG&E's corporate headquarters in downtown San Francisco, with PG&E Counsel John Pendleton on the phone and Senior PG&E staff Calvin Yee to go over PG&E's data.
- Shortly before the meeting Joe Nation sent Paul Fenn an email summarizing what we would discuss. At the meeting PG&E indicated that it was not prepared to discuss items of the data request not included within PG&E's CCAINFO tariff. LPI Counsel Howard Golub expressed surprise and frustration, and PG&E indicated we could either go on with the discussion limited to CCAINFO tariff items, or break up the meeting and try to do it at another time. Our team huddled and decided to go ahead, and requested that PG&E go ahead with the preparation of CCAINFO tariff non-confidential and confidential customer usage data, indicating we would pursue the elements of Sonoma County's data request on a separate track, so as to move forward with collection and analysis planned in the Sonoma RESCO project. The meeting consisted of staff explaining the meaning of each item on the CCAINFO tariff, and planning subsequent final clarifications prior to PG&E's preparation of the CCAINFO tariff data.
- September 3, 2009 Local Power sent a letter to PG&E clarifying that its request for "Fitting CCA annual usage to climate band load shapes; estimation of peak coincident and non-coincident demands" on the CCAINFO tariff was meant to include "C) We want Item 13 not just for (1) the whole county but also (2) Petaluma, (3) Santa Rosa, and (4) Unincorporated Areas"
- September 14, 2009, Local Power sent a letter to PG&E<sup>20</sup> clarifying and confirming that LPI needed estimation of peak coincident and non-coincident demands in these four jurisdictions. We also added one jurisdiction to the list, namely Windsor, for purposes of climate cross-referencing. So we requested; (1) the whole county but also (2) Petaluma, (3) Santa Rosa, (4) Unincorporated Areas and (5) Windsor. We requested load profile curves for each of these cities that includes: a) maximum and minimum load day specifying date on which these occurred and specified megawatt value of peak and low for each curve; and b) representative week for each of four seasons. Load profiles broken down by customer class are also requested. – all to 2008 or most recent year available.
- September 28, 2009 Local Power received first shipment of data from PG&E, which required two more weeks before delivering the complete set of CCAINFO Tariff data to its LPI's San Francisco office. The data is now on a secure server,

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<sup>19</sup> See Attachment 4

<sup>20</sup> See Attachment 5

being analyzed by LPI database expert Art Medlar, LPI's CIO, LPI President Paul Fenn, author of AB117 and intervener in R.03-10-003 from 2004 to 2006 in its Phase I and II decisions.

## Appendix 5

### Data Request Letter to PG&E

COUNTY OF SONOMA  
OFFICE OF THE COUNTY ADMINISTRATOR  
575 ADMINISTRATION DRIVE – ROOM 104A  
SANTA ROSA, CALIFORNIA 95403-2888  
TELEPHONE (707) 565-2431  
FAX (707) 565-3778



BOB DEIS  
COUNTY ADMINISTRATOR  
JIM ANDERSEN  
ASSISTANT COUNTY ADMINISTRATOR  
JENNIFER M. MURRAY  
DEPUTY COUNTY ADMINISTRATOR  
LORI NORTON  
DEPUTY COUNTY ADMINISTRATOR  
CHRIS THOMAS  
DEPUTY COUNTY ADMINISTRATOR

August 25, 2008

Marlo Martin  
Pacific Gas & Electric Company  
77 Beale Street, Mail Code B19C  
San Francisco, CA 94177

Re: **Community Choice Aggregation (CCA) Data Request from PG&E per AB117**

Dear Marlo:

#### Background

The County of Sonoma, Sonoma County Water Agency, and all nine Sonoma municipalities have funded the Climate Protection Campaign (CPC) of Graton, California, to develop a Community Climate Action Plan (CCAP). This plan will define actions to meet the community's greenhouse gas emission reduction goal of 25% below 1990 levels by 2015.

Because electricity use produces a significant portion of emissions in Sonoma County, a main focus of the CCAP are strategies to reduce the greenhouse gas associated with electricity consumption. After over a year of study, CPC has identified Community Choice Aggregation (CCA) as the most promising strategy for doing so. Although the county has not decided to implement a CCA strategy, as part of our due diligence analysis, Sonoma County seeks to obtain that data that will enable it to determine the potential customer base and its characteristics and context. The designated representative of the County for purposes of this CCA data request is CPC and its consultant Local Power Inc., based in San Francisco.

#### Request

The County of Sonoma hereby requests data for all PG&E ratepayers in Sonoma County including all ratepayers in the jurisdictions of the nine cities in Sonoma County as well as all ratepayers in the entire unincorporated area of Sonoma County. This data request further deputizes staff and consultants of the Climate Protection Campaign to receive the data on behalf of the County of Sonoma and its nine cities. This request also authorizes CPC to make further requests for other data relevant to CCAP development, aggregated under the 15/15 Rule.

It is my understanding under AB117 and California Public Utilities Commission Decision D.04-12-046, the sole condition placed on provision of this data is that the request be made in a letter that is signed by either the mayor or chief county administrator, and that the letter attest that the City or County intends to "investigate" or "pursue" status as a Community Choice Aggregation

Marlo Martin  
Pacific Gas & Electric Company  
August 25, 2008  
Page 2

(CCA). Please consider this letter as attesting to, on behalf of the CPC consortium, Sonoma County's wishes to investigate or pursue status as a CCA, as evidenced by my signature at the bottom of this request. The required documentation addressed under tariff Schedule E-CCAINFO, section SPECIAL CONDITIONS, subsection 5, is attached.

It is my understanding other Bay area local governments, such as the city and counties of San Francisco and Marin, have requested and acquired similar electrical load data from PG&E. Prior to the CPUC's CCA Rulemaking Phase I Decision (D.04-12-046) issued on December 16, 2004, the Investor-Owned Utilities only released data that was not protected under the CPUC's "15/15 Rule." The "15/15 Rule" was established for direct access to protect customer confidentiality in data releases to electric service providers. While I refer to asking for the same or similar data as San Francisco and Marin County, please do not infer that Sonoma County has the same position on CCA as they do.

Pursuant to the CPUC's subsequent Phase II decision authorizing CCAs, not utilities, to decide what data is appropriate for their use prior to switchover, Sonoma needs and requests all data and all available data fields from PG&E, effective immediately, for purposes of further refining data contained in this section, and assessing its potential portfolio and energy efficiency rollouts.

D.04-12-046 supports the claims of prospective CCAs that County and municipal governments should be provided the necessary customer data to make an informed analysis of the prospects of a CCA program. The Commission's decision concludes, "CCAs can be entrusted with confidential customer information," but established procedures to assure that "cities and counties do not seek information casually." To those ends the Commission ordered that as a "condition of receiving utility information the mayor or chief county administrator sign a letter attesting to the city or county's intent to "investigate" or "pursue" status as a CCA. These letters from Sonoma local governments are attached.

Please provide data for unincorporated areas and for all nine municipalities in Sonoma County including Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma (City), and Windsor.

This data requests consists of data PG&E already offers to CCAs through its tariffs, and data not included under its tariffs.

#### **A. E-CCAINFO Tariff Data Request**

Under PG&E's tariff Schedule E-CCAINFO, local governments considering forming a Community Choice Aggregation (CCA) program can request certain categories of load and customer data from PG&E for specified charges.

Please deliver the following data to CPC as defined under the following RATES section of Schedule E-CCAINFO:

1. Aggregate monthly usage (kWh) by rate schedule <ul style="list-style-type: none"> <li>PG&amp;E will provide the CCA with energy consumption (kWh) for the most recent 12 months of completed information for each customer class for a given period of time and a given city.</li> <li>PG&amp;E will aggregate monthly usage by rate schedule.</li> <li>Additional requests for this information will be provided at the CCA's expense. (See Item 6, below.)</li> <li>Number of customers in each rate schedule.</li> </ul>	No charge for the first request
2. Annual proportional share of energy efficiency funds for a CCA's proposed territory as defined in the CPUC's energy efficiency policy manual.	No charge
3. System wide residential and nonresidential load shapes by climate band for the most recent year for which PG&E has completed information.	No charge
4. Standard system average load profiles by rate class, also referred to as Dynamic Load Profiles & Static Load Profiles, posted to PG&E's website. <ul style="list-style-type: none"> <li>Request information to access data on website</li> </ul>	Available at no charge at PG&E's website
5. Quarterly or monthly aggregated participation data already tracked for CPUC reports (for energy efficiency programs). <ul style="list-style-type: none"> <li>Request information to access data on website.</li> </ul>	Available at no charge at PG&E's website
6. Aggregate monthly usage (kWh) by rate schedule, first request is at no charge (See Item 1, above).	\$207.00 per request
7. Aggregate monthly usage (kWh) by zip code within a city code.	\$207.00 per request
8. Public Goods Charge customer payment by city code.	\$350 per request
9. Number of service agreements in each rate schedule within a CCA's territory or proposed territory.	\$207.00 per request
10. Mapping of customer rate schedule to rate class.	No charge
11. Estimated annual generation revenues by CCA territory.	\$207.00 per request
12. Estimation of peak coincident and non-coincident demands.	Items 1 and 3 provided to customer
13. Fitting CCA annual usage to climate band load shapes; estimation of peak coincident and non-coincident demands.	\$696.00 per request
14. Total annual kWh loads of bundled and direct access customers on a monthly basis and secondly on a rate schedule basis within the CCA's territory.	\$920.00 per request
15. Aggregated residential annual kWh usage for a particular year in a format by tier for each rate schedule. For the Time of Use (TOU) rates, provide further separation by summer/winter peak, partial peak, and off peak periods and summer/winter period.	\$920.00 per request



Marlo Martin  
Pacific Gas & Electric Company  
August 25, 2008  
Page 4

16. Customer-specific information consisting of: service agreement number, name on agreement, service address with zip code, mailing address with zip code, monthly kWh usage, monthly maximum demand where available, and monthly rate schedule for all accounts within the CCA's territory, per request (provided on a cd rom/zipped file).	\$920.00 per request
17. Customer-specific information consisting of: service agreement number, monthly interval meter data where available, and rate schedule for all accounts within the CCA's territory, per request (provided on a cd rom/zipped file).	\$920.00per request

Specifically, we request the following data under Schedule E-CCAINFO:

Unless otherwise specified, all data is requested for the six (6) full years from 2002 through 2007.

1. Under Schedule Items 1 and 6, the monthly usage data for energy consumption (kwh) for each of the nine (9) cities and the unincorporated county, aggregated by rate schedule.
2. Under Schedule Item 2, the proposed CCA's share of energy efficiency funds.
3. Under Schedule Item 3, the system-wide residential and nonresidential load shapes by climate band for the most recent year for which PG&E has completed information
4. Under Schedule Item 4, the County requests information to access data on website of the standard system average load profiles by rate class also, referred to as Dynamic Load Profiles & Static Load Profiles
5. Under Schedule Item 5, the County requests information to access data on website for monthly aggregated participation data already tracked for CPUC reports (for energy efficiency programs).
6. Under Schedule Item 7, aggregate monthly usage (kWh) by zip code within each of the nine (9) cities, plus the unincorporated county.
7. Under Schedule Item 8, Public Goods Charge customer payment by city code for each of the nine (9) cities plus the unincorporated county. Data should also specify share of PGC funds collected for Direct Access customers.
8. Under Schedule Item 9, number of service agreements in each rate schedule within the proposed Sonoma CCA's territory.
9. Under Schedule Item 10, mapping of customer rate schedule to rate class.
10. Under Schedule Item 11, estimated annual generation revenues for the proposed Sonoma CCA territory.

Marlo Martin  
Pacific Gas & Electric Company  
August 25, 2008  
Page 5

11. Under Schedule Item 12, system-wide estimation of peak coincident and non-coincident demands, for a typical day in each month, as well as for the peak and lowest demand days of the year.
12. Under Schedule Item 13, fitting proposed Sonoma CCA annual usage to climate band load shapes; estimation of peak coincident and non-coincident demands for a typical day in each month as well as for the peak and lowest demand days of the year. Specify if this includes or excludes direct access customers.
13. Under Schedule Item 14, total annual kWh loads of bundled and direct access customers on a monthly basis and secondly on a rate schedule basis within the CCA's territory. Totals for bundled and direct access customers should be presented separately.
14. Under Schedule Item 15, the aggregated residential annual kWh usage in a format by tier for each rate schedule. For the TOU rates, provide further separation by summer/winter peak, partial peak, and off peak periods and summer/winter period.
15. Under Schedule Item 16, all customer-specific information for the proposed Sonoma CCA consisting of: service agreement number, name on agreement, service address with zip code, mailing address with zip code, monthly kWh usage, monthly maximum demand where available, and monthly rate schedule for all accounts within the CCA's territory, provided on a cd rom/zipped file. Data should include direct access customers, and also specify which customers are bundled and which are direct access.
16. Under Schedule Item 17, all customer-specific information consisting of: service agreement number, monthly interval meter data where available (including location of all interval meters in Sonoma County and what geographic region they provide data for), and rate schedule for all accounts within the CCA's territory, provided on a cd rom/zipped file.

We would like PG&E to add the NAICS data to the customer-specific information (Item 16). We believe that the additional cost will be \$165.

#### **B. Other Data Not Covered by E-CCAINFO**

In addition to the Schedule E-CCAINFO listed above, in order to determine CCA opportunities within the County of Sonoma through a thorough determination of energy (kWh) and demand (kW) load information throughout the year, the County requests the following:

1.	All electrical data for the past five years of hourly reporting, where available, by all Time of Use (TOU) residential, agricultural, commercial, industrial and governmental PG&E customers in the County of Sonoma. This data must include all related customer contact information. It is also critical that the data be provided in such a form as to indicate the control meter level such that it is linked to the correct billing entity. Specifically, all billing accounts should identify the billing entity, and also the premise and the control meter tied to that premise.
2.	All data relating to low-income CARE customers within Sonoma County, including rates, number of customers, kilowatt-hours, and billing collections.
3.	Per Item 13 in the data request tariff schedule, the maximum and minimum day load profile curves for Sonoma County, as well as a representative week of load curve data for the county for each of the four seasons. Maximum and minimum load curves should specify what date each occurred. Load profiles broken down by customer class are also requested.
4.	All data relating to demand response/interruptible load program deployment and agreements within Sonoma County, including customers, capacity, hours per year, and what category of program each customer is participating in including the kilowatts of commitment in each category.
5.	The list of all net metering customers, including contact information, and type and capacity of generating equipment installed.
6.	All PG&E data dictionaries relevant to load performance, billing, marketing and grid structure, monitoring systems and performance and any other data dictionaries relevant to intelligence and historical performance of the customer base and grid in Sonoma County. The County assumes that all data dictionaries will be complete according to existing practices within PG&E.
7.	Pertaining to grid monitoring and performance, for purposes of determining the ability of the grid to support new business models initiated by Sonoma County or its representative related to CCA, all data addressing the historical five year and current capacities and performance of the Substation and grid infrastructure within Sonoma County. This would include a listing of specifications and throughput data for every known data monitoring and measuring device and system on the PG&E system impacting the County, as well as associated network and IT specifications related to SCADA systems, time-of-use and real-time metering. Such specifications should include margin of error/accuracy of all types of meters used to derive data and date of installation, as well as deployment or schedule for future Advanced or "Smart" metering including their capabilities and characteristics.

The County prefers all raw file data in an ASCII format. Please include the data definition descriptions covering all data items. At a minimum:

- a. Detailed descriptions of files (field names and adequate documentation/description of meaning, field delimiters, fixed record length bytes and field begin-end bytes if applicable, record delimiters, etc.)
- b. Primary key descriptors
- c. Referential integrity constraints

The County respects the privacy of customers and is requesting its designated representative, CPC and consultant, to use a Non-Disclosure Agreement process as a means of protecting customer privacy.

Marlo Martin  
Pacific Gas & Electric Company  
August 25, 2008  
Page 7

### **C. Meeting Request**

Commensurate with the scope of this data request, Local Power requests a timely meeting with appropriate PG&E legal, business, and data engineering decision makers to finalize the data exchange needs. At this time we can discuss the cost and delivery schedule for the requested data to be transferred to the Administrator of the County of Sonoma or its designated representative. The County and its representative want material to be provided as soon as possible and request PG&E to send each portion as soon as it is available regarding data and information within both the E-CCAINFO and non-tariff data requirements outlined in this letter, to insure that certain urgently needed data be transferred by PG&E without delay.

Please contact Paul Fenn, the designated representative and consultant for the Climate Protection Campaign, to arrange the requested meeting and for delivery of data. He can be reached at:

Paul Fenn  
Local Power Inc.  
35 Grove Street, Suite 118  
San Francisco, CA 94102  
Phone (510) 451-1727 x702  
Fax (415) 358-5760  
Email: paulfenn@localpower.com

### **D. Payment**

The County requests that PG&E provide a written estimate of charges for all requests specified above to Paul Fenn at the above San Francisco business address. Upon approval of the estimate, the County or its designee will provide PG&E with a written notice to proceed. PG&E is requested to issue an invoice for the amount due to Mr. Fenn.

Thank you for your prompt attention. If you have any questions on our stated purpose for this research, please feel free to call me. If you have questions on the detail requested by this letter, please contact Mr. Fenn at Local Power.

Sincerely,



Bob Deis  
County Administrator

Marlo Martin  
Pacific Gas & Electric Company  
August 25, 2008  
Page 8

c: Sonoma County city managers  
c: Randy DeCaminada, Executive Manager, PG&E, North Coast Region

**Attachments:**

1. Electric Schedule E-CCAINFO
2. Declarations by mayors and city managers regarding Investigation, Pursuit or Implementation of Community Choice Aggregation
3. Community Choice Provider Non-Disclosure Agreements Form No. 79-1031

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8 of 8



Pacific Gas and Electric Company  
San Francisco, California  
U 39

Cancelling

Revised  
Original

Cal. P.U.C. Sheet No.  
Cal. P.U.C. Sheet No.

25518-E  
23058-E

**ELECTRIC SCHEDULE E-CCAINFO**  
**INFORMATION RELEASE TO COMMUNITY CHOICE PROVIDERS**

Sheet 1

- APPLICABILITY:** This schedule applies to Community Choice Aggregators (CCAs) who participate in Community Choice Aggregation Service (CCA Service), as defined in electric Rules 1 and 23. (T)  
(T)
- TERRITORY:** The entire PG&E service territory.
- RATES:**
1. Aggregate monthly usage (kWh) by rate schedule  
..... No charge for the first request  
  
PG&E will provide the CCA with energy consumption (kWh) for the most recent 12 months of completed information for each customer class for a given period of time and a given city. (T)  
  
PG&E will aggregate monthly usage by rate schedule.  
  
Additional requests for this information will be provided at the CCA's expense. (See Item 6, below.) (T)
  2. Annual proportional share of energy efficiency funds for a CCA's proposed territory as defined in the CPUC's energy efficiency policy manual..... No charge (T)
  3. System wide residential and nonresidential load shapes by climate band for the most recent year for which PG&E has completed information..... No charge
  4. Standard system average load profiles by rate class also referred to as Dynamic Load Profiles & Static Load Profiles posted to PG&E's website..... Available at no charge at PG&E's website
  5. Quarterly or monthly aggregated participation data already tracked for CPUC reports (for energy efficiency programs).  
..... Available at no charge at PG&E's website
  6. Aggregate monthly usage (kWh) by rate schedule, first request is at no charge (See Item 1, above)  
Per request.....\$207.00
  7. Aggregate monthly usage (kWh) by zip code within a city code  
Per request.....\$207.00
  8. Public Goods Charge customer payment by city code  
Per request.....\$350.00
  9. Number of service agreements in each rate schedule within a CCA's territory or proposed territory  
Per request.....\$207.00 (T)

(Continued)

Advice Letter No: 2784-E-A  
Decision No. 05-12-041

Issued by  
**Brian K. Cherry**  
Vice President  
Regulatory Relations

Date Filed November 29, 2006  
Effective November 9, 2006  
Resolution No. E-4013

1C1



**Pacific Gas and Electric Company**  
San Francisco, California  
U 39

Cancelling

Revised  
Original

Cal. P.U.C. Sheet No.  
Cal. P.U.C. Sheet No.

25519-E  
23059-E

**ELECTRIC SCHEDULE E-CCAINFO**  
**INFORMATION RELEASE TO COMMUNITY CHOICE PROVIDERS**

Sheet 2

RATES:  
(Cont'd.)

10. Mapping of customer rate schedule to rate class .....No charge
11. Estimated annual generation revenues by CCA territory (T)  
Per request..... \$207.00
12. Estimation of peak coincident and non-coincident demands  
..... Items 1 and 3 provided to customer
13. Fitting CCA annual usage to climate band load shapes; estimation of (T)  
peak coincident and non-coincident demands  
Per request..... \$696.00
14. Total annual kWh loads of bundled and direct access customers on (T)  
a monthly basis and secondly on a rate schedule basis within the  
CCA's territory  
Per request..... \$920.00
15. Aggregated residential annual kWh usage for a particular year in a  
format by tier for each rate schedule  
  
For the TOU rates, provide further separation by summer/winter  
peak, partial peak, and off peak periods and summer/winter period  
Per request..... \$920.00
16. Customer-specific information consisting of: service agreement  
number, name on agreement, service address with zip code, mailing  
address with zip code, monthly kWh usage, monthly maximum  
demand where available, and monthly rate schedule for all accounts  
within the CCA's territory, per request (provided on a cd rom/ziped (T)  
file)  
Per request..... \$920.00
17. Customer-specific information consisting of: service agreement  
number, monthly interval meter data where available, and rate  
schedule for all accounts within the CCA's territory, per request (T)  
(provided on a cd rom/ziped file)  
Per request..... \$920.00

(Continued)

Advice Letter No: 2784-E-A  
Decision No. 05-12-041

Issued by  
**Brian K. Cherry**  
Vice President  
Regulatory Relations

Date Filed November 29, 2006  
Effective November 9, 2006  
Resolution No. E-4013

2C1



Pacific Gas and Electric Company  
San Francisco, California  
U 39

Cancelling

Revised  
Original

Cal. P.U.C. Sheet No.  
Cal. P.U.C. Sheet No.

25520-E  
23060-E

**ELECTRIC SCHEDULE E-CCAINFO**  
**INFORMATION RELEASE TO COMMUNITY CHOICE PROVIDERS**

Sheet 3

**SPECIAL  
CONDITIONS:**

1. Pursuant to Public Utilities Code Sections 331.1 and 366.2, a Community Choice Aggregator (CCA), as defined in Rule 1 and Rule 23, shall have the right to aggregate the electric load of end-use electric customers within its jurisdiction for the purpose of providing electric procurement service for such customers. (T)
2. The 15/15 Rule will be applied to all data provided to the CCA, prior to the meeting of requirements under Special Condition 4. The 15/15 Rule was adopted by the CPUC in the Direct Access Proceeding (CPUC Decision 97-10-031) to protect customer confidentiality. The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers and a single customer's load must be less than 15 percent of an assigned category. If the number of customers in the complied data is below 15, or if a single customer's load is more than 15 percent of the total data, categories must be combined before the information is released. The Rule further requires that if the 15/15 Rule is triggered for a second time after the data has been screened once already using the 15/15 Rule, the customer be dropped from the information provided. In addition to the 15/15 Rule, the CPUC further determined that no information about customers with demands above 500 kW should be included in the distributed information. (T)
3. Aggregated information provided will include Direct Access service agreements (accounts). (D)
4. Customer-specific information or aggregated information that violates the 15/15 Rule, as listed above will be provided when the CCA has met all of the following conditions: (T)
  - a. Signed Non-Disclosure Agreement.
  - b. Executed an Attestation stating that the city or county is investigating, pursuing or implementing CCA, and
  - c. Any registration or other requirements as imposed by the CPUC. (L)

(Continued)

Advice Letter No: 2784-E-A  
Decision No. 05-12-041

Issued by  
**Brian K. Cherry**  
Vice President  
Regulatory Relations

Date Filed November 29, 2006  
Effective November 9, 2006  
Resolution No. E-4013

3C1



**ELECTRIC SCHEDULE E-CCAINFO**  
INFORMATION RELEASE TO COMMUNITY CHOICE PROVIDERS

Sheet 4

**SPECIAL  
CONDITIONS:  
(Cont'd.)**

5. Definitions:

- a. Community Choice Aggregator ("CCA") – Pursuant to Public Utilities Code Section 331.1 a CCA is defined as "any city, county, or city and county whose governing board elects to combine the loads of its residents, businesses, and municipal facilities in a communitywide electricity buyers' program."
- b. Rate Class – Defined as residential, small commercial/industrial, medium commercial/industrial, large commercial/industrial, agricultural, public street and highway lighting.
- c. Rate Schedule – As listed in PG&E's Tariff Book, for example E-1, A-1, E-19 and E-20.
- d. Service Agreement – Defined as the customer's service identification number linking the customer's rate schedule with the meter.

(T) (L)

(T)

(T)

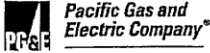
(L)

Advice Letter No: 2784-E-A  
Decision No. 05-12-041

Issued by  
**Brian K. Cherry**  
Vice President  
Regulatory Relations

<i>Date Filed</i>	November 29, 2006
<i>Effective</i>	November 9, 2006
<i>Resolution No.</i>	E-4013

4C1



**DECLARATION BY MAYOR OR CHIEF COUNTY ADMINISTRATOR  
REGARDING INVESTIGATION, PURSUIT OR IMPLEMENTATION OF  
COMMUNITY CHOICE AGGREGATION**

I, Robert Deis [name], state as follows:

1. I am the mayor or ~~chief county administrator of~~  
Sanoma County [name of city or county].

2. I am authorized to make this declaration on behalf of  
\_\_\_\_\_ [check appropriate box]

☐ a city, or

☒ county,

which is investigating, pursuing or implementing community  
choice aggregation as a community choice aggregator as defined by  
Section 331.1 of the California Public Utilities Code ("CCA" or  
"Potential CCA").

3. I understand that all of the confidential information provided  
by PG&E to the city or county indicated above is subject to the terms and  
conditions of the Nondisclosure Agreement between these two entities  
and is provided for the sole purpose of enabling the city or county to  
investigate, pursue or implement community choice aggregation.

I declare under penalty of perjury under the laws of the State of  
California that the foregoing is true and correct. Executed this 28th day of  
August, 2008 at Sanoma County, CA [city, state].

[Signature] [Signature]

## Appendix 6

### PG&E Letter Regarding Data Provision



**Mario Martin**  
Snr. Information Sys.  
Analyst  
ESP Relations

US Mail:  
Mail Code N8C  
Pacific Gas and Electric Company  
P. O. Box 770000  
San Francisco, CA 94177-0001

Overnight Mail:  
Mail Code N8C  
Pacific Gas and Electric Company  
245 Market, Rm 865C  
San Francisco, CA 94105

415.973.2150

September 25, 2009

**VIA E-MAIL and  
U.S. MAIL**

Mr. Paul Fenn, CEO  
Local Power  
35 Grove Street, Suite 118  
San Francisco, CA 94102

Re: County of Sonoma Community Choice Aggregation (CCA) Data Requests

Dear Mr. Fenn:

I am writing to provide additional responses to the County of Sonoma (County)<sup>1</sup> on its CCA-related data requests, as well as to provide an invoice for those requests that are covered by PG&E's E-CCAINFO tariff. The enclosed invoice for the requested E-CCAINFO data for calendar years 2005-2008 has been updated since the earlier invoice PG&E provided to the County for this data on January 29, 2009. PG&E is prepared to provide the information requested pursuant to E-CCAINFO within 10 workdays from receiving the required payment in the amount of \$22,705.00.<sup>2</sup>

PG&E also provides responses to the County's requests for information not covered by PG&E's E-CCAINFO tariff.

#### Status of Required Declarations and Nondisclosure Agreements

As you know, under PG&E's E-CCAINFO tariff a city or county that is investigating community choice aggregation must provide PG&E with a Declaration and a master Nondisclosure Agreement (NDA) before PG&E may release any confidential, customer-specific electric usage data to the city or county that violates the "15/15 Rule." (See PG&E's letters of March 24 and

<sup>1</sup> Along with the County of Sonoma, it is my understanding that the following cities are investigating CCA and have jointly requested data from PG&E for this purpose: Cotati, Cloverdale, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, City of Sonoma and Windsor.

<sup>2</sup> As described in this letter, the County and Sonoma cities also need to clarify a minor issue relating to the confidentiality-related documentation that has been submitted.

June 16, 2009.) Additionally, all persons who will be reviewing the confidential customer-specific data must sign an exhibit to the master NDA. PG&E and the County's representatives have communicated regularly over the past several months regarding satisfying this requirement. The County and Sonoma cities completed the submission of this documentation on July 30, 2009.

As Calvin Yee of PG&E has noted to Ann Hancock, however, there is one issue that needs to be corrected in order to complete this documentation, which is that the Cities of Cotati, Cloverdale, Healdsburg, Santa Rosa and Sonoma have left blank the "effective date" of their respective master NDAs. PG&E can enter the "effective date" for those cities but needs to make certain the cities have authorized PG&E to do so. PG&E has proposed an effective date of August 1, 2009, but can enter any reasonable date. Please let us know as soon as possible what effective date those communities request so that this issue does not delay the release of any data.

#### Data Requested Covered by E-CCAINFO

The County has requested Items 1-17 of PG&E's E-CCAINFO tariff, as originally requested in Sonoma County's letter of August 25, 2008 and as recently adjusted in your letter of September 3, 2009. PG&E has compiled this information and, as outlined above, is prepared to provide the information to the County within 10 workdays from receiving payment. Additionally, PG&E is in the process of determining whether it will be required to provide some or all of this information in an encrypted format for confidentiality and security reasons.

Please note that PG&E originally invoiced the County and offered to provide this information in our January 29, 2009 letter. PG&E has now re-invoiced the County for \$22,705 based on subsequent discussions with County representatives; a copy of this invoice is attached at Appendix A.

#### Other Data Not Covered by E-CCAINFO

In addition to the information covered by PG&E's E-CCAINFO tariff, the County has requested a number of items that are outside of the 17 categories of information included in the E-CCAINFO tariff. PG&E has discussed these other items with the County's representatives in an effort to determine whether the requested information or similar relevant information that is within the E-CCAINFO tariff or otherwise publicly available can be provided while still conforming to the E-CCAINFO tariff. PG&E hopes that these discussions on how the County can use the information covered by the E-CCAINFO tariff or other publicly available information to meet its needs have been helpful.

However, for the information the County has requested that is not included in the E-CCAINFO tariff or otherwise publicly available, PG&E must respectfully decline the County's requests.

The E-CCAINFO tariff was created with input from all CCA parties participating in the CCA rulemaking proceeding and is a balanced approach to making available aggregated categories of information that a community might require to assess and plan a CCA program, while at the same time not burdening utilities with excessive requests or breaching the privacy and security rights of

utility customers. Under that tariff, PG&E has successfully provided data to the San Joaquin Valley Power Authority and the Marin Energy Authority for the purpose of considering and developing their respective CCA programs.

Should the Commission revise or modify the utilities' E-CCAINFO tariffs in the future, PG&E will of course promptly comply with those tariff changes.

Further, providing additional information not authorized by the E-CCAINFO tariff creates security and privacy concerns for PG&E and its customers. For example, PG&E is concerned about potential legal liability to customers or third-parties resulting from providing confidential information to the County that is not covered by the E-CCAINFO tariff and the indemnification the County is required to provide PG&E from any claims regarding disclosure of confidential information under the tariff. (See Paragraph 8 of Form 79-1031.) The master NDA also provides:

The CPUC has determined that CCA may obtain specified confidential customer information from Utility pursuant to Tariff Schedule E-CCAINFO-Information (as modified hereafter from time to time) ("E-CCAINFO") as a community choice aggregator, as defined by PU Code Section 331.1, solely in order to investigate, pursue or implement community choice aggregation pursuant to PU Code Section 366.2, et seq. The provisions of this Agreement and E-CCAINFO govern the disclosure of Utility's confidential customer information to CCA ("Disclosure Provisions"). (Form 79-1031; emphasis added.)

In short, it is not clear that PG&E would be indemnified and held harmless by a city or county under the master NDA from a claim by a customer or other party if PG&E provides confidential information to the city or county that is outside of the E-CCAINFO tariff.

#### Responses to Specific Requests for Data Not Covered by E-CCAINFO

The following is a written response to the County's specific information requests beyond those 17 categories of information covered by E-CCAINFO, based on the clarifications the County has provided over the last few weeks.

1. **All electrical data for the past five years of hourly reporting, where available, by all Time of Use (TOU) residential, agricultural, commercial, industrial and governmental PG&E customers in the County of Sonoma. This data must include all related customer contact information. It is also critical that the data be provided in such a form as to indicate the control meter level such that it is linked to the correct billing entity. Specifically, all billing accounts should identify the billing entity, and also the premise and the control meter tied to that premise.**

PG&E is providing information under its E-CCAINFO tariff that is responsive to this request. After you have had an opportunity to review that data, please contact us if you believe there is additional information that should be covered by the E-CCAINFO tariff that was not provided.

**2. All data relating to low-income CARE customers within Sonoma County, including rates, number of customers, kilowatt-hours, and billing collections.**

The rate schedule information that PG&E will be providing under its E-CCAINFO tariff will supply confidential information on customers participating in the CARE program. Information on billing collections is outside of the E-CCAINFO tariff.

**3. Per Item 13 in the data request tariff schedule, the maximum and minimum day load profile curves for Sonoma in the data request tariff schedule, the maximum and minimum day load profile curves for Sonoma County, as well as a representative week of load curve data for the county for each of the four seasons. Maximum and minimum load curves should specify what date each occurred. Load profiles broken down by customer class are also requested.**

As discussed in recent meetings, PG&E is providing 2008 data under its E-CCAINFO tariff that will supply much of the information requested by customer class (i.e., residential/non-residential) for each of the five requested geographical areas (i.e. the cities of Petaluma, Santa Rosa, and Windsor, the entire County, and the unincorporated portion of the County). Cost per geographical area is described in Item 13 of the E-CCAINFO tariff. After you have had an opportunity to review that data, please contact us if you believe there is additional information that should be covered by the E-CCAINFO tariff that was not provided.

**4. All data relating to demand response/interruptible load program deployment and agreements within Sonoma County, including customers, capacity, hours per year, and what category of program each customer is participating in including the kilowatts of commitment in each category.**

PG&E is continuing to evaluate this request to determine what information it may provide under its E-CCAINFO tariff and will provide a further response to the County as early as possible next week.

**5. The list of all net metering customers, including contact information, and type and capacity of generating equipment installed.**

The rate schedule information that PG&E will be providing under its E-CCAINFO tariff will supply confidential information on customers participating in net metering. The type and capacity of generating equipment installed is not part of E-CCAINFO. After you have had an opportunity to review that data, please contact us if you believe there is additional information that should be covered by the E-CCAINFO tariff that was not provided.



6. **All PG&E data dictionaries relevant to load performance, billing, marketing and grid structure, monitoring systems and performance and any other data dictionaries relevant to intelligence and historical performance of the customer base and grid in Sonoma County. The County assumes that all data dictionaries will be complete according to existing practices within PG&E.**

PG&E is providing a data dictionary for the aggregated and customer-specific data that will be provided pursuant to PG&E's E-CCAINFO tariff. The other data dictionaries requested by the County are not included in the E-CCAINFO tariff. Additionally, as we have discussed the County's request is extremely broad. PG&E utilizes a number of data dictionaries in its various departments. These dictionaries are not presently compiled or catalogued on a company-wide basis, requiring considerable time to comply with the County's request. The request also raises security concerns with respect to data dictionaries relevant to, e.g., "grid structure" and "monitoring systems," as well as to "intelligence and historical performance of the customer base and grid in Sonoma County." Also, the broad request for PG&E's data dictionaries appears to raise concerns regarding disclosing proprietary or trade secret information as to how the Company structures or assesses its data.

7. **Pertaining to grid monitoring and performance, for purposes of determining the ability of the grid to support new business models initiated by Sonoma County or its representative related to CCA, all data addressing the historical five year and current capacities and performance of the Substation and grid infrastructure within Sonoma County. This would include a listing of specifications and throughput data for every known data monitoring and measuring device and system on the PG&E system impacting the County, as well as associated network and IT specifications related to SCADA systems, time-of-use and real-time metering. Such specifications should include margin of error/accuracy of all types of meters used to derive data and date of installation, as well as deployment or schedule for future Advanced or "Smart" metering including their capabilities and characteristics.**

The County's request for "all data addressing the historical five year and current capacities and performance of the Substation and grid infrastructure within Sonoma County" is outside the categories of information available through PG&E's E-CCAINFO tariff. It is overbroad and raises serious security concerns similar to those referenced in the response to Question 6.

Paul Fenn  
September 25, 2009  
Page 6

Next Steps

As outlined above, please remit payment as designated in the enclosed invoice for the data covered by PG&E's E-CCAINFO tariff at your earliest opportunity. Upon receipt of payment, PG&E will provide the E-CCAINFO within 10 business days. Also, please confirm as soon as possible what date the Sonoma cities would like to use to fill in the effective dates missing from the master NDAs.

Please feel free to give me a call anytime if you have any questions.

Very truly yours,

  
Marlo Martin

Enclosure

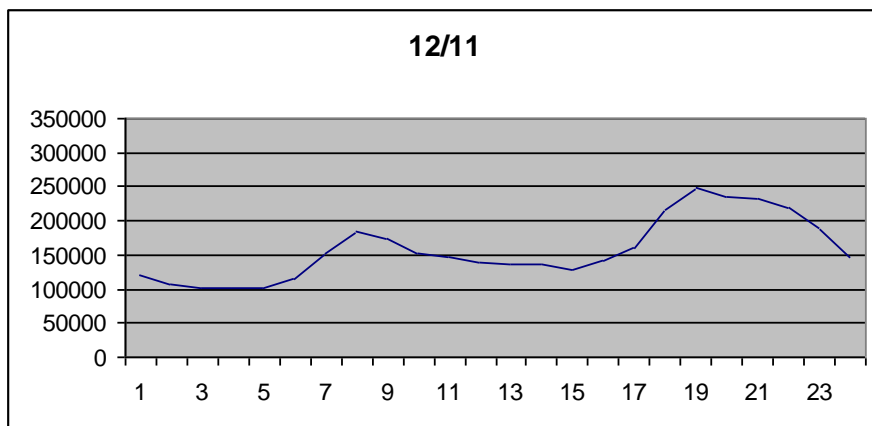
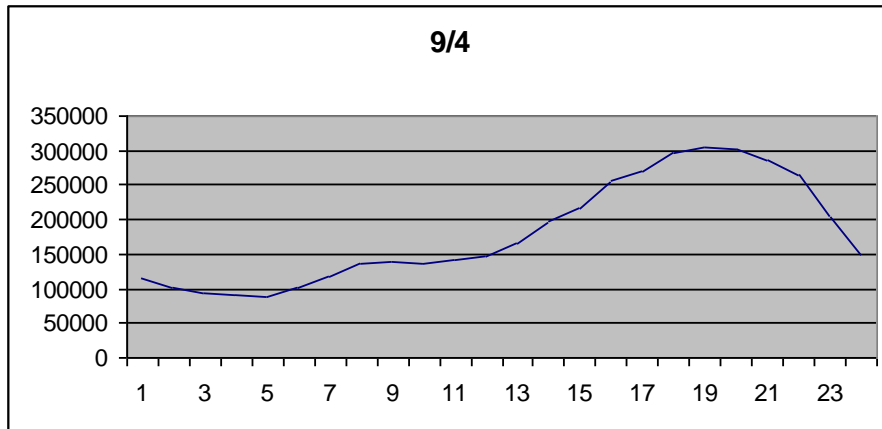
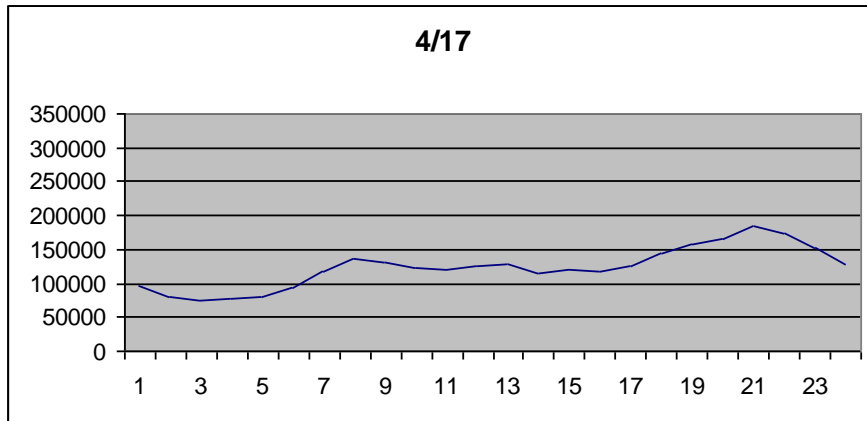
cc: Cortes Saunders  
Calvin Yee  
Jonathan Pendleton  
Joe Nation  
Ann Hancock  
Howard Golub  
Steve Roscow (CPUC Energy Division)  
Carlos Velasquez (CPUC Energy Division)



## Appendix 7

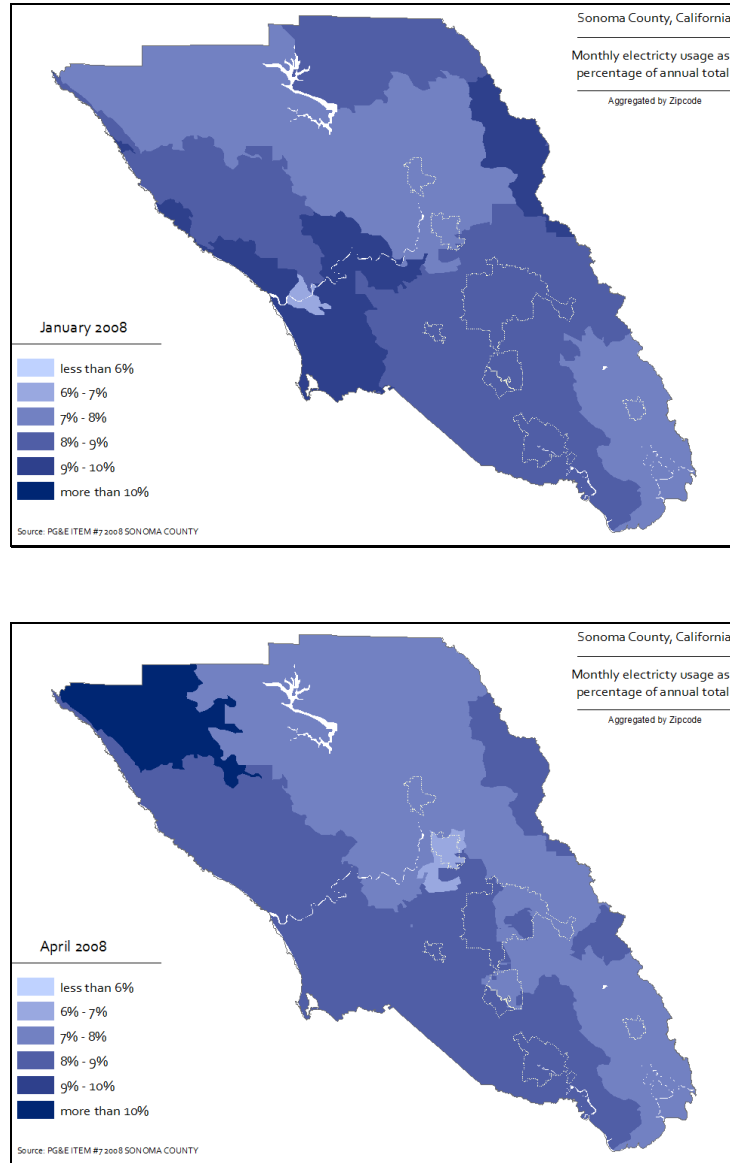
### Samples of Data Integration

This series of charts shows total hourly residential load for Sonoma County for various dates throughout 2008. They clearly show the seasonal variation.



**Figure 1. Sonoma County Residential Load Profile**

The following maps show total monthly residential load as a proportion of annual load for each zip code in Sonoma County. These maps enable comparison of the seasonal load profiles of locations within Sonoma County.



**Figure 2. Geospatial display of load data**

## Appendix 8

### California Energy Commission Protocol for Requesting GIS Data

-----Original Message-----

From: Jacque Gilbreath [<mailto:Jgilbrea@energy.state.ca.us>]

Sent: Thursday, February 25, 2010 11:32 AM

To: Dale Roberts

Cc: sarah.shaeffer@gmail.com

Subject: CEC data request\_response from CEC

Sonoma County Water Agency,  
Dale Roberts.

The California Energy Commission (CEC) has a standard procedure that allows us to provide GIS digital data to you as long as it is requested from a Federal, State, County or City entity. As you know, the data you are requesting would have to be submitted to the CEC from the Sonoma County Water Agency. Attached is the CEC's non-disclosure agreement which would have to be agreed to and signed by the Sonoma County Water Agency. It must be signed by a division manager that is leading the project which you are using this data for, or by the manager of the GIS unit who would oversee all GIS data used by Sonoma County. The agreement must include a detailed description of layers requested and the data's intended use. Your request must also specify extent of area which you are requesting for the GIS data. I assume you are requesting GIS data for Sonoma county only, but you will need to specifically say that in your request. The intended use should also specify a project that this data will be applied to, since this NDA can only be used for a specified project. Please note when signing, all restrictions for use and sharing of information which are required by the CEC. Additionally all Sonoma County Water Agency employees and contractors who will have access to the CEC GIS data will need to sign the NDA agreement (this can be done by making a copy of the signature page for each additional name). After the agreement is signed it can mail back to me using regular mail (please note mailing address in the signature block) or, for faster delivery, an express mail service, or you can hand deliver it to the security station at the CEC. If you deliver it to the building, please e-mail or phone me that it is coming so I can expect its arrival. As soon as the signed agreement is received by me in hard copy format, I can release the digital data in shape file format to the requester via CD or DVD, as this data cannot be sent via e-mail.

1) The layers you have requested: Electrical transmission lines, Substations, Natural Gas pipelines, Geothermal, Solar, Hydro, Wind, Biomass, and Landfill gas current and potential (CEC projects currently in the siting process) are GIS layers we have available to you only through the NDA process.

2) Other layers you discussed - specific resource potential areas - are as follows:

a) Known Geothermal Region Areas (KGRAs) - this GIS layer comes from Ca. Dept. of Conservation. There is no restriction on this data. If you would like this data, I can forward you without a NDA. Map is shown

here: [http://www.energy.ca.gov/maps/geothermal\\_areas.html](http://www.energy.ca.gov/maps/geothermal_areas.html)

b) Concentrating Solar Resource Areas - this GIS layer comes from NREL. There is no restriction on this data. If you would like this data, I can forward you without a NDA. Map is shown here:

[http://www.energy.ca.gov/maps/solar\\_potential.html](http://www.energy.ca.gov/maps/solar_potential.html)

c) Wind Resource Potential - this GIS layer comes from CEC and has no restriction on the data. If you would like this data, I can forward you without a NDA. Map is shown here:

[http://www.energy.ca.gov/maps/wind\\_potential.html](http://www.energy.ca.gov/maps/wind_potential.html)

Wind Speed and Power maps: These were developed by TrueWind Solutions. There is restriction for use with this data so you would have to request GIS data in your NDA request. You can view the maps here:

<http://www.energy.ca.gov/maps/wind.html>

3) We do not have potential resource areas for Hydro, Biomass or Landfill gas.

Please let me know if there is any other information you need regarding this agreement. Jacque Gilbreath

Please read the following disclaimer:

DISCLAIMER: This data layer may change without notice. The California Energy Commission makes no warranties, whether expressed or implied, as to the suitability or accuracy of the product for any particular purpose. Any use of this information is at the user's own risk. For further information or suggestions concerning these maps, please contact the California Energy Commission- Energy Facilities Siting Division - Cartography Unit, 1516 9th Street, MS48, Sacramento, CA 95814. For any further questions, please call Jacque Gilbreath or Terry Rose at (916) 654-3902

California Energy Commission

Siting Transmission & Environmental Protection Division Cartography Unit

Phone: 916-654-3902 FAX: 916-654-5117

Map Order Phone: (916) 654-4182

Mailing Address: 1516 9th Street, M.S. 48, Sacramento, CA 95814 Jacque Gilbreath Research Program Specialist I (GIS)  
jgilbrea@energy.state.ca.us

## **Appendix 9**

### **Minutes from Meetings to Discuss Ongoing Coordination Issues**

**Technical Interface Meeting with Paul Fenn, Dave Erickson, Art Medlar, and Donatella Pasqualini (Gordon Keating notes)**

**Tomales community room, 9.March.2010**

#### **LPI distributed generation analysis:**

1. Uses meter data to understand load shapes through the year; looking to match distributed electricity generation sources to load shapes
2. What is the best opportunity for RE insertion to avoid e- use costs?
3. What is the best option for locating infrastructure and which type?
4. Develop a list of preferred candidates for RE based on energy use volume and time-of-use pattern and RE resource availability
5. Map these t-o-u curves onto other similar customers in same class and climate zone.
6. Contrast the above with Net Generation, which has no location driver (-->anywhere) and does not have secure revenue generation --net gen does not pay from utility and rules can be changed @ any time (legislature)
7. Placing RE assets: "Seamless switching" on/off grid allows behind-the-meter e- generation and bundling of generators/users in a geographical block; contractually assigned generation from one roof to an adjacent user ("4th-party user"); on-site power generation is not regulated if shared with 'over-the-fence' neighbor (i.e., not crossing public street). **Islanding**
8. Mine PG&E database for clusters of, e.g., large rooftops (w/ appropriate aspect, sky view) + high-load adjacent customers -- clusters are candidates for islanding.
9. Need appropriate scale to make economics work -- cost of PV array + seamless switch (~\$2K), etc.
10. LPI will revise existing RE portfolio model and make early predictions about where assets will be.

Main user for the LPI tool (ClimateWorx): City, county governments; secondary user: savvy people-on-the-street

Benefits of Islanding: the 'backyard barbeque speech'

1. CC mitigation
2. Enhance RE insertion (now minority)
3. Backup power (w/ seamless switching)
4. The ultimate talking point --What is the economic benefit to each household in the Islanding cluster?? Can we quantify that?

#### **Need from Loren Toole's (LANL) grid model:**

1. Service area polygons for substations in SC - consider locations for DG sites, one in each polygon
2. Forecasts of demand at substations (if available for distribution)

#### **Summary of scenarios for integrating LPI analysis with CLEAR:**

##### **A. Scenarios for electrical generation**

1. Loads + single user generation (e.g., home PV array)
2. Loads + islanding opportunities (e.g., cluster of PV-host + high-load adjacent users)
3. Energy efficiency:
  1. Demand regulation (load modulation) -- smart grid; refrig and A/C are 2 largest loads; on/off for short time periods controlled by electricity provider, randomized pattern; Demand regulation is treated as **virtual capacity**, treated as infrastructure; achievable in commercial/industrial market; implementation there could be estimated and mapped to residential? What is actual scenario here?
  2. Standard rebates on selected appliance replacements; SC now has 3-year household retrofit program going (see Ann and Renata); Benefit considered annual % consumption avoided (~0.7%/yr), on-bill financing
4. Demand regulation (load modulation)-- hardware for smart grid; refridge +A/C; add to virtual capacity of electricity generation
5. Standard rebates for retrofit of selected appliances; annual consumption avoided
6. specific technologies:
  1. Pumped storage
7. Available sites for combined heat and power: power production from commercial boiler, cheaper than gas-fired powerplant
8. Low-T geothermal: 190 degree water -- 500 kW + hot water; regionally specific within Sonoma County

9. Various combinations of technologies to offset centralized generation

## **B. Scenarios for economics**

### **(Local economics and policies)**

1. AB32 GHG reduction target
2. Favorable interest on private activity bond financing and on municipal bonds
3. On-bill financing for efficiency programs, appliance replacement

### **(Macroeconomics)**

1. Carbon cost/ market - result in a different mix of RE
2. Cost of importing various types of electricity
3. Fuel costs with time -- trans. fuel, NG
4. Financing, interest rates -- effect on retrofit uptake and rest of system?
5. Effect of various tax policies -- production tax credit

## **C. Scenarios for NG**

1. Space heating retrofit: use existing NG residential (+commercial?) accounts to fund retrofit solar or geo-exchange hardware paid for by NG rate; "sell water heating service rather than selling NG to heat the water."
2. What are targets for adoption? Check CCAP
3. Air-source heat pumps (NG replacement) -- additional electrical demand?
4. Various combinations of technologies to offset NG
5. Propane offset NG use - different market than NG

## **D. Scenarios for Transportation**

1. Smart grid use of PEV car battery storage; [Battery pack replacement (Better Place); design grids with batteries as grid assets]
2. Vehicle-to-grid -- thermo-electric generation avoided
3. Vehicle-to-building -- controls on use, charging, discharging
4. Public transport electrification (probably not cost-effective due to small additional emissions cut over already pretty efficient public transport vehicles)
5. PEV coming -- load growth, infrastructure impacts, change in transport?
6. Effect of SMART on ridership (Dave will check with SCTA)

Need to firm up these as modeling scenarios.

What is the carbon impact on electricity demand? Cost for green electricity?

Check on status of LANL's TRANSIMS to help simulate V2G or V2B architecture

#### **E. Scenarios for Water**

1. Use water demand (meter data) from SCWA and cities to calculate energy intensity of water (SCWA energy is PWRPA, but cities use PG&E data to pump and distribute)
2. Volume of water used (throughput) will be difficult to reduce because the water utilities' revenue model relies on consumption
3. End-use (BTU/gal for HW) = 4x energy use of rest of water system; 40% of NG used in residential
4. Energy intensity of water: supply, distribution, wastewater, end-use -- CPC have broken down energy used and GHG emitted in each segment

#### **F. Scenarios for Agriculture**

1. Livestock -- GHG reductions
2. Assessment of biomass resources
3. Winegrowers' Assoc. - low-C labels, best practices
4. Farm Bureau; best practices

This section needs more details.

#### **G. Scenarios for Land Use**

1. SB375 incentive to local communities to put transport-oriented, high-density requirements into community plans -- possible scenario
2. shifts in population --> shifts in land use (is there a model for that?)

#### **H. Scenarios due to external drivers**

1. Population Model
2. Low-C fuel regulations
3. Tailpipe emissions regs
4. Changes in state Renewable Portfolio Standard (33% by 2020 nonbinding, 20% by 2010 binding)
5. "Path 15 Greening" (N-S transmission line)



6. Regional power generation, e.g. additional solar thermal -- requires transmission lines and traditional backup

### **Scaling of Analysis and Modeling:**

1. Single user generator
2. Multi-user Islanding
3. RESCO pilot project
4. Sonoma Mountain Village as a case study for the RESCO demand analysis and model?
5. Large municipal loads like carbon-free water (PWRPA)
6. Substation service area -- report results in terms of effects on substations
7. Effects on transmission system?

PWRPA: Power and Water Resources Pooling Authority -- SCWA's Joint Powers Agreement (JPA) bonding authority; intergovernmental public investment group; provides precedent for CCAP plan; lessons learned from PWRPA projects highlight opportunities and barriers for other conceivable projects.

### **Misc**

- SC power use: residential peak -- 300 MW; overall county peak 600-700 MW; (~264k meters; ~20k time-of-use meters--variable e- cost during the day)
- Solar PV in Sonoma County totals ~9 MW individual residential and commercial/gov't installation; via ~800 interconnects.

### **On-Going Efforts:**

- LPI to develop preliminary plan for timing of RE portfolio rollout -- V.2 of CCAP; informed by rate-schedule analysis
- Expect to receive GIS data - substation locations, transmission/ impedance maps
- Want water meter data for cities
- SMV coordination -- find out about current context with ASC, etc.
- Ag data sources?
- SMART ridership?
- Public transport investment curves
- missing elements from CCAP
- AB32 regs

- Biological / Terrestrial sequestration
- AB 375
- regional resources: low-T geothermal, other?

## **Appendix 10**

### **Data and Modeling Requirements Lists from Renewable Energy Portfolio Team and Systems Dynamics Team**

## **Model and Data Requirements for the *CLEAR* Model**

### **Sonoma County RESCO**

**DRAFT**

#### **1. Background**

A key component of the Sonoma County RESCO project is an integrated assessment framework for understanding the complex interrelationships among natural, built, and social systems as climate change, new energy policies, and social shifts affect our local, national and global situation. The foundation of this framework is a system dynamics model called CLimate-Energy Assessment for Resiliency (*CLEAR*). The *CLEAR* model defines important systems and their interrelationships in order to understand feedbacks, emergent behavior, and the potential for unintended consequences. The nature of this model is not predictive but prognostic. External drivers that impact all modeled sectors include population growth, climate impacts, and policy. The model can serve as a regional accounting system for carbon sources (emissions) and sinks as well as a quantitative tool to assist in carbon trading and credits.

This document defines the current capabilities of the *CLEAR* model and outlines modeling scenarios for integrating with and adding value to the renewable energy portfolio analysis. The data required for each of these modeling scenarios are outlined.

#### **1.1 Purpose**

The *CLEAR* model is an integrated system dynamics model designed to assess and simulate renewable energy mixes supporting required electrical demand and low-carbon emission goals. The model quantifies the key factors involved in implementing a mixed renewable energy resource strategy. These factors include

- reduction of GHG emissions
- implementation and integration of renewable sources to meet energy demand
- increased energy efficiency to reduce demand
- sustained economic viability and quality of life in the County.

Significant changes to Sonoma County's energy supply profile towards low carbon emissions pose a challenging problem due to feedbacks and potential impacts among interdependent County sectors (e.g., energy, transportation, water, economy, land use, and agriculture). The interface, made available on a web portal, helps stakeholders and policy makers understand options for technology implementation.

## **1.2 Basis in CCAP**

The approach for reducing GHG emissions in Sonoma County is outlined in the Community Climate Action Plan (CCAP). The energy solutions and financing methods outlined in the CCAP include a conceptual model of a renewable energy (RE) portfolio. The portfolio includes energy supply, demand response and efficiency that would significantly reduce GHG emissions due to electricity and natural gas use. Implementation of the tasks defined in the CCAP requires all elements of this RESCO project, of which this model is a part:

- a. Prototype RE Portfolio Design — designing a prototype of an integrated, locally distributed, cost-effective RE portfolio will provide greater resolution to the conceptual portfolio described in the CCAP. This will require the acquisition and integration of datasets that facilitate design specification. The use of GIS data and detailed load information will allow positioning of resources and demand response.
- b. Pilot Project — the project will employ cost-effective integrated RE resources to provide a proof of concept for how to identify neighborhoods, business parks or other sites that can benefit from dedicated energy supply resources. The use of cost-effective integrated RE resources and demand-side measures will provide a scaleable example for future self-sufficient energy regions less dependent on the utility-based electricity and natural gas transmission system.
- c. Integrated Assessment Model — In order to understand the impacts of the RE portfolio prototype and the pilot project, the *CLEAR* model simulates RE mixes supporting low-carbon emission goals and quantifies the key factors involved in implementing a mixed RE resource strategy. This tool simulates the complex interactions between technology deployment, economics and social behavior.

- d. Exploration of the financial mechanisms for construction of the portfolio, and
- e. Local Government Coordination — a coordinating component facilitates the necessary data collection from various local governments and the County's investor-owned utility and manages the public works projects envisioned. Future RE implementation will be enhanced by ongoing communication and collaboration with the County's cities, Supervisors, agencies, and other public and private partners.

### **1.3 Interface**

The model interface will provide a means for stakeholders to explore the relationships among the parameters in various model sectors and develop an understanding of their dynamics. Particular scenarios will be highlighted in order to guide users to explore specific options for GHG reduction. The model has been designed as a web-ready Java applet with a graphical user interface to allow users to choose emission reduction policies and compare results of various scenarios. Preliminary use of the demonstration version of the model indicates that users with diverse technical and policy backgrounds can quickly grasp the meaning of timing and longevity of emissions reduction policies and the control of economic drivers.

### **1.4 Model users**

The *CLEAR* model users will be primarily County elected officials, staff, and County agency professionals. These stakeholders will exercise the *CLEAR* model to develop an understanding of the costs, benefits, tradeoffs, and potential unintended consequences of various scenarios for GHG reductions. Secondary users include the general public and interest groups who may explore the model and communicate opinions or views to help inform decisions made by the primary stakeholder group.

## **2. What does CLEAR do?**

The model is designed to track the emission of CO<sub>2</sub> across sectors. In the first version of the model, two CO<sub>2</sub> sources were modeled: transportation and electricity generation. Emissions from these sources were modeled in several sectors, including residential and commercial (industrial) transportation and

electricity demand, and electricity demand for water supply and treatment. Economics and population growth drive changes in demand. Policies for renewable energy (wind, solar) and low-emissions transportation (hybrid cars, mass transportation) provide mitigation choices. In particular, the modeled energy mix (wind, solar, and conventional energy such as petroleum) is a function of the energy costs (installation, production, and investment), the magnitude of a potential CO<sub>2</sub> tax, and the limited energy capacity. Climate change in the form of increase in average daily temperature drives changes in water resources as well as electricity and water demand.

## **2.1 What are the questions that the *CLEAR* model can answer for the Sonoma RESCO project?**

The county-scale RE portfolio design and systems modeling provide the means to understand how the kind of “islanding” and microgrid development demonstrated in the Pilot Project can be implemented for other sites of concentrated energy use in the county.

The CCAP extrapolates a linear decrease in County GHG emissions based on the recommended actions across several sectors.

1. Is this rate of decrease of GHG emissions attainable via the projects outlined in the CCAP? (i.e., validate the CCAP conclusions)
2. Are there feedbacks, bottlenecks, or unintended consequences of this plan?
3. Can we add detail in terms of timing or order of adoption of the projects to optimize GHG emissions reduction?
4. How does the ‘islanding’ (microgrid) approach used in the pilot project affect the outcome of the model? (i.e., how do we represent the Pilot Project in the model?)
5. What is the effect on the rate of GHG emissions reduction by location of self-powering microgrids for particular developments in the County (i.e., RE portfolio scenario evaluation)

Other potential modeling ideas:

- Simulate the effect of varying levels of uptake of efficiency programs such as AB 811 and Pay-As-You-Save®

- modeling vehicle-to-grid interactions
- modeling demand response strategies
- simulate scenarios that address the need for variable power delivery and methods for managing and controlling diverse RE resources to match customer needs
- Simulate effects of end use efficiency and peak reduction methods on overall emissions from municipal water cycle
- model various strategies for dealing with municipal solid waste

### 3. **Summary of potential scenarios for integrating RE portfolio analysis with CLEAR**

(Data requirements in *italics*)

**A. Scenarios for renewable energy supply:** combinations of technologies to offset centralized production and distribution of energy supply

1. Renewable energy insertion:
  1. single-user generation
  2. islanding (building cluster)
  3. Addition of regional renewable electricity resources (fuel mix)
    1. Utility
    2. Other entity (CCA)

*Data required: a) adoption rate of single-users or clusters in terms of avoided consumption; b) locations (or concentration areas) for deployment in County; uptake for opt in versus opt out in single user? Utility deployment rate vs deployment rate by other?; technology types, i.e., system hardware configurations, input feedstock types, availability; general resource availability; regulatory processes for permitting/timing*

2. Energy efficiency:

1. Demand regulation (load modulation) -- smart grid; commercial / industrial sector refrigeration and A/C, possibly extended to residential sector)
2. Appliance retrofit: home and commercial; e.g. Sonoma County appliance rebate program

*Data required: a) adoption profiles and avoided consumption; efficiency metrics for various technologies, avoided cost*

3. Combined heat and power:
  1. commercial boilers
  2. Residential applications
  3. Shopping centers
  4. Business parks
  5. Hospitals
  6. Schools
  7. Other campus apps

*Data required: a) adoption profiles and avoided consumption b) number of suitable sites; c) percentage of developable sites; regulatory information*

4. Low-temperature geothermal: space heating, hot water, electricity generation; regionally specific within Sonoma County

*Data required: a) adoption rate of each technology and avoided consumption; b) locations (or concentration areas) for deployment in County*

5. Energy storage to supplement/support RE:
  1. Pumped storage
  2. Battery storage
  3. Other exotic storage types: Hydrogen from water electrolysis, flywheel technology, compressed air storage.

*Data required: a) relationship to renewable generation technologies in terms of peak shifting and effect on demand curve(s); b) locations for deployment within the County*

6. Large municipal loads:
  - a. Water pumping
    - i. Effect of renewable mix
    - ii. Effect of peak reduction



- iii. Effect of demand reduction
- b. Wastewater treatment
  - i. Effect of renewable mix
  - ii. Effect of process changes, demand reduction
  - iii. Effect of flow reduction
- c. Streetlights/Outdoor lighting
  - i. Renewable mix
  - ii. Efficiency improvement
  - iii. Other demand reduction

## **B. Scenarios for economics**

### **(Local economics and policies)**

1. AB32 GHG reduction target
2. Favorable interest on private activity bond financing and on municipal bonds
3. On-bill financing for efficiency programs, appliance replacement

### **(Macroeconomics)**

1. Carbon cost/market – Markey/Waxman, etc. --result in a different mix of RE
2. Cost of importing various types of electricity
3. Fuel cost projections -- transportation fuel, NG
4. Financing, interest rates -- effect on retrofit uptake and rest of system?
5. Effect of various tax policies -- production tax credit; federal incentives to utilities and governments

*Data required: a) implementation or adoption model for each policy*

## **C. Scenarios for Natural Gas: Combinations of technologies to offset NG**

1. Space heating retrofit: use existing NG residential (and commercial) accounts to fund retrofit solar or geo-exchange hardware paid for by NG rate

*Data required: a) adoption targets of each technology and avoided consumption;  
b) locations (or concentration areas) for deployment in County*

2. Air-source heat pumps (NG replacement)

*Data required: a) adoption targets of each technology and avoided consumption; b) locations (or concentration areas) for deployment in County; c) implications for additional electrical demand*

3. Thermal load aggregation with or without CHP (natural gas)
  1. Supply with biogas/biomass
  2. Solar hot water

#### **D. Scenarios for Water**

1. Targets for reduced energy use via reduced water consumption

*Data required: a) water demand (meter data) from SCWA and cities to calculate energy intensity of water; cities use PG&E electricity to pump and distribute; energy intensity of water: supply, distribution, wastewater, end-use; End-use (BTU/gal for HW) = 4x energy use of rest of water system; 40% of NG used in residential*

2. Reduced wastewater generation

*Data required Current wastewater volumes*

3. Increased use of reclaimed wastewater to displace local potable water

*Data required: Urban irrigation water use*

4. Effect on Geysers from reclaimed wastewater recharge

*Data required: characterization of feedback between electricity generation at the Geysers and the diversion of reclaimed water for other purposes*

5. Increased use of groundwater (wells) versus Russian River water.

#### **E. Scenarios for Transportation: VMT avoided and effect of shift from fuel combustion to electricity demand**

1. Effect of SMART on mode share

*Data required: a) transportation mode share and mass transit ridership pre-SMART and b) projections for SMART ridership, projected VMT avoided*

2. Smart grid use of PEV car battery storage; Vehicle-to-grid, Vehicle-to-building

*Data required: a) adoption profiles and use of V2G / V2B to balance load and store RE generation*

3. Public transport electrification

*Data required: a) investment curves and projected emissions avoided*

6. Electric vehicle deployment

*Data required: Uptake rate based on various cost scenarios, effect on overall electric load, decrease in gasoline use: potential locations for placement of public charging stations*

7. Mode share shift to walking and biking through investment in infrastructure upgrades

*Data required: Current mode share distribution, projected effects of various measures, costs*

## **F. Scenarios for Agriculture**

1. Livestock -- GHG reductions
2. Assessment of biomass resources
3. Winegrowers' Assoc. - low-C labels, best practices
4. Farm Bureau; best practices
5. Forestry operations

*Data required: a) For all: descriptions of BAU carbon balance, potential for terrestrial carbon sequestration, best practices and potential emissions avoided or offset*

## **G. Scenarios for Land Use**

1. SB375 incentive to local communities to put transport-oriented, high-density requirements into community plans

*Data required: a) Land-use change projections and potential effects on VMT and home heating and electricity consumption, water and wastewater, solid waste generation*

2. shifts in population --> shifts in land use

*Data required: a) population growth model(s) for Sonoma County; b) projected shifts in land use*

## **H. Scenarios due to external drivers**

1. Low-C fuel regulations
2. Tailpipe emissions regs
3. Changes in state Renewable Portfolio Standard (33% by 2020 nonbinding, 20% by 2010 binding)
4. Climate Changes (warmer, wetter winters, hotter summers)
5. Changes in water availability

*Data required: a) details of each policy in terms of targets and timelines*

**Attachment 1**  
**LPI Letter to PG&E December 19, 2008**

**Local Power, Inc.**  
**35 Grove St. #118**  
**San Francisco, CA 94102**  
**(510) 451-1727**

December 19, 2008

Marlo Martin  
Sr. Information Systems Analyst  
Pacific Gas & Electric Company  
Mail Code B19C  
P.O. Box 770000  
San Francisco, CA 94177-0001

Re: Community Choice Aggregation (CCA) Data Request to PG&E per AB117

Dear Marlo,

I am replying to your letter dated November 24, 2008 in response to the County of Sonoma's CCA Data Request letter (signed by County Administrator Bob Deis), dated August 25, 2008.

**In your letter, you listed the following items that you needed to before providing data requested:**

1. Signed declarations from the mayors for each of the listed cities in Sonoma County;
2. Signed CCA Non-Disclosure Agreements (NDAs) for each of the listed cities in Sonoma County;
3. Exhibit A of the CCA NDA signed by each individual that will be handling the data;
4. Written confirmation of the specific years and acceptance of charges.

**Accordingly, please find enclosed the following documents:**

1. Declarations for cities signed by authorized city officials of each jurisdiction were included in the letter dated August 25, 2008.
2. NDA's signed by the authorized officials of each jurisdiction, including the following individuals:
  - a. Nina D. Regor, City Manager, City of Cloverdale
  - b. Dianne Thompson, City Manager, City of Cotati
  - c. Marjie Pettus, Asst. City Manager, City of Healdsburg

- d. Vincent Marengo, Director Public Works, City of Petaluma<sup>21</sup>
  - e. Stephen Danley, City Manager, City of Rohnert Park
  - f. Dell Tredinnick, Project Development Manager, City of Santa Rosa
  - g. Susan Kelly, Engineering Director, City of Sebastopol
  - h. Linda Kelly, City Manager, City of Sonoma
  - i. Matthew Mullan, Town Manager, Town of Windsor
3. Signed NDAs<sup>22</sup> of Exhibit A CCA - NDAs by each individual that will (or may) be handling the data:
- a. John David Erickson, Technical Director, Climate Protection Campaign, Santa Rosa
  - b. Cordel Stillman, Deputy Chief Engineer, Sonoma County Water Agency
4. Finally, this is confirmation that years 2003 to 2007 inclusive are satisfactory, and that we accept the \$27,770 total charge for the data Sonoma County has requested. Please note that the invoice for this amount should be addressed to
- Cordel Stillman  
Capital Projects Manager  
Sonoma County Water Agency  
P.O. Box 11628  
Santa Rosa, CA 95406

Most urgently, we repeat our August 25 request for a meeting between Sonoma County representatives (myself, Howard Golub and possibly one additional advisor) and yourself and the PG&E data specialists who will prepare the data, to make certain that the details of our August 25 data request are properly understood by PG&E to avoid any misunderstanding that might result in unnecessary additional charges. We ask that this meeting be held during the first two weeks of January.

We are hopeful that resolution of any outstanding issues can be resolved in a timely manner.

Thank you,

Paul Fenn, CEO  
Local Power

Cc: Ann Hancock, Climate Action Campaign

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<sup>21</sup> The City of Petaluma has enclosed two signed copies of its NDA form and has requested that PG&E's representative sign and return one of the copies for its records. These two signed copies are enclosed. Please sign and return this copy to me and I will pass it on to them.

<sup>22</sup> You have already received a NDA from myself, CEO of Local Power, based in San Francisco.

## Attachment 2

### LPI Letter to PG&E March 16, 2009

Local Power.

March 16, 2009

Marlo Martin  
Pacific Gas & Electric Company  
77 Beale St., Mail Code B19C  
San Francisco, CA 94177

Dear Marlo:

PG&E has indicated that LPI must provide Non-Disclosure Agreements (NDAs) signed by mayors in order to provide confidential customer information as requested in Sonoma County's six-month long data request to PG&E. Please provide all the documentation/supporting codes. We offer to meet if that would assist PG&E in complying.

#### **1. Demand for All Non-Confidential Information**

Key elements of our data request concern generic PG&E database system information that is not confidential and therefore does not require an NDA. Thus, we are repeating our demand for immediate provision of this generic information.

Therefore, LPI requests that PG&E provide the following data immediately:

- a. Non-Confidential data for Sonoma
- b. generic information requested by Sonoma County's data request immediately, preferably in the form of file raw data in an ASCII format. Please include the data definition descriptions covering all data items. At a minimum:
  - i. Detailed descriptions of files (field names and adequate documentation/ description of meaning, field delimiters, fixed record length bytes and field begin-end bytes if applicable, record delimiters, etc.
  - ii. Primary key descriptors
  - iii. Referential integrity constraints

Please provide all PG&E data dictionaries relevant to load performance, billing, marketing and grid structure, monitoring systems and performance and any other data dictionaries relevant to intelligence and historical performance of the customer base and grid in Sonoma County. The County assumes that all data dictionaries will be complete according to existing practices within PG&E, and asks to be notified if this is not the case.

#### **2. Santa Rosa and Sonoma County Unincorporated Areas Confidential Data.**

The NDA has already been signed by the County CAO and the Mayor of Santa Rosa, so PG&E should provide that info forthwith.

### **3. There's no requirement for each mayor to sign the NDA, and all of the people who will be handling confidential documents have already signed the NDAs.**

PG&E's requirement of mayor's signature on an NDA to be included in the data request is also contrary to state regulations. In its Phase I decision, the Commission decided CCAs signing nondisclosure agreements to receive confidential customer data that is not masked or aggregated:

"We direct the utilities to provide all relevant usage information, load data and customer information to CCAs. The CCA shall sign nondisclosure agreements for any confidential information that is not masked or aggregated. We will also require that all notices relevant to CCA programs inform customers that the utility may share customer information with the CCA and that the CCA may not use the utility's information for any purpose other than to facilitate provision of energy services" (p.52)

Thus, in "Finding of Fact # 41," the Commission determined that "Nondisclosure agreements would provide reasonable protections against the disclosure by a CCA of a utility's customer information. Nowhere do regulations suggest giving mayors the authority to effectively veto a standard ordinance-based process subject to joint mayor-council deliberation, and in which councils have power to override mayoral vetoes. If as PG&E has suggested a mayor's signature is required to validate a nondisclosure agreement, PG&E violates basic governance, including AB117, and on the face of it constitutes or otherwise indicates non-cooperation by PG&E relative to the Sonoma governments' request.

In fact, the California Public Utilities Commission merely mentions that a county or city's chief administrative officer must attest that it is "investigating" or "pursuing" status as a CCA as a precondition of receiving confidential customer information ("Conclusion of Law #33):

"The utilities should require CCAs to sign nondisclosure agreements when they share confidential information about customers or electricity load and should require a county or city's chief administrative officer to attest that it is "investigating" or "pursuing" status as a CCA as a precondition to receiving confidential customer information" (p.68).

The Commission decided that full data could be provided to CCAs in order to facilitate their preliminary program design and planning;

Conclusion of Law #32: "Section 366.2(c)(9) requires the provision of detailed billing and load data to CCAs that are investigating, pursuing or implementing CCA programs" (p.68).

Accordingly, the Commission ordered in Order #5 that the chief administrative officer of a city confirm that the CCA is investigating or pursuing status be a precondition of



receiving confidential customer information:

“PG&E, SDG&E, and SCE’s proposed tariffs shall include... (12) the offer to provide access to all relevant customer information, billing information, usage and load information, consistent with this order and which shall be provided to the CCA at cost except that those information services already approved in D.03-07-034 shall be provided at no cost to the CCA; (13) a requirement that all confidential utility information shall be provided subject to nondisclosure agreement and a requirement that the chief administrative officer of a city or county attest that the city or county is investigating or pursuing status as a CCA as a precondition of receiving confidential customer information; (14) a requirement that customer notifications about prospective CCA operations inform the customer that customer information may be provided to the CCA subject to nondisclosure for any purpose other than those related to facilitating the CCA’s services; (15) a provision for CCAs to indemnify the utilities from liabilities associated with the CCA’s disclosure of confidential customer information where the utility has taken all reasonable steps to prevent such disclosure” (Order # 5, pp.70-71).

Thus, regulations place requirements on the origin of the attestation, but not the Non-Disclosure Agreement. Sonoma County’s Official Data Request Letter addressed this requirement specifically:

“Pursuant to AB117 and California Public Utilities Commission regulations, please consider this letter as attesting to Sonoma County’s intent to investigate status as a Community Choice Aggregator, as evidenced by my signature at the bottom of this request. Under CPUC Decision D.04-12-046, execution of this letter is the sole condition to PG&E’s providing the requested information to Sonoma County” (emphasis added, pp.4-5).

PG&E’s CCA-INFO Tariff includes similarly ambiguous language that does not support PG&E’s claim for a mayoral NDA signature requirement:

“4. Customer-specific information or aggregated information that violates the 15/15 Rule, as listed above will be provided when the CCA has met all of the following conditions:

- a. Signed Non-Disclosure Agreement.
- b. Executed an Attestation stating that the city or county is investigating, pursuing or implementing CCA, and
- c. Any registration or other requirements as imposed by the CPUC”

Special Conditions - Advice Letter No. 2784-E-A Filed November 29, 2006 Decision No. 05-12-041, Effective November 9, 2006, Resolution No. E-4013 105191 Regulatory Relations, p.3).

As the Sonoma CCA Data Request included all of these documents consistent with this tariff language and the language of AB117 and CPUC regulations, PG&E must provide the data for all jurisdictions in Sonoma County forthwith.

**Local Power.**

Yours Sincerely,

---

Paul Fenn, CEO  
Local Power Inc.

Cc: Jonathan D. Pendleton  
Attorney  
Pacific Gas and Electric Company  
77 Beale Street, B30A  
San Francisco, CA 94105

Howard V. Golub  
Senior Counsel  
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## Attachment 3

### PG&E Letter to LPI March 24, 2009



Jonathan D. Pendleton

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March 24, 2009

**VIA E-MAIL AND  
REGULAR MAIL**

Howard Golub, Esq.  
Nixon Peabody, LLP  
One Embarcadero Center, 18th Floor  
San Francisco, CA 94111-3600

Dear Mr. Golub:

Re: Letter of March 16, 2009 from Paul Fenn, Local Power, to Marlo Martin, PG&E

I am writing in response to the March 16, 2009 letter that Paul Fenn sent to Marlo Martin of PG&E, received on March 19, and would like to take this opportunity to clarify the requirements of PG&E's "E-CCAINFO" tariff. (A copy of this tariff is attached for your convenience at Tab A.) I am hopeful that clarifying the remaining steps your clients need to take to satisfy the confidentiality protections of PG&E's tariffs will help to move the data production process forward expeditiously from this point onward.

To assist in this process, PG&E has put together an Excel spreadsheet identifying the documentation it has received to date and what documentation is still needed from the County of Sonoma and the nine cities (Petaluma, Cloverdale, Cotati, Healdsburg, Rohnert Park, Santa Rosa, Sebastopol, Sonoma and Windsor) that we understand are currently investigating Community Choice Aggregation (CCA). A copy of this spreadsheet is attached at Tab B.

As summarized below, there are three main requirements for obtaining the confidential, customer-specific electric usage data that the county and nine cities have requested: Declarations, Non-Disclosure Agreements (including Exhibit A), and payment for the data. These tariff requirements apply to the County and each of the cities. They are important requirements, designed specifically to protect the confidentiality of our customers, and as such we have an obligation to insist upon full compliance before we release any of the data to your clients. PG&E has successfully complied with similar requests for data in connection with the San Joaquin Valley Power Authority and Marin Clean Energy CCA programs, and stands ready to do the same with the Sonoma County communities.

### **Declarations**

#### a) Requirements

In order to obtain information pursuant to E-CCAINFO, each city or county must provide PG&E a Declaration confirming that it is “investigating, pursuing or implementing CCA....” The mayor of a city or Chief Administrative Officer (CAO) of a county must sign the Declaration. (See PG&E Electric Sample Form No. 79-1030, attached at Tab C.) As part of that Declaration, the mayor or CAO states: “I understand that all of the confidential information provided by PG&E to the city or county indicated above is subject to the terms and conditions of the Nondisclosure Agreement between these two entities and is provided for the sole purpose of enabling the city or county to investigate, pursue or implement community choice aggregation.”

#### b) Status

To date, PG&E has received a properly executed Declaration from the County of Sonoma only.

### **Non-Disclosure Agreements**

#### a) Requirements

In order for a city or county investigating CCA to obtain confidential, customer-specific information or aggregated information that violates the “15/15 Rule” (see E-CCAINFO, Special Condition No. 2), in addition to a Declaration (see above) an “authorized representative” of the city or county is first required to execute a master non-disclosure agreement (NDA). (E-CCAINFO, Special Condition No. 4.) (See PG&E Electric Sample Form No. 79-1031, attached at Tab D.) As Mr. Fenn correctly notes in his letter, there is no requirement that the mayor of a city or CAO of a county sign the master NDA rather than another authorized representative. Of course, if the mayor or CAO will be reviewing the confidential data, they too must sign an Exhibit A to the NDA, as outlined below.

Any individual who will be reviewing the confidential customer data on behalf of the city or county must sign an Exhibit A to the city’s or county’s master NDA. This includes both staff members and any outside consultants. If a city or county intends in the future to have additional persons review the confidential data, it must first provide a signed Exhibit A for each of those persons.

Regarding the City of Santa Rosa, in Paul Fenn’s letter he indicates that the City of Santa Rosa’s mayor has executed a master NDA. However, it is my understanding that PG&E has not yet received a master NDA from the City of Santa Rosa. (See summary spreadsheet at Tab B.) As stated above, the master NDA does not have to be signed by the mayor but PG&E does need to have a signed master NDA from Santa Rosa in order to provide it with the requested confidential data. Additionally, please note that it is my understanding Santa Rosa has not yet

Howard Golub  
March 24, 2009  
Page 3

submitted a Declaration signed by the mayor. If I am mistaken on the status of either of these documents please let me know and PG&E will update its records promptly.

b) Status

To date, PG&E has received master NDAs from the County of Sonoma and the City of Petaluma. PG&E will need NDAs from each of the remaining cities signed by an authorized representative of those cities.

PG&E has received an Exhibit A from individuals representing each of the cities and from three outside entities. After reviewing the attached spreadsheet, please let us know if there are others who will be submitting a signed Exhibit A to one of the master NDAs. A person is not authorized to review any confidential, customer-specific data unless they have executed an Exhibit A to a city or county's NDA.

**Payment**

PG&E issued an invoice to your clients on January 29, 2009 pursuant to the E-CCAINFO fee schedule, but has not yet received any payment for the requested data. Where applicable, PG&E must receive payment before it can release the data, including any categories of non-confidential data for which a fee is owed.

**Request for Non-Confidential Information for the County of Sonoma**

Please note that PG&E understood your client's information request to be a single request rather than ten separate requests for each city or county and responded to and invoiced the request accordingly. It is my understanding that the cost to PG&E to compile and provide information is based on the number of requests, rather than the number of communities that are part of a particular request. If the County of Sonoma wishes to obtain information concerning its unincorporated areas separately, then PG&E will need to compile the information individually and invoice the County separately. Please confirm whether you wish PG&E to do so. Further, if your client would like us to treat each of the investigating communities separately, please let us know as soon as possible.

I hope this information is helpful. If you believe the spreadsheet needs to be updated or if you have any questions, please do not hesitate to contact me.

Very truly yours,

/s/

Jonathan D. Pendleton

JDP:rt

## Attachment 4

### PG&E Letter to LPI June 16, 2009

**Pacific Gas and Electric Company**

P.O. Box 770000 - Mail Code N8C  
San Francisco, CA 94177-0001

June 16, 2009



Paul Fenn  
Local Power Inc.  
35 Grove Street, Suite 118  
San Francisco, CA 94102

Re: Sonoma County CCA Data Request

Dear Mr. Fenn:

I am writing in response to your letter to PG&E dated June 9, 2009 regarding remaining items required to fulfill Sonoma County's CCA Data Request; per PG&E's March 24, 2009 letter. The March 24<sup>th</sup> letter from PG&E detailed the three main requirements necessary to complete the data request. However, your June 9<sup>th</sup> letter provided only one of those requirements; the Declarations (Form 79-1030) signed by the Mayors of Sonoma County.

To assist you with completing the remaining requirements, I have updated the Excel spreadsheet which accompanied the March 24<sup>th</sup> letter to include the most recent receipt of Declarations from the Mayors. As previously stated, in addition to the Declaration requirements, PG&E also requires a signed Non-Disclosure Agreement for each of the cities and payment in the amount of \$27,770.

As summarized below, these are the requirements which have been fulfilled and what is still outstanding in order to provide the requested data for the County of Sonoma.

#### **Declarations**

##### a) Requirements

As stated in PG&E's March 24<sup>th</sup> letter pursuant to E-CCAINFO, each city or county must provide PG&E a Declaration confirming that it is "investigating, pursuing or implementing CCA..." The mayor of a city or Chief Administrative Officer (CAO) of a county must sign the Declaration.

##### b) Status

To date, this requirement has been fulfilled as PG&E has received a properly executed Declaration from all of the Cities/County in the County of Sonoma.

### **Non-Disclosure Agreements**

#### a) Requirements

##### Non-Disclosure Agreement

As stated in PG&E's March 24<sup>th</sup> letter in order for a city or county investigating CCA to obtain confidential, customer-specific information or aggregated information that violates the "15/15 Rule" (see E-CCAINFO, Special Condition No. 2), in addition to a Declaration, an "authorized representative" of the city or county is first required to execute a master non-disclosure agreement (NDA). (E-CCAINFO, Special Condition No. 4.) (See PG&E Electric Sample Form No. 79-1031, attached) To clarify again, there is no requirement that the mayor of a city or CAO of a county sign the master NDA, only an authorized representative. However, of course, if the mayor or CAO will be reviewing the confidential data, they too must sign an Exhibit A to the NDA, as outlined below.

##### Exhibit A

PG&E also stated that any individual who will be reviewing the confidential customer data on behalf of the city or county must sign an Exhibit A to the city's or county's master NDA. This includes both staff members and any outside consultants. If a city or county intends in the future to have additional persons review the confidential data, it must first provide a signed Exhibit A for each of those persons.

#### b) Status

There has been no change in status since PG&E's March 24<sup>th</sup> letter. To date, PG&E has only received master NDAs from the County of Sonoma and the City of Petaluma. PG&E will need NDAs from each of the remaining cities signed by an authorized representative of those cities. PG&E has also received an Exhibit A from individuals representing each of the cities and from three outside entities as indicated in the attached spreadsheet. After reviewing the spreadsheet, please let us know if there are any other individuals that will be reviewing the confidential data and submit a signed Exhibit A accordingly. A person is not authorized to review any confidential, customer-specific data unless they have executed an Exhibit A to a city or county's NDA.

Paul Fenn  
June 16, 2009  
Page 3

**Payment**

PG&E issued an invoice to Cordell Stillman, Capital Projects Manager, Sonoma County Water Agency on January 29, 2009, as instructed in your December 19, 2008 letter, but has not yet received any payment for the requested data. Where applicable, PG&E must receive payment before it can release the data, including any categories of non-confidential data for which a fee is owed.

I hope this information will assist you in providing what is needed in order to complete the data request. If you have any further questions, please contact me at (415) 973-2150.

Sincerely,

Marlo Martin  
Sr. Information Systems Analyst

Enclosures

cc: Jon D. Pendleton  
Howard V. Golub



## Attachment 5

### LPI Letter to PG&E September 14, 2009

#### Local Power.

Local Power, Inc.  
35 Grove St. #118  
San Francisco, CA 94102  
(510) 451-1727

September 14, 2009

Marlo Martin  
Pacific Gas & Electric  
77 Beale Street, Mail Code B19C  
San Francisco, CA 94177

Dear Marlo,

This letter is to clarify Sonoma County's request for data as discussed in our conference call last week. During our meeting you requested that Local Power clarify what data Sonoma needs relative to item 13 on page 3 of Sonoma's data request.

In my most recent letter emailed to you by Ann Hancock on September 3, I submitted the following clarification of Sonoma's data request regarding "Fitting CCA annual usage to climate band load shapes; estimation of peak coincident and non-coincident demands."

Specifically, I requested the following:

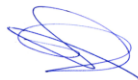
"C) We want Item 13 not just for (1) the whole county but also (2) Petaluma, (3) Santa Rosa, and (4) Unincorporated Areas" (LPI letter to PG&E, September 3, 2009)

To clarify this request, we confirm our need for estimation of peak coincident and non-coincident demands in these four jurisdictions. We have discussed this matter and wish to add one jurisdiction to the list, namely Windsor. Thus, please provide this data for the following; (1) the whole county but also (2) Petaluma, (3) Santa Rosa, (4) Unincorporated Areas and (5) Windsor.

Specifically, we request load profile curves for each of these cities that includes: a) maximum and minimum load day specifying date on which these occurred and specified megawatt value of peak and low for each curve; and b) representative week for each of four seasons. Load profiles broken down by customer class are also requested.

Please provide this data for 2008 or the most recent year available.

Yours truly,



Paul Fenn, CEO