

Clean Energy & Jobs Oakland Campaign

Report of Research Committee

Sonoma Clean Power

Summarizing 3 documents:

Energy Solutions, May 2008

Feasibility report, October 2011

Implementation Plan, October 2012

Source Documents

- ***Energy Solutions***, completed May 2008
 - Proposal for an electrical portfolio to meet goals of the Sonoma County Community Climate Action Plan.
 - Written by Local Power, commissioned and paid for by the Climate Protection Campaign.
- ***Feasibility Report***, October 2011
 - Commissioned by the Sonoma County Water Agency
 - Examines feasibility of Community Choice Energy program in Sonoma County.
 - Written by Dalessi Management Consulting.
- ***Implementation Plan***, October 2012
 - Prepared by Sonoma County Water Agency to fulfill requirements by AB117.
 - Paid for by Sonoma County Water Agency.
 - To be submitted to the CPUC for approval.

Overview of Summary, Part 1

- Background on Sonoma Clean Power (SCP):
(From the *Draft Implementation Plan*)
 - Goals of SCP
 - Structure and Governance
 - Start-up Costs
 - Scope of program
- Renewable Sources of Electricity,
- Lessons learned-Discussion

Goals

- Reduce Sonoma County greenhouse gas emissions from electricity.
- Increase renewable resources in Sonoma County's energy portfolio.
- Rates competitive with PG&E.
- Stimulate local economy, develop local jobs
- Implement energy efficiency and demand reduction programs.
- Long-term rate stability, energy reliability through local control.

SCP Structure and Governance

- SCP is a Joint Powers Authority (JPA)
- Participants include Sonoma County Water Agency (SCWA), Sonoma County Board of Supervisors as of 4/13
- 8 cities in Sonoma County have been asked to decide by June 2013 if they will join.
- Will be governed by a board of directors appointed by participants of SCP.
- CEO, hired by Board
- 2 standing committees, rate-payers advisory and business operations

Start-up Costs

Costs not recoverable from revenues:

- *Energy Solutions and Alternative Analysis* reports by Local Power, \$250,000 & \$12,000-private donations

Costs (investments?) to be paid back out of revenues:

- Around \$9 million total, includes:
- *Feasibility study*, ~\$100,000, SCWA paid
- *Draft Implementation Plan*, ~\$50,000, SCWA paid

Start-up Costs (Cont.)

Implementation costs:

- \$1.5 million 6 month before launch to establish agency (staffing & contractors)
- \$1 million:
 - \$300,000 admin. & general expenses
 - \$700,000 to PG&E for bond, etc.
- \$6 million working capital to pay for electricity for the 60 days lag time from start of program until revenue is available.

Scope of Sonoma Clean Power

- Customers phased in starting 2014. Each phase one year apart.
- Anticipate 90,000 accounts after phase-in period (2016)
- Annual electric demand forecast after phase-in: 2,300 GWh/ year
- Peak electrical load, including a required reserve, after phase-in: 415 MW

Financial Plan

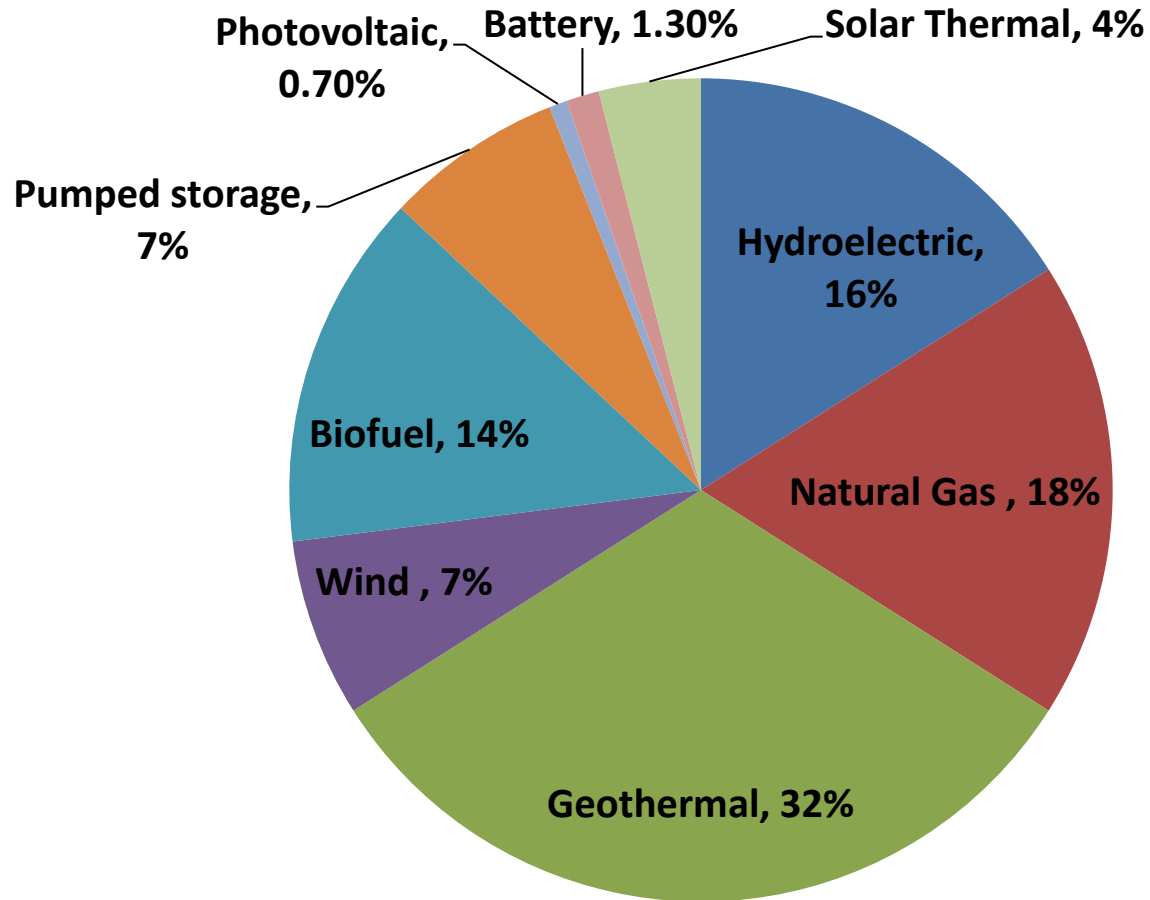
CATEGORY	2013	2014	2015	2016	2017	TOTAL
I. REVENUES FROM OPERATIONS (\$)						
ELECTRIC SALES REVENUE	-	32,487,442	103,309,898	170,065,330	179,443,743	485,306,414
LESS UNCOLLECTIBLE ACCOUNTS	-	(97,462)	(309,930)	(510,196)	(538,331)	(1,455,919)
TOTAL REVENUES	-	32,389,980	102,999,968	169,555,134	178,905,412	483,850,495
II. COST OF OPERATIONS (\$)						
(A) OPERATIONS AND ADMINISTRATIVE (O&A)						
STAFFING & PROFESSIONAL SERVICES	1,368,000	2,736,000	4,054,080	4,175,702	4,300,973	16,634,756
DATA MANAGEMENT SERVICES	-	371,659	1,939,129	3,831,749	3,831,749	9,974,285
IOU FEES (INCLUDING BILLING)	-	88,967	658,705	1,480,167	1,517,469	3,745,309
OTHER ADMINISTRATIVE & GENERAL	150,000	300,000	988,800	1,018,464	1,049,018	3,506,282
SUBTOTAL O&A	1,518,000	3,496,626	7,640,713	10,506,082	10,699,210	33,860,631
(B) COST OF ENERGY	-	25,374,018	86,155,255	147,269,558	154,129,047	412,927,878
(C) DEBT SERVICE	339,682	2,038,093	4,302,641	4,982,006	4,982,006	16,644,428
(D) DEPOSITS AND OTHER USES	1,315,000	-	-	-	-	1,315,000
TOTAL COST OF OPERATION	3,172,682	30,908,737	98,098,610	162,757,646	169,810,262	464,747,938
CCA PROGRAM SURPLUS/(DEFICIT)	(3,172,682)	1,481,242	4,901,359	6,797,488	9,095,150	19,102,557

Energy Solutions, 2008: **Renewable Targets**



- *Sonoma Climate Action Plan* in 2005 set target of 25% below 1990 levels of county-wide green house gas (GHG) emissions by 2015.
- *Energy Solutions* plan includes 66% renewable sources by 2015
- 63% reduction in GHG due to electrical generation.

Energy Solutions: Resource Mix



Energy Solutions:

Renewable Plan

Wind Power Electric Generation				
	<u>3rd Party Ownership & Finance</u>		<u>CCA Ownership & Finance</u>	
<u>Capital Cost:</u>				
Installed Cost Rate	\$1,900	per kilowatt	\$1,900	per kilowatt
Capacity	150,000	kilowatts	150,000	kilowatts
Net Cost	\$285,000,000		\$285,000,000	
<u>Utility Finance:</u>				
Avg. Cost of Capital	12%		5.00%	
Term	30	years	30	years
Financing Cost	\$1,026,000,000		\$427,500,000	
<u>Operation and Maintenance:</u>				
Lifecycle O&M	\$142,200,000		\$142,200,000	
O&M rate	\$0.011		\$0.011	
<u>Electric Generation</u>				
Capacity Factor	32%		32%	
Lifecycle Output	12,601,785,600	kwh	12,601,785,600	kwh
Cost of Electricity	\$0.115	per kwh	\$0.068	per kwh
Production Tax Credit	\$0.020	per kwh	\$0.000	per kwh
Net first 10 year cost	\$0.095	per kwh	\$0.068	per kwh

Energy Solutions:

Plan for Renewables

Highlights of plan:

- All resources owned by Sonoma Clean Power.
- Very little Solar Photo Voltaic-in 2008, solar panels were more expensive.
- Renewable resources are mostly regional, some local.
- Average costs, 8.5 cents/KW, v.s. PG&E 8.8 cents/KW.
- 63% reduction in CO₂ emissions due to electrical generation by 2015 over continuing to get electricity from PG&E.

Feasibility Study, 2011: **Renewable Targets**



Feasibility Study considered 4 scenarios:

1. Comply with California renewable portfolio standards (RPS), up to 33% by 2020.
2. Start at 33% and increase to 51% by 2020.
3. Start at 51% and increase to 75% by 2020.
4. Starts at 20% but increases to 80% by 2020.

Feasibility Study:

Scenario Comparison

	Summary of plan in 2020	Renewable sources	Increase over PG&E
Scenario 1	33% renewable, in line with PG&E	All market purchase & power purchase agreements (PPA), +2% RECs*	\$4/month
Scenario 2	Starts at 33%, increases to 51% by 2020	9% CCA , 91% market purchase & PPA, +2% RECs	\$4.5/month
Scenario 3	Starts at 51%, increases to 75% by 2020	21% CCA, 79% market purchase & PPA, +2% RECs	\$9.5/month
Scenario 4	Starts at 20%, increases to 85% by 2020	59% CCA, 41% market purchase and PPA, +4% RECs	\$5/month

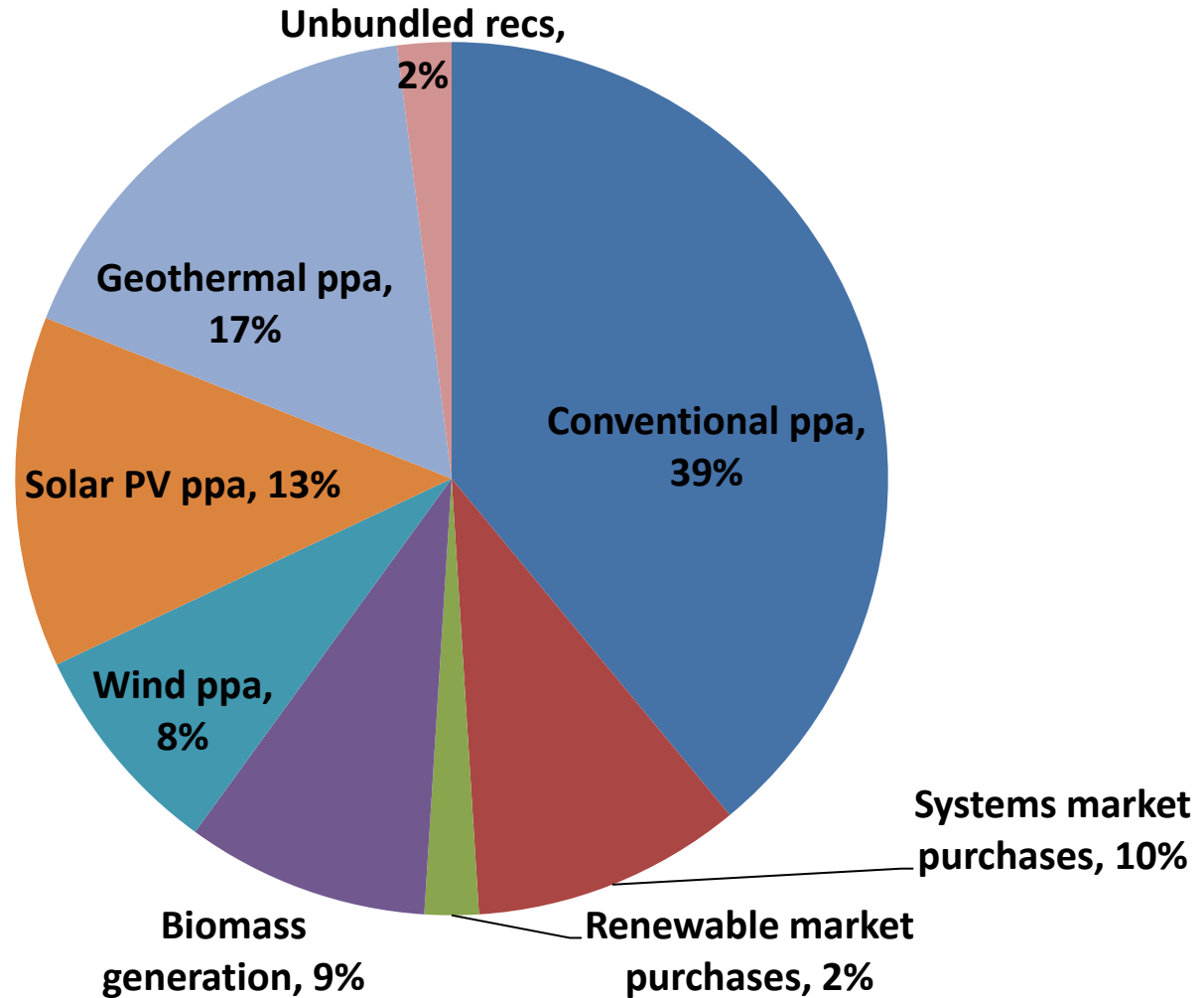
* RECs= renewable energy credits. These can be sold separately from the electricity produced by a renewable source and used to “green-up” brown energy.

Feasibility Study, 2011:

Scenario Benefits

	Short term jobs /yr created	Long term jobs /yr created	CO₂ reductions metric tons
Scenario 1	100-300	15-100	70,000
Scenario 2	100-400	20-400	3,100,000
Scenario 3	700-1,500	100-200	7,100,000
Scenario 4	400-1,100	100-400	7,600,000

Scenario 2: Resource Mix



Draft Implementation Plan, 2012:

Renewable Targets

- Launch at 33% renewable, increase to 50% by 2018, optional 100% plan.
- Gain ownership of 30 MW of renewable energy generation by 2020, 120 MW by 2030.
- Reduce electricity purchases by 1-2%/ year through efficiency and distributed generation.
- Stimulation of local economy and jobs due to CCA is among stated primary objectives (but specifics are vague).

Draft Implementation Plan:

Plan for Renewables

- The renewable portion of portfolio will include a mix of market purchase, power purchase agreements, and bundled and unbundled RECs.
- CCA acquisition of renewable resources begins in 2018.
- Alternative to direct investment - may partner with third party to obtain new renewable resources (Northern California Power Agency, a JPA in Roseville)

Draft Implementation Plan:

Development Plan for Local Resources

- Distributed generation increases from 3MW in 2014 to 25 MW by 2023.
- Encourage local development of renewables through mix of existing incentives, aggressive net metering & feed in tariffs.
- Plan for local solar distributed generation will rely on existing incentive programs (CA Solar Initiative) with min. 21 MW of PV deployed over next several years.
- May offer Solar Co-op program - 1 or more arrays up to 1 MW each, allowing participation by customers typically excluded by traditional ownership (e.g. multi-family properties, rentals)
- Demand response energy reduction increases from 3MW 2015 to 21MW in 2023.
- Final plan for local build-out is undetermined.

What Have We Learned?

- Requirements of AB117
- Regulations favorable to PG&E (e.g. CCA must post bond in case of CCA program close-out)
- Feasibility studies conclude formation of Community Choice Energy programs is possible and has community support.
- Bulk of start-up costs are investments rather than costs, and risk is mostly to financial institutions carrying the loans.
- *Energy Solutions* shows that investment in electrical resources results in cheaper rates in the long run and allows CCAs to accelerate the transition to renewable resources.
- *Draft Implementation Plan* relies on net profits over 4 years to finance acquisition of renewable resources.

The Big Questions

- What happened to a plan for investing in local renewable resources?
- Made up 66% of *Energy Solutions* proposal, not included in any detail in *Draft Implementation Plan*.
- Why are cities still hesitant to join SCP?