

*Marin Community
Choice Aggregation
Project –
Integrating
Renewable Energy*

October 11, 2007

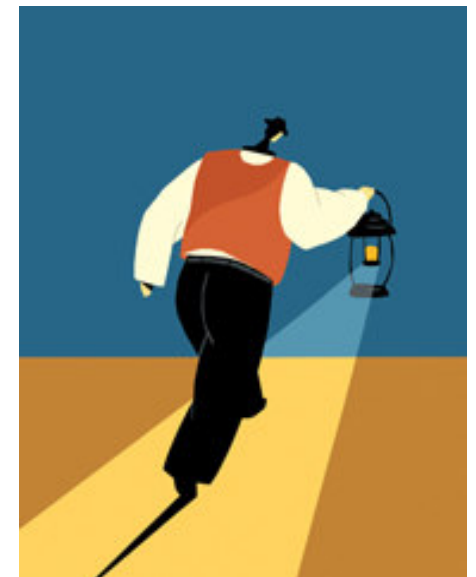
CCA Overview

Draft Business Plan Highlights

Accessing Renewable Energy

Questions

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CCA Overview

Background

- The Community Choice Aggregation (CCA) law, AB 117 enacted in 2002, provides cities and counties with the authority to aggregate electric loads of utility customers within their boundaries for purposes of procuring wholesale electricity.
- The law was passed in the wake of the energy crisis which revealed many issues with the way that utilities obtained electricity for their customers:
 - Reliance on volatile, short-term markets
 - Inadequate electricity supplies and blackouts
 - Increasing dependence on natural gas fueled generation
 - Limited options for small customers
- CCA provides local governments with an opportunity to make direct choices regarding their energy future based on the energy-specific goals and objectives expressed by community members and supported by local leadership.
- Participation is voluntary and gives customers a means to control their energy costs through their participation in the program.

How Are Energy Services Provided Under CCA?



Generation

- no longer utility only
- no longer regulated
- suppliers compete

Transmission

- remains utility only
- lines open to all suppliers

Distribution

- remains utility responsibility
- service remains the same
- rates remain regulated

Customers

- choose generation suppliers

Draft Business Plan Highlights

Draft Business Plan Highlights

- **Organization and Governance:**

- The County of Marin and eleven participating cities would form a new Joint Powers Agency during early 2008, named the Marin Power Authority (“Authority”), for purposes of offering CCA services to customers beginning in 2009.
- The program would form an appointed Energy Commission, which will be comprised of Board designees from the Member communities, to evaluate policy matters affecting the Authority and its customers (such as rate setting).
- The Authority would retain responsibility for rate setting and resource planning without regulatory oversight from the CPUC.

Draft Business Plan Highlights (Continued)

- **Resource Supply:**

- The Authority would negotiate contracts with third party electric suppliers to provide electricity to customers, including meeting the renewable goals of the CCA (for an initial 3-5 year period).
- During the first year of full program implementation (2010), total annual energy supply for Marin's CCA is projected to be 1,290 GWh; total peak demand is 239 MW.
- The Authority would increase its renewable energy procurement until it supplies more than one half of its electric requirements from renewable resources, such as wind, solar, geothermal and biomass by 2013.
- The Authority would develop or otherwise obtain entitlements to up to 125 MW of new renewable generation (proposed to be wind technology) by 2013, financed with tax-exempt revenue bonds.
- The Authority would continue to increase its renewable energy procurement/deliveries with the long-term goal of 100% renewable energy supply to Authority customers subject to economic and operational constraints.

Draft Business Plan Highlights (Continued)

- **Ratesetting:**

- The Authority's ratesetting policy would be to maintain electric rates that are less than or equal to generation rates charged by PG&E.

- **Energy Efficiency:**

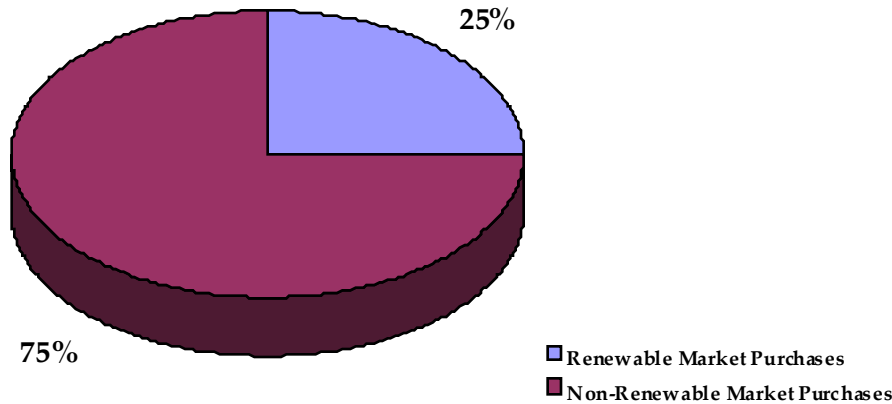
- The Authority would leverage existing state and federal incentives to achieve a targeted deployment of at least 14 MW of distributed solar (photovoltaic) systems within its boundaries by 2017.
- The Authority would promote additional energy efficiency efforts and ultimately seek to administer all energy efficiency programs within its jurisdiction.

- **Environmental Impacts:**

- Through implementation of the proposed CCA Program, the Cities would cause a reduction in greenhouse gas emissions of between 174,000 and 308,000 metric tons per year by 2017, as the renewable resources procured and developed by the Authority would displace incremental production from natural gas fueled power plants.
- The projected range of greenhouse gas emissions reductions represents between 5.6% and 10% of the Marin Communities' current total greenhouse gas emissions.

Renewable Energy Supply Targets (2010 and 2017)

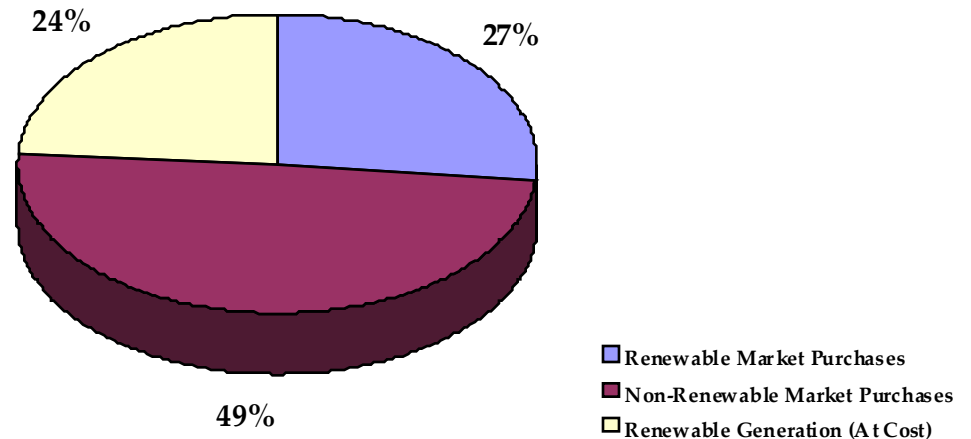
Marin Power Authority 2010 Resource Mix



- In 2010, the Marin Power Authority would deliver 25% of its energy from Eligible Renewable Generating Sources.
- Total program load in 2010 is projected to equal 1,290 GWh.
- Total annual renewable energy requirement to meet the 25% target: 320 GWh.

- Total projected program load in 2017: 1,432 GWh.
- The Authority would supply 24% of this energy requirement from a new renewable generating asset financed with tax-exempt bonds: 322 GWh.
- An additional 27% of the Authority's energy needs would be supplied through renewable energy purchases from incremental contracts with local suppliers or market purchases: 394 GWh.

Marin Power Authority 2017 Resource Mix



Accessing Renewable Energy

Accessing Renewable Energy through Transmission Development

- **There are currently several high-voltage, interstate transmission projects being investigated in the Western United States to access remote areas with potential renewable generating capacity.**
- **These projects would provide increased access to renewable generating resources as well as highly efficient, conventional (natural gas) generation.**
- **Available transmission capacity would be available to Marin and others through Open Access Transmission Tariffs.**
- **Three key regional projects include:**
 - **The Frontier Line**
 - **Northern California to the Pacific Northwest/British Columbia**
 - **Desert Southwest Area**

Frontier Line – Project Overview

- **Route:**

- Multiple lines connecting the states of California, Arizona, Nevada, Utah and Wyoming (in general, routes originate in Wyoming and terminate in California).

- **Costs & Benefits:**

- There are several proposed configurations for the Frontier Line, which vary dramatically in cost: approximately \$2 Billion to more than \$20 Billion.
- The Frontier Line is estimated to create between \$325-\$400 million in annual benefits for California consumers (reduced electricity costs, improved system reliability, and diversification of supply among many others).

- **Renewable Energy Potential:**

State	Coal (MW)	Gas (MW)	Wind (MW)	Total
Wyoming	1,975	50	2,410	4,435
Utah	1,525	140	800	2,465
Nevada	1,500		100	1,600
Grand Total	5,000	190	3,310	8,500

Northern California to Pacific Northwest/BC – Project Overview

- **Route:**

- Several alternatives, some of which proceed from Northern California to northern Nevada, Idaho, Wyoming and into BC; other alternatives proceed on a more direct northerly route.

- **Renewable Energy Potential:**

State	Coal (MW)	Biomass (MW)	New Hydro (MW)	Geo (MW)	Gas (MW)	Wind (MW)	Total
NorCal, NV, WA and OR		50		200		5,000	5,250
Alberta, Canada	3,000				3,500	3,000	9,500
BC, Canada		1,500	1,280			5,100	7,880
Wyoming	1,975				50	2,410	4,435
Idaho	1,525				140	800	2,465
Nevada ¹	1,500					100	1,600
Grand Total	8,000	1,550	1,280	200	3,690	16,410	31,130

¹Totals include some double counting of resources in Nevada.

Desert Southwest Area – Project Overview

- **Routes:**

- Several potential projects to be located in Southern California, Nevada (greater Las Vegas area), Arizona and New Mexico.

- **Additional Details:**

- In its 2006 Procurement Plan, Southern California Edison included the following transmission development assumptions to accommodate incremental output and future output from Eligible Renewable Resources in the Desert Southwest Region:
 - Tehachapi (Phase I) – 700 MW in 2010
 - Tehachapi (Phases II and III) – 1,700 MW in 2013
 - Tehachapi (Phase IV) – 2,100 MW in 2015
 - San Bernardino County – 2,000 MW every 2 years starting in 2015 with a maximum of 10,000 MW
 - Salton Sea – 1,300 MW in 2017
 - North of Lugo – 975 MW in 2020
- SCE/CAISO is currently processing 21 generation interconnection requests for approximately 4,500 MW of renewable generation (online between 2007-2011).

Questions

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