

CCA in California

Brisbane Solar / Wind Park and Beyond:

Using CCA and H Bonds to Finance Local Green Power Project

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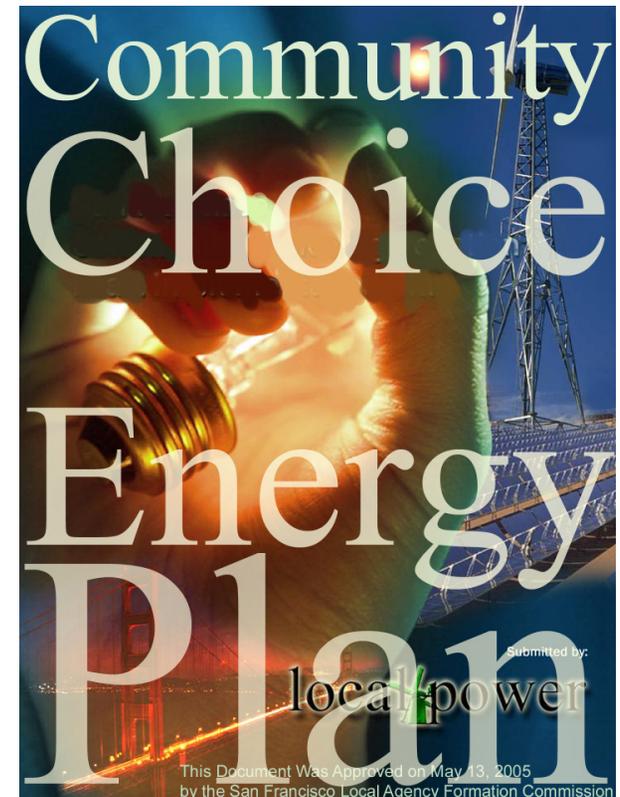
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Qualifications

Paul Fenn

- Founder & CEO, Local Power
- Author of Nation's First Community Choice Law (Massachusetts, 1994)
- Author of California's AB 117
- Author of San Francisco H Bond Authority, CCA Ordinance, CCA Implementation Plan



What is the Proposed Alternative

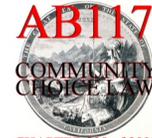
- The City of Brisbane may now use currently available legal and financial resources to integrate the development of wind and solar electricity generation into the Baylands Specific Plan, as well as into Brisbane's General Plan.
- Local Power's proposal is based on both our experience as primary designer of San Francisco's solar and wind development plan, and also on work performed by students in an engineering class I recently taught at San Francisco State University, in which my students focused on the Baylands as a potential site for renewable energy development.



Baylands Green? Community Choice Aggregation in Brisbane

Community Choice is key to Brisbane's ability to develop a renewable energy facility at the Baylands - either directly or indirectly. Directly, Brisbane could provide for the power needs of its own residents, businesses and public agencies, guaranteeing power sales from a renewable energy facility integrated into the Specific Plan - delivering fixed prices and energy independence to the local economy. Indirectly, Brisbane could build a facility to sell power to San Francisco, which is itself now implementing Community Choice to buy power. Either approach would enhance the uniqueness and sustainability of the Plan and deliver both profits to the city and significant local economic development - all at very low risk.

Community Choice is an authority granted by California law (AB 117, Migden) that allows cities and counties to take charge of their own energy future. Under Community Choice, local governments can serve as a virtual "electricity buyer's cooperative" for local residents, businesses and government agencies. Unlike ordinary cooperatives, however, the day-to-day management for securing electricity supplies is managed by a qualified and experienced third party, while the local government is placed in the role of strategic planner.



The government entity, called a Community Choice Aggregator (CCA), contracts with existing licensed suppliers called "Electric Service Providers" (ESPs). These suppliers are used to providing reliable and cost-competitive electricity for large businesses and government agencies. About 12 percent of California's electricity is currently purchased from Electric Service Providers.



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Project Identified

- We concluded that the developer's current Specific Plan could safely and aesthetically integrate three columns of wind turbines generating
 - 281 Megawatts of generation capacity in areas not claimed in the Specific Plan, in addition to
 - as much as 25 Megawatts of building integrated solar photovoltaics on rooftop space specified in the Specific Plan. According to our technology survey, this could be done with no negative visual impact, and a combination of vertical.



SPECIFIC CONCLUSIONS

- We arrived at the following conclusions:
 - the wind conditions at the site are adequate for both commercially viable wind generation;
 - the solar conditions are very good for solar power production;
 - the wind facilities could be safe, quiet, and aesthetically integrated into wetlands and walking path, and could provide an anchor for an ecopark;
 - the wind/solar farm would be ideally located on the power grid, making it extremely competitive;

FINAL CONCLUSIONS

More conclusions;

- on-site power facilities would approach 300 Megawatts of power that could either provide energy independence for Brisbane residents and businesses under Community Choice Aggregation (CCA);
- as a uniquely central urban location with commercial wind potential, a Baylands Green power could be profitably sold in long-term contracts to other CCAs in the Bay Area such as San Francisco, Marin, Oakland, Berkeley, and several others now seeking renewable energy supplies for their communities;
- these substantial solar and wind resources could also provide power and a visible “billboard” for an alternative transportation retail development such as a green auto dealership, provide a truly unique “look” for the site to distinguish it from boilerplate “Big Box” developments that litter the Bay Area, and thus enhancing the uniqueness and commercial success of the overall development.

CONCLUSIONS CONTINUED

Finally;

- the facility could be developed with little risk to Brisbane;
- the facility would be sufficiently large to achieve a massive greenhouse gas reduction for the community, making it a national leader;
- the proposed windmills would be targeted on areas of land not yet set aside for buildings that may too toxic for conventional uses such as residential and or business development, while enhancing rather than detracting from the commercial viability of the development;

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H Bonds in Brisbane for a Baylands Green White Paper on Municipal Finance of Solar Under a Community Choice Program

First created in San Francisco, H Bonds are generic municipal revenue bonds used to finance renewable energy and energy conservation facilities. As in San Francisco, Brisbane has the opportunity to issue H Bonds based on a new revenue source – monthly electric bill payments of participating residents, businesses and public agencies, or power sales revenues to San Francisco or another Community Choice Aggregator (“CCA”) formed pursuant to AB117 (2002 – Migden).



H Bonds provide CCAs with considerable flexibility. They can be used to finance renewable energy generating units and other revenue producing elements of CCA. They can be supported by existing assets and enterprises, or by new assets or enterprises such as renewable energy generating units, or revenues from a contract with an Electric Services Provider (“ESP”). H Bonds and CCA are extremely synergistic. Together, they (a) provide the means to develop renewable energy and energy efficiency resources and the market to utilize and pay for those resources and (b) provide CCA with a secure base of resources with which to serve its customers and, thus, avoid excessive dependence on a volatile energy market. Whether the bonds will qualify for tax-exempt status and other factors affecting their marketability are dependent on the structure of the transaction being financed. Specific structures are discussed below. Generally, in order to qualify for tax exemption, the facilities that are financed must be owned by a governmental entity or operated by Brisbane or other governmental entity - or by a nongovernmental entity on behalf of Brisbane pursuant to a contract that meets certain requirements prescribed by the Internal Revenue Service. Even if not tax-exempt, H Bonds could still be issued to finance facilities which make solar and other technologies more affordable to local residents and businesses, albeit at a slightly higher interest cost than government-owned facilities would pay – but could also take advantage of significant federal tax benefits.

Application of H Bonds to CCA

H Bonds can be used in a variety of ways. From a strategic business perspective, H Bonds and CCA are extremely synergistic. Without CCA, renewable energy and energy efficiency projects financed by H Bonds would have to search for a market for the power output. Given that San Francisco, Oakland, Marin County, Berkeley, Vallejo, Pleasanton, and several other Bay Area cities are now seeking to implement their own CCA programs, this opportunity is also immediate.

Alternately, without resources of the sort authorized by H Bonds, a CCA program could not finance new green power facilities; moreover, without a secure base of resources, a CCA would be extremely dependent of the energy market to serve its customers. The energy crisis of 2000-2001 dramatically demonstrated the danger of over-dependence on a volatile energy market - a lesson reinforced by fossil fuel price fluctuations this year, and PG&E’s increasingly volatile electricity

PUBLIC RECORD DOCUMENTS AVAILABLE AT THE TABLE OR BILL PRINCE

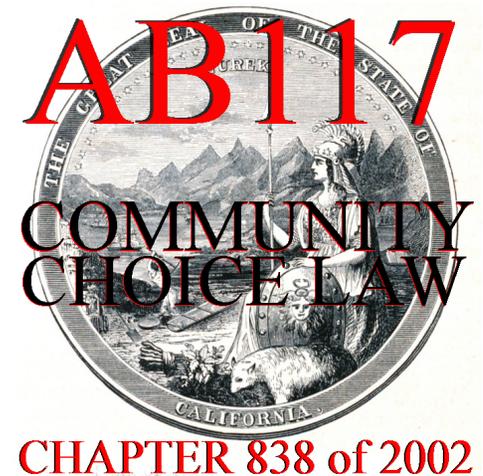
Local Power has submitted to date:

- In short, the potential for wind and solar development on the Baylands should be considered both within the Baylands Specific Plan and the General Plan. We believe that a “Baylands Green” may provide an appropriate alternative or adjunct to the developer’s Plan, and submitted information being distributed at tables by Mr. Prince, on how to structure such an option for your consideration. This includes the following information:
 - » Community Choice Aggregation
 - » Municipal Financing - H Bonds
 - » Information about Paul Fenn and Local Power, based in Oakland

CCA Background - Precedents

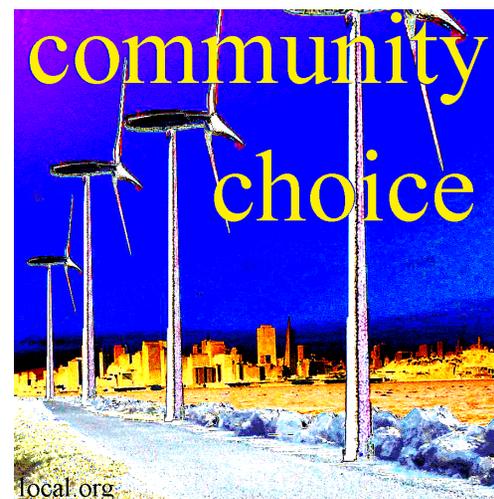
Nationally, CCA uses economies of scale to leverage lower prices, cleaner power and better service:

- Since 1997, CCA Laws have been passed by New Jersey, Ohio, Massachusetts, California, and Rhode Island.
- The first CCA to form was the Cape Light Compact, which includes all of Cape Cod and nearby islands, which have received power, gas and energy efficiency services for over five years
- The largest CCA to form until now was the Northeast Ohio Public Energy Council (NOPEC), which serves 650,000 customers with gas and electricity, switching them from utility coal and nuclear power to a gas and renewables portfolio with a guaranteed 5% discount below utility prices.



How Big is the Market?

- California's CCA market is estimated at **\$2 Billion/year** in revenue based on early adopters alone (starting in 2007), with approximately **\$7 Billion in green power capital projects** in just the first few years.



Such As?

- **San Francisco** with 51% RPS Goal includes 775,000 residents
- **Fresno County** and 13 cities with accelerated 20% by 2010 RPS Goal includes over 1 million residents
- **Oakland-Emeryville-Berkeley** CCA municipalities with 50% RPS Goal include 600,000 residents
- **Marin County** and CCA municipalities with 50% RPS Goal include 247,289 residents
- **Chula Vista** and neighboring municipalities in San Diego County with 40% RPS Goal includes 250,000 residents
- **LA County** and CCA municipalities in LA County with 40% RPS Goal includes over 1 million residents
- **San Luis Obispo and Ventura** CCA counties with 40% RPS Goal: over 1 million residents
- **Solano County** CCA municipalities with 40% RPS Goal: 117,000 residents

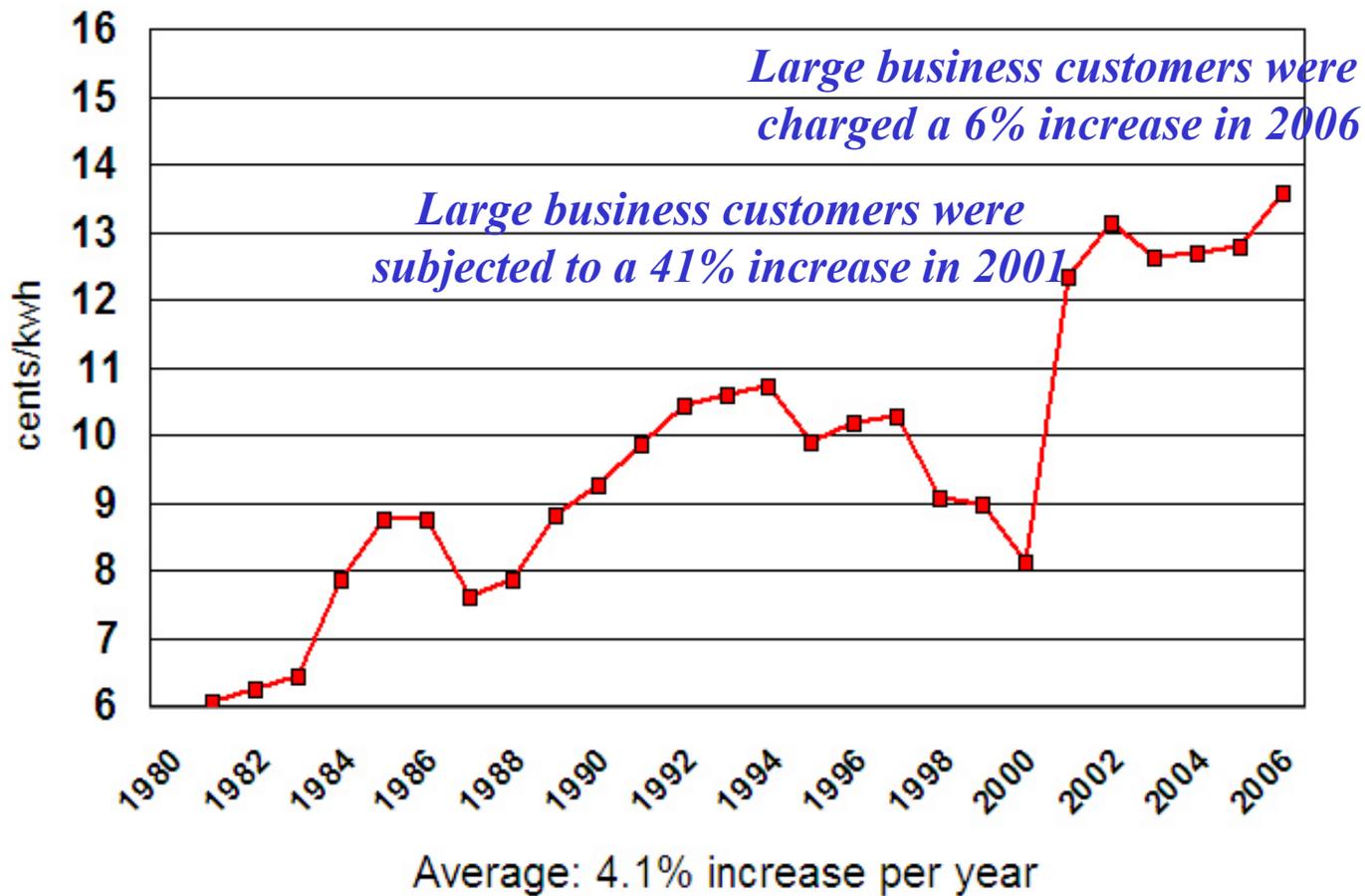


How Many Customers is That?

Total = California CCA markets with approximately 5 Million pops are preparing \approx 50% by 2017 RPS Implementation Plans RIGHT NOW.

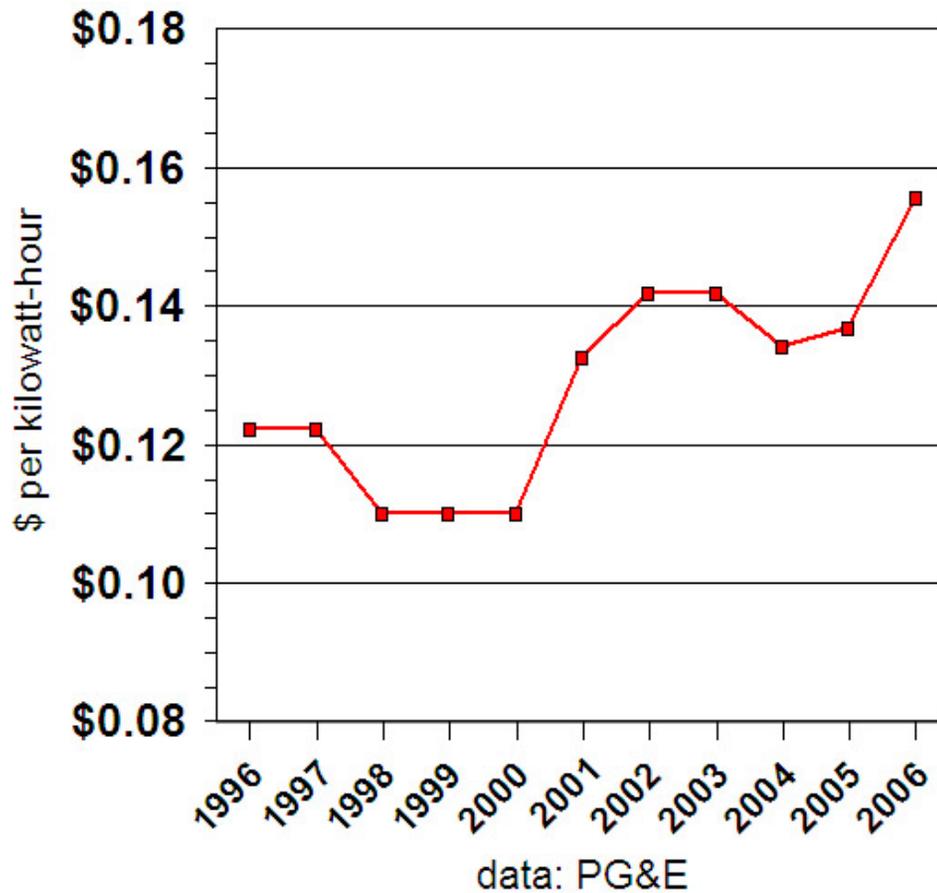
Why?

PG&E Rates 1980 to 2006



Residential Ratepayers are Voters Too

PG&E Primary Residential Rate If your rate drops, watch out...



Cause of Rate Volatility: GAS

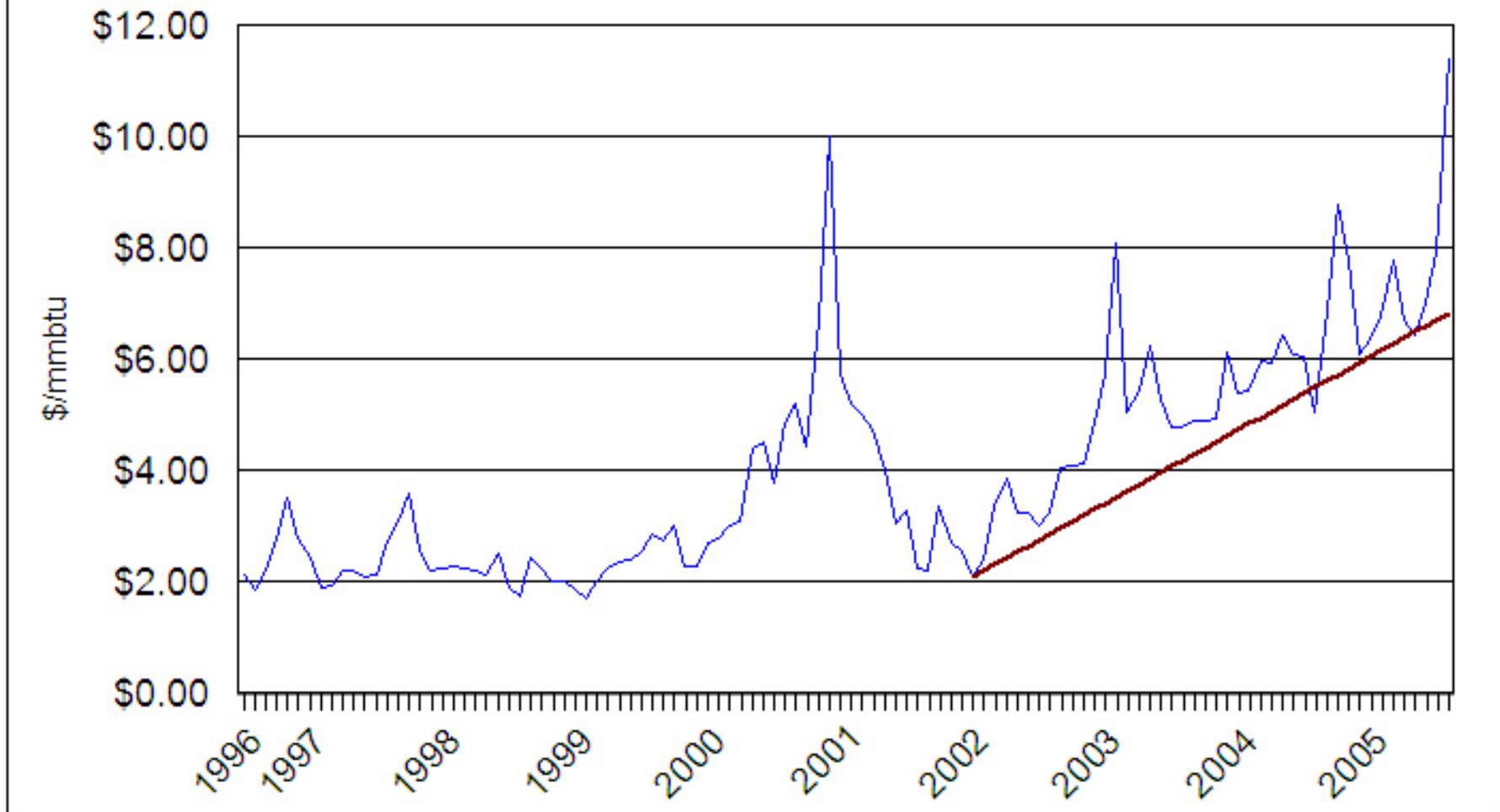
California utilities are over-reliant on gas-fired generation. For example:

- PG&E's generation portfolio is 42% gas-fired power plants
- In 2000, gas spot-market prices quadrupled in less than nine months peaking in January, 2001
- Domestic gas supplies are dwindling
- PG&E has contracted for six new gas-fired power plants and is seeking to build a Liquefied Natural Gas (LNG) Terminal & 230 Mile Pipeline on the California-Oregon Border.
- California law bans construction of new nuclear plants or purchase of coal power.



Not Just Price, But Also Volatility

NYMEX Henry Hub Natural Gas Futures



Another Driver: Climate Crisis

California cities and Counties have led the nation in making major commitments to reduce greenhouse gas emissions over the next decade

- For example, Sonoma County and area cities have promised an across the board 20% greenhouse gas reduction from 1990 levels by 2015 - but emissions have increased by nearly 50% since 1990.
- CCA provides one of the only mechanisms available for local governments like Sonoma to achieve significant reductions.



SF CCA History

SF Leadership:

- SF resolution for CCA law in state legislature (1999)
- SF voter approval of “solar bond” authority, Proposition H (2001)
- CA passage of CCA Law AB117 (2002)
- SF adoption of the CCA Ordinance 86-04 (2004)
- SF adoption of CCA CCA Implementation Plan (2007)
- SF issuance of RFP (2007)
- SF award of CCA Contract (2007)



S.F. Program Goals

Main goals of SF CCA program:

- Local Control & Local Generation
- Accelerated Rollout of Renewables
- Competitive, More Predictable Rates
- Improved Local Reliability and Public Safety
- Reduced Cost, No-Money-Down Solar
- Significant Greenhouse Gas Reductions



The San Francisco Opportunity

A Municipal Solar Public Works Project

- \$250 Million/Year in Recurring Ratepayer Revenue - Larger than any Direct Access Customer in California
- 15 Year Power Purchase Agreement = \$3.75B Revenue
- “Phase I” 360 MW Capital Project Rollout worth \$1.2 Billion in H Bonds = 20%RPS by 2010
- 51% RPS by 2017 = approx. \$2B More in H Bonds
- EE PGC Funds \$7-10M/yr for 15 yrs. = \$150M
- Additional Solar & Renewables Subsidies



Total Value of San Francisco Contract Alone

Total San Francisco Contract Value \approx \$5.5B



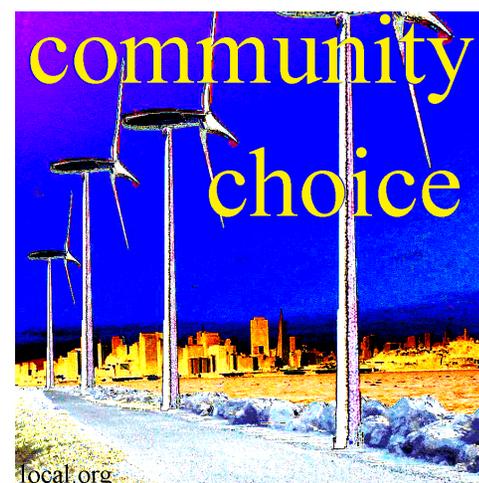
Rollout Details

- Supplier required to design, build, operate and maintain:
 - 104 Megawatts of Renewable Distributed Generation in the City including at least 31 MW of Solar Photovoltaics (PV);
 - 107 Megawatts of conservation and energy efficiency technologies in the City;
 - 150 Megawatt Wind Farm
 - 51% Renewable Power by 2017 based on second bond issuance



How CCA Works

- Local government selects competitive Electric Service Provider to provide commodity service, green portfolio rollout and energy efficiency services to residents and businesses
- Local utility continues to provide distribution, meter-reading and billing;
- Customers wishing to remain with local utility can opt-out - bonds issued after opt-out period.
- CCA may impose exit fees on customers following opt-out period to securitize revenue bond repayment.



San Francisco's CCA Model

Transparent, Structured Rates

- San Francisco's CCA program avoids "political ratesetting"
- Supplier will be selected through a competitive bidding process based on portfolio and risk-bearing requirements
- Supplier will be required to commit to a locally set rate schedule, must "meet or beat" PG&E's current rates followed by structured rates over the long-term
- Promised rates must include costs of designing, building, operating and maintaining renewable energy facilities, and installing energy efficiency measures
- Rollout requirements may be adjusted in relation to the opt-out rate

Financing Mechanism

- Use of Proposition H Bond Authority in CCA Program
 - The City will issue revenue bonds to finance renewables and conservation
 - All H Bonds to be repaid by CCA revenues
 - Some H Bond-financed facilities will be taxable and others tax-exempt according to their ownership structure



SF CCA Model Details

CCA supplier assumes major risks

- ESP must meet or beat PG&E rates, offer fixed, hedged or tagged rates
- No Changes to Rate Schedule, no disproportionate impacts on ratepayer classes
- No external costs - all ESP costs (including capital and insurance) contained in rate schedule
- ESP the Scheduling Coordinator

Business Model

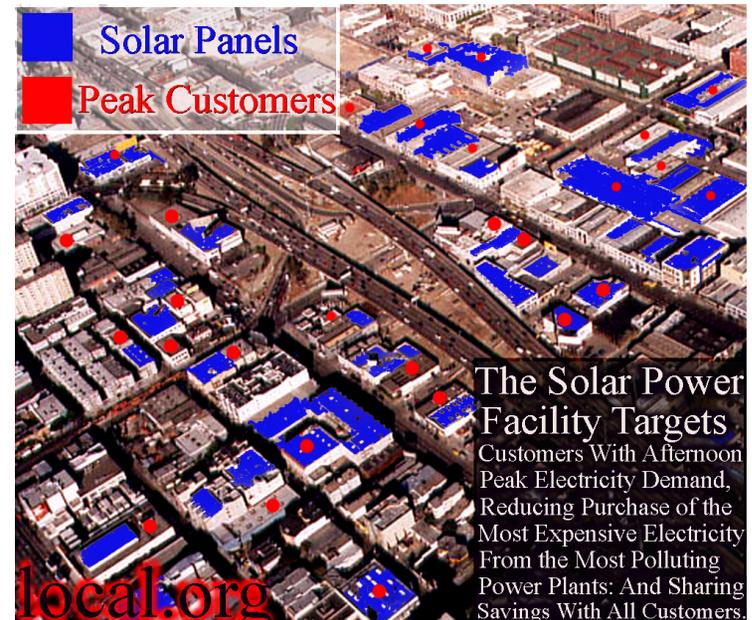
- Maximum Performance Risk Placed on Supplier, not Government:
 - Single contractor commits to rates, portfolio and rollout schedule.
 - Business Model Protects City and Customers
 - CCA is self-funded through revenues
 - Double-Bonding Required for commodity and rollout risks
 - “Meet or Beat PG&E” requirement is inclusive of all electric bill elements.

Notes: ESP will be required to post a bond or demonstrate insurance for any costs associated with an involuntary return of customers to PG&E, and also will be required to obtain a letter of credit to cover performance risks related to the 360 MW rollout

Contract Structure - ESP PPA With Embedded DBOM on Tight Rollout Schedule

Integration Challenge

- ESP or Subcontractors to Provide “Hard” RPS Portfolio Component
- 31 MW is 100-200 large photovoltaic sites installed over 3 years
- 72 MW DG is probably 3-5 sites, preferably renewable
- 150 MW Wind is preferably available for Hetch Hetchy Load Balancing;
- 104 MW Energy Efficiency and Conservation will be all conservation if EE PGC Funds Not Made Available.



H Bond Structure Contract Bonds

All Revenues Come from Monthly Electric Bills

ESP

Assumes All Performance New RPS Facilities Rollout and Performance Risk
Owns and Operates All Facilities Until H Bonds from a Facility are Repaid

Financial Institution

Bond Underwriting and
Credit Enhancement

Bond
Underwriting

Credit
Enhancement

Other
Engineering
Related Work

CCA

Issues H Bonds Based on Revenues
Under CCA ESP Contract Terms
Assumes Title to H Bond Financed Facilities
When H Bonds for a Facility Retire

Site
Acquisition

Permitting

Customer
Interface

Thanks

