

Case Studies of the Greening of Local Electricity:

San Francisco Electric Power

By David Hess

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San Francisco's energy is provided by the investor-owned utility Pacific Gas and Electric (PG&E). The energy crisis of 2000 caused rolling blackouts in the Bay Area and other parts of California, led to huge ratepayer increases, and resulted in a taxpayer-funded bail-out of the investor-owned utilities. As a result, consumers were angry and very open to different plans to take back control over their electricity. In California some cities are controlled by publicly owned municipal utility districts, and a fierce battle erupted in San Francisco over plans to municipalize the city's electricity. In November, 2001, San Franciscans voted on two, similar propositions: F, to create a San Francisco Municipal Water and Power Agency, and I, to create a San Francisco-Brisbane Municipal Utility District. Either proposition would have created local ownership of transmission (poles and wires), distribution, and some generation.

Neither proposition won, but Proposition F lost by only 500 votes, even after PG&E spent about \$1.2 million, many magnitudes above that of the supporters, to sink the measure. In November, 2002, the coalition tried again with Proposition D, which would have created municipalized public power and closed the old power plant in Bayview Hunters Point. The low-income neighborhood had significant toxic risks and the highest rates of cancer and asthma in the city. However, the utility spent \$2.1 million in comparison with \$50,000 spent by the coalition of supporters, and the proposition lost, this time with only 41% of the vote.¹

Two other measures on the November, 2001, ballot did pass. Proposition B, which had a 73% positive vote, authorized a \$100 million revenue bond for the city to construct renewable energy generation and conservation technologies on city-owned property. For example, solar panels were planned for rooftops of city-owned buildings, and wind turbines were planned for city-owned property in other counties. The bond authority provided for about 40MW of capacity in the new technologies out of the city's load of 160 MW. Proposition H, which won with 55% of the vote, changed the city's charter to give it the authority to issue revenue bonds for renewable energy and conservation, rather than require that the city seek approval from the voters each time it wants to issue a bond for green energy.²

Proposition H was sponsored by Supervisor Tom Ammiano and written by Paul Fenn as part of his broader strategy to bring "community choice" to San Francisco. At the time of the interview, Ammiano was a supervisor (the equivalent of city council member) in the city of San Francisco, where he has served since 1994 and has also served as president of the board of supervisors. Fenn has been the leader in state level legislation to develop community choice aggregation as an option for cities in the era of electricity supply deregulation. In 1993, while serving as the Director of the

Massachusetts Senate Committee on Energy, he wrote the first community choice law, which was passed in 1996. He also worked on similar laws that were passed in Ohio in 1999 and New Jersey in 2003. After propositions B and H passed, Fenn proposed in 2002 that the city fold the 10MW of solar generation in Proposition B into a larger, 60MW solar works project under Proposition H, which could be combined with community choice aggregation. I spoke interviewed both Supervisor Ammiano and Paul Fenn about the efforts to transform electricity in San Francisco.

An alternative to municipalization, community choice allows cities or other local units to aggregate their ratepayers into a single block and then bid for electricity provision on a competitive basis. Unlike public power, community choice does not require that cities step into a management role, nor does it require them to take over transmission infrastructure. Instead, the city acts as a broker for all the ratepayers in its jurisdiction. Unlike green pricing schemes, which allow ratepayers to opt in to an alternative electricity provider, usually for a premium, community choice operates with an “opt out” structure. In other words, ratepayers are given a window of opportunity to choose not to join the aggregation, and once the aggregation has gone into effect they cannot leave without paying a penalty. The aggregation of customers places new power in the hands of city governments, or coalitions of governments and small public utilities, to win lower rates and cleaner energy for their customers.

As Supervisor Ammiano put it, “Yes, we should have public power, but after spending two draining losses at the ballot, one by 500 votes, I think people wanted to regroup and rethink before we go to the ballot again, because we’re always going to be outspent. Basically we needed interpreters so different people from different class backgrounds could understand what we were talking about. The environmental justice piece could have been stronger the first time around. In the second campaign, we thought, ‘We got so close last time; we’re going to really do it this time,’ but it was an even worse defeat. So one of the things suggested was community aggregation, which I had been working on. It’s not so much either or, as much as a step towards. Community aggregation does establish a certain amount of local control that does not exist now, and it could have an effect on rates and improve service. It could also be a launching pad toward public power. So aggregation is a good thing, and PG&E is pretending that it’s not so bad and that they’re not going to interfere, but they’re nervous about it. Unfortunately it takes a little education to let people know what it is, because it is a little complicated, but I am glad that we are on that path.

“Community choice is more internal, and it’s more deliberative. It doesn’t take, like the Sacramento Municipal Utility District, five people to be elected. Whenever you have an election, you have your constituencies. So this way it is a little cleaner, but it’s a little more Byzantine, because of regulations. We have to deal with the California Public Utilities Commission, which lately has been very unpopulist in terms of its bias toward the utility companies. However, as we’re doing this, we’re educating people and we’re also getting a handle on what public power is.”

Fenn had been working some time at the state level in California, and he wrote the state legislature’s community choice law. In 2002 the law, which was sponsored by San Francisco Assemblywoman Carole Midgen, passed, so the door was opened to community choice in the state. In January 2004 the California Public Utilities Commission adopted a procurement framework that allowed community choice to go

into effect, and in May of that year the San Francisco Board of Supervisors issued its “declaration of energy independence,” which was a vote to enact community choice for San Francisco. It directed the San Francisco Public Utilities Commission to develop a plan for community choice aggregation. According to Fenn, implementation of the community choice plan could occur as early as 2006.

As a former historian, Fenn gave a broader historical context for public power and community choice. “Generally speaking, we are not in an era of increased government activism. We are in an era of privatization, roll-backs, reduction of expenses, and deunionization: that’s the de rigueur of American local politics right now. So I would never put hope in public power as a political movement. However, you do have 90-plus percentile of the public supporting increased funding for renewable energy, a big buy-in on climate change among the public, recognition that it is caused by humans, and proof that electricity is the single largest cause of the problem. So from my point of view that’s where the stars line up and you have the opportunity to do something about it politically. In the United States right now, city governments are the leaders in dealing with climate change. States are just beginning to do something about it, but cities have been doing it for ten years. So you have something like five hundred-plus cities in America that have signed on to climate reduction targets, and that’s a significant fact. They have no way to meet those targets through conventional means, and they know that.”

In addition to political feasibility, another advantage of community choice over public power is that municipalization can saddle cities with huge debts that create an incentive for them to maintain electricity sales in order to generate revenue. As Fenn explained, “If you look at most utilities, whether public or private, their main issue is debt service. They are debt managing entities, and debt managing entities see to it that their revenue streams are not interrupted, because if they are interrupted, they have debt problems. Their credit ratings drop and their cost of capital increases. If you own infrastructure and debt associated with infrastructure that depends upon sales and through-puts of power, then institutionally under the sustainability model over the long term you are going to oppose reductions in through-puts. In fact, I would challenge you to find any statistical evidence that public power agencies are any cleaner than investor-owned utilities. I’m a proponent of public power, but I don’t have any illusions about that. I’m very aware of the fact that there are leaders, and power is cheaper because it is nonprofit, but if you look across the board, public power agencies are not cleaner. It’s very disappointing, but we should not ignore the fact that they are not. Over the course of working on this for fifteen years, my conclusion is the reason that they’re not is that they own debt, and their debt is in the generation, distribution, and transmission of fuel contracts, so that they need to sell energy to continue.”

Fenn’s primary goal is reducing emissions that cause global warming and health risks, and as a result he views community choice as a mechanism for funding large-scale public works around renewable energy generation and conservation. In the earlier cases in Massachusetts and Ohio, community choice was not coupled with bond authority and construction requirements. Even so, significant advances toward Kyoto compliance were achieved, in effect as a side effect of the competitive bidding process that was aimed at securing rate reductions for customers. For example, the community aggregator NOPEC (the Northern Ohio Public Energy Council) “had no environmental goals at all. It was not seeking clean power at all. So they had their request for proposals, looking for cheaper

power, and Green Mountain came in and underbid the utility price. They basically offered 3-5% in the energy component of the bill below the utility. It was 98% natural gas and 2-3% renewables, but they were getting coal and nuclear before that. So they got a 33% reduction in their greenhouse gas emissions with lower rates.”

As Fenn worked on community choice in different states, he learned that community choice needed to be coupled with the bond authority of local governments, such as that granted by Proposition H to the city of San Francisco. Coupling community choice with bond authority allows governments to link aggregated procurement bids with requirements to build renewable energy generation and conservation projects at a significant scale. His plan for San Francisco is as follows: “The public works project that is necessary for San Francisco is a billion dollars in capital. It will take a third of the city off grid and it will cause Kyoto compliance. The H bond is going to fund a billion dollar contract. It will be built over a three-year period and it will be embedded in a \$4 billion power purchase agreement, which will be paid in bonds. It will be the largest power conversion in the history of the world. It will be in the city. Community choice is used with the H bond so that you have a bidding requirement with the companies that come in that will bid rates against PG&E’s rates. The company will have a portfolio requirement, which is not merely buy 10% of this and 40% percent of that. It’s a build requirement. Embedded in the power purchase agreement is a requirement to design, build, operate, and maintain a capital project. So they have to bid against a commodity tariff and achieve within their bid rates, which are fixed and cannot be increased, a large capital project. Within the capital project is included 360MW of capacity and load reductions, and that breaks down as a 150 MW wind farm outside the city (probably on Hetch-Hetchy property), 107 MW of conservation and efficiency load reductions, and 104 MW of distributed generation. The distributed generation will include a minimum of 31 MW of photovoltaic installations (200 in larger KW installations of warehouse scale) and 73 MW of other distributed generation (5-15MW scale, renewable or hydrogen scrubbed natural gas). That’s out of a city that consumes between 650MW and 850MW at any time. So one entity will sign a contract with the Board of Supervisors, and the contract will be enforced by the city attorney.” The exact details of the construction are left up to the electricity provider.

To make the construction effective, the city needs access to load data, and the issue became another battle that Fenn fought, this time at the state level. “One of the things that I fought hard for and won from the state regulator was cities will have access to all utility data all the way down to the customer. On December 16, 2004, the CPUC ordered utilities to release all the data to community choice aggregators. They’ve protected the data as a gold mine from the beginning. The data are customer data, interval meter data, and substation data. So any city in California will be able to map its energy use and identify the appropriate sources to target for new resources and load reductions. So that’s 3-D power. You’re not just providing this generic product blindly to the community. You’re actually looking at the grid and asking where the low and high congestion areas are, so we know where to put the solar and the distributed generation and where to reduce the loads. That’s the problem with solar. If you just put a panel up randomly, as on solar homes, no one is at the house during the daytime, unless they work at home. There really should be solar at work. That’s where you use energy in the afternoon. So if you put it on homes, then you have to wheel the power to use it.

Utilities don't want to use it; they don't want it to impact the substation through-puts. But if you identify the right locations, then you can have measured impacts at the substation. If you can have measured impacts at the substation, then you can un-schedule the purchase across the grid. You're buying less power."

The attraction of Fenn's approach is that it will result in a significant scale shift in the construction of renewable energy generation, and it will be configured in a way to allow the city to reduce its purchases from the grid. Even progressive publicly owned utilities are building solar and wind at a much lower rate, whereas Fenn's plan will result in 31 MW in three years, at no increase in taxes. Furthermore, community choice scales in a second way, by replication across communities: "There are 22 cities and counties in California that want to go to 40% green, including San Diego and Los Angeles county. Already 11½ % of the investor-owned utility's load is seeking to depart to a 40% green RPS. There are another 26 jurisdictions interested, which is 20% of California. If this happens, then we're moving toward a solution on a level that is even beyond Europe. But it also has the quality of being under control and under a market structure. All of the energy companies are bidding. I told someone at the Shell Center for Sustainability about this, and he shook my hand and said it was great. The problem from their point of view is that there are not enough zeros. They don't do little things. They only do big things. So let's give them big things to do, and cities are needed for that."

Equity and Sustainability

There are several major ways in which community choice for San Francisco will affect low-income customers: the public works project of constructing new generation and conservation facilities in the city will provide new jobs, the 360MW of new generation will allow the closure of polluting fossil fuel plants within the city, and rates will be lowered over the long term and possibly over the short term. There is also a ratepayer bill charge, which is standard across the state, that provides funds for weatherization, including weatherization for low-income residents. As Fenn added, "I would say that the major political motivator is less the climate change and more to close the power plants. The 360MW number was specifically gauged to what would be necessary on the grid level to satisfy the transmission operator so that they would revoke the reliability-must-run contracts (the grid reliability status, which basically extends the licensing of the plant forward). If you can get the independent system operator to revoke the reliability-must-run contract, then you're in a position to close the plants legally. Otherwise, you're under the broader, preemptive mandate of the transmission operator, and you cannot close it legally. Bayview Hunters' Point is a cancer/asthma cluster, and there are a lot of reasons. When they put ships around the Bikini Atoll and blew it up, they put animals on the ships and brought them all back, tested them, and dumped them into the water. Some people believe that there is a ring of radioactivity around the Bay, but that area is very harsh." By substituting the city's old fossil fuel plants with new renewable generation and conservation, it will be possible to close the plants.

Fenn also noted that he is working on trying to get the unions to define the public works project in a way that provides new jobs to low-income residents, especially in neighborhoods such as Bayview/Hunters Point. "I said to the union, 'Make this a win-win situation. Make this a new union member situation. Get a training program based in

Hunters Point. Make it their game.’ But this deal is yet to be done. That’s going to be one of the last things that’s going to be negotiated.

Policy Issues and Recommendations

One of the key lessons of the San Francisco case is the political difficulty of converting to public power and the attractiveness of community choice as an alternative model. In contrast with other community choice programs already in existence, the innovation of the San Francisco case is that community choice is coupled with the city’s bond authority (which required a charter amendment) in order to construct renewable energy and public power on a much larger scale than before. The change would allow cities to go beyond incremental increases in renewable energy or showcase demonstration projects, such as the construction of solar panels on the Moscone Convention Center. As Fenn notes, “When do we get out of this incremental politics mode and into emergency, public works mode? For me it’s all about preparing the public works paradigm because you need these multi-billion conversions in every metro area, or we’re not going to get there.”

Another lesson that Fenn has learned is to place the authority for decision-making in the hands of the city council, not a government agency. For example, he has kept an eye on the San Francisco Public Utility Commission, which the city council charged with developing an implementation plan for community choice, yet at the time of the interview had not drafted a plan. The broader issue is to make sure that the implementation cannot get bogged down by city agencies and departments. As Fenn notes, “I’ve known this for years, so I’ve drafted these laws to give the city councils all the control. They give the staff zero control. The bonds must be authorized directly by the city council, the creation of the aggregator has to be by ordinance, the plan adoption has to be by ordinance, and the award of contract has to be by ordinance. I believe that if you want sustainability, that has to be job one. It has to be democratic. If you give it agencies, you’re wasting your time. Agencies don’t do anything.”

Another obstacle can be the preservationist side of the environmental movement. In addition to the familiar concern with bird kill, which has largely been corrected by changing the design and location of wind turbines, some environmentalists and homeowners are concerned with the effects of wind turbines on the “viewshed” or even the “glare” associated with solar panels. Fenn says that this misplaced environmentalism must change: “So the North Pole is melting, and the Audoban Society in Berkeley is stopping a wind project on the Berkeley pier because there’s a bird sanctuary nearby. So I said, ‘We’ll put up a 5MW big one. They go very slowly.’ They said, ‘I don’t care. We hate it.’ So we’ll have a little sanctuary here, and the Auduban Society can run it, while the North Pole melts and we’re all at war in the Middle East.”

Overall, Fenn sees community choice as a viable option for cities in an era of deregulation, privatization, and devolution. It can also appeal across the political spectrum, both in Republican and Democratic states, because it addresses the problem of local government powerlessness. As he comments, “Local governments have been systematically reduced to a condition of penury. They have no taxation powers. They are subsidiary to state taxation collection, and they have almost no discretionary funds. They are reduced to \$50 parking tickets and harassing small businesses and big-box retail

for cash. And what are they doing? More privatization, more cost cutting. And you have Republicans saying, ‘More decentralization, more devolution.’ So they gut the federal government and they gut the state government, but no one, including the Democrats, is trying to build up local government, which is the central component to make devolution work. I believe in devolution. I believe it is critical. I think the reason that we’re having oil wars now is that we have too much power in our federal government, too much money, and too much lobbying influence. I believe that federal government should be reduced, but I don’t believe that if you simply do that and leave out the energy companies—from Peabody Coal to Chevron Texaco in tact—that you will achieve devolution. All you will achieve is corporate governance. That’s what we have. We live under corporate control. So in my view local power is not even about energy; it’s about the empowerment of local governments. But it also means having any illusions about their limitations.

“There *is* a public mandate for renewables, for things that are not being done. Democratically the best chance for getting it done is in the city council. There is a very good likelihood of success at the local level. I’ve had incredible success at the local level. I’ve never had trouble passing things. I’ve passed all these laws alone. It’s effortless. So I find one politician who has brains and a little power, and I work with him or her for five or six years. After five or six years the council is on board, and once the council is on board, the legislative delegation is on board, then the Congressional delegation is on board, and everybody is on board. I’m not trying to take over PG&E; I’m not trying to take somebody out. I’m trying to achieve something everybody wants, which is large-scale renewables. It’s kind of an apple-pie formula.”

Update: May 17, 2005. LAFCO (the Local Agency Formation Commission) approved the Community Choice Implementation Plan that Fenn has advocated was approved, and it was sent to the Board of Supervisors for the final vote.

Web sites:

<http://sfwater.org/home.cfm>
<http://www.local.org>
<http://temp.sfgov.org/sfenvironment/>

Sources

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1. Finnie, Chuck. 2002. “PG&E Spends Big to Defeat Prop. D.” San Francisco Chronicle, October 29. Retrieved March 21, 2005 (<http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2002/10/29/MN44580.DTL&type=printable>).

2. Fenn, Paul. 2002. "Local Power Calls on San Francisco Board of Supervisors to Aggregate Government, Private Sector Solar Contracts." Retrieved March 21, 2005 (<http://www.local.org/sfsolarp.html>).

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