

Review of South Bay Clean Power  
Draft Business Plan, released 2/2017  
And Joint Powers Authority Agreement

American Coalition for Sustainable Communities (ACSC) affiliate Jim Phelps offers a review of the Draft Business Plan for South Bay Clean Power (SBCP), released 2/2017, and Joint Powers Authority (JPA) Agreement with highlights. Mr. Phelps is a former power engineer and utility rate analyst.

P. 1 Letter of Introduction: South Bay Clean Power (SBCP) promises local jobs (net-new of the SBCP enterprise itself), local power generation; local economic investment. These are the same commitments made by Marin Clean Energy (MCE). However, after 7 years, MCE has failed on most promises:

- Only 2% of MCE's net-new renewable power is generated locally.
- 3 full-time local jobs (excludes the 35+ staff employees at MCE) rather than major employment of Marin's skilled workforce.
- More than \$2 billion of Marin's "local" money exported to: Shell (The Hague), Electricite de France (Paris), Exelon (Chicago), Calpine (Houston), G2 Energy (Atlanta).<sup>1</sup>
- MCE alienated local labor – MCE made an enemy of IBEW 1245, the electrical workers largest branch in N. CA. and brought in out-of-area Cupertino Electric in order to advertise "partnership" with local labor unions.

### **DER – SBCP's Vision**

Distributed Energy Resources (DER — distributed generation such as rooftop solar, energy efficiency, energy storage, demand responses and electric vehicles).

### **What is scope of SBCP CCA?**

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SBCP has **no** specified deliverables. The Business Plan states "*Note that, unlike the Los Angeles Community Choice Energy CCA Business plan of July 28, 2016 this report does not forecast the results of implementing a CCA in any quantitative manner. For example, we do not forecast the renewable content of the program's energy portfolio, or what the rates charged to customers will be in comparison to Southern California Edison's rates (underline added).*"

→ Without quantified deliverables, how can anyone make a decision about participating in SBCP?

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<sup>1</sup> P. 1 of the SBCP Joint Powers Authority (JPA) agreement makes the same claim that MCE once made regarding "capital retention" for the community. MCE claimed it would "redirect" money from PG&E shareholders back into Marin. Its leadership made the same claim to Sonoma County.

<http://www.marinij.com/article/ZZ/20100506/NEWS/100509713>

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→ Page 7 of Cover Letter states that SBCP may include purchases of power from SCE. This is a peculiar redundancy for a program that desires to displace SCE with 100% local clean energy. Since SCE has difficulty attaining state mandated Renewable Portfolio Standard annual mandates, it is unlikely that SCE would sell to SBCP a portion of its renewable or large hydro energy since these two energy sources account for SCE's RPS and carbon-free energy. Accordingly, it is reasonable to conclude that the power for which SBCP would contract with SCE would be "system power." System power is predominantly coal and gas-fired energy. This puts SBCP at odds with its claim of "decarbonizing California's wholesale electricity generation."<sup>2</sup>

Alternately, if SBCP purchases renewable energy from SCE that is available because SCE's "Generation" customer base shrinks (due to CCA), and SBCP claims this power in its own accounting ledger and advertising, SBCP is not decarbonizing California. It is merely taking a renewable asset from SCE that would have decarbonized California on SCE's behalf and claiming it for itself. In other words, this "decarbonizing" occurs regardless of SBCP's existence, and therefore SBCP is not "*lowering carbon emissions.*"<sup>3</sup>

Finally, SBCP should be cautioned that one of its core themes is "local" renewables.<sup>4</sup> If any energy from SCE's renewables is from distant, out-of-community, locations, this contradicts SBCP's *local* commitment.

- The absence of clearly defined deliverables may explain why, before The City of Redondo Beach voted not to pursue SBCP in March, its Mayor asked staff why the city was looking into four versions of CCA.
- Renewable energy construction is expensive, excluding Bureau of Land Management delays. What are the JPA municipal members going to do if SBCP rates are 2x or 5x SCE rates? Opt Outs from SBCP + expensive steel-in-the-ground assets, revenues from which are limited by SCE market prices, are not a sustainable business model.<sup>5</sup>

Potentially, member municipalities in the SBCP JPA will be unable to leave, per JPA section 6.6, discussed under "Municipal Financial Exposure from the JPA," below.

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<sup>2</sup> SBCP Draft Business Plan, p. 20.

<sup>3</sup> Ibid

<sup>4</sup> Draft Business Plan's Letter of introduction, page 1, 4<sup>th</sup> bullet.

<sup>5</sup> Clean energy is price sensitive. Marin Clean Energy has been able to entice only 1.89% (one point eight-nine percent) of its customers to "step up" and pay 1 penny per KWh premium to move from Light Green product (advertised as 53% renewable) to Deep Green product (advertised 100% renewable). Source: MCE February 2017 Integrated Resource Plan, page 16 of 33. Deep Green costs approximately \$4.45 extra per month.  
[https://www.mcecleanenergy.org/wp-content/uploads/2017/03/MCE\\_Residential\\_Rates\\_Apr2017.pdf](https://www.mcecleanenergy.org/wp-content/uploads/2017/03/MCE_Residential_Rates_Apr2017.pdf)

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P. 2 of Executive Summary

SBCP says it will “*exercise local control, with manageable governing boards, over their energy choices, program design, program elements, electric rates and financial reserves, while simultaneously enjoying the economy of scale that a large-scale joint-approach.*”

→ *Economy of scale* of what deliverables? How does anyone quantify what this SBCP will cost, or if it is economically attainable in this era of unfunded pension liabilities?

To put this last question into perspective a 1 MW solar farm (domestic manufactured panels that do not violate U.S. Department of Commerce (Chinese) anti-dumping law) costs approximately \$4 million (U.S. Domestic panels), plus land cost (requires 5 – 8 acres, depending upon location) and powers ~200 medium-size homes (still requires base load gas-fired power generation at night).

Local municipal pension liabilities range from \$14 million for Hermosa Beach (2011 data), to \$49 million for Manhattan Beach (2017 data), to Torrance’s \$392 million (2014 data).

→ SBCP “*large-scale joint-approach*” is reminiscent Washington Public Power Supply System (WPPS) (aka “Whoops”) fiasco of the 980s when twenty-three publicly owned utilities and municipal power agencies teamed-up to construct five nuclear power plants in the Pacific-Northwest. The work scope continued to creep under unequal management. (see “Governance,” below). WPPS suffered from “delays and huge cost overruns.” WPPS lost more than \$8 billion and was a failure.<sup>6</sup>

P. 2 of Executive Summary

*As summarized in the proceeding two sections, distinct advantages pioneered by the newly-formed CCAs Silicon Valley Clean Energy and the Redwood Coast Energy Authority offer powerful best practices that we have incorporated for South Bay Clean Power.*<sup>7</sup>

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<sup>6</sup> Time Magazine: Whoops! A \$2 Billion Blunder: Washington Public Power Supply System  
By Charles P. Alexander, Adam Zagorin, and Deborah Peterson, dated Aug. 08, 1983

<sup>7</sup> Silicon Valley Clean Energy committed 50% of its portfolio would be “eligible” (in accordance with RPS limits). SVCE now wants half of the “50%” commitment to be **unbundled Renewable Energy Certificates** (PCC3) for the next 14 years. SVCE’s consultant claims SVCP will save \$1.6 million/year for next five years. SVCE’s consultant claims these unbundled RECs are “eligible” renewables – conforms with state Renewable Portfolio Standard. This is false. Only 3% of “eligible” energy may be comprised of unbundled RECs. SVCE engages in misrepresentation wherein fossil-fired energy (“unspecified sources”) is loaded into its portfolio under the guise of whatever is printed on the REC (“wind”). That re-labeled “wind” energy is then advertised to consumers who believe they receive clean power that reduces GHG emissions.

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→ Misleading consumers is “best practices”?

**SBCP Governance Problems**

P. 9 of Business Plan

*“The number of elected officials on the board would have to be less than the total number of governments involved. This necessitates a representative form of governance, in which multiple local governments are represented by one board member.”*

- Introduces possibility that SBCP, will be subject to lawsuits under *One Person One Vote*.

Introduces conflict-of-interest and likelihood that a municipality’s interests will not be achieved. See Orange County Register report <http://www.ocregister.com/2017/05/26/why-does-city-of-industry-want-thousands-of-acres-of-ranchland-in-chino-hills-and-diamond-bar-heres-their-plan-2-2/> regarding [Tres Hermanos ranch](#).

- *“Additionally, such a large territory will include governments with divergent goals for the CCA — objectives such as lower rates, financial stability, increased renewables, lower greenhouse gas emissions and support for distributed energy and workforce development all involve trade-offs in governance decisions. (underline added).*

**LAWSUITS**

- “Trade-offs” may trigger discord and, may trigger lawsuits beginning with a municipality(s) that claims to be under-represented when “trade-offs” are not in its favor.
- A second lawsuit may occur if a municipality (attempts) leaves SBCP, causing withdrawal by any, or all, of the municipality’s commercial & industrial, government agencies, and residential customers. With respect to Joint Powers Agreement (JPA) 6.6, the lawsuit would be brought by the JPA against a departing municipality that claims the JPA caused it damage when that departing municipality declines to pay the JPA’s levies.
- JPA Agreement section 2.5.4 identifies that the JPA includes **eminent domain** in its tools, but would not *“exercise the power of eminent domain within the jurisdiction of a member municipality over its objection without first meeting and conferring in good faith.”* This may trigger a lawsuit from the municipal member that receives an unfavorable outcome after such “good faith.”
- A third lawsuit is class action against the JPA for misrepresenting SBCE’s energy content or greenhouse gas reductions (GHG).

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Class action could potentially result in a death spiral where SBCP fixed costs are spread over a shrinking customer base, driving up consumer prices. Is customer base captive, per respective SBCP customer agreement/conditions of service. Does the agreement document contain specific language that releases customers from all JPA liabilities under all circumstances?

**Municipal Financial Exposure from the JPA**

Page 7 of Business Plan states:

*In adopting the at-risk, performance based contracting approach pioneered by the Redwood Coast Energy Authority to implement the CCA, South Bay Clean Power will limit local government financial liabilities and expenses to:*

*Direct staff and legal costs **could** be funded by the member governments of South Bay Clean Power directly.*

→ **Could** be funded? What happens when some member municipality elects to pay down its unfunded pension liabilities, rather than pay this optional CCA charge?

*Power supply financing **should** require little, if any, guarantee from local governments. And will be negotiated by the CCA's chosen power management contractor later during the implementation process.*

→ **Should?**

**JPA Agreement**

**Section 2.5.7 of JPA Agreement** establishes each municipality's "financial firewall" in which the municipality is not liable for payment to energy suppliers if the JPA decides to invoke the clause.

- The "financial firewall" is only functional if the respective energy supplier(s) acknowledges existence of the firewall and accepts a JPA statements that individual JPA members are not liable for payments should the JPA invoke the firewall.
- It remains unclear how remaining contract costs might be spread across SBCP's captive customer base, including municipal members, should the JPA fold. See WPPS discussion on p. 3, where members of the nuclear consortium quietly withdrew leaving small investors holding \$5 billion of worthless bonds. <sup>3</sup>
- **Section 6.6** creates a continuing financial problem for the municipalities, especially if SBCP management enters into unwise contracts. 6.6 states that a withdrawing municipality shall be liable for: *Claims, demands, damages, or other financial obligations*

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*for which the Party may remain liable include, **but are not limited to, losses from the resale of power contracted for by the Authority to serve the Party's load in the CCA Program... As a condition precedent to a Party's withdrawal from the Authority or in the event of an affirmative vote to involuntarily terminate a Party, the Authority may withhold funds otherwise owing to the Party or may require the Party to deposit sufficient funds with the Authority, as reasonably determined by the Authority and approved by a vote of the Board, to cover the Party's financial obligations for the costs described above. This represents tens of millions of dollars in financial liability and exposure for each municipality.***

- Section 6.6 makes it all but impossible for any member municipality to withdraw from SBCP. Is that wise considering other municipal obligations, including fire, police, and unfunded pension liability?
- **Although SBCP, or a respective municipality, will claim that taxpayers are not liable for JPA debts, these claims are false.** Scenario: Municipality "Y" demands to be released from the JPA due to mismanagement, **discord over eminent domain**, or unexpected high electricity costs. The JPA invokes Section 6.6. Y is forced to pay "sufficient funds" to the JPA, by settlement or lawsuit. Those "sufficient funds" come from Y's General Fund(s). Y now runs a budgetary deficit and, in order to avoid city layoffs, Y either raises taxes or, more likely, issues bonds or passes a *temporary* tax measure in order "to avoid closing a fire house."

#### SCE AND SBCP

Another scenario for a death spiral occurs when SBCP asserts political power that is contrary to the wellbeing of Edison International (EIX) shareholders. EIX is the corporate holding entity for SCE. Legal costs would be added to SBCP's rate base. It is unreasonable to believe that SCE will quietly fade into the sunset just because SBCP believes it can outperform SCE's performance of California's Renewable Portfolio Standard (RPS), to which SCE adheres.

If legislative or regulatory action forces the closure or termination of SCE assets, SBCP will trigger higher exit fees and competitive transition charges required from SCE. These fees will likely make SBCP uncompetitive, causing increased Opt Out departures from the CCA.

Page 6 of SBCP's Letter of Introduction states:

*"We believe there is ample opportunity for a cooperative and mutually beneficial relationship between South Bay Clean Power and SCE. Our direct experiences **to date** have given no indication of any **hostility** towards CCA whether it be with the existing Lancaster Choice Energy, the County of Los Angeles' efforts or our own South Bay Clean Power interactions with SCE's CCA team — quite the opposite, in fact.*

*For example, Southern California Edison — uniquely among California's investor-owned Utilities."*

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California's three utilities, PG&E, Sempra, and SCE are Investor Owned Utilities (IOUs). They are under regulatory mandate to work with CCA. Working with an IOU utility in the early phases of CCA is a very different then working with them if they feel threatened. They will defend themselves and protect their very existence. In response to the advent of CCA-type entities, IOUs revised their enterprise models so that profits no longer flows from Generation.<sup>8</sup> Today, IOU electricity profits are derived largely from the IOU's Transmission & Distribution.

However, SBCP states its desire to offer *demand response*, which is part of SCE's "territory" – Distribution management, construction, and services are what the IOUs are left with as CCA takes over the "generation" portion of IOUs' business. Demand Response is part of the IOUs' electric distribution system, and is remains as part of their core business model.<sup>9</sup>

SBCP states that it has worked, "collaboratively", with SCE in regulatory workshops exploring the modernization of a Distribution system that integrates with SBCP's vision. Page 10 of the Business Plan then states:

*To be clear, this is our understanding of the discussions, and not a formal statement or commitment from Southern California Edison.*<sup>10</sup>

If CCA (SBCP) lobbies to dismantle the current IOU business model, the resulting fees and charges that will be added to SBCP's rates will make SBCP uncompetitive.

JPA Agreement , Exhibit A "Definitions" includes language that opens the door to SBCP's occupying the IOUs' space (the utility's side of electric meters):

*"'Distributed Energy Resources' (core component of SBCP) can refer to utility-side distributed energy resources (such as battery storage or community solar interconnected to the distribution grid) or customer-side distributed energy resources (installed behind-the-meter in buildings and facilities)... See p. 5 of 9 SCE AND SBCP.*

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<sup>8</sup> "Generation" is the unbundled component of the SCE electric bill that CCAs occupy. SCE will bill consumers on behalf of SBCP, and the "Generation" funds will then be paid by SCE to SBCP each month.

<sup>9</sup> IOU demand response programs include SCE's Automated Demand Response, Permanent Load Shifting, Scheduled Load Reduction, to name just a few. PG&E demand response programs include Peak Day Pricing, Base Interruptible Pricing, Scheduled Load Reduction Program, Optional Binding Mandatory Curtailment Plan, Automated Demand Response Incentive, and Permanent Load Shift. Sempra includes many demand response programs, including its Base Interruptible Program, Capacity Bidding Program, Critical Peak Pricing, and Summer Saver program.

<sup>10</sup> South Bay Clean Power Draft Business Plan, Executive Summary, p. 10

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**Conflicts & Contradictions**

The Business Plan claims SBCP will be an integrated model that provides municipal members with “a full suite of energy services — from day-to-day power market operations through long-term planning — to serve its municipal utility members.”<sup>11</sup> The Draft Business Plan says that the lack of this has been a downfall for Marin Clean Energy for seven years.<sup>12</sup>

→ Downfall? This is a false citation by SBCP. MCE was based upon an integrated full-services contract model with Shell Energy North America, in which SENA acted as both an energy supplier and as MCE’s Integrated Scheduling Coordinator (ISC). SBCP claims that SBCP needs an ISC to be a successful. While MCE has failed to deliver on many of its commitments to the Marin County community (see page 1 of this report), an ISC is not to blame for MCE’s failed policy and management decisions. Thus, citing MCE’s “lack” of an ISC is not sufficient cause to SBCP to attempt to distance itself from the possibility that SBCP may duplicate MCE’s (poor) 7-year track record.<sup>13</sup>

However, Business Plan stated objective is to move away from gas-fired (gas supplied) generation. Page 18 states that SBCP’s risk management (as carried out by its Scheduling Coordinator) may entail calling on various assets of SBCP, including *peaker plant tolling agreement* (this is gas-fired generation).

→ Cover letter page 3 Business Plan pages 21 calls for elimination of burning natural gas.

JPA Agreement, p. 1 of 15:

*Establish an energy portfolio that **minimizes the use of (Category 3)** unbundled renewable energy credits. (third listed item...) Minimizes from what level? How many RECs?*

Business Plan Letter of Introduction, p.2:

**No use of Category 3** unbundled Renewable Energy Certificates (RECs) to achieve our 100% renewables goal; Which path does SBCP claim to follow? “No use” was committed by Silicon Valley Clean Power, until its staff determined it could not meet its renewable energy commitment. During its April 12 board meeting, staff consultants suggested SVCP revise its portfolio so that 50% of the “clean” energy was unbundled

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<sup>11</sup> IBID, page 7.

<sup>12</sup> IBID, p 17.

<sup>13</sup> MCE’s record includes (1) exporting nearly \$7 billion of the “local” communities money to Europe, (2) poor oversight of the cancelled 100 acre (15 MW) Rio Solar farm, (3) green-washing with RECs to extent that MCE overstates its actual GHG reductions by an average 80%.



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RECs (Category 3 energy).<sup>14</sup>

Business Plan, Page 38

SBCP includes list of target municipal members. The two largest, Carson and Torrance, comprise 45% of SBCP's gross revenues. The largest loads in Carson and Torrance include oil refineries. SBCP's last page of its Cover Letter (above the signature block) identifies refineries as sources of air pollution. SBCP desires to replace automobiles with electric vehicles as part of its Distributed Energy Resources. Do Carson's and Torrance's tax revenues from refineries put SBCP at odds with its two largest target members? This will be an issue as SBCP attempts to build financial accounts for construction of renewables.

### **SBCP's Greenhouse Gas Goals and Inconvenient Truths**

P. 21

The Business Plan cites California's total greenhouse gas (GHG) emissions, and states that decarbonizing depends upon 100% renewable energy. **SBCP fails to reconcile that two popular renewables reportedly *increase* GHG emissions or undermine clean air:**

1. Landfill Gas to Energy (LFGTE), which the Sierra Club unanimously concludes emits more GHG than it removes.<sup>15</sup> Where are these landfills and what is their untapped capacity to produce *net-new* generation?
2. Biomass, which the Clean Air Council reports that biomass emissions add harmful particulates to the air (asthma).<sup>16</sup> Further, a medium size biomass plant consumes more than 20 million gallons of water for evaporative coolers.<sup>17</sup> Where does that water come from during drought?

Based upon SBCP's Business Plan, metropolitan smog issues around LA are not relevant in the ardent pursuit of "renewable" energy.

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<sup>14</sup> Silicon Valley Clean Power, April 12, 2017 Board of Directors meeting, Item 4. "Alternative to Type 2 Renewable Energy" Recommendation: Approve new approach to hedge the cost of power supply, allowing an alternate to the use of PCC2 renewable resources.

<sup>15</sup> <https://www.sierraclub.org/sites/www.sierraclub.org/files/landfill-gas-report.pdf>

<sup>16</sup> <http://www.ecowatch.com/is-biomass-energy-renewable-1891131459.html>

<sup>17</sup> Assume 20 MW generator circulating 20,000 GPM through 20 (F) range (20,000 x .001 x 2 x 60 x 24 x 365), plus blow-down at 5 cycles circulating water.

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SBCP advocates patterning its implementation off of Redwood Coast Energy Authority (RCEA).<sup>18</sup> SBCP's Business Plan identifies status of RCEA's implementation and includes on page 99 the following text:

*Process Guidelines for Development of a Request for Offers for Local Biomass Power.*

### **SBCP's Control Over Citizens**

P. 40

The Business Plan states that SBCP's Regional JPA governance structure is designed to support and enhance acceleration of SBCP's vision about how the region should be managed, supporting broad, sectoral carbon reductions — not only for electricity generation, but also transportation electrification and fuel-switching of appliances (from natural gas to clean electricity). The SBCP Business Plan states *CCAs are the only load-serving entity that can also leverage local government authorities to accomplish this goal.*

- SBCP appears to believe it has an overarching authority to dictate residents' lifestyles through social engineering schemes.

### **Money Management and Municipal Financial Obligations**

P. 54

"Waterfall Mechanism (Lockbox)" is cited by some elected officials as a safeguard that protects JPA members from financial liability. This is a false belief. The "Lockbox" is merely a workflow mechanism. It helps power suppliers and power management contractors better believe that the CCA's financial obligations will be managed strictly per contract terms. A municipality is still subject to financial liability from numerous sources for myriad reasons.

→ Who guarantees initial contract?

→ Who pays the power suppliers in event of large Opt Outs?

P. 55

*"After commencing operations, expanding (SBCP) staff and building up a reserve fund, CCAs to date have been able to negotiate further loans and credit support (lines and letters of credit) without requiring General Fund guarantees and based solely on future revenue forecasts."*  
(underline added)

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<sup>18</sup> "While the financial product chosen by the Redwood Coast Energy Authority may not prove to be appropriate or ideal for South Bay Clean Power, we recommend that South Bay Clean Power take advantage of the approach pioneered by the Redwood Coast Energy Authority to work with best-in-class power industry contractors." SBCP Business Plan dated February 2017, page 63.

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→ SBCP assumes initial loans are subject to General Fund guarantees.

P. 56

*"In other words, once the Sonoma CCA program was prepared to launch, commercial lenders then considered the CCA's forecasted revenue to be a sufficient guarantee for the loan required to purchase the necessary power for the program. But getting to that stage incurred General Fund exposure in the low millions of dollars."* (underline added).

P. 58

*"For Los Angeles County (CCA), total General Fund liabilities or expenses prior to launch were assumed between \$31,000,000 to \$52,000,000."*<sup>19</sup> (underline added).

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<sup>19</sup> Draft South Bay Clean Power Business Plan, p. 58.

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**Viability of Renewable Energy (RE) Resources for SBCP Model**

**Net-new RE generation resources are required, otherwise no actual GHG reduction  
Contracting with existing RE resources does not result in decrease of GHG emissions**

RPS Energy Types					
solar (PV)	<b>Net new. OK.</b>				
solar (thermal)	<b>Economically unfeasible at \$5.8MM/MW (Ivanpah). Environmental issues.</b>				
wind	<b>BLM issues. EIR issues (birds, visual, noise). Otherwise, not net-new local resource. Not "local."</b>				
biomass	<b>clean air (PM<sub>2.5</sub> and PM<sub>10</sub>) &amp; water use issues. "Spare the Air" days?</b>				
biogas (LFGTE)	<b>Sierra Club = LFGTE results in net GHG emission increase.</b>				
small hydro (≤30 MW)	<b>Not happening -- EIR. Also, not local.</b>				
geothermal	<b>Not net-new. Not local.</b>				
tidal	<b>Not commercially or technically viable.</b>				

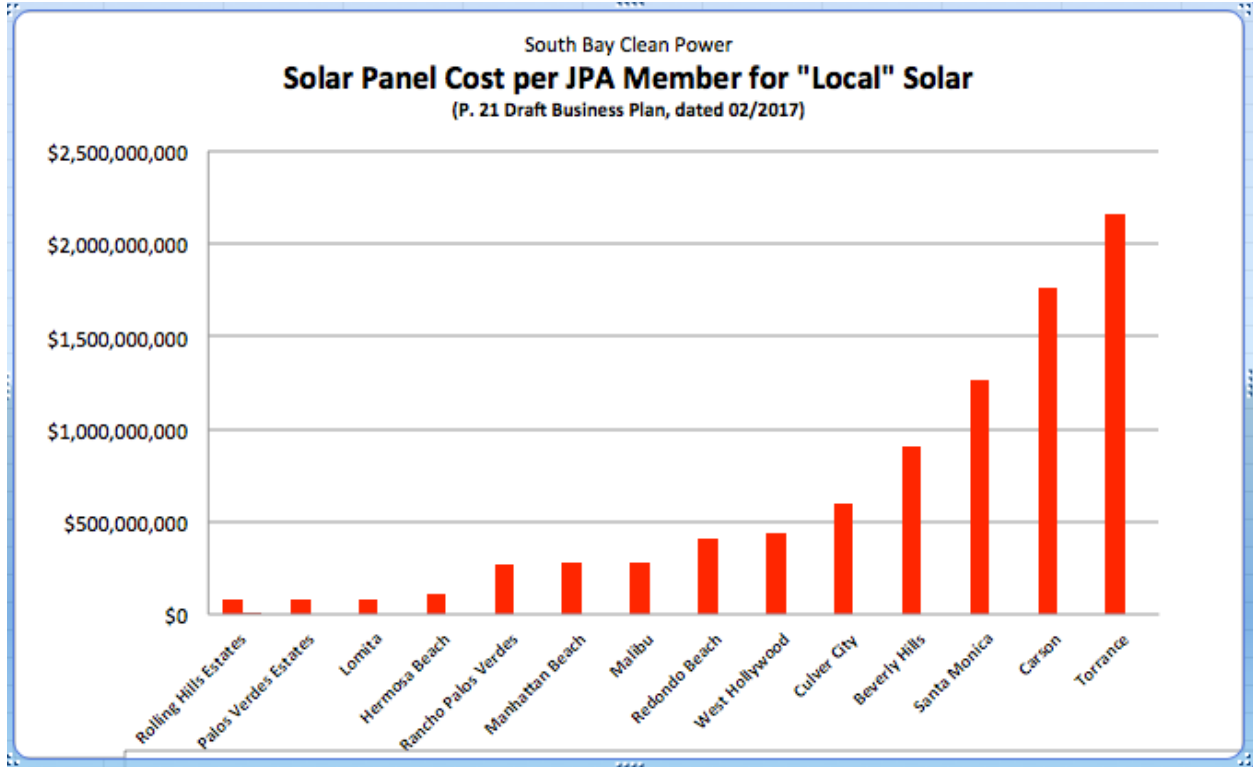
Based upon above table, SBCP's only "local" path to 100% renewable power is massive deployment of solar ten years after launching, as stated in the first bullet of the Letter of Introduction.

Note: After 7 years, only 2.3% of MCE's total portfolio is "local."<sup>20</sup> What is basis of South Bay Clean Power's belief that it can out-perform California's longest running CCA (CCE) by 43x?

<sup>20</sup> MCE's 2/2017 Integrated Resource Plan.

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**Cost of "local" solar**



This solar panel cost chart illustrates the total pro-rata share that each municipality would incur year 1 through year 10, per Draft Business Plan’s Letter of Introduction, bullet #1 and #4. Even if a reviewer discounts the costs by 90%, the remaining financial obligations are staggering; Redondo Beach’s obligation would be \$41 million.

**Net-New GHG Reductions**

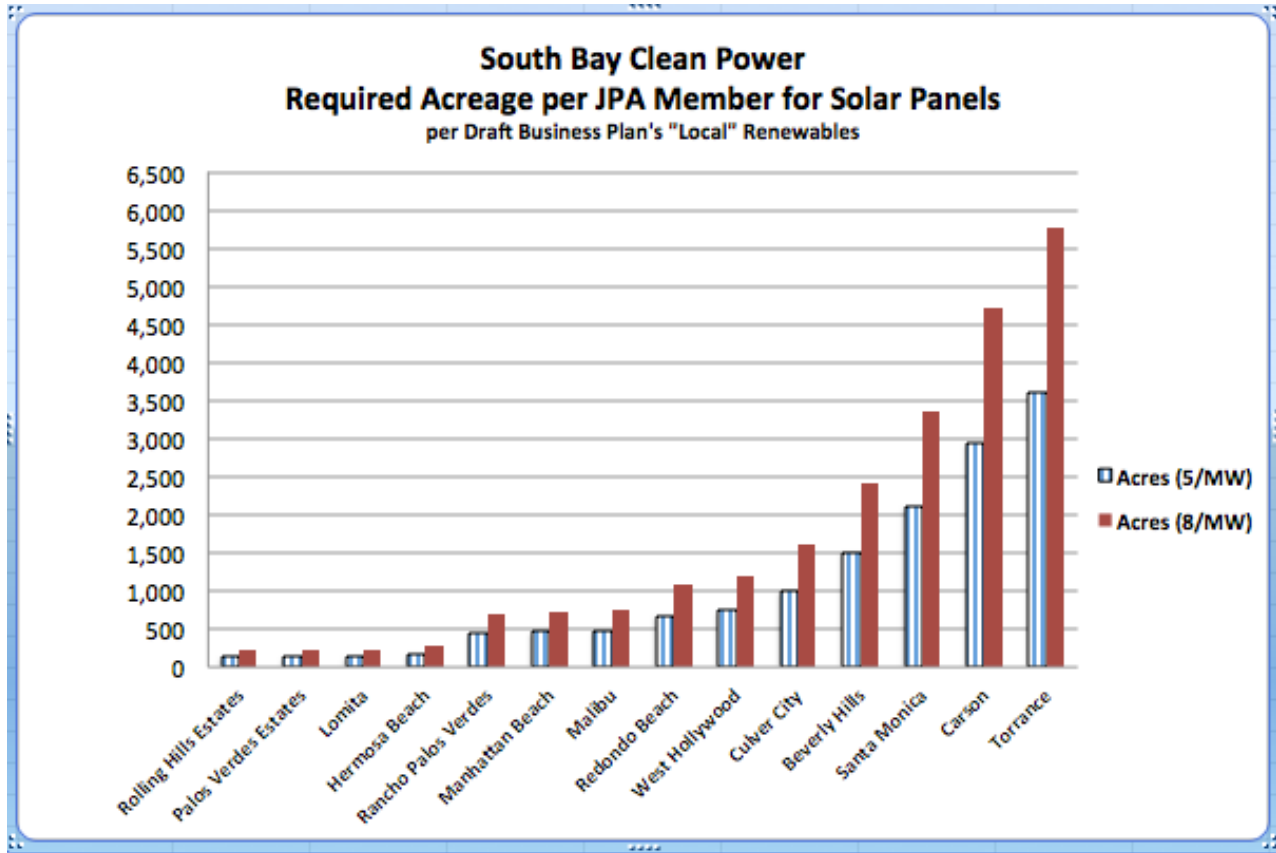
SBCP has a 100% *local* renewables commitment. SBCP must construct its own *net-new* renewable resources or else it merely takes credit for clean energy (no GHG emissions) that, for instance, was previously purchased by a city in the San Fernando Valley. SBCP then pencils that “GHG reduction” into its own ledger while there is no actual GHG emission “reduction” to the atmosphere.

To clarify this point by example: What happens to a San Fernando Valley city after it loses pre-existing clean power that SBCP now buys? The San Fernando Valley city buys dirty power, known as “System Power.” And if that city behaves like CCAs such as MCE, Silicon

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Valley Clean Power, and Lancaster Choice Energy, who discovered they were unable to deliver on their clean energy promises, it green-washes the dirty power with unbundled RECs and deceives consumers who do not understand what is happening.

**Land Requirement for Solar**



This acreage chart identifies the pro-rata real estate obligation for each prospective JPA member in SBCP based upon solar deployment to meet SBCP's 100% "local" renewable energy commitment.<sup>21</sup> This required real estate would be used for solar panel farms.

As noted on the "Solar Panel Cost" chart, even if SBCP discounted its solar commitment by 90%, the resulting real estate requirements would still be huge. For instance, at 100% solar, Beverly Hills requires approximately 2,000 acres. If SBCP defaults on its 100% local

<sup>21</sup> Sonoma Feasibility Study, Oct. 10, 2011, Part 2, p. 4 footnote identifies that each megawatt of solar requires between 5 and 8 acres, depending on exposure. (date at bottom of page shows Sept. 29, 2011).

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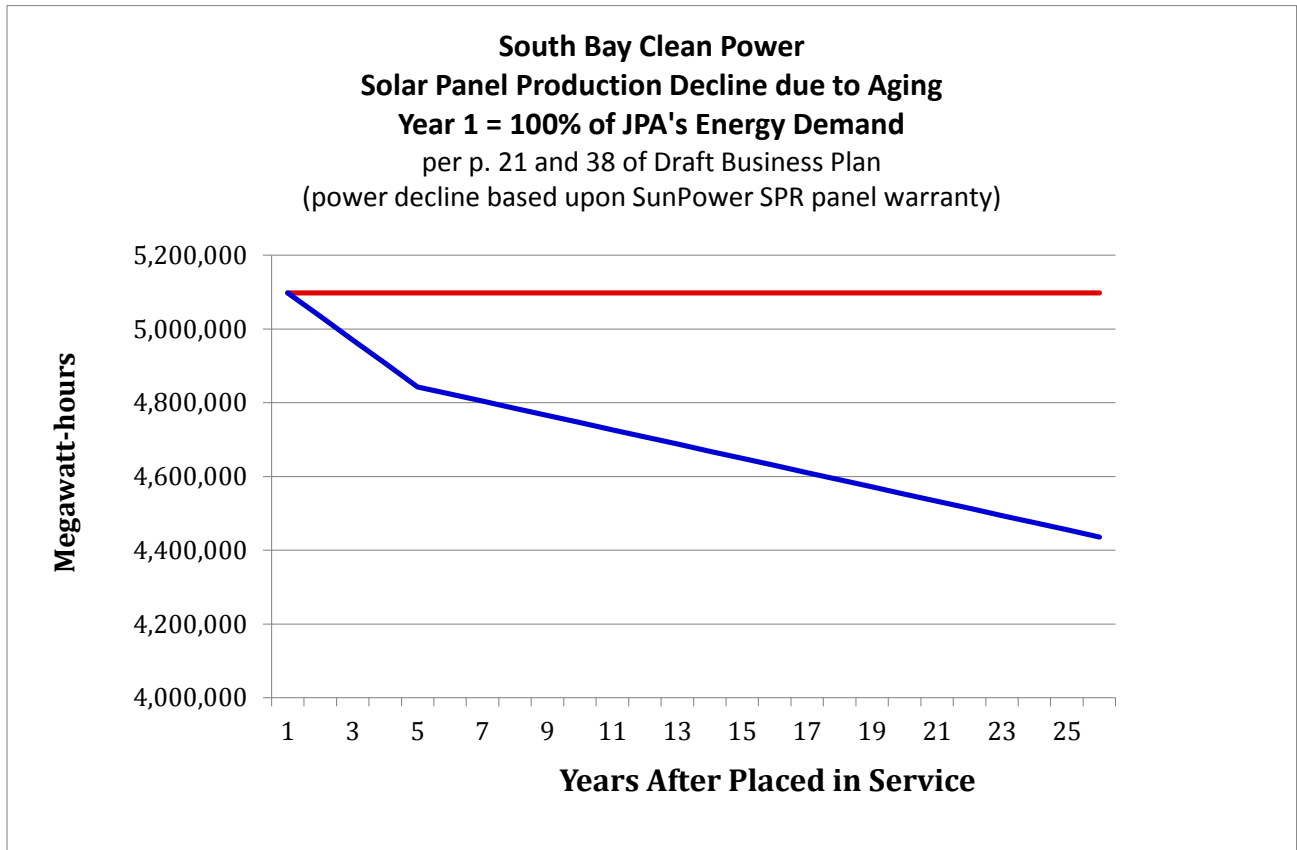
commitment and only deploys 10% solar, Beverly Hills still requires approximately 200 acres for its share of solar farms.<sup>22</sup>

Alternately, the JPA invokes its eminent domain clause (JPA Agreement, section 2.5.4) and places Beverly Hills' solar panel farms in Redondo Beach or Carson.

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<sup>22</sup> Sonoma Clean Power Feasibility Study, October 10, 2011, Part II, p. 4, footnote 3 (date at bottom of page shows "September 29, 2011." This complements County of San Bernardino empiric data contained in <http://www.sbcounty.gov/uploads/lus/renewable/SolarProjectList.pdf> that calculates to 8 acres per MW of solar.

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This chart shows how SBCP’s solar output declines with time.<sup>23</sup>

The top **red** line shows SBCP’s megawatt-hour (MWh) energy demand as relatively flat (includes added load for electric vehicles and saving from efficiencies) each year. This represents the electricity that SBCP needs to deliver to its customers each year.

The bottom **blue** line shows how production from SBCP’s solar panels declines from U.V. and heat. For instance, in year 7, SBCP’s solar output is 300,000 MWhs short. If the JPA determines it only wants 10% of its generating resources from solar (what “local” resources supply the remaining 90%?), SBCP is 30,000 MWhs short. This represents an added required JPA expenditure to replace this “lost” solar energy of \$68.5 million, assuming U.S. manufactured solar panels that do not violate U.S. Department anti-dumping laws (Chinese solar panels).<sup>24</sup>

<sup>23</sup> SunPower SPG solar panel warranty is 95% output at year 5, and 0.004 decline/yr thereafter.

<sup>24</sup> 30,000/1,752 (1,752 MWh from 1 MW solar farm) x \$4,000,000 / megawatt = \$68,493,000 + land.