

To: Cheryl Taylor
SFPUC CC: Barbara Hale, Harlan Kelly, Jr.
From: Samuel Golding, Local Power Inc.
Date: October 11, 2012
RE: CS-920R-B, Task 3, Subtask C, Preliminary Budgetary Estimates

Summary

Financial pro forma analyses for six scenarios developed for the CleanPowerSF preliminary budgetary estimates are given in the Appendix.

The analytical framework underpinning these preliminary results is a 'cost of service' model that estimates the revenue requirements for CleanPowerSF, and compares this against the rates customers would have paid under Pacific Gas and Electric. The model shows the impact of the deployment of demand side assets (behind-the-meter, i.e. on a customer's property) and supply side assets (both in-front-of-the-meter and behind-the-meter) on the CCA's revenue requirements and total revenue.

Deploying a mix of behind-the-meter renewable generation and efficiency assets in addition to traditional utility-scale renewable generation plants and conventional power purchase agreements is a novel approach within the utility industry. While companies in the broader energy industry have designed business models to finance and deploy onsite energy production and efficiency assets, the utility industry has not embraced these innovations for a variety of reasons. The approach detailed here uniquely combines CCA with H Bonds according to adopted ordinances and voter approval. The program as defined has not been implemented elsewhere. This approach allows CleanPowerSF to fully embrace the potential of renewable distributed generation and energy efficiency to achieve a maximum acceleration of energy localization that is achievable economically.

Demonstrating analytically to the SFPUC precisely how this new business model would function financially was the over-arching goal of this task.

To this end, Local Power has provided an 'open book' spreadsheet containing all the financial calculations for SFPUC internal review and use. The energy calculations require the use of a database, accessible online through a web portal. While the financial spreadsheet is necessarily complex, it is purposely laid out in a detailed and transparent fashion, such that SFPUC staff should be able to understand mathematically how this novel approach allows for a competitive cost of service for its ratepayers while achieving social justice and environmental policy directives.

Policy Requirements and Preliminary Results

CleanPowerSF is bound by ordinance to supply 51% of its energy needs from renewable and demand-side measures by 2017, while meeting or beating PG&E's rates, with a focus on deploying in-City and nearby resources.

The RPS was set at 51% by 2017 and thereafter for all scenarios, and all electricity is GHG free. The scenarios do meet or beat PG&E's rates, with the exception of the bilateral wholesale power contract with Shell Energy North America for a 100% renewable product.

Local Power was unable to achieve the 51% goal in these draft runs with assets deployed by the program. Depending on the scenario, the 'Localization Portfolio Standard' (LPS) varies between 25% to 47% by 2017. This is not due to any constraint in the financial performance of the deployment, but rather because several technologies are not yet included in the model and CHP deployments being constrained (as detailed under 'Interpreting Preliminary Model Results'). Correcting these shortcomings in the final model should achieve the 51% goal.

Scenarios

The preliminary budgetary estimates detail three scenarios:

- Rapid deployment
- Rapid deployment plus the repower of geothermal at the Geysers
- A slower deployment

These scenarios are duplicated under two different Phase I program design assumptions, for a total of six scenarios. The two Phase I starting assumptions are that in the first year of service, the program serves:

- 50,000 residential customers with the 100% renewable product to be executed in the Shell confirmation agreement;
- 97,000 residential customers with a roughly equal split between Shell null power and Hetch Hetchy hydroelectric (using the generation profile of the current sales into the Western System Power Pool), at RPS compliance (20%) and 100% GHG free electricity.

Thereafter, enrollment is phased to serve roughly 33% of the customer base in 2014, 66% in 2015, and 100% by 2016, with a 20% opt-out expected. Both scenarios switch to a 51% RPS in 2017 and for the years thereafter.

The main difference is that in the first Phase I design, the price premium is assumed to result in the opt-out of 50,000 residential customers. The second Phase I design does not require a rate increase (though the PG&E surcharges still result in customers having to pay slightly more, similar to MEA's Phase I economics) - and the 50,000 customers are enrolled in the CCA in subsequent years.

Interpreting Preliminary Model Results

These results should be treated as strictly preliminary in nature. There are several important refinements to be made for the final model.

Wholesale Contract and Market Purchases

Aside from the bilateral contract with Shell for residential service, market purchases currently comprise the entirety of wholesale costs. This is a placeholder assumption and likely overstates the cost of service, especially in the later years of the model. Local Power will need to work closely with SFPUC procurement staff to develop assumptions regarding the cost and terms of bilateral wholesale power contracts that would be available to CleanPowerSF.

Refining Inputs Based on the Site Selection Analysis

The Site Selection Analysis will inform the deployment schedule and volume of various technologies. In particular, combined heat and power (CHP) applications were constrained to 60 MW instead of the 106+ MW identified in City's 2007 cogeneration assessment for the draft model. This is because the draft deployment is constrained to the estimated thermal end uses of the medium and large commercial buildings in the City. CHP capacity in the final model will be increased by two factors:

- Serving the cooling loads in these buildings, which requires the addition of absorption chillers in the model.
- Serving smaller commercial buildings and industrial applications with CHP, which will be estimated in the Site Selection Analysis and incorporated into the model.

Refining Estimates of PPA Costs

The draft model was run based on the assumption that all assets are owned by the City and financed with non-taxable bonds, with the exception of demand-side measures. Estimates of PPA costs will be refined for the final model, to assess the impact of various incentives available to the private sector on the CCAs cost of service.

Addition of Technologies to the Model

The model is currently capable of running the following technologies:

- Solar Photovoltaics
- Wind Turbines

- Energy Efficiency
- Combined heat and power:
 - District Heating
 - Fuel Cells
 - Internal Combustion Engines
 - Microturbines
 - Turbines
- Geothermal
- Electric Fuel Cells
- Hetch Hetchy Hydroelectric

Several technologies are currently not being modeled currently but will be for the final version, which when incorporated are expected to achieve a 51% LPS by 2017 while meeting or beating PG&E rates. These may include:

- Absorption Chillers
- Solar Thermal (distributed)
- Demand Response and Dispatch
- Advanced Energy Storage
- Tidal Power
- Wave Power
- Electric Vehicle (managed charging and vehicle-to-building)
- Ground Source Heat Pumps

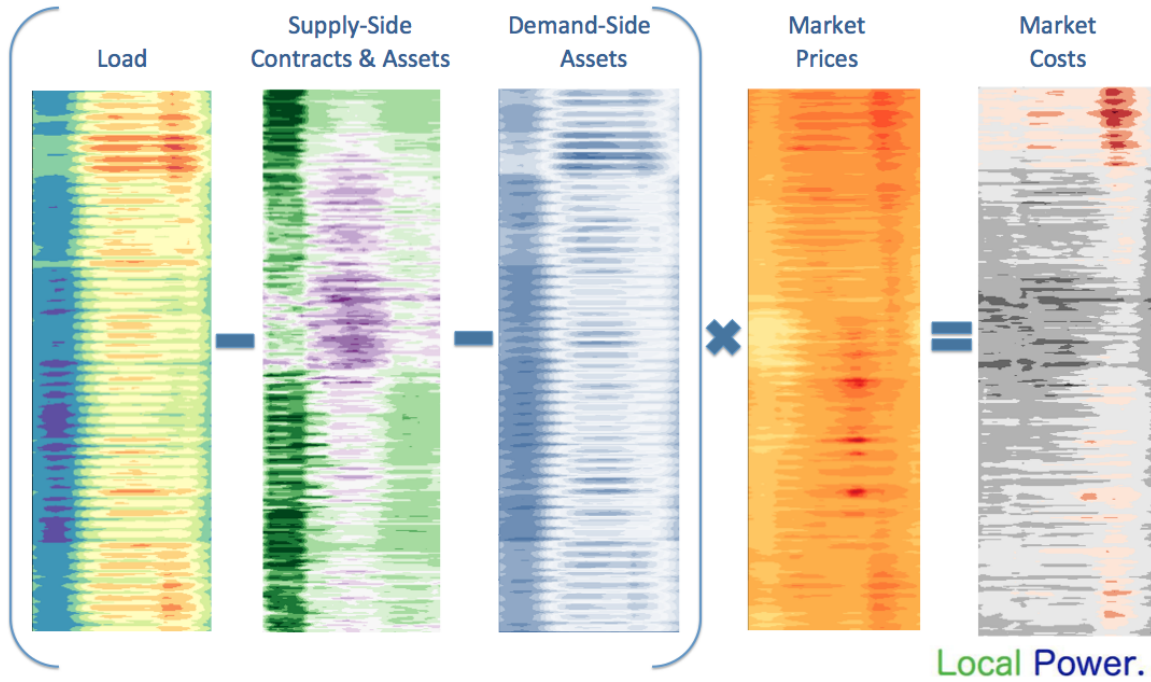
Modeling Overview

Energy Model

The energy model produces outputs that are used to calculate the impact of the deployment of assets on CleanPowerSF's energy and capacity requirements, as well as the resulting cost and revenue for any power purchased from or sold into the CAISO Day-Ahead Market (DAM).

It first calculates the CleanPowerSF load shape based on customer-class enrollment volumes, monthly consumption, and load curves. Then any generation, contracts, or DSM load impacts are subtracted from this load shape on an hourly basis. Within any given hour, excess power is assumed to be sold into the CAISO day ahead market, and any shortfall is procured from the market.

A simplified graphic of this process is shown below with 'heat maps' portraying hourly load, generation, contract, negawatt, price patterns, and the resulting costs over the course of a year:



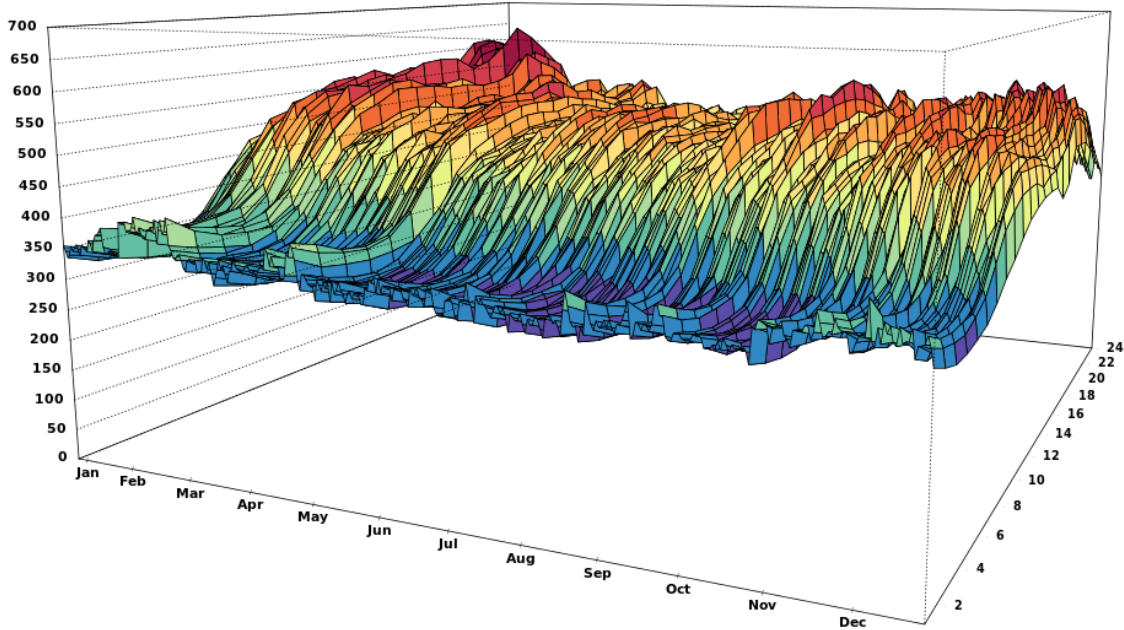
These interactions are modeled at the substation node, and assets are adjusted for primary and secondary distribution and transmission losses depending upon their assumed location.

Hourly Calculations and Strategic Load Shaping

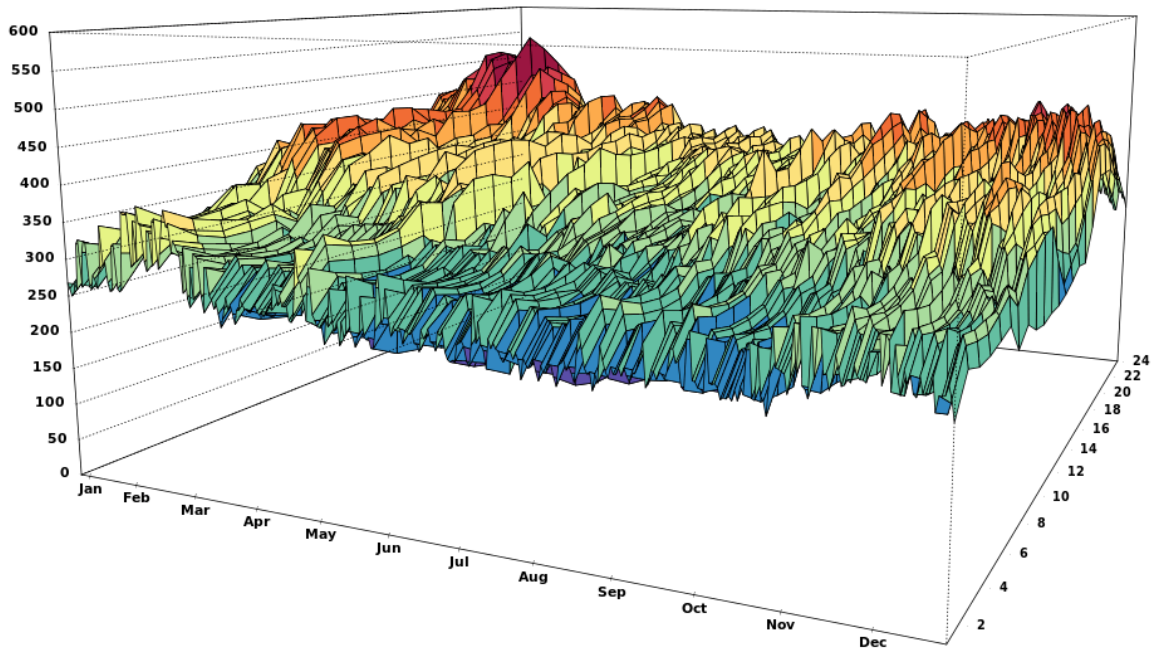
The impact of the deployment is modeled on an hourly basis. This is necessary to fully account for the impact of technologies on a CCA's load shape, and the resulting cost of electricity and resource adequacy requirements. This methodology allows sufficient insight into these dynamics to strategically shape the CCAs load shape to lower the overall cost of service.

For example, the graphics below depict the CCA's load shape in 2018 under the 'rapid' deployment scenario, before and after the behind-the-meter deployments:

CleanPowerSF Load Shape (2018) Prior to DG & DSM



Load Shape (2018) After DG & DSM



The CCA's load shape post-deployment is far more stable than before; daily ramping has been lessened, and the overall level of monthly peak substantially diminished. (Note that the scale on the second chart is 100 MW lower than the first.) More advanced iterations of the model will target the peaks with demand dispatch, energy

storage, and the short-term boost in capacity of which some CHP technologies are capable.

Energy Model Inputs

The following inputs are specified on a monthly basis:

- Total consumption (MWh) by customer class¹
- Total customer count by class (customer base)
- CCA customer count by class
- Installed capacity by technology

Customer class load growth, assumed opt-outs, and technology degradation factors are incorporated into the above inputs.

The follow inputs are specified on an hourly basis:

- Load curves by customer class
- Generation or negawatt curves by technology²
- Power supply shape by wholesale contract
- Wholesale market prices

Energy Model Outputs

The following outputs are given by month:

- Base, intermediate, and peak consumption and cost overall, with and without the CCA portfolio of assets
- Base, intermediate, and peak consumption by customer class
- Monthly MWh supplied (or avoided, for demand-side assets) by technology and contract
- The market value of the above MWh (had the volume of power been purchased from or sold into the market)
- Day, hour and MW for the following demand period definitions:
 - System coincident peak demand
 - CCA peak demand

¹ Primary and secondary distribution losses are added here as appropriate to the customer class, so as to model the energy requirements for the CCA at the substation node.

² T&D losses are included here

³ The color scale is in megawatts, and the Y-axis is the hours of the day.

⁴ Color scale is price per MWh in 2010 \$s

⁵ Color scale is sales and purchases in 2010 \$s

⁶ Efficiency impacts are currently using customer load shapes; this is conservative and does

- CCA minimum demand
- Peak demand by customer segment
- Capacity impact by technology for each of the above demand periods (except for peak demand by customer class)
 - The model calculates the max, median, and minimum capacity impacts for the demand periods by comparing technology output over similar time frames over the course of each month – this is necessary to estimate the range of capacity impacts for intermittent renewable technologies. For example, a wind farm may happen to be outputting 100% of its nameplate capacity at the point in time when the system coincident demand period is set for the month; however, it would be inaccurate to assume this will be the actual capacity impact for the wind farm, as it could just as easily be at 0% of its capacity. The median output for the time period that defines system coincident demand is the more accurate value to assume for its capacity impact.

Financial Model

The financial model calculates CleanPowerSF's revenue requirements for its cost of service, as well as the revenue resulting from both the generation portion of customers' bills and the full retail bill value for electric and natural gas usage displaced by behind-the-meter assets. For certain technologies, the program is assumed to gain only a portion of the financial benefit from the retail bill displacement. This is why customer bills begin to decline over the course of all scenarios presented.

Energy Calculations

The outputs from the energy model are used as inputs to the financial model. The energy model outputs are at the substation node and prices are expressed in real dollars. The financial model duplicates the energy model outputs while adjusting for the transmission and primary and secondary distribution losses by asset and customer class, inflation, and wholesale price escalation. The resulting data array provides all the electricity-related inputs needed for the financial model calculations. Thermal calculations are based off of the energy model outputs, but are calculated within the financial model.

Financial Model Inputs

The following inputs are specified on an annual basis:

- Market price escalation
- Natural gas price escalation
- PG&E rates and escalation
 - Electricity: generation and non-generation

- Natural Gas
- PG&E rate surcharges and escalation
 - Franchise Fee
 - PCIA
- Uncollectible expenses
- Resource Adequacy requirements by type
- Renewable Portfolio Standard percentages overall and by type (for the compliance threshold, and for purchases above the RPS compliance threshold)
- GHG free percentages
- Discount or premium (as compared to PG&E's rates) for the generation portion of the electricity bill, as well as the full retail bill for both electricity and natural gas (for behind-the-meter assets)
- Inflation
- Financing Costs
 - Revenue Bond specifications (for taxable and non-taxable issuances):
 - Coupon Rate
 - Maturity
 - Annual Payments
 - Capitalized Interest Fund
 - Debt Service Reserve Fund
 - Insurance Cost
 - Underwriting Cost
 - Interest Rate for Reserves
 - CCA bond requirements and carrying costs
- SFPUC Balance Sheet adjustments (for calculating DSCR)
- Operational costs:
 - Staff and marketing
 - Schedule coordination
 - Billing and data management

The following inputs are specified by technology:

- The percentage of capacity installed within each customer segments (applicable to behind-the-meter assets)

- Shared savings percentage (i.e. the percentage of the avoided retail rate costs resulting from the installation of the asset that accrue to the program as opposed to the customer)
- Impact of standby charges
- Whether it is contracted for under a PPA, or built by the City
- Costs: PPA, capital, fixed & variable O&M
 - To estimate PPA costs while taking into consideration the impact of tax incentives (available to the private sector), an LCOE calculator is included.
- Applicability of CAISO charges
- Applicability of Schedule Coordinator charges
- Resource Adequacy type
- Load modifier for RA, Cap-and-Trade, and RPS calculations
- Applicability of integration charges
- Capacity balancing
- Localization Portfolio Standard valuation
- Renewable Portfolio Standard valuation and type
- Job creation estimates (direct, indirect, and induced)
- Natural Gas consumption
- Biogas consumption
- Thermal generation or savings
- T&D loss factors

Sensitivity Analyses

The final version of the model will be able to quickly run several scenario analyses for any given deployment scenario. The model has low, reference, and high datasets loaded for natural gas price forecasts and PG&E rates by customer class. It currently only has the reference case of wholesale market price escalations loaded, and only a single estimate of the PCIA charges. The PCIA, PG&E rates, and wholesale costs are interrelated. This calculation will be included in the final version of the model.

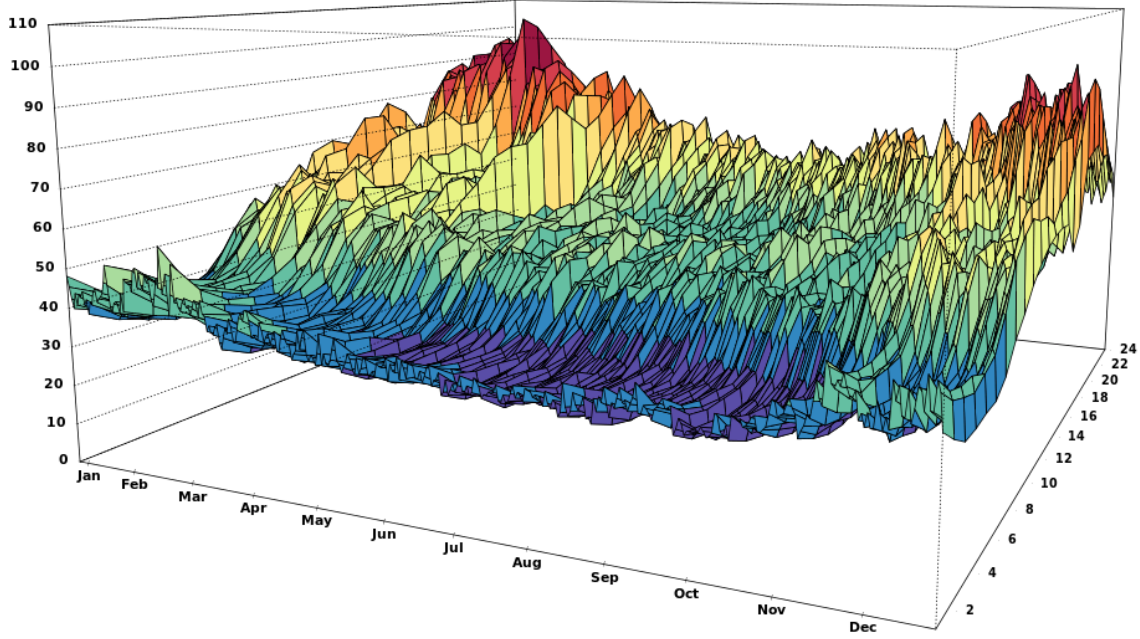
Financial Model Outputs

The financial model outputs a pro forma spreadsheet. The appendix lists all pro forma analyses for the preliminary budgetary estimates.

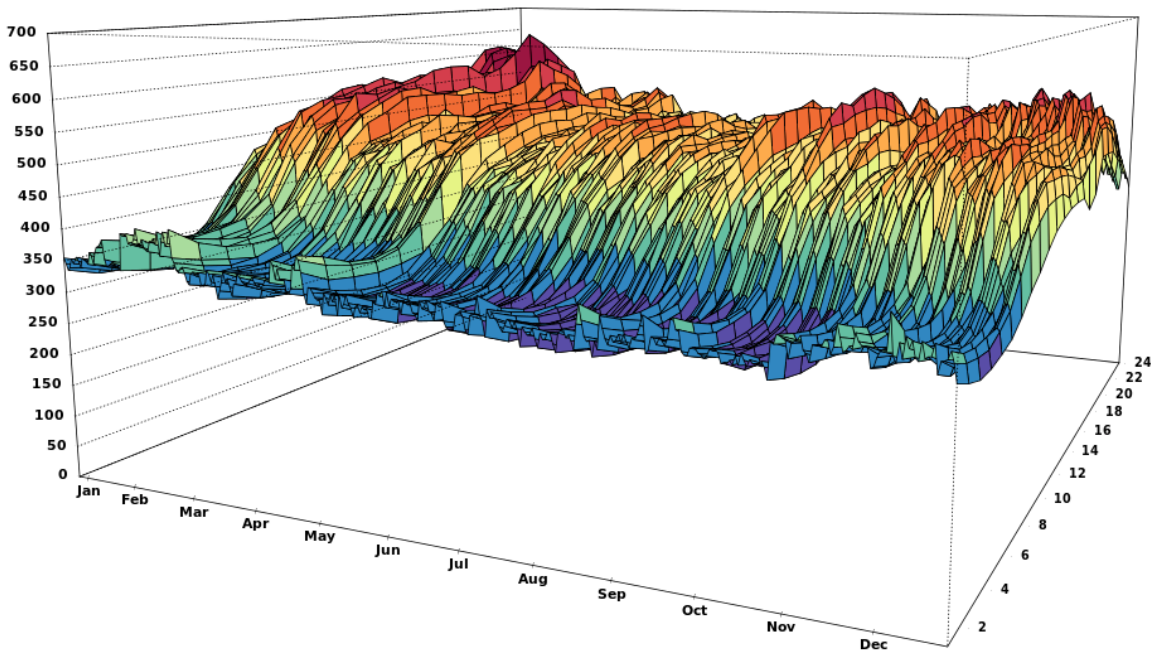
Appendix

CleanPowerSF Load Shapes for Select Years:

2013: 95,000 Residential Customers

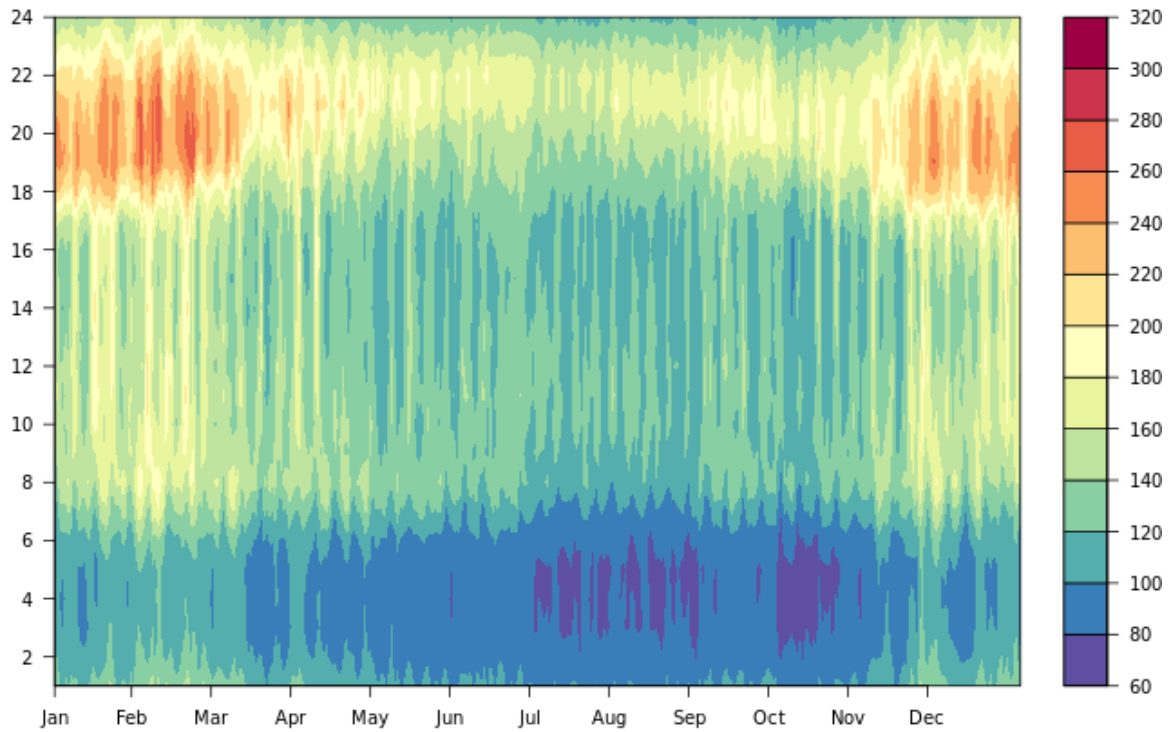


2016: Full Enrollment (80% Customer Base Retention)

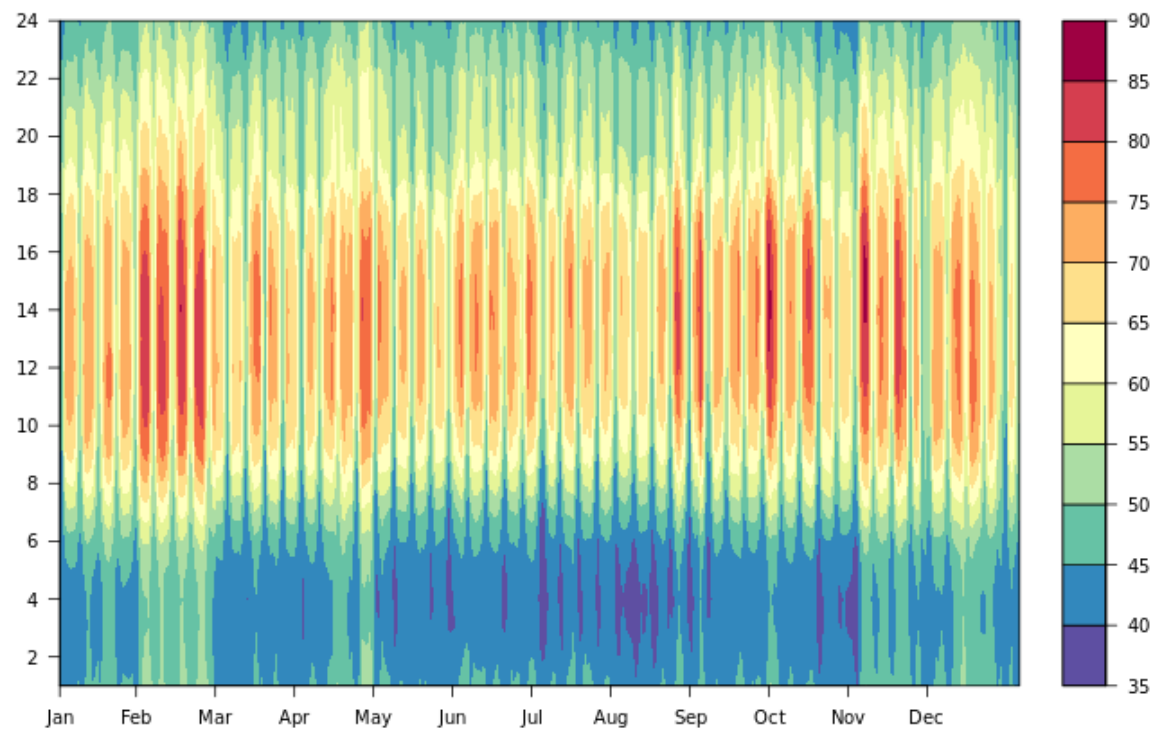


Customer Load Shapes³

Residential

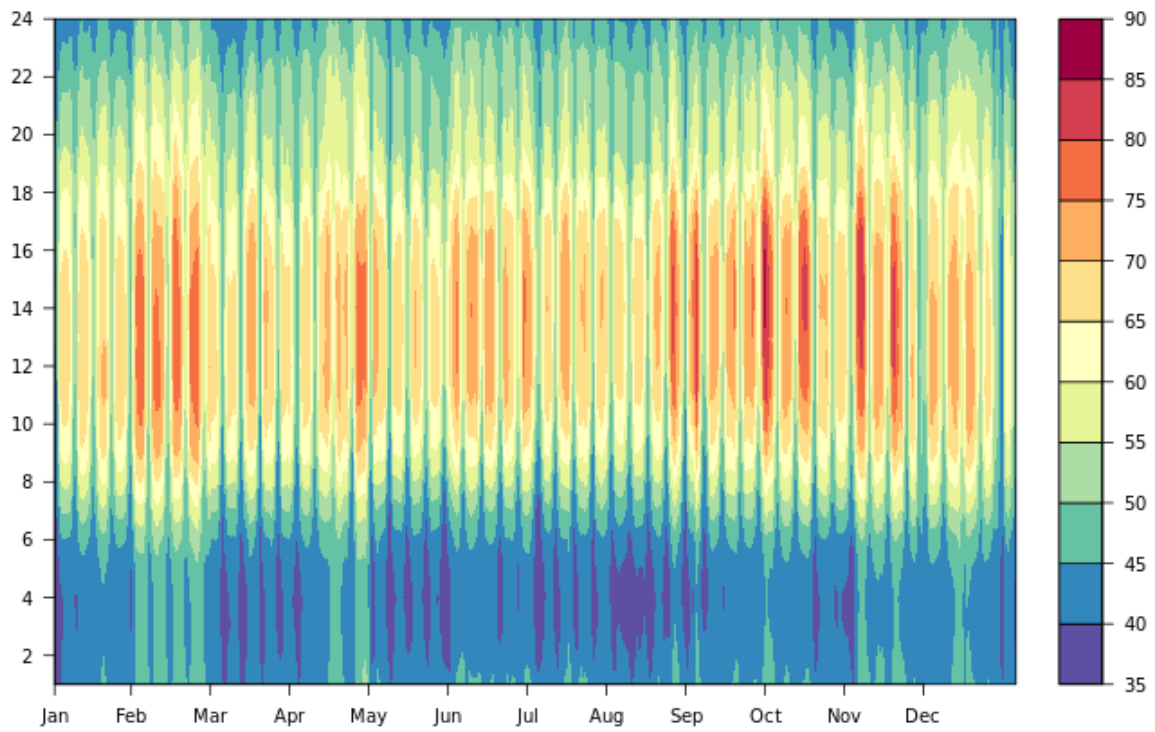


Small Commercial

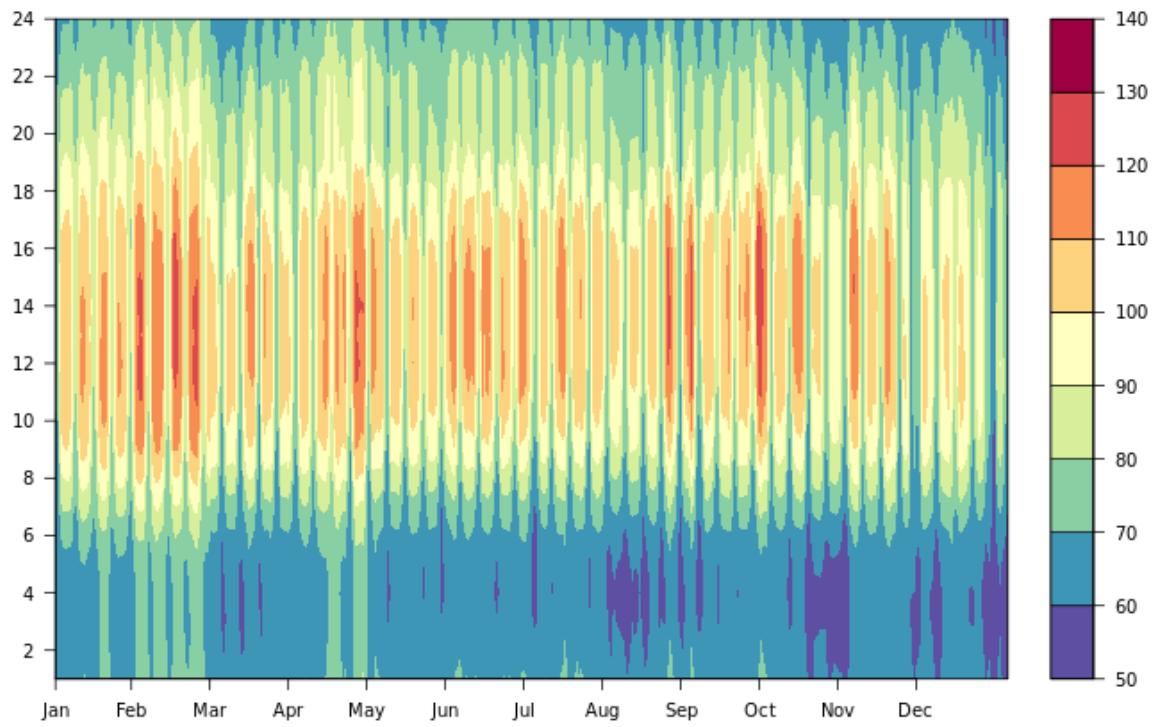


³ The color scale is in megawatts, and the Y-axis is the hours of the day.

Medium Commercial

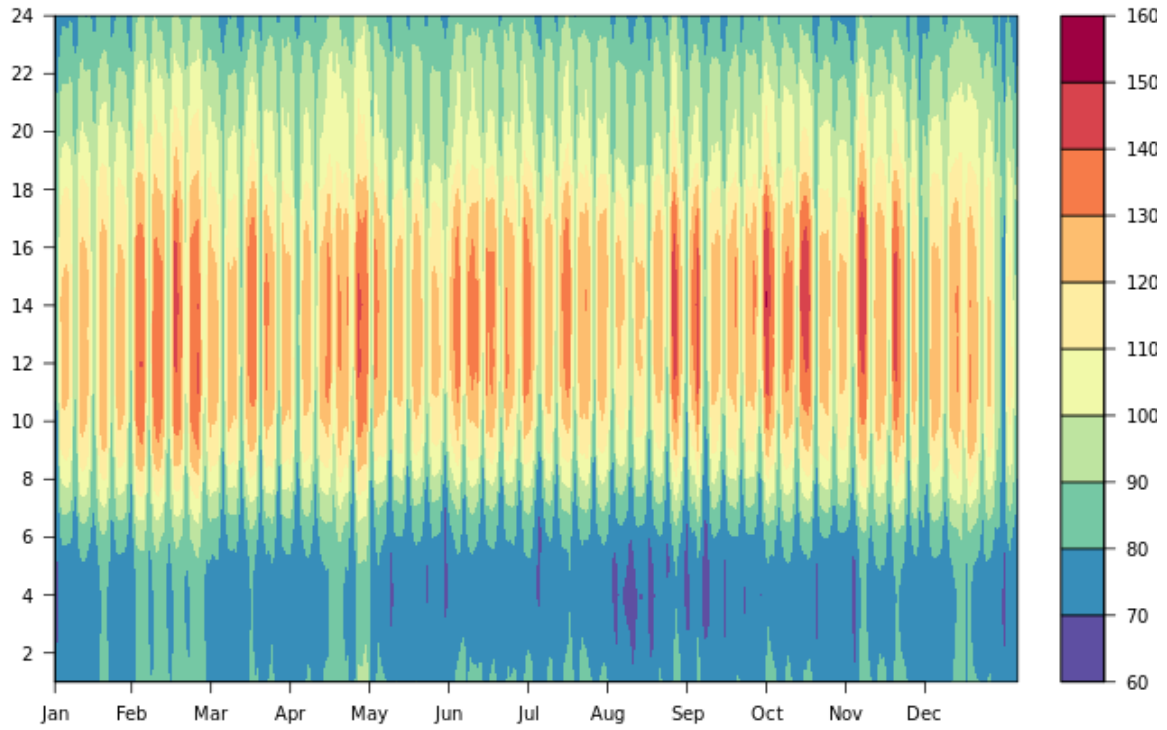


Large Commercial



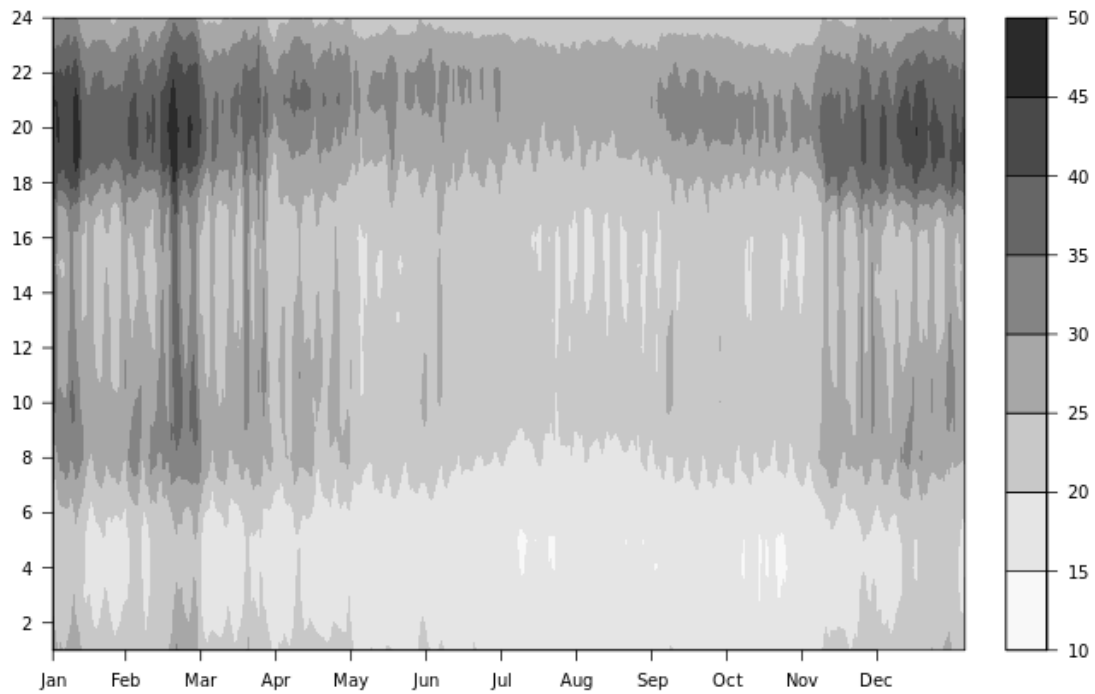
Local Power.

Industrial

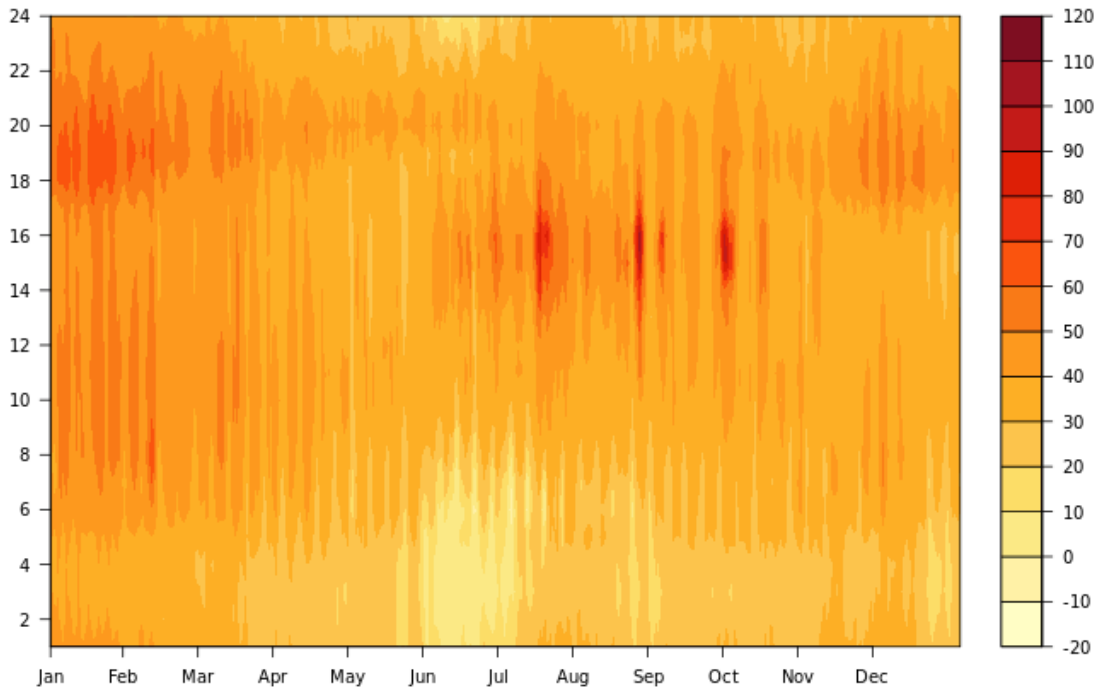


Market and Contracts

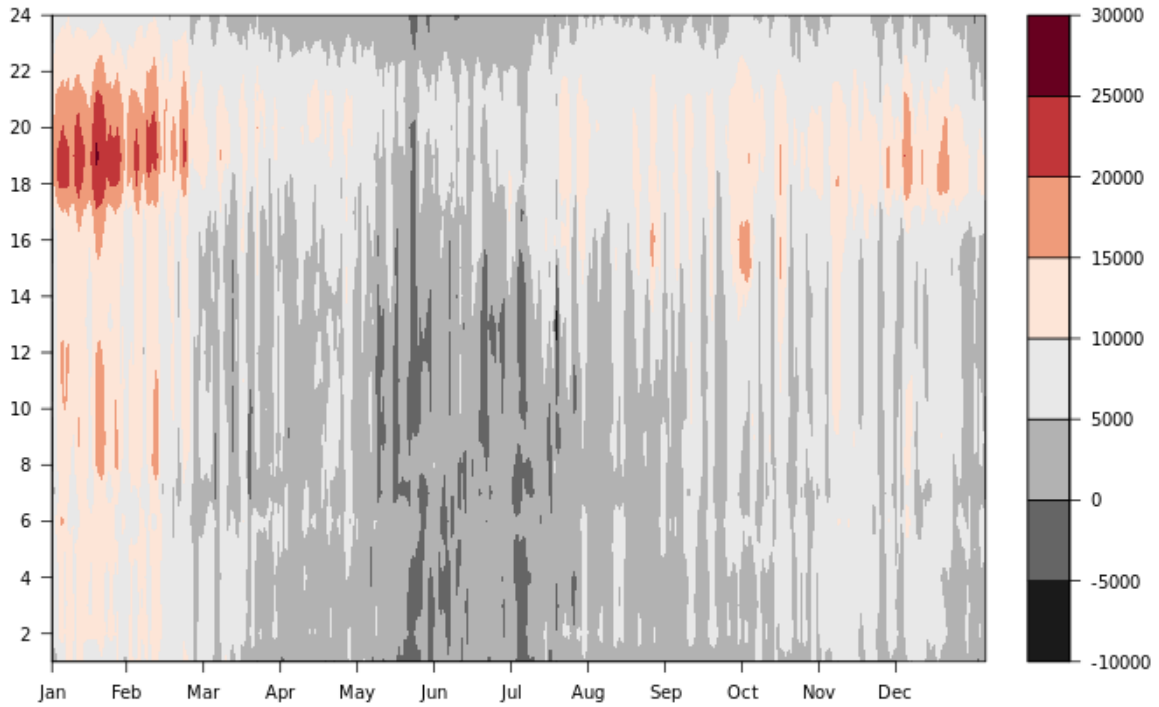
SENA Contract MW (null power, 50k residential customers)



CAISO Day Ahead Market Prices⁴



CAISO Day Ahead Market Market Transactions⁵

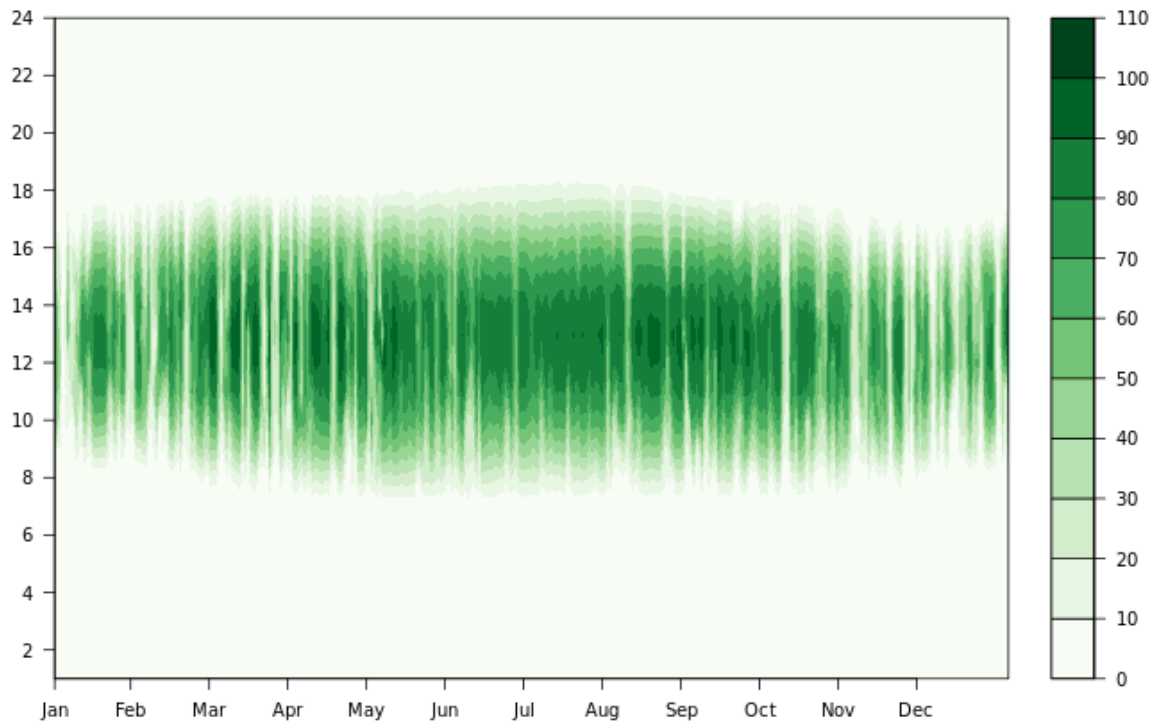


⁴ Color scale is price per MWh in 2010 \$s

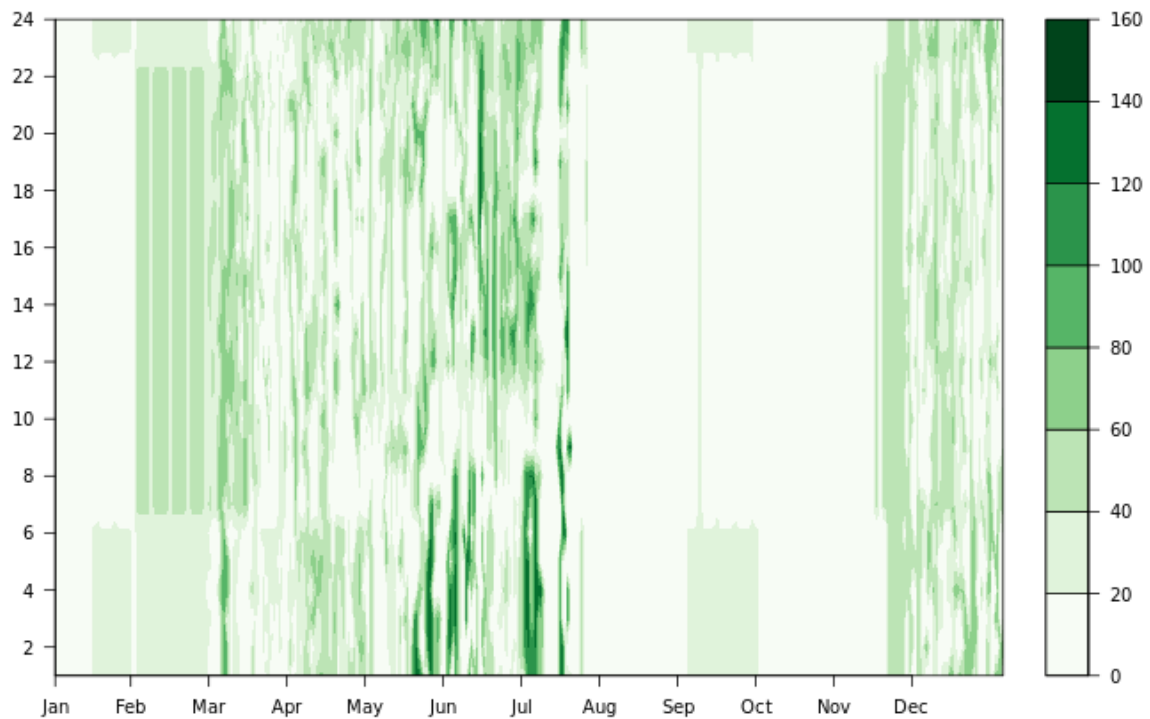
⁵ Color scale is sales and purchases in 2010 \$s

Resource Shapes (2018)

Solar Photovoltaic

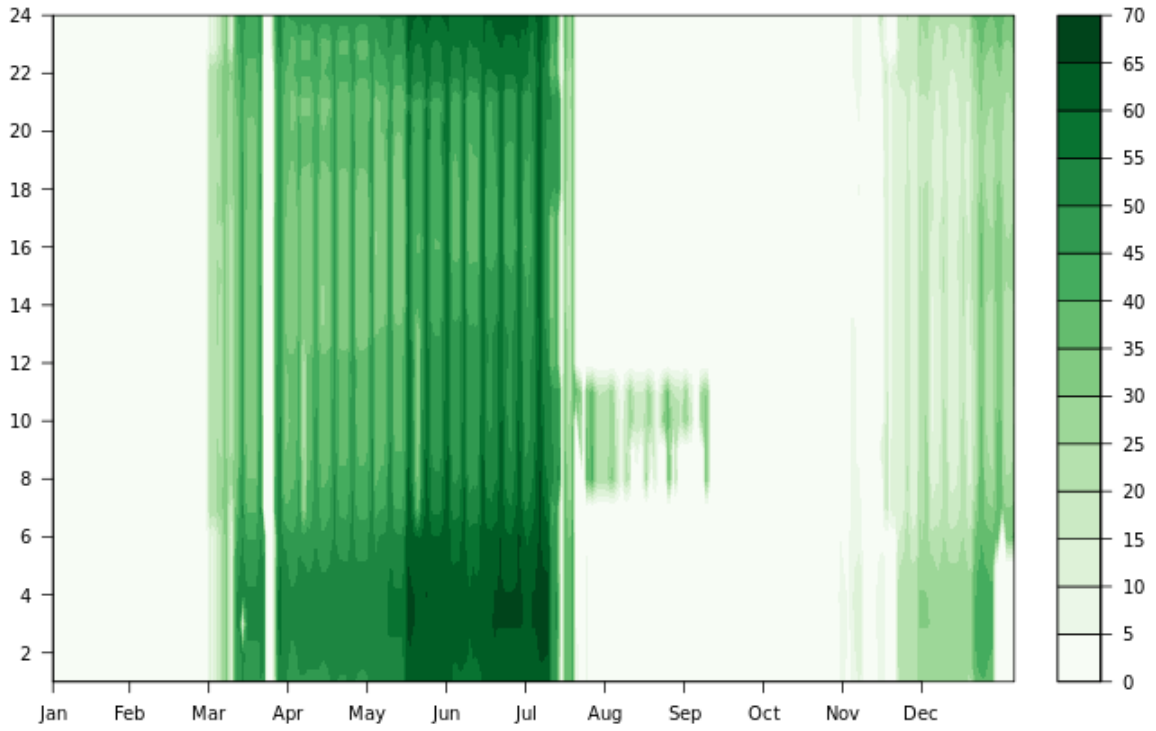


Hydroelectric (Western System Power Pool, fixed, average year)

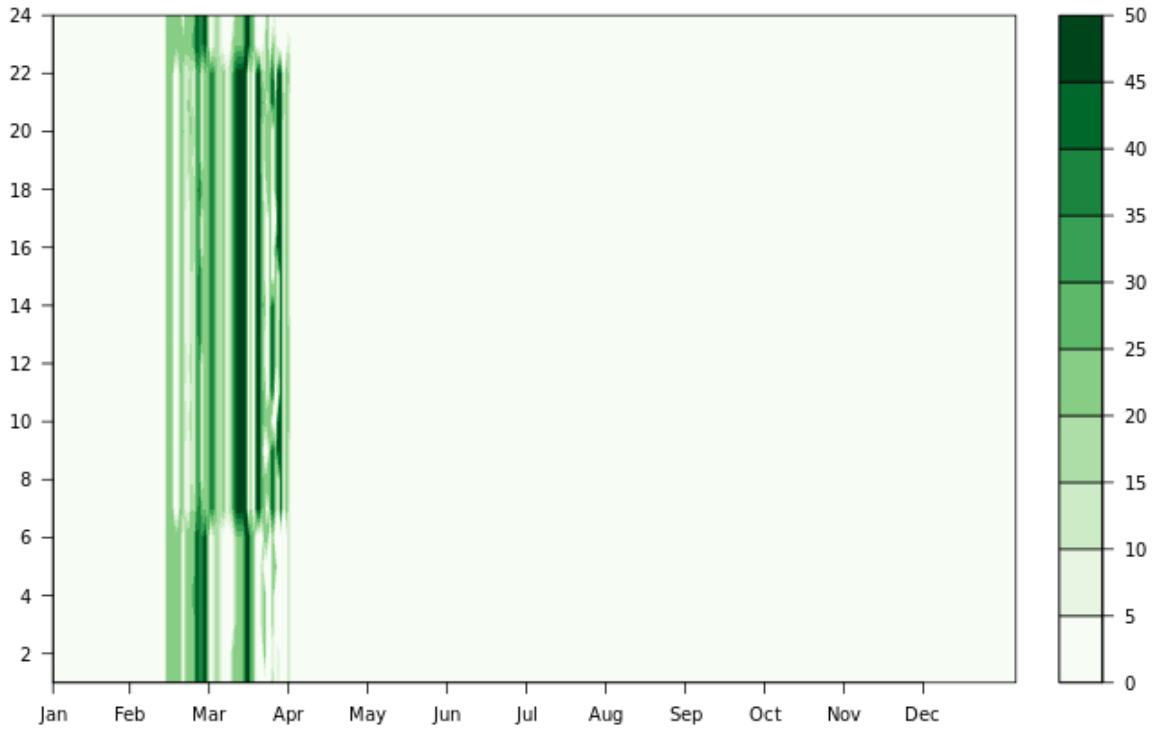


Local Power.

Hydroelectric (MID/TID Excess, average year)

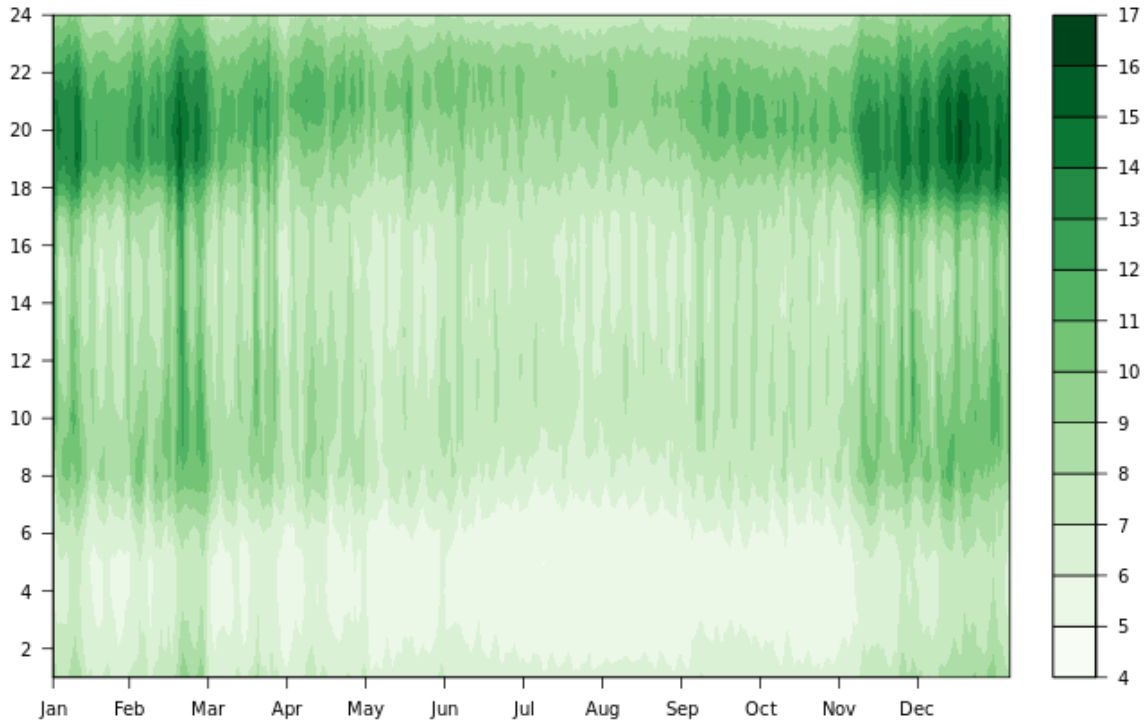


Hydroelectric (Western System Power Pool, fixed, average year)

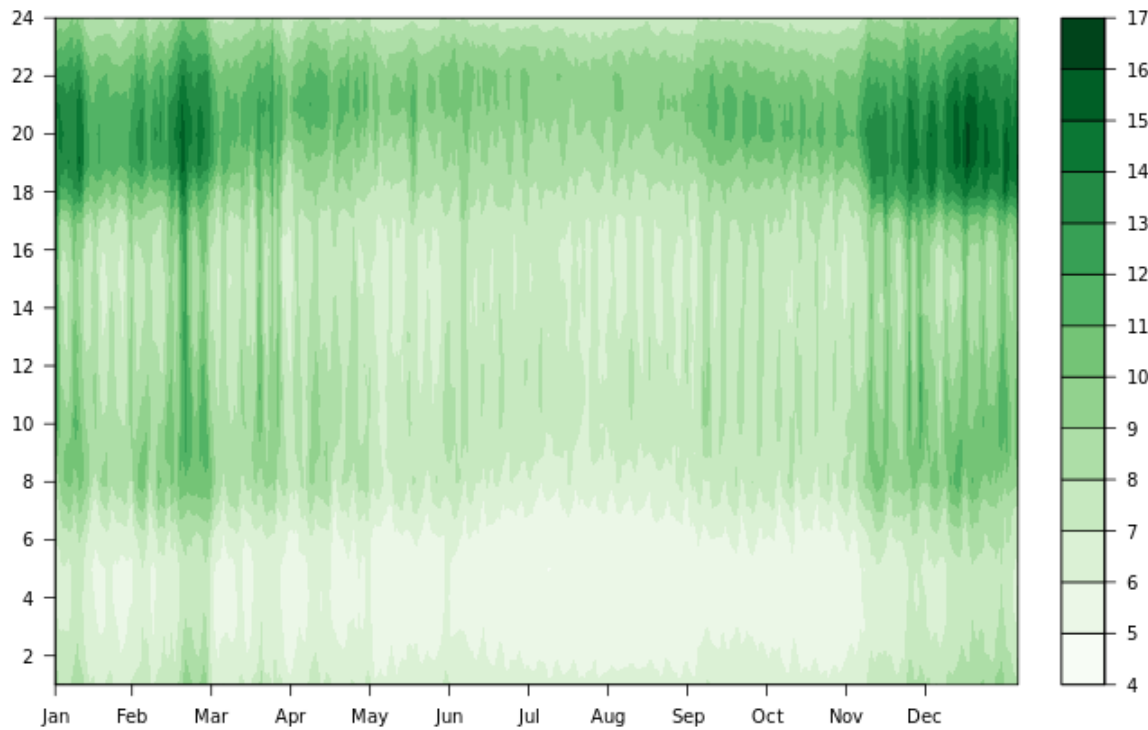


Local Power.

Energy Efficiency⁶ - Residential

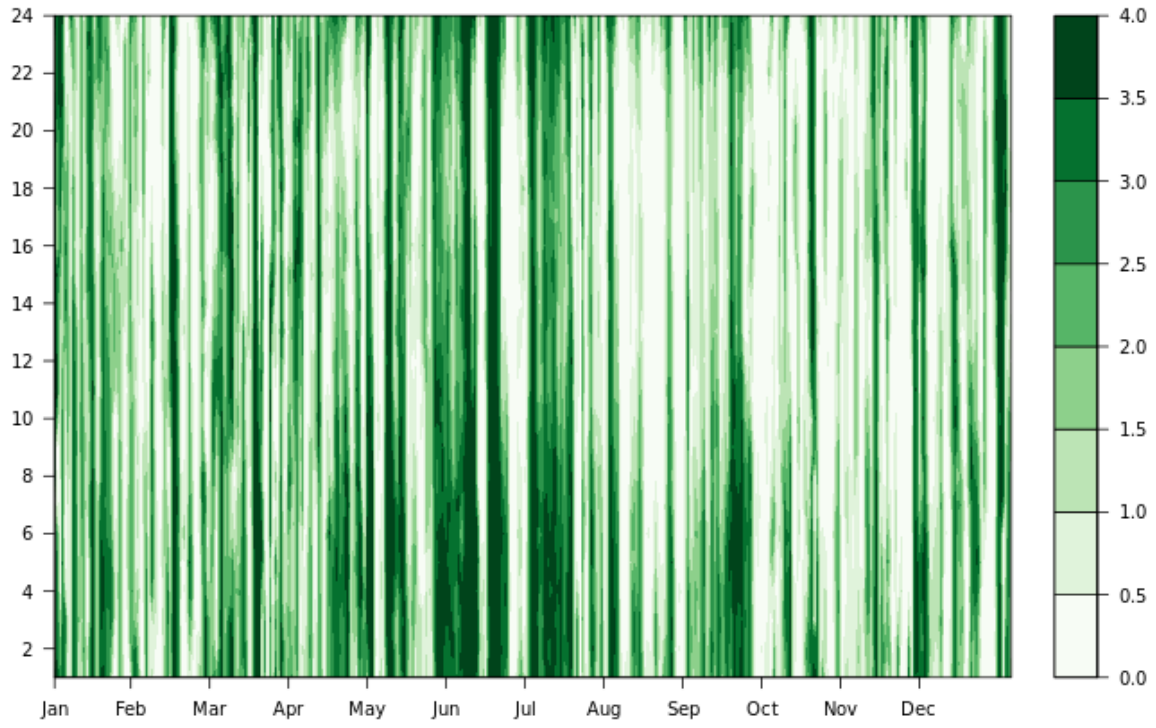


Energy Efficiency - Nonresidential

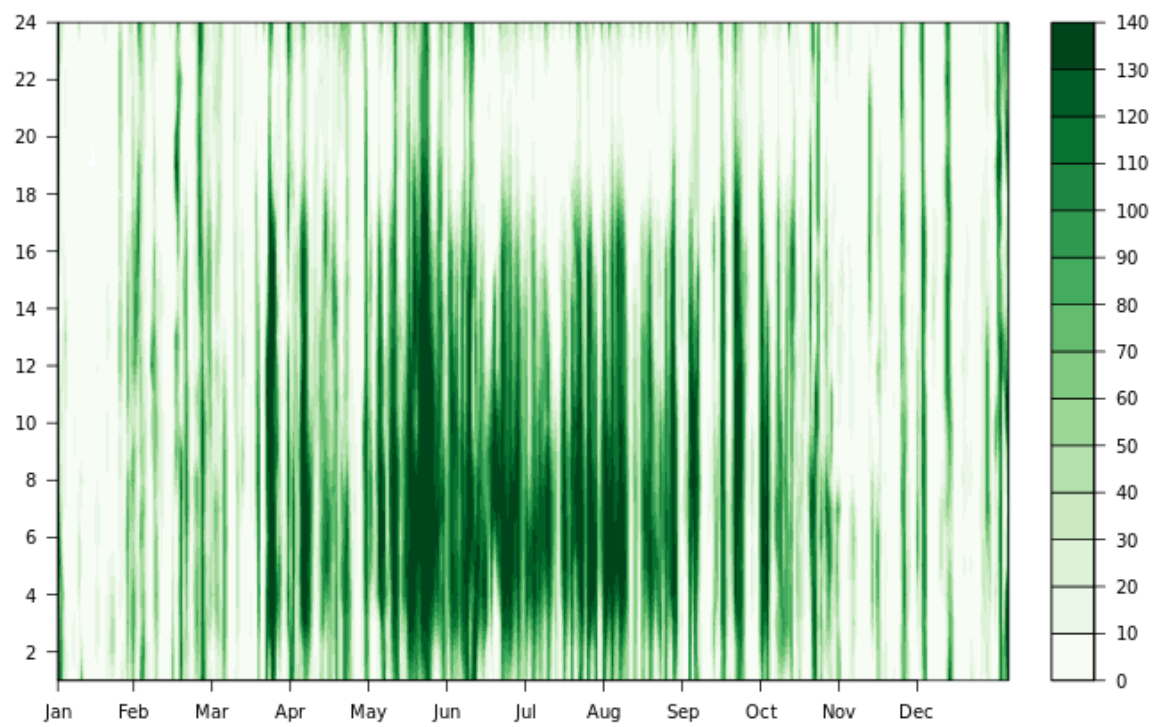


⁶ Efficiency impacts are currently using customer load shapes; this is conservative and does not account for the increased on-peak impacts expected from measures. Local Power will work to refine these impacts.

Local Wind

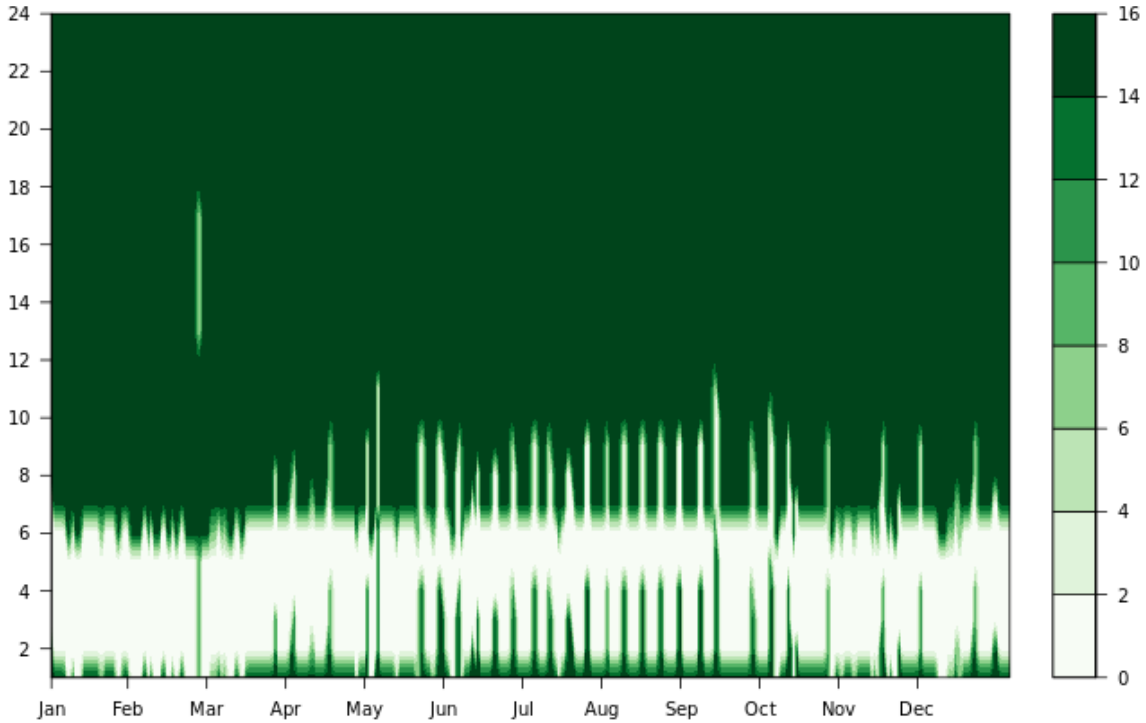


Remote Wind



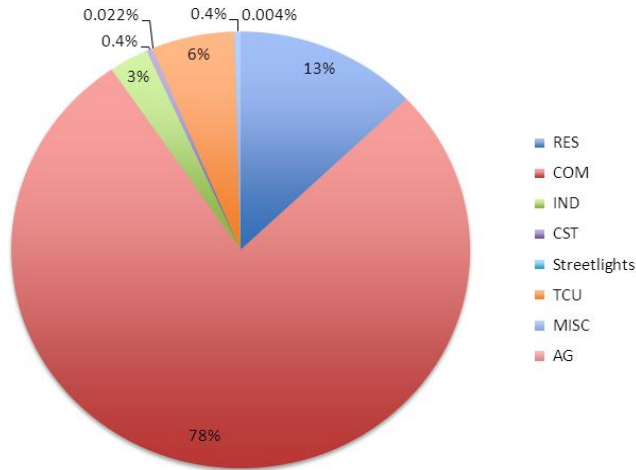
Local Power.

Combined Heat and Power and Geothermal⁷

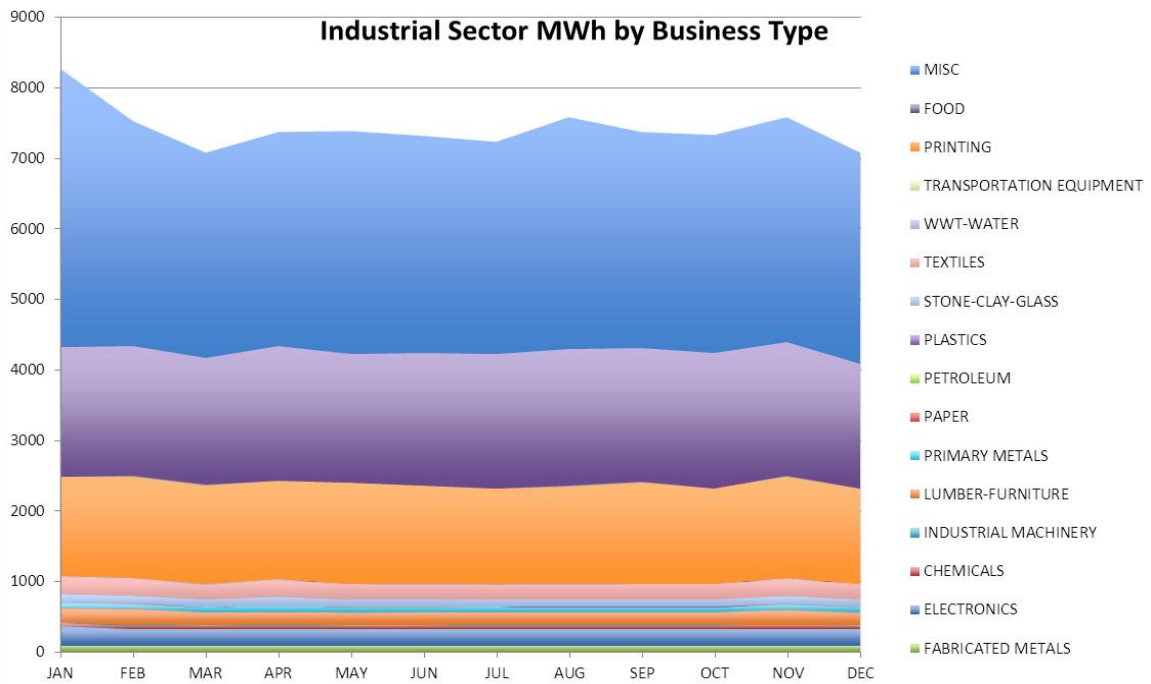
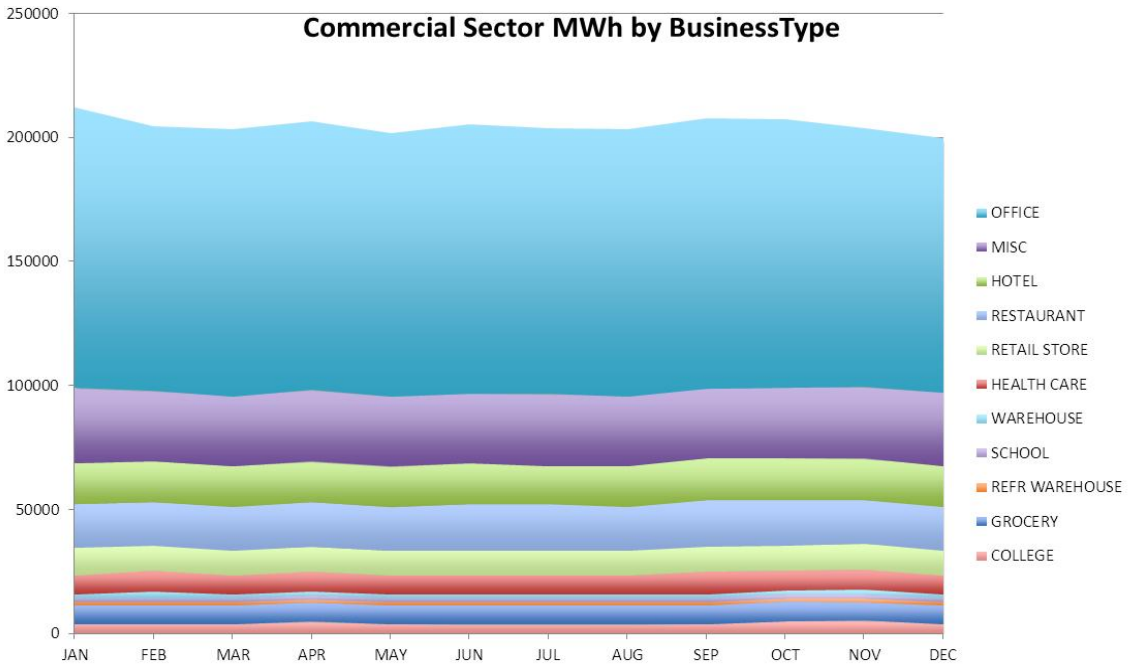


Customer Segment and Sector Consumption (2011)

Bundled Service Usage by Sector



⁷ Geothermal and all CHP technologies have an assumed 80% capacity factor, with downtime coinciding with the lowest wholesale power price periods. Local Power will work to refine these for the final model, taking into account randomized non-planned downtime within operational constraints, profiles refined with vendor and plant operator input, and the ability of certain CHP technologies to boost output temporarily for ramping and peak shaving purposes.



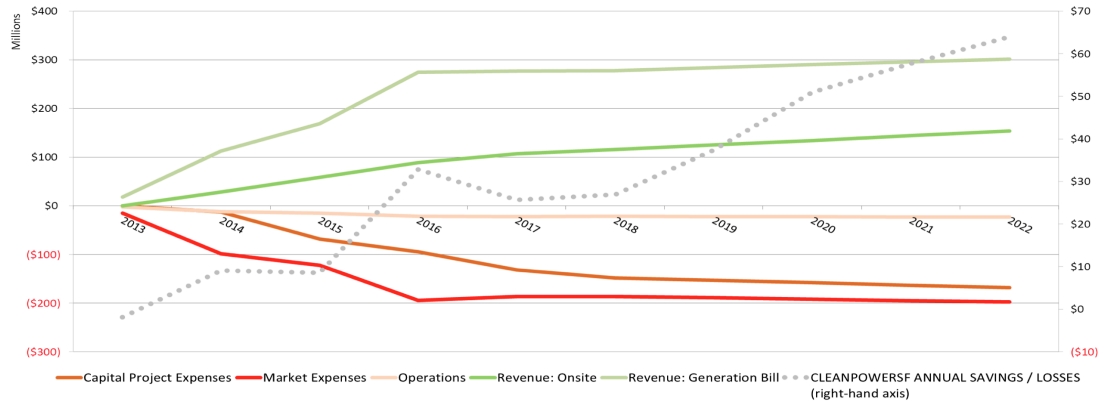
Scenario Pro Forma

Phase I – SENA

DRAFT RESULTS FOR LIMITED RELEASE

SENA PHASE I - RAPID DEPLOYMENT + GEYSERS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	50,000	155,758	155,886	236,384	236,577	236,771	236,965	237,159	237,353	237,547
Small_Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium_Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large_Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street_Lights	-	45	86	131	131	131	131	131	131	131
Traffic_Lights	-	35	67	102	102	103	103	103	103	103
Total	50,000	164,787	173,421	262,973	263,184	263,397	263,610	263,823	264,035	264,247
RATE PARITY OVER / (UNDER)	28%	4%	3%	2%	2%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	13%	3%	1%	0%	-1%	-4%	-5%	-7%	-7%	-8%
LOCALIZATION PORTFOLIO STANDARD	0%	16%	41%	36%	49%	50%	51%	52%	52%	53%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	10%	40%	100%	51%	47%	47%	47%	47%	47%	47%
RPS Type 2 - Firmed/Shaped	85%	51%	0%	49%	53%	53%	53%	53%	53%	53%
RPS Type 3 - TRECS	5%	9%	0%	0%	0%	0%	0%	0%	0%	0%
Total RPS	100%	33%	32%	31%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	15	40	80	120	120	120	120	120	120
Wind (MW)	-	-	150	150	154	154	154	154	154	154
Combined Heat and Power (MW)	-	20	35	45	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
Energy Efficiency (Cumulative Retrofits)	-	6,000	15,000	25,200	35,400	46,800	58,200	69,600	81,000	92,400
Hetch Hetchy Hydroelectric (GW)	-	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	25	25	25	25	25	25	25	25	25
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 104,528,961	\$ 477,660,843	\$ 159,872,973	\$ 235,176,342	\$ 140,384,878	\$ -	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 17,074,829	\$ 26,069,994	\$ 27,796,442	\$ 28,298,925	\$ 30,115,974	\$ 30,617,509	\$ 31,142,926	\$ 31,692,226	\$ 32,214,644
SFUC DSCR (Indenture)	43.72	9.74	2.81	3.03	2.88	2.95	3.22	3.62	4.03	4.46
SFUC DSCR (Current)	21.59	7.20	2.20	2.27	1.86	1.69	1.73	1.77	1.78	1.80
ESTIMATED JOB CREATION										
Jobs - Primary	-	876	2,959	1,781	1,921	274	274	274	274	274
Jobs - Secondary	-	788	2,663	1,602	1,729	247	247	247	247	247
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	1,664	5,623	3,383	3,650	521	521	521	521	521
Cumulative Job Years	-	1,664	7,287	10,670	14,320	14,841	15,362	15,883	16,404	16,925
REVENUE REQUIREMENTS										
Staff and Operations	(\$801,018)	(\$2,634,100)	(\$3,249,707)	(\$4,799,801)	(\$4,677,880)	(\$4,555,627)	(\$4,556,077)	(\$4,556,382)	(\$4,556,827)	(\$4,557,130)
Billing and Data Management	(\$1,469,999)	(\$5,295,340)	(\$6,019,640)	(\$9,277,165)	(\$9,440,243)	(\$9,587,802)	(\$9,731,889)	(\$9,883,598)	(\$10,043,184)	(\$10,195,232)
Schedule Coordination	\$0	(\$3,331,759)	(\$5,111,663)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,365,331)	(\$6,474,564)	(\$6,588,763)	(\$6,697,997)
Uncollectibles	(\$62,199)	(\$495,148)	(\$793,879)	(\$1,269,550)	(\$1,343,570)	(\$1,377,708)	(\$1,432,418)	(\$1,486,635)	(\$1,540,633)	(\$1,591,917)
CCA Bond Carrying Cost	(\$3,244)	(\$15,987)	(\$18,773)	(\$28,622)	(\$29,744)	(\$29,930)	(\$30,298)	(\$31,431)	(\$31,431)	(\$30,682)
Working Capital Carrying Cost	(\$4,109)	(\$90,150)	(\$258,969)	(\$349,968)	(\$443,329)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$49,976)	(\$40,803,481)	(\$47,224,033)	(\$87,728,297)	(\$65,093,901)	(\$78,450,530)	(\$79,298,247)	(\$80,195,708)	(\$81,281,689)	(\$82,165,677)
Contract Purchases	(\$9,790,480)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$10,035,807)	(\$10,202,938)	(\$10,378,077)	(\$10,561,075)	(\$10,736,164)
RPS Compliance and Environmental Attribute Purchases	(\$3,331,440)	(\$13,666,025)	(\$14,580,606)	(\$26,990,620)	(\$40,409,845)	(\$40,096,672)	(\$39,790,859)	(\$39,497,658)	(\$39,206,841)	(\$38,981,382)
Resource Adequacy	(\$1,433,087)	(\$6,106,869)	(\$7,095,444)	(\$11,692,211)	(\$9,677,218)	(\$9,725,716)	(\$9,768,277)	(\$9,819,193)	(\$9,880,231)	(\$9,934,414)
CAISO Adequacy	(\$681,247)	(\$3,982,684)	(\$6,098,834)	(\$9,651,953)	(\$9,429,922)	(\$9,455,192)	(\$9,472,610)	(\$9,496,842)	(\$9,529,088)	(\$9,553,336)
Integration Charges (Generator)	\$0	(\$2,169)	(\$47,353)	(\$51,779)	(\$66,410)	(\$67,777)	(\$67,070)	(\$67,396)	(\$67,752)	(\$68,037)
Natural Gas Purchases	\$0	(\$6,830,919)	(\$12,991,922)	(\$16,511,154)	(\$17,131,583)	(\$17,886,701)	(\$18,767,859)	(\$19,695,467)	(\$20,680,622)	(\$21,629,902)
Biogas Purchases	\$0	(\$9,979,688)	(\$15,152,762)	(\$19,174,982)	(\$19,813,233)	(\$20,640,945)	(\$21,649,525)	(\$22,710,130)	(\$23,819,703)	(\$24,864,268)
Capital Projects - O&M	\$0	(\$3,933,834)	(\$18,425,947)	(\$27,397,747)	(\$41,776,272)	(\$42,107,209)	(\$42,394,840)	(\$42,705,791)	(\$43,039,273)	(\$43,330,563)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$4,448,041)	(\$24,579,291)	(\$30,295,851)	(\$38,893,271)	(\$42,989,209)	(\$40,815,842)	(\$38,599,007)	(\$36,337,856)	(\$34,031,442)
Capital Projects - Coupon Payment - Taxable	\$0	(\$4,018,651)	(\$22,543,230)	(\$29,593,330)	(\$39,816,494)	(\$46,803,233)	(\$48,676,352)	(\$50,622,366)	(\$52,647,260)	(\$54,753,151)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$1,212,966)	(\$2,946,747)	(\$4,618,883)	(\$6,124,487)	(\$7,546,893)	(\$8,773,173)	(\$9,794,020)	(\$10,599,604)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$1,590,628)	(\$4,122,604)	(\$6,979,987)	(\$10,069,910)	(\$13,529,948)	(\$17,261,609)	(\$21,284,774)	(\$25,620,615)
Revenue Requirement Subtotal	(\$17,626,606)	(\$122,784,026)	(\$205,699,635)	(\$310,502,357)	(\$340,786,818)	(\$356,264,508)	(\$364,095,151)	(\$372,257,847)	(\$380,921,001)	(\$389,941,712)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$177,771,261	\$112,836,412	\$168,498,038	\$274,124,028	\$277,035,333	\$277,860,503	\$284,308,602	\$290,394,495	\$296,193,652	\$301,240,467
Behind-the-Meter Revenue - Electric	\$0	\$23,037,584	\$46,757,011	\$71,457,931	\$87,762,044	\$94,203,383	\$101,226,941	\$107,979,318	\$114,753,994	\$121,364,405
Behind-the-Meter Revenue - Thermal	\$0	\$5,596,995	\$11,567,464	\$17,146,507	\$19,079,641	\$21,266,950	\$23,736,881	\$26,379,078	\$29,239,325	\$32,208,268
Bond Interest Credit & DSR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$177,771,261	\$141,470,991	\$226,822,513	\$362,728,466	\$383,877,018	\$393,630,836	\$409,262,424	\$424,752,891	\$440,180,971	\$454,833,540
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	(\$2,047,815)	(\$9,596,359)	(\$12,618,676)	(\$19,375,534)	(\$17,415,251)	(\$10,435,172)	(\$7,753,343)	(\$1,551,153)	(\$1,557,832)	(\$1,562,884)
CLEANPOWER\$F SAVINGS / LOSSES (ANNUAL)	(\$1,903,360)	\$9,090,607	\$8,504,203	\$32,850,575	\$25,674,950	\$26,911,156	\$37,413,930	\$50,943,891	\$57,702,139	\$63,928,944
CLEANPOWER\$F SAVINGS / LOSSES (CUMULATIVE)	(\$1,903,360)	\$7,187,247	\$15,691,449	\$48,542,024	\$74,216,974	\$101,148,130	\$138,562,060	\$189,505,950	\$247,208,089	\$311,137,033

CleanPower\$F Revenues, Expenses, and Annual Cashflow
PRELIMINARY RESULTS



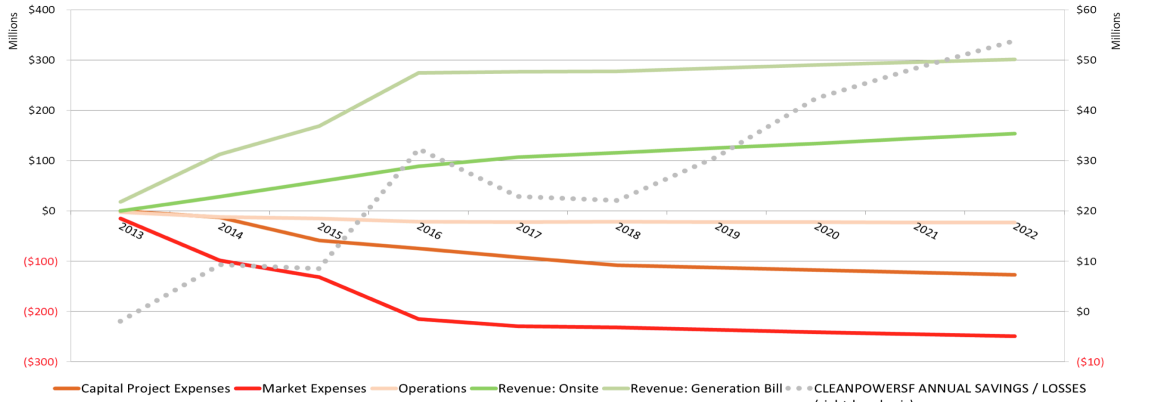
Local Power.

Local Power.

DRAFT RESULTS FOR LIMITED RELEASE

SENA PHASE 1 - RAPID DEPLOYMENT	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	50,000	155,758	155,886	236,384	236,577	236,771	236,965	237,159	237,353	237,547
Small_Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium_Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large_Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street_Lights	-	45	86	131	131	131	131	131	131	131
Traffic_Lights	-	35	67	102	102	103	103	103	103	103
Total	50,000	164,787	173,421	262,973	263,184	263,397	263,610	263,823	264,035	264,247
RATE PARITY OVER / (UNDER)	28%	4%	3%	2%	2%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	13%	3%	1%	0%	-1%	-4%	-5%	-7%	-7%	-8%
LOCALIZATION PORTFOLIO STANDARD	0%	16%	34%	27%	30%	31%	32%	33%	34%	35%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	10%	42%	46%	39%	29%	31%	33%	35%	35%	35%
RPS Type 2 - Firmed/Shaped	85%	48%	54%	61%	67%	65%	63%	60%	60%	61%
RPS Type 3 - TRECS	5%	10%	0%	0%	4%	4%	4%	5%	5%	5%
Total RPS	100%	32%	31%	31%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	15	40	80	120	120	120	120	120	120
Wind (MW)	-	20	35	45	45	45	45	45	45	45
Combined Heat and Power (MW)	-	20	35	45	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (MW)	-	15	15	15	15	15	15	15	15	15
Energy Efficiency (Cumulative Retrofits)	-	6,000	15,000	25,200	35,400	46,800	58,200	69,600	81,000	92,400
Hetch Hetchy Hydroelectric (GWh)	-	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	-	-	-	-	-	-	-	-	-
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 104,528,961	\$ 435,014,211	\$ 116,644,146	\$ 146,836,298	\$ 140,304,878	\$ -	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 17,074,829	\$ 26,069,994	\$ 27,796,442	\$ 28,298,925	\$ 30,115,974	\$ 30,617,509	\$ 31,142,295	\$ 31,699,236	\$ 32,217,644
SFUC DSCR (Indenture)	43.72	9.77	2.94	3.24	3.17	3.15	3.39	3.75	4.12	4.50
SFUC DSCR (Current)	21.59	7.22	2.29	2.41	1.98	1.74	1.77	1.79	1.80	1.81
ESTIMATED JOB CREATION										
Jobs - Primary	-	876	2,799	1,620	1,600	274	274	274	274	274
Jobs - Secondary	-	788	2,519	1,458	1,440	247	247	247	247	247
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	1,664	5,317	3,078	3,039	521	521	521	521	521
Cumulative Job Years	-	1,664	6,981	10,059	13,098	13,619	14,140	14,661	15,182	15,703
REVENUE REQUIREMENTS										
Staff and Operations	(\$801,018)	(\$2,634,160)	(\$3,249,707)	(\$4,799,801)	(\$4,677,880)	(\$4,555,627)	(\$4,556,077)	(\$4,556,382)	(\$4,556,827)	(\$4,557,130)
Billing and Data Management	(\$1,469,999)	(\$5,295,340)	(\$6,014,339)	(\$9,256,433)	(\$9,418,443)	(\$9,565,833)	(\$9,709,777)	(\$9,861,329)	(\$10,020,246)	(\$10,172,647)
Schedule Coordination	\$0	(\$3,331,759)	(\$5,111,663)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,365,331)	(\$6,474,564)	(\$6,583,633)	(\$6,697,997)
Uncollectibles	(\$62,199)	(\$495,148)	(\$793,879)	(\$1,269,550)	(\$1,343,570)	(\$1,377,708)	(\$1,432,418)	(\$1,486,635)	(\$1,540,633)	(\$1,591,917)
CCA Bond Carrying Cost	(\$5,244)	(\$15,987)	(\$18,773)	(\$28,622)	(\$29,744)	(\$29,930)	(\$29,174)	(\$30,298)	(\$31,431)	(\$30,682)
Working Capital Carrying Cost	(\$4,109)	(\$90,150)	(\$237,390)	(\$306,875)	(\$354,159)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$49,976)	(\$40,803,481)	(\$56,348,785)	(\$106,643,886)	(\$104,363,911)	(\$118,779,704)	(\$120,571,491)	(\$122,444,057)	(\$124,596,327)	(\$126,442,504)
Contract Purchases	(\$9,790,480)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$10,035,807)	(\$10,202,938)	(\$10,378,027)	(\$10,561,075)	(\$10,736,164)
RPS Compliance and Environmental Attribute Purchases	(\$3,331,448)	(\$13,438,753)	(\$14,477,979)	(\$25,873,905)	(\$40,989,180)	(\$41,711,947)	(\$42,428,931)	(\$43,145,725)	(\$43,784,385)	(\$44,432,909)
Resource Adequacy	(\$1,433,037)	(\$6,106,869)	(\$7,902,750)	(\$13,298,828)	(\$13,940,389)	(\$13,013,645)	(\$13,077,739)	(\$13,151,893)	(\$13,237,977)	(\$13,333,834)
CAISO Charges	(\$681,247)	(\$3,982,684)	(\$6,098,835)	(\$9,651,954)	(\$9,429,921)	(\$9,455,192)	(\$9,472,609)	(\$9,496,484)	(\$9,520,089)	(\$9,553,539)
Integration Charges (Generator)	\$0	(\$2,169)	(\$47,353)	(\$52,779)	(\$66,410)	(\$66,777)	(\$67,070)	(\$67,396)	(\$67,752)	(\$68,037)
Natural Gas Purchases	\$0	(\$6,830,019)	(\$12,991,922)	(\$16,511,154)	(\$17,131,583)	(\$17,886,701)	(\$18,767,859)	(\$19,699,467)	(\$20,680,622)	(\$21,629,502)
Biogas Purchases	\$0	(\$9,979,688)	(\$15,152,762)	(\$19,174,982)	(\$19,813,223)	(\$20,640,945)	(\$21,649,525)	(\$22,710,138)	(\$23,819,794)	(\$24,864,563)
Capital Projects - O&M	\$0	(\$3,933,834)	(\$12,066,893)	(\$14,520,741)	(\$15,621,620)	(\$15,753,123)	(\$15,868,573)	(\$15,992,896)	(\$16,125,813)	(\$16,242,563)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$4,448,041)	(\$22,764,541)	(\$26,711,369)	(\$31,713,469)	(\$36,139,146)	(\$34,302,133)	(\$32,428,339)	(\$30,517,090)	(\$28,567,616)
Capital Projects - Coupon Payment - Taxable	\$0	(\$4,018,651)	(\$20,903,666)	(\$26,217,316)	(\$32,911,180)	(\$39,621,696)	(\$41,206,504)	(\$42,854,826)	(\$44,569,019)	(\$46,351,780)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$1,212,966)	(\$2,946,747)	(\$4,618,885)	(\$6,124,887)	(\$7,546,893)	(\$8,775,173)	(\$9,799,020)	(\$10,599,604)
Capital Projects - Capital Payment - Taxable	\$0	\$0	(\$1,590,628)	(\$4,122,604)	(\$6,979,987)	(\$10,069,910)	(\$13,529,948)	(\$17,261,609)	(\$21,284,774)	(\$25,620,615)
Revenue Requirement Subtotal	(\$17,626,806)	(\$122,556,754)	(\$205,688,827)	(\$311,020,491)	(\$343,548,594)	(\$361,089,243)	(\$370,785,013)	(\$380,813,590)	(\$390,306,041)	(\$399,474,803)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$17,771,261	\$112,836,412	\$168,498,038	\$274,124,028	\$277,035,333	\$277,860,503	\$284,308,602	\$290,394,495	\$296,193,652	\$301,240,467
Behind-the-Meter Revenue - Electric	\$0	\$23,037,584	\$46,757,011	\$71,457,911	\$87,762,044	\$94,503,383	\$101,226,941	\$107,979,318	\$114,753,994	\$121,364,805
Behind-the-Meter Revenue - Thermal	\$0	\$5,596,995	\$11,567,464	\$17,146,507	\$19,079,641	\$21,266,950	\$23,726,881	\$26,379,078	\$29,233,325	\$32,228,268
Bond Interest Credit & DSR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$17,771,261	\$141,470,991	\$226,822,513	\$362,728,466	\$383,877,018	\$393,630,836	\$409,262,424	\$424,752,891	\$440,180,971	\$454,833,540
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	(\$2,047,815)	(\$9,596,359)	(\$12,618,676)	(\$19,375,534)	(\$17,415,251)	(\$10,435,172)	(\$7,753,343)	(\$1,551,153)	(\$1,557,832)	(\$1,562,884)
CLEANPOWERSF SAVINGS / LOSSES (ANNUAL)	(\$1,903,360)	\$9,317,879	\$8,515,011	\$32,332,441	\$22,913,173	\$22,106,421	\$30,724,068	\$42,386,148	\$48,317,099	\$53,795,853
CLEANPOWERSF SAVINGS / LOSSES (CUMULATIVE)	(\$1,903,360)	\$7,414,519	\$15,929,529	\$48,261,970	\$71,175,143	\$93,281,565	\$124,005,632	\$166,393,780	\$214,710,879	\$268,506,732

CleanPowerSF Revenues, Expenses, and Annual Cashflow PRELIMINARY RESULTS



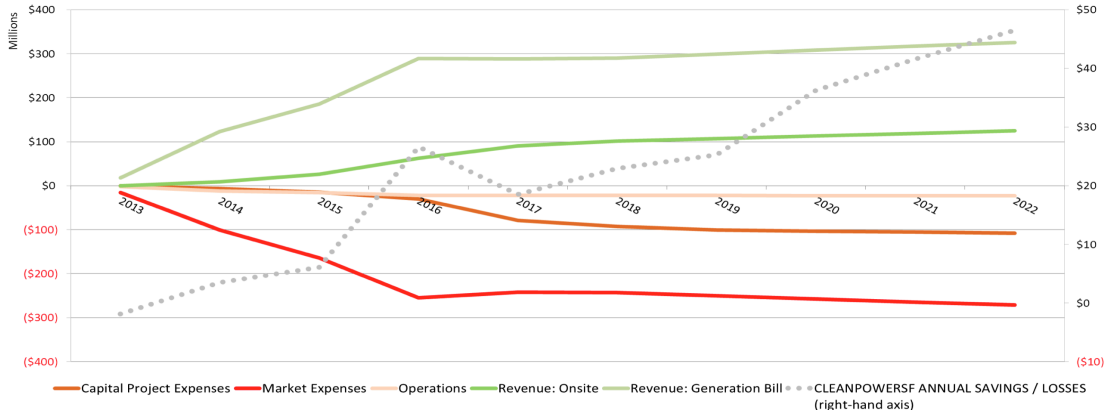
Local Power.

Local Power.

DRAFT RESULTS FOR LIMITED RELEASE

SENA PHASE 1 - SLOW DEPLOYMENT	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	50,000	155,758	155,886	236,384	236,577	236,771	236,965	237,159	237,353	237,547
Small Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street Lights	-	45	86	131	131	131	131	131	131	131
Traffic Lights	-	35	67	102	102	103	103	103	103	103
Total	50,000	164,787	173,421	262,973	263,184	263,397	263,610	263,823	264,035	264,247
RATE PARITY OVER / (UNDER)	28%	3%	2%	2%	2%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	13%	4%	3%	2%	0%	-2%	-3%	-4%	-4%	-5%
LOCALIZATION PORTFOLIO STANDARD	0%	9%	10%	12%	26%	27%	28%	28%	29%	29%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	10%	37%	43%	47%	30%	32%	34%	36%	36%	36%
RPS Type 2 - Firmed/Shaped	85%	54%	47%	42%	66%	64%	62%	59%	59%	59%
RPS Type 3 - TRECS	5%	9%	10%	11%	4%	4%	5%	5%	5%	5%
Total RPS	100%	37%	34%	32%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	5	20	50	90	110	110	110	110	110
Wind (MW)	-	6	15	35	45	154	154	154	154	154
Combined Heat and Power (MW)	-	6	15	35	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (MW)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
Energy Efficiency (Cumulative Retrofits)	-	3,000	7,500	12,600	17,700	23,400	29,100	34,800	40,500	46,200
Hetch Hetchy Hydroelectric (GWh)	-	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	-	-	-	-	-	-	-	-	-
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 60,277,770	\$ 51,697,953	\$ 120,326,115	\$ 483,110,084	\$ 140,304,878	\$ 71,398,084	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 8,537,415	\$ 13,034,997	\$ 13,896,221	\$ 14,149,462	\$ 15,057,987	\$ 15,308,754	\$ 15,571,463	\$ 15,846,113	\$ 16,108,622
SFUC DSCR (Indenture)	43.72	13.73	7.75	5.86	3.31	3.34	3.45	3.86	4.30	4.76
SFUC DSCR (Current)	21.59	9.77	5.71	4.23	2.10	1.89	1.81	1.85	1.87	1.90
ESTIMATED JOB CREATION										
Jobs - Primary	-	379	668	1,229	3,176	784	137	137	137	137
Jobs - Secondary	-	341	601	1,106	2,859	705	123	123	123	123
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	721	1,269	2,335	6,035	1,489	260	260	260	260
Cumulative Job Years	-	721	1,990	4,325	10,360	11,850	12,110	12,371	12,631	12,892
REVENUE REQUIREMENTS										
Staff and Operations	(\$801,018)	(\$2,634,160)	(\$3,249,707)	(\$4,799,801)	(\$4,677,880)	(\$4,555,627)	(\$4,556,077)	(\$4,556,382)	(\$4,556,827)	(\$4,557,130)
Billing and Data Management	(\$1,469,999)	(\$5,299,680)	(\$6,016,311)	(\$9,270,587)	(\$9,454,767)	(\$9,614,067)	(\$9,770,251)	(\$9,934,130)	(\$10,105,980)	(\$10,270,294)
Schedule Coordination	\$0	(\$3,351,591)	(\$5,178,575)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,365,331)	(\$6,474,564)	(\$6,588,763)	(\$6,697,997)
Uncollectibles	(\$62,199)	(\$463,831)	(\$742,337)	(\$1,231,928)	(\$1,325,308)	(\$1,369,626)	(\$1,422,432)	(\$1,474,693)	(\$1,528,652)	(\$1,575,819)
CCA Bond Carrying Cost	(\$3,244)	(\$15,987)	(\$18,773)	(\$28,622)	(\$29,744)	(\$29,930)	(\$29,174)	(\$30,298)	(\$31,431)	(\$30,682)
Working Capital Carrying Cost	(\$4,100)	(\$63,955)	(\$114,161)	(\$197,134)	(\$329,481)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$49,976)	(\$47,329,246)	(\$86,030,946)	(\$135,460,720)	(\$112,229,055)	(\$126,432,722)	(\$129,921,872)	(\$133,556,487)	(\$137,557,131)	(\$141,281,148)
Contract Purchases	(\$9,790,480)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$10,035,807)	(\$10,202,938)	(\$10,378,027)	(\$10,561,075)	(\$10,736,164)
RPS Compliance and Environmental Attribute Purchases	(\$3,311,448)	(\$16,084,922)	(\$25,590,266)	(\$39,834,694)	(\$44,043,748)	(\$44,504,689)	(\$45,754,737)	(\$47,145,971)	(\$47,145,971)	(\$47,276,832)
Revenue Adequacy	(\$1,433,087)	(\$6,816,735)	(\$10,935,828)	(\$16,061,293)	(\$16,677,851)	(\$13,681,277)	(\$13,863,634)	(\$14,056,695)	(\$14,263,241)	(\$14,458,785)
CAISO Charges	(\$681,247)	(\$4,390,755)	(\$6,772,779)	(\$10,220,498)	(\$9,839,093)	(\$9,849,159)	(\$9,956,205)	(\$10,070,725)	(\$10,194,056)	(\$10,309,395)
Integration Charges (Generator)	\$0	(\$723)	(\$2,940)	(\$2,527)	(\$56,623)	(\$62,553)	(\$62,805)	(\$63,087)	(\$63,397)	(\$63,639)
Natural Gas Purchases	\$0	(\$3,709,390)	(\$7,288,703)	(\$15,538,216)	(\$17,269,460)	(\$18,030,658)	(\$18,918,904)	(\$19,858,011)	(\$20,847,063)	(\$21,803,981)
Biogas Purchases	\$0	(\$5,419,978)	(\$8,500,974)	(\$15,745,632)	(\$19,972,682)	(\$20,807,068)	(\$21,823,762)	(\$22,892,904)	(\$24,011,408)	(\$25,064,675)
Capital Projects - O&M	\$0	(\$1,732,555)	(\$3,722,821)	(\$7,574,864)	(\$15,012,371)	(\$15,554,156)	(\$15,667,296)	(\$15,789,184)	(\$15,919,538)	(\$16,034,310)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$2,565,011)	(\$4,652,624)	(\$9,562,021)	(\$29,680,643)	(\$34,302,964)	(\$35,704,723)	(\$33,902,519)	(\$32,064,270)	(\$30,189,257)
Capital Projects - Capital Payment - Non-Taxable	\$0	(\$2,317,939)	(\$4,397,641)	(\$9,199,524)	(\$28,140,836)	(\$34,660,338)	(\$38,791,883)	(\$40,345,559)	(\$41,957,301)	(\$43,635,593)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$606,483)	(\$1,473,373)	(\$2,309,441)	(\$3,062,243)	(\$3,775,446)	(\$4,386,388)	(\$4,897,010)	(\$5,299,802)
Capital Projects - Capital Payment - Taxable	\$0	\$0	(\$795,314)	(\$2,061,302)	(\$3,489,994)	(\$5,034,955)	(\$6,764,974)	(\$8,630,804)	(\$10,642,387)	(\$12,810,308)
Revenue Requirement Subtotal	(\$17,626,806)	(\$119,345,938)	(\$193,321,171)	(\$305,914,681)	(\$342,680,972)	(\$357,849,104)	(\$373,350,446)	(\$383,414,626)	(\$392,932,647)	(\$402,095,810)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$17,771,261	\$123,139,034	\$185,488,135	\$289,133,425	\$288,092,867	\$289,994,490	\$299,351,439	\$308,441,723	\$317,331,940	\$325,512,013
Behind-the-Meter Revenue - Electric	\$0	\$7,512,576	\$21,362,888	\$50,734,586	\$73,097,366	\$82,345,663	\$86,372,790	\$90,388,019	\$94,389,405	\$98,229,505
Behind-the-Meter Revenue - Thermal	\$0	\$1,871,454	\$5,245,522	\$12,111,470	\$17,469,219	\$18,981,664	\$20,685,035	\$22,511,067	\$24,464,901	\$26,492,499
Bond Interest Credit & DSR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$17,771,261	\$132,523,064	\$212,096,345	\$351,979,345	\$378,659,452	\$391,321,817	\$406,409,264	\$421,340,899	\$436,186,286	\$450,234,017
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	(\$2,047,815)	(\$9,657,899)	(\$12,720,646)	(\$19,462,265)	(\$17,478,541)	(\$10,496,461)	(\$7,828,574)	(\$1,640,428)	(\$1,661,274)	(\$1,680,464)
CLEANPOWERSF SAVINGS / LOSSES (ANNUAL)	(\$1,903,360)	\$3,519,226	\$6,054,528	\$26,602,535	\$18,499,939	\$22,976,252	\$25,230,244	\$36,285,755	\$41,592,365	\$46,457,744
CLEANPOWERSF SAVINGS / LOSSES (CUMULATIVE)	(\$1,903,360)	\$1,615,866	\$7,670,394	\$34,272,929	\$52,772,868	\$75,749,120	\$100,979,364	\$137,265,119	\$178,857,484	\$225,315,228

CleanPowerSF Revenues, Expenses, and Annual Cashflow
PRELIMINARY RESULTS



Local Power.

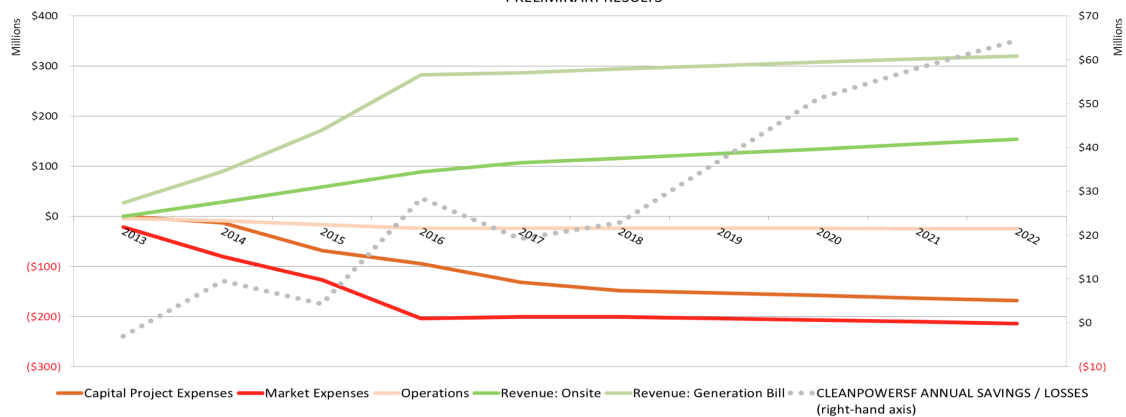
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Phase I – SENA and Hetch Hetchy

DRAFT RESULTS FOR LIMITED RELEASE

HETCHY PHASE I - RAPID DEPLOYMENT + GEYSERS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	97,000	100,000	182,286	276,384	276,577	276,771	276,965	277,159	277,353	277,547
Small_Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium_Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large_Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street_Lights	-	45	86	131	131	131	131	131	131	131
Traffic_Lights	-	35	67	102	102	102	102	102	102	102
Total	97,000	109,029	199,821	302,973	303,184	303,397	303,610	303,822	304,035	304,247
RATE PARITY OVER / (UNDER)	0%	0%	-1%	0%	0%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	5%	0%	0%	0%	-2%	-3%	-4%	-6%	-7%	-7%
LOCALIZATION PORTFOLIO STANDARD	0%	19%	39%	35%	47%	48%	48%	49%	50%	51%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	50%	59%	100%	100%	45%	45%	46%	46%	46%	46%
RPS Type 2 - Firmed/Shaped	25%	27%	0%	0%	55%	55%	54%	54%	54%	54%
RPS Type 3 - TRECS	25%	14%	0%	0%	0%	0%	0%	0%	0%	0%
Total RPS	20%	22%	31%	27%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	15	40	80	120	120	120	120	120	120
Wind (MW)	-	-	150	150	154	154	154	154	154	154
Combined Heat and Power (MW)	-	20	35	45	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
Energy Efficiency (Cumulative Retrofits)	-	6,000	15,000	25,200	35,400	46,800	58,200	69,600	81,000	92,400
Hetch Hetchy Hydroelectric (GWh)	212	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	-	25	50	100	100	100	100	100	100
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 104,528,961	\$ 477,660,843	\$ 159,872,973	\$ 235,178,342	\$ 140,304,878	\$ -	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 17,074,829	\$ 26,069,998	\$ 27,796,442	\$ 28,298,925	\$ 30,115,974	\$ 30,617,509	\$ 31,142,226	\$ 31,692,236	\$ 32,214,644
SFUC DSCR (Indenture)	44.20	9.64	2.73	2.93	2.74	2.82	3.11	3.51	3.93	4.36
SFUC DSCR (Current)	22.08	7.01	2.14	2.24	1.79	1.69	1.73	1.77	1.79	1.81
ESTIMATED JOB CREATION										
Jobs - Primary	-	876	2,959	1,781	1,921	274	274	274	274	274
Jobs - Secondary	-	788	2,663	1,602	1,729	247	247	247	247	247
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	1,664	5,623	3,383	3,650	521	521	521	521	521
Cumulative Job Years	-	1,664	7,287	10,670	14,320	14,841	15,362	15,883	16,404	16,925
REVENUE REQUIREMENTS										
Staff and Operations	(\$1,324,188)	(\$2,013,898)	(\$3,543,102)	(\$5,244,184)	(\$5,121,971)	(\$4,999,427)	(\$4,999,585)	(\$4,999,599)	(\$4,999,753)	(\$4,999,765)
Billing and Data Management	(\$2,854,728)	(\$3,635,277)	(\$6,189,750)	(\$10,510,697)	(\$10,696,155)	(\$10,865,979)	(\$11,031,358)	(\$11,205,372)	(\$11,388,270)	(\$11,562,629)
Schedule Coordination	\$0	(\$2,805,167)	(\$5,365,446)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,365,311)	(\$6,474,564)	(\$6,588,763)	(\$6,697,997)
Uncollectibles	(\$94,271)	(\$413,941)	(\$805,992)	(\$1,298,554)	(\$1,375,095)	(\$1,433,826)	(\$1,490,697)	(\$1,547,039)	(\$1,603,129)	(\$1,656,379)
CCA Bond Carrying Cost	(\$6,204)	(\$10,578)	(\$21,631)	(\$32,976)	(\$34,264)	(\$34,476)	(\$33,601)	(\$34,891)	(\$36,193)	(\$35,326)
Working Capital Carrying Cost	(\$7,469)	(\$82,803)	(\$262,780)	(\$354,529)	(\$446,467)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$70,001)	(\$28,674,778)	(\$53,224,207)	(\$97,201,957)	(\$74,955,649)	(\$88,683,004)	(\$89,878,180)	(\$91,137,047)	(\$92,614,843)	(\$93,869,777)
Contract Purchases	(\$15,641,589)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$10,035,807)	(\$10,202,938)	(\$10,378,027)	(\$10,561,075)	(\$10,736,164)
RPS Compliance and Environmental Attribute Purchases	(\$2,952,323)	(\$9,563,427)	(\$12,740,722)	(\$24,211,652)	(\$42,835,954)	(\$42,540,964)	(\$42,255,110)	(\$41,978,230)	(\$41,736,941)	(\$41,500,824)
Resource Adequacy	(\$1,708,941)	(\$4,664,319)	(\$7,773,988)	(\$12,719,311)	(\$10,722,918)	(\$10,790,050)	(\$10,850,369)	(\$10,919,891)	(\$11,000,271)	(\$11,073,165)
CAISO Charges	(\$1,353,007)	(\$3,211,166)	(\$6,470,656)	(\$10,225,213)	(\$10,013,545)	(\$10,049,177)	(\$10,076,488)	(\$10,111,080)	(\$10,151,161)	(\$10,188,975)
Integration Charges (Generator)	\$0	(\$2,169)	(\$47,353)	(\$52,779)	(\$66,410)	(\$66,777)	(\$67,070)	(\$67,366)	(\$67,752)	(\$68,037)
Natural Gas Purchases	\$0	(\$6,830,019)	(\$12,991,922)	(\$16,511,154)	(\$17,131,589)	(\$17,886,701)	(\$18,767,859)	(\$19,699,467)	(\$20,680,622)	(\$21,629,902)
Biogas Purchases	\$0	(\$9,979,688)	(\$15,152,762)	(\$19,174,982)	(\$19,813,221)	(\$20,640,945)	(\$21,649,325)	(\$22,710,130)	(\$23,819,704)	(\$24,864,963)
Capital Projects - O&M	\$0	(\$1,933,834)	(\$18,425,947)	(\$27,397,747)	(\$41,776,272)	(\$42,107,209)	(\$42,394,840)	(\$42,705,971)	(\$43,039,273)	(\$43,330,268)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$4,448,041)	(\$24,579,291)	(\$30,293,851)	(\$38,893,271)	(\$42,989,209)	(\$40,815,842)	(\$38,599,007)	(\$36,337,830)	(\$34,031,441)
Capital Projects - Capital Payment - Non-Taxable	\$0	(\$4,018,651)	(\$22,543,230)	(\$29,591,339)	(\$39,816,494)	(\$48,803,223)	(\$48,675,352)	(\$50,622,366)	(\$52,647,260)	(\$54,753,151)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$1,212,960)	(\$2,946,747)	(\$4,616,883)	(\$6,124,487)	(\$7,546,893)	(\$8,773,173)	(\$9,794,000)	(\$10,599,004)
Capital Projects - Capital Payment - Taxable	\$0	\$0	(\$1,590,628)	(\$4,122,604)	(\$6,979,987)	(\$10,069,910)	(\$13,529,948)	(\$17,261,609)	(\$21,284,774)	(\$25,620,615)
Revenue Requirement Subtotal	(\$26,012,822)	(\$101,437,776)	(\$212,275,831)	(\$321,513,611)	(\$356,445,184)	(\$372,382,232)	(\$380,628,986)	(\$389,224,679)	(\$398,354,645)	(\$407,218,583)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$26,934,644	\$89,634,163	\$171,958,955	\$282,411,040	\$286,042,487	\$293,894,273	\$300,959,609	\$307,652,687	\$314,049,538	\$319,657,957
Behind-the-Meter Revenue - Electric	\$0	\$23,037,584	\$46,757,011	\$71,457,931	\$87,762,044	\$94,503,383	\$101,226,941	\$107,979,318	\$114,753,904	\$121,364,805
Behind-the-Meter Revenue - Thermal	\$0	\$5,596,995	\$11,567,464	\$17,146,507	\$19,079,641	\$21,266,950	\$23,726,881	\$26,379,078	\$29,233,325	\$32,228,288
Bond Interest Credit & DSCR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$26,934,644	\$118,268,741	\$230,283,430	\$371,015,478	\$392,884,172	\$409,664,606	\$425,913,431	\$442,011,083	\$458,036,857	\$473,251,030
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	\$921,823	\$16,830,966	\$18,007,600	\$49,501,867	\$36,438,989	\$37,282,374	\$45,284,445	\$52,786,403	\$59,682,212	\$66,032,447
Market Expenses	(\$3,972,772)	(\$7,248,717)	(\$13,747,301)	(\$21,091,028)	(\$17,302,306)	(\$14,386,940)	(\$8,399,901)	(\$1,642,262)	(\$1,650,550)	(\$1,657,132)
CLEANPOWERSF SAVINGS / LOSSES (ANNUAL)	(\$3,050,949)	\$9,582,249	\$4,260,298	\$28,410,840	\$19,136,682	\$22,895,434	\$36,884,544	\$51,144,142	\$58,031,662	\$64,375,315
CLEANPOWERSF SAVINGS / LOSSES (CUMULATIVE)	(\$3,050,949)	\$6,531,300	\$10,791,598	\$39,202,438	\$58,339,120	\$81,234,554	\$118,119,098	\$169,263,240	\$227,294,903	\$291,670,218

CleanPowerSF Revenues, Expenses, and Annual Cashflow
PRELIMINARY RESULTS



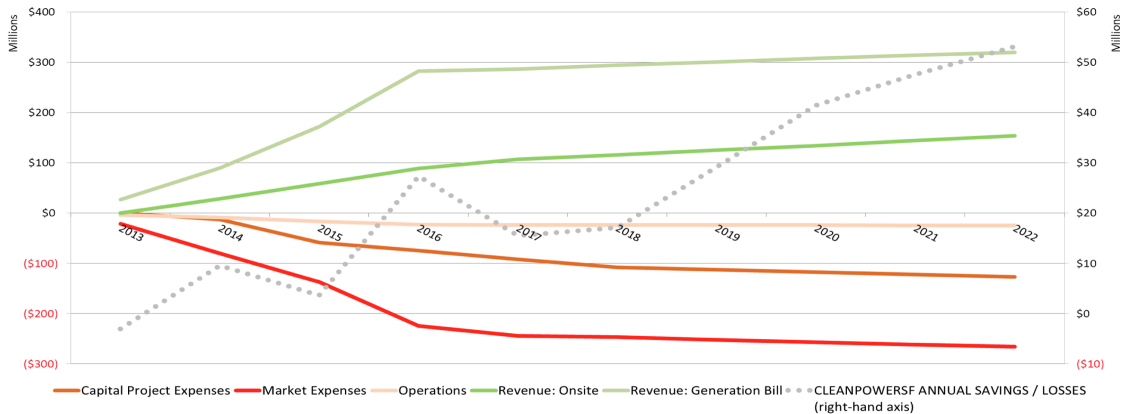
Local Power.

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DRAFT RESULTS FOR LIMITED RELEASE

HETCHY PHASE 1 - RAPID DEPLOYMENT	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	97,000	100,000	182,286	276,384	276,577	276,771	276,965	277,159	277,353	277,547
Small_Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium_Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large_Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street_Lights	-	86	131	131	131	131	131	131	131	131
Traffic_Lights	-	35	67	102	102	103	103	103	103	103
Total	97,000	109,029	199,821	302,973	303,184	303,397	303,610	303,823	304,035	304,247
RATE PARITY OVER / (UNDER)	0%	0%	-1%	0%	0%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	5%	0%	0%	0%	-2%	-3%	-4%	-6%	-7%	-7%
LOCALIZATION PORTFOLIO STANDARD	0%	19%	32%	26%	29%	30%	31%	32%	33%	34%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	50%	59%	53%	40%	29%	31%	33%	36%	35%	35%
RPS Type 2 - Firmed/Shaped	25%	27%	47%	51%	67%	65%	62%	60%	60%	60%
RPS Type 3 - TRECs	25%	14%	0%	9%	4%	4%	4%	5%	5%	5%
Total RPS	20%	22%	23%	25%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	15	40	80	120	120	120	120	120	120
Wind (MW)	-	-	150	150	150	154	154	154	154	154
Combined Heat and Power (MW)	-	20	35	45	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (MW)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
Energy Efficiency (Cumulative Retrofits)	-	6,000	15,000	25,200	35,400	46,800	58,200	69,600	81,000	92,400
Hetch Hetchy Hydroelectric (GWh)	212	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	-	-	-	-	-	-	-	-	-
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 104,528,961	\$ 435,014,211	\$ 116,464,146	\$ 146,836,298	\$ 140,304,878	\$ -	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 17,074,829	\$ 26,069,998	\$ 27,796,442	\$ 28,296,925	\$ 30,115,974	\$ 30,617,509	\$ 31,142,936	\$ 31,699,226	\$ 32,217,644
SFUC DSCR (Indenture)	44.20	9.64	2.83	3.11	2.88	2.97	3.21	3.57	3.94	4.33
SFUC DSCR (Current)	22.08	7.01	2.21	2.35	1.88	1.73	1.76	1.78	1.79	1.81
ESTIMATED JOB CREATION										
Jobs - Primary	-	876	2,799	1,620	1,600	274	274	274	274	274
Jobs - Secondary	-	788	2,519	1,458	1,440	247	247	247	247	247
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	1,664	5,317	3,078	3,039	521	521	521	521	521
Cumulative Job Years	-	1,664	6,981	10,059	13,098	13,619	14,140	14,661	15,182	15,703
REVENUE REQUIREMENTS										
Staff and Operations	(\$1,324,188)	(\$2,013,898)	(\$3,543,192)	(\$5,244,184)	(\$5,121,971)	(\$4,999,427)	(\$4,999,585)	(\$4,999,599)	(\$4,999,753)	(\$4,999,765)
Billing and Data Management	(\$2,854,728)	(\$3,635,277)	(\$6,814,420)	(\$10,499,905)	(\$10,674,232)	(\$10,843,889)	(\$11,009,122)	(\$11,182,978)	(\$11,365,713)	(\$11,539,918)
Schedule Coordination	\$0	(\$2,805,167)	(\$5,365,447)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,365,331)	(\$6,474,564)	(\$6,583,797)	(\$6,697,997)
Uncollectibles	(\$94,271)	(\$413,941)	(\$805,992)	(\$1,298,554)	(\$1,375,095)	(\$1,433,826)	(\$1,490,697)	(\$1,547,039)	(\$1,603,129)	(\$1,656,379)
CCA Bond Carrying Cost	(\$6,294)	(\$10,578)	(\$21,633)	(\$31,976)	(\$34,264)	(\$34,478)	(\$33,601)	(\$34,891)	(\$36,193)	(\$35,326)
Working Capital Carrying Cost	(\$7,669)	(\$82,803)	(\$243,202)	(\$311,836)	(\$339,296)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$70,001)	(\$28,674,778)	(\$62,348,958)	(\$116,117,537)	(\$114,225,601)	(\$129,012,187)	(\$131,151,432)	(\$133,385,415)	(\$135,929,476)	(\$138,146,918)
Contract Purchases	(\$15,641,589)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$25,035,807)	(\$25,022,938)	(\$25,037,027)	(\$25,061,075)	(\$25,076,144)
RPS Compliance and Environmental Attribute Purchases	(\$2,352,233)	(\$9,563,427)	(\$13,330,942)	(\$24,673,420)	(\$44,301,749)	(\$45,114,312)	(\$45,921,726)	(\$46,730,186)	(\$46,539,271)	(\$46,070,077)
Revenue Adequacy	(\$1,708,741)	(\$4,664,319)	(\$8,580,689)	(\$14,325,929)	(\$13,986,089)	(\$14,077,379)	(\$14,159,819)	(\$14,252,588)	(\$14,350,013)	(\$14,452,985)
CAISO Charges	(\$1,353,007)	(\$3,211,166)	(\$6,470,657)	(\$10,225,214)	(\$10,013,542)	(\$10,049,178)	(\$10,076,486)	(\$10,111,082)	(\$10,154,162)	(\$10,188,973)
Integration Charges (Generator)	\$0	(\$2,169)	(\$47,353)	(\$52,779)	(\$66,410)	(\$66,777)	(\$67,070)	(\$67,396)	(\$67,752)	(\$68,037)
Natural Gas Purchases	\$0	(\$6,830,019)	(\$12,991,922)	(\$16,511,154)	(\$17,131,583)	(\$17,886,701)	(\$18,767,859)	(\$19,699,467)	(\$20,680,622)	(\$21,629,502)
Biogas Purchases	\$0	(\$9,079,688)	(\$15,152,762)	(\$19,174,982)	(\$19,813,223)	(\$20,601,945)	(\$21,649,325)	(\$22,710,130)	(\$23,819,704)	(\$24,864,563)
Capital Projects - O&M	\$0	(\$3,933,834)	(\$12,066,893)	(\$16,520,741)	(\$15,621,620)	(\$15,753,123)	(\$15,868,573)	(\$15,992,896)	(\$16,125,813)	(\$16,242,563)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$4,448,041)	(\$22,764,541)	(\$26,711,369)	(\$31,713,469)	(\$36,139,146)	(\$40,302,113)	(\$43,428,339)	(\$46,511,090)	(\$48,567,616)
Capital Projects - Capital Payment - Non-Taxable	\$0	(\$4,018,651)	(\$20,903,666)	(\$26,217,316)	(\$32,911,180)	(\$39,621,696)	(\$44,854,826)	(\$48,569,019)	(\$50,351,780)	(\$50,599,604)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$1,212,966)	(\$2,946,747)	(\$4,618,883)	(\$6,124,487)	(\$7,546,893)	(\$8,773,173)	(\$9,794,020)	(\$10,599,604)
Capital Projects - Capital Payment - Taxable	\$0	\$0	(\$1,590,628)	(\$4,122,604)	(\$6,979,987)	(\$10,069,910)	(\$13,529,948)	(\$17,261,609)	(\$21,284,774)	(\$25,620,615)
Revenue Requirement Subtotal	(\$26,012,822)	(\$101,437,776)	(\$212,957,839)	(\$322,610,190)	(\$360,093,232)	(\$378,164,928)	(\$388,349,278)	(\$398,884,207)	(\$408,850,341)	(\$418,469,182)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$26,934,644	\$89,634,163	\$171,958,955	\$282,411,040	\$286,042,487	\$293,894,273	\$300,959,609	\$307,652,687	\$314,049,538	\$319,657,957
Behind-the-Meter Revenue - Electric	\$0	\$23,037,584	\$46,757,011	\$71,457,931	\$87,762,044	\$94,503,383	\$101,226,941	\$107,979,318	\$114,753,904	\$121,364,805
Behind-the-Meter Revenue - Thermal	\$0	\$5,596,995	\$11,567,464	\$17,146,507	\$19,079,641	\$21,266,950	\$23,726,881	\$26,379,078	\$29,233,325	\$32,228,268
Bond Interest Credit & DSR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$26,934,644	\$118,268,741	\$230,283,430	\$371,015,478	\$392,884,172	\$409,664,606	\$425,913,431	\$442,011,083	\$458,036,857	\$473,251,030
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	\$921,823	\$16,830,966	\$17,325,592	\$48,405,288	\$32,790,941	\$31,499,678	\$37,564,153	\$43,126,876	\$49,186,516	\$54,781,848
CLEANPOWERSF SAVINGS / LOSSES (ANNUAL)	(\$3,050,949)	\$9,582,249	\$3,578,290	\$27,314,261	\$15,488,634	\$17,112,739	\$29,164,253	\$41,484,614	\$47,535,966	\$53,124,716
CLEANPOWERSF SAVINGS / LOSSES (CUMULATIVE)	(\$3,050,949)	\$6,531,300	\$10,109,590	\$37,423,851	\$52,912,485	\$70,025,224	\$99,189,477	\$140,674,091	\$188,210,057	\$241,334,773

CleanPowerSF Revenues, Expenses, and Annual Cashflow PRELIMINARY RESULTS



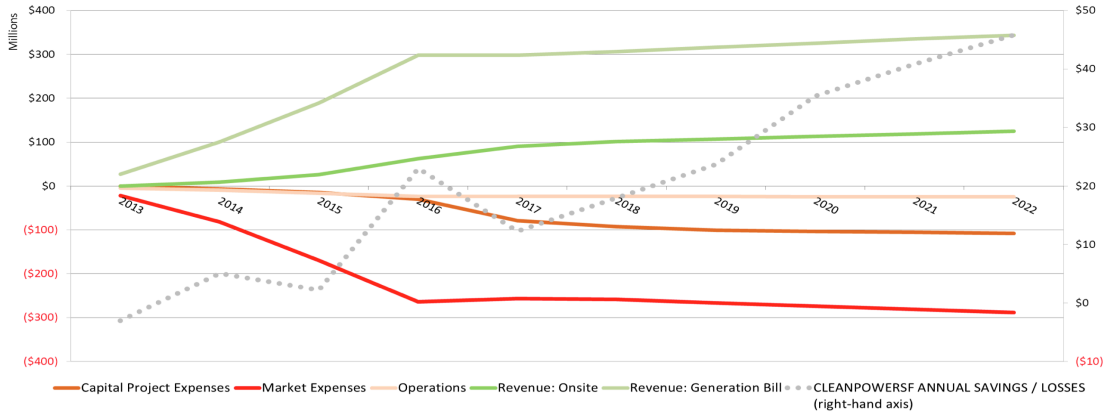
Local Power.

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DRAFT RESULTS FOR LIMITED RELEASE

HETCHY PHASE 1 - SLOW DEPLOYMENT	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CCA CUSTOMER COUNT										
Residential	97,000	100,000	182,286	276,384	276,577	276,771	276,965	277,159	277,353	277,547
Small_Commercial	-	7,775	15,102	22,898	22,914	22,930	22,946	22,962	22,978	22,994
Medium_Commercial	-	806	1,566	2,375	2,376	2,378	2,380	2,381	2,383	2,384
Large_Commercial	-	335	651	987	988	988	989	990	991	992
Industrial	-	27	52	79	79	79	79	79	79	79
Agricultural	-	6	11	17	17	17	17	17	17	17
Street_Lights	-	86	131	131	131	131	131	131	131	131
Traffic_Lights	-	35	67	102	102	103	103	103	103	103
Total	97,000	109,029	199,821	302,973	303,184	303,397	303,610	303,823	304,035	304,247
RATE PARITY OVER / (UNDER)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BILL PARITY OVER / (UNDER) - INCLUDES PG&E SURCHARGES	5%	2%	2%	1%	0%	-1%	-2%	-4%	-4%	-4%
LOCALIZATION PORTFOLIO STANDARD	0%	10%	9%	11%	25%	26%	27%	27%	27%	28%
CARBON FREE	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
RENEWABLE PORTFOLIO STANDARD										
RPS Type 1 - Bundled	50%	63%	61%	60%	30%	32%	34%	36%	37%	37%
RPS Type 2 - Firmed/Shaped	25%	22%	24%	27%	66%	64%	61%	59%	59%	59%
RPS Type 3 - TRECS	25%	15%	14%	14%	4%	4%	5%	5%	5%	5%
Total RPS	20%	22%	23%	25%	51%	51%	51%	51%	51%	51%
RESOURCE SUMMARY										
Solar Photovoltaics (MW)	-	5	20	50	90	110	110	110	110	110
Wind (MW)	-	6	15	35	45	154	154	154	154	154
Combined Heat and Power (MW)	-	5	15	35	45	45	45	45	45	45
Biogas Powered (%)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
District Heating (MW)	-	15	15	15	15	15	15	15	15	15
Biogas Powered (MW)	-	50%	50%	50%	50%	50%	50%	50%	50%	50%
Energy Efficiency (Cumulative Retrofits)	-	3,000	7,500	12,600	17,700	23,400	29,100	34,800	40,500	46,200
Hetch Hetchy Hydroelectric (GWh)	212	212	212	387	387	387	387	387	387	387
Geothermal (MW)	-	-	-	-	-	-	-	-	-	-
Shell Energy North America (Residential Customers)	50,000	50,000	50,000	50,000	50,000	-	-	-	-	-
BOND ISSUANCE										
Project Financing - Non-Taxable	\$ 60,277,770	\$ 51,697,953	\$ 120,326,115	\$ 483,110,084	\$ 140,304,878	\$ 71,398,084	\$ -	\$ -	\$ -	\$ -
Project Financing - Taxable	\$ -	\$ 8,537,415	\$ 13,034,987	\$ 13,899,221	\$ 14,149,462	\$ 15,057,987	\$ 15,308,754	\$ 15,571,463	\$ 15,844,113	\$ 16,108,822
SFUC DSCR (Indenture)	44.20	13.72	7.53	3.79	3.15	3.19	3.30	3.37	3.44	3.51
SFUC DSCR (Current)	22.08	9.65	5.50	4.15	2.00	1.88	1.80	1.84	1.86	1.89
ESTIMATED JOB CREATION										
Jobs - Primary	-	379	668	1,229	3,176	784	137	137	137	137
Jobs - Secondary	-	341	601	1,106	2,859	705	123	123	123	123
Jobs - Induced	-	-	-	-	-	-	-	-	-	-
Annual Job Years	-	721	1,269	2,335	6,035	1,489	260	260	260	260
Cumulative Job Years	-	721	1,990	4,325	10,360	11,850	12,110	12,371	12,631	12,892
REVENUE REQUIREMENTS										
Staff and Operations	(\$1,324,188)	(\$2,013,898)	(\$3,543,132)	(\$5,244,184)	(\$5,121,971)	(\$4,999,427)	(\$4,999,585)	(\$4,999,599)	(\$4,999,751)	(\$4,999,765)
Billing and Data Management	(\$2,854,728)	(\$3,619,685)	(\$6,816,290)	(\$10,512,962)	(\$10,710,532)	(\$10,892,098)	(\$11,069,568)	(\$11,255,742)	(\$11,450,910)	(\$11,637,523)
Schedule Coordination	\$0	(\$2,825,000)	(\$5,432,359)	(\$6,042,596)	(\$6,151,829)	(\$6,261,063)	(\$6,366,331)	(\$6,474,564)	(\$6,586,763)	(\$6,697,997)
Uncollectibles	(\$94,271)	(\$383,887)	(\$757,121)	(\$1,265,075)	(\$1,360,995)	(\$1,425,755)	(\$1,480,724)	(\$1,535,113)	(\$1,589,168)	(\$1,640,304)
CCA Bond Carrying Cost	(\$6,294)	(\$10,578)	(\$21,631)	(\$31,978)	(\$34,264)	(\$34,476)	(\$33,601)	(\$34,891)	(\$36,193)	(\$35,216)
Working Capital Carrying Cost	(\$7,669)	(\$56,610)	(\$117,978)	(\$202,103)	(\$331,627)	\$0	\$0	\$0	\$0	\$0
Market Purchases	(\$70,001)	(\$35,200,534)	(\$92,031,114)	(\$144,934,356)	(\$122,090,733)	(\$136,665,195)	(\$140,501,799)	(\$144,497,897)	(\$148,890,289)	(\$152,985,201)
Contract Purchases	(\$15,641,589)	(\$17,150,020)	(\$18,703,988)	(\$23,580,346)	(\$24,993,214)	(\$10,035,807)	(\$10,202,938)	(\$10,378,027)	(\$10,561,075)	(\$10,736,164)
RPS Compliance and Environmental Attribute Purchases	(\$2,952,323)	(\$11,309,799)	(\$24,131,623)	(\$38,368,012)	(\$47,856,312)	(\$47,907,054)	(\$49,247,532)	(\$50,600,431)	(\$51,955,984)	(\$53,314,011)
Resource Adequacy	(\$1,708,741)	(\$5,374,184)	(\$11,613,752)	(\$17,088,393)	(\$14,725,551)	(\$14,746,611)	(\$14,945,727)	(\$15,157,391)	(\$15,385,302)	(\$15,597,536)
CAISO Charges	(\$1,353,007)	(\$3,619,237)	(\$7,144,601)	(\$10,793,757)	(\$10,422,716)	(\$10,443,143)	(\$10,560,081)	(\$10,684,967)	(\$10,819,129)	(\$10,944,832)
Integration Charges (Generator)	\$0	(\$723)	(\$2,940)	(\$2,527)	(\$56,623)	(\$62,553)	(\$62,805)	(\$63,087)	(\$63,397)	(\$63,639)
Natural Gas Purchases	\$0	(\$3,709,390)	(\$7,288,703)	(\$15,558,216)	(\$17,269,460)	(\$18,030,658)	(\$18,918,904)	(\$19,856,011)	(\$20,847,063)	(\$21,803,981)
Biogas Purchases	\$0	(\$5,619,978)	(\$8,500,974)	(\$15,745,632)	(\$18,972,682)	(\$20,807,068)	(\$22,823,762)	(\$24,892,904)	(\$27,014,480)	(\$29,164,675)
Capital Projects - O&M	\$0	(\$1,732,555)	(\$3,722,821)	(\$7,574,864)	(\$15,012,371)	(\$15,554,156)	(\$15,667,296)	(\$15,789,184)	(\$15,919,538)	(\$16,034,310)
Capital Projects - Coupon Payment - Non-Taxable	\$0	(\$2,565,011)	(\$4,652,624)	(\$9,562,021)	(\$29,680,643)	(\$34,302,964)	(\$35,704,723)	(\$33,902,519)	(\$32,064,270)	(\$30,189,257)
Capital Projects - Capital Payment - Taxable	\$0	(\$2,317,399)	(\$4,397,641)	(\$9,199,524)	(\$28,140,836)	(\$34,660,338)	(\$38,791,883)	(\$40,343,559)	(\$41,957,301)	(\$43,635,559)
Capital Projects - Coupon Payment - Taxable	\$0	\$0	(\$6,064,833)	(\$14,732,373)	(\$2,300,441)	(\$3,062,243)	(\$3,773,446)	(\$4,386,586)	(\$4,897,010)	(\$5,299,802)
Capital Projects - Capital Payment - Taxable	\$0	\$0	(\$7,953,314)	(\$2,061,302)	(\$3,489,994)	(\$5,034,955)	(\$6,764,974)	(\$8,630,804)	(\$10,642,387)	(\$12,810,308)
Revenue Requirement Subtotal	(\$26,012,822)	(\$97,328,490)	(\$200,281,147)	(\$317,242,222)	(\$359,229,796)	(\$374,924,764)	(\$390,914,681)	(\$401,485,282)	(\$411,476,938)	(\$421,090,212)
REVENUE										
Generation Portion of Bill Revenue - Electric	\$26,934,644	\$100,298,022	\$189,712,039	\$298,604,026	\$298,289,186	\$306,031,184	\$316,006,287	\$325,704,702	\$335,159,585	\$343,936,249
Behind-the-Meter Revenue - Electric	\$0	\$7,512,576	\$21,362,888	\$50,734,586	\$73,097,366	\$82,345,663	\$86,372,790	\$90,388,019	\$94,389,445	\$98,229,505
Behind-the-Meter Revenue - Thermal	\$0	\$1,871,454	\$5,245,522	\$12,111,470	\$17,469,219	\$18,981,664	\$20,685,035	\$22,511,067	\$24,464,901	\$26,492,499
Bond Interest Credit & DSR Refund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Revenue Subtotal	\$26,934,644	\$109,682,052	\$216,320,249	\$361,450,082	\$388,855,770	\$407,358,511	\$423,064,112	\$438,603,788	\$454,047,931	\$468,658,253
CASH FLOW SAVINGS / LOSSES										
PG&E Customer Surcharges	\$921,823	\$12,353,562	\$16,039,102	\$44,207,860	\$29,625,974	\$32,433,747	\$32,149,431	\$37,118,506	\$42,570,993	\$47,568,040
CLEANPOWERSF SAVINGS / LOSSES (ANNUAL)	(\$3,050,949)	\$5,043,305	\$2,189,830	\$23,030,101	\$12,260,378	\$17,985,518	\$23,674,299	\$35,386,969	\$40,817,001	\$45,793,329
CLEANPOWERSF SAVINGS / LOSSES (CUMULATIVE)	(\$3,050,949)	\$1,992,355	\$4,182,186	\$27,212,287	\$39,472,665	\$57,458,183	\$81,132,482	\$116,519,451	\$157,336,451	\$203,129,780

CleanPowerSF Revenues, Expenses, and Annual Cashflow
PRELIMINARY RESULTS



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