



**Sonoma
Water**

Public Hearing to Consider and
Adopt Findings per California
Government Code Section
4217.10–4217.18 to Enter Into a
Microgrid Services Agreement
and Related Lease with Scale
Microgrid Solutions Operating,
LLC.

SONOMA WATER BOARD OF DIRECTORS

Dale Roberts, Sonoma Water Principal Engineer
Adam Brand, County of Sonoma, Assistant
County Counsel

    sonomawater.ca.gov



Photo by Scale Microgrids

Background / Current System

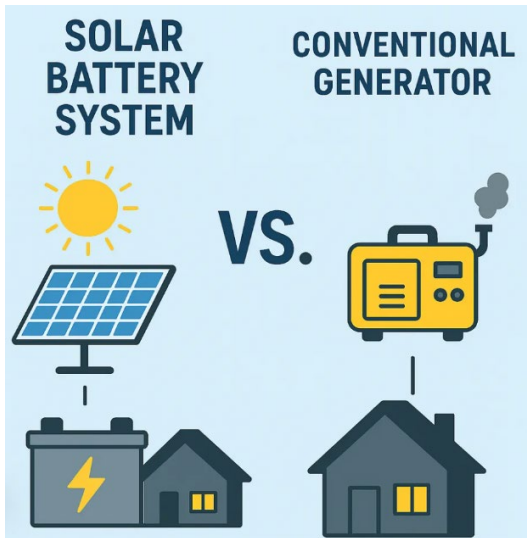
- Existing solar power system at Administration Building at end of useful life
- Net Energy Metering not cost effective with solar alone
- Serves as our Emergency Operations Center
- Roof leaks difficult to find with existing panel mount
- Existing panels offline during outages
- Current system provides no energy resilience



Photo of 404 Aviation Blvd Admin

FACILITY NEEDS

- EOC operations require reliable, continuous power during grid outages and emergencies.
- Existing standby generator only has capacity for server.
- A larger standby generator is required to meet entire building load.
- We want 72 hours grid isolated.



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Proposed Solution

Replace existing solar power system with a solar + battery storage microgrid

Entering into a Microgrid Service Agreement (MSA) would:

- Provide renewable, on-site energy generation and storage cost effectively.
- Minimize energy imports.
- Enable 72-hour grid independence during outages.
- Reduce reliance on fossil-fuel generators.
- Lower operating costs and carbon footprint.

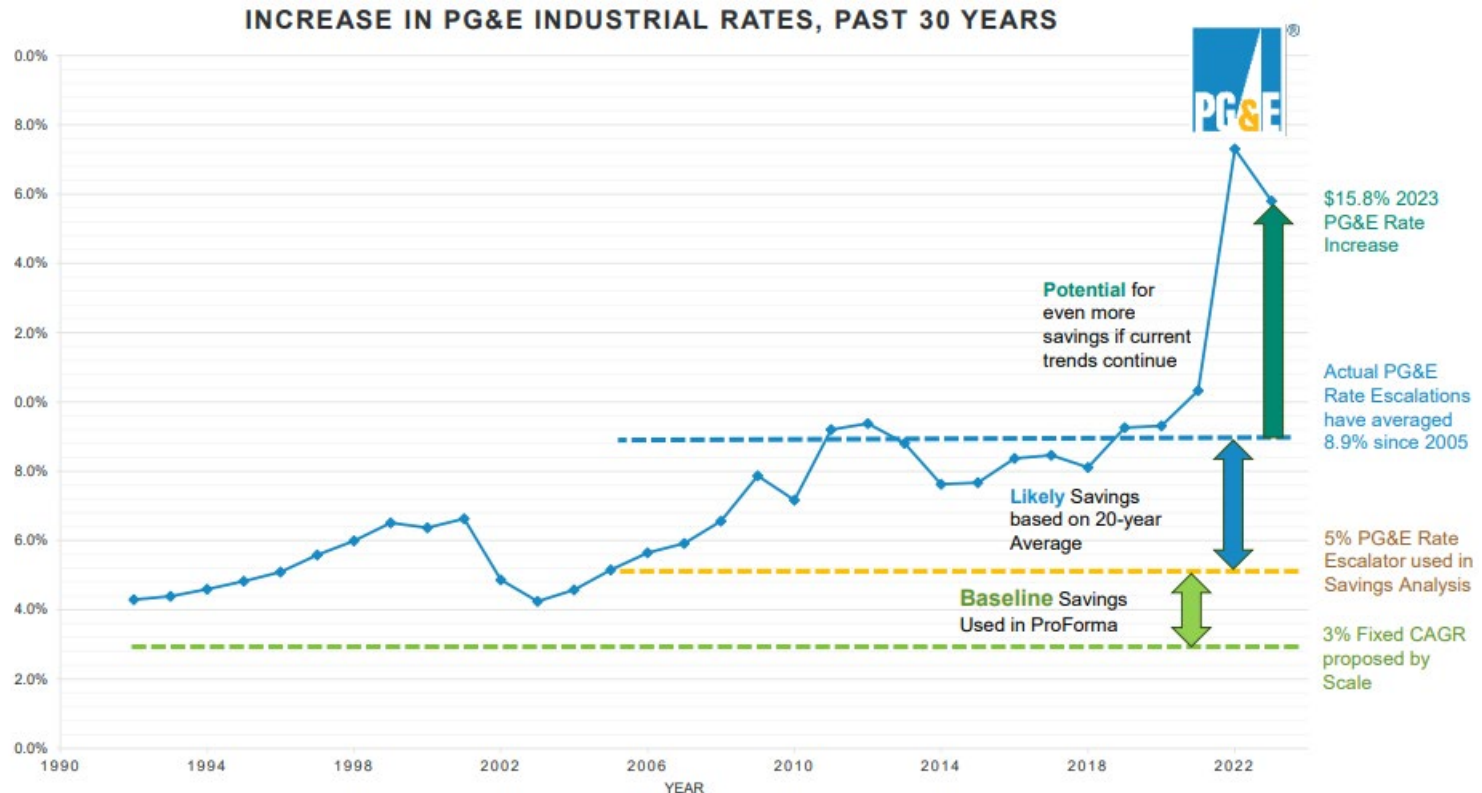


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Economics

- Power delivery & generation costs increasing
- Assumes 5% PG&E escalation rate
- Agreement is 3% escalation rate
- Generator replacement cap cost \$250k
- Avoided generator O&M cost \$10k/year
- Renewable Energy Credits offsets \$3.5k/year
- Fair rental value of roof \$1k/year

Year	PG&E Rate CAGR
2023	15.8%
2022	17.3%
2021	10.3%
2020	9.3%
2019	9.3%
2018	8.1%
2017	8.5%
2016	8.4%
2015	7.7%
2014	7.6%
2013	8.8%
2012	9.4%
2011	9.2%
2010	7.2%
2009	7.9%
2008	6.6%
2007	5.9%
2006	5.6%
2005	5.2%
2004	4.6%
2003	4.2%
2002	4.9%
2001	6.6%
2000	6.4%
1999	6.5%
1998	6.0%
1997	5.6%
1996	5.1%
1995	4.8%
1994	4.6%
1993	4.4%
1992	4.3%



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Agreement Opportunity

- Scale Microgrids to finance, design, build, own, operate, and maintain the solar/battery power system.
- Sonoma Water would purchase energy at a predictable cost, avoid capital and O&M expenses.
- Net savings of \$917,705 over 20-year agreement term.

Pro-Forma

20 Year Service Agreement <u>With</u> Demolition							
Year	Cumulative Impact	Annual Impact	Electricity Savings	REC's	MSA Costs	Avoided Capex	Avoided Opex
Totals	\$917,705	\$917,705	\$7,471,020	\$88,757	(\$7,147,520)	\$250,000	\$255,447
0	\$250,000	\$250,000	\$0	\$0	\$0	\$250,000	\$0
1	\$227,668	(\$22,332)	\$230,194	\$3,475	(\$266,000)		\$10,000
2	\$208,816	(\$18,852)	\$241,316	\$3,561	(\$273,980)		\$10,250
3	\$193,747	(\$15,069)	\$252,973	\$3,651	(\$282,199)		\$10,506
4	\$182,782	(\$10,965)	\$265,190	\$3,742	(\$290,665)		\$10,769
5	\$176,262	(\$6,519)	\$277,993	\$3,835	(\$299,385)		\$11,038
6	\$174,551	(\$1,712)	\$291,410	\$3,931	(\$308,367)		\$11,314
7	\$178,030	\$3,479	\$305,471	\$4,029	(\$317,618)		\$11,597
8	\$187,107	\$9,077	\$320,206	\$4,130	(\$327,146)		\$11,887
9	\$202,212	\$15,105	\$335,648	\$4,233	(\$336,961)		\$12,184
10	\$223,801	\$21,589	\$351,831	\$4,339	(\$347,070)		\$12,489
11	\$252,357	\$28,556	\$368,789	\$4,448	(\$357,482)		\$12,801
12	\$288,390	\$36,033	\$386,560	\$4,559	(\$368,206)		\$13,121
13	\$332,441	\$44,051	\$405,182	\$4,673	(\$379,252)		\$13,449
14	\$385,083	\$52,641	\$424,696	\$4,790	(\$390,630)		\$13,785
15	\$446,918	\$61,836	\$445,145	\$4,910	(\$402,349)		\$14,130
16	\$518,588	\$71,670	\$466,574	\$5,032	(\$414,419)		\$14,483
17	\$600,767	\$82,179	\$489,028	\$5,158	(\$426,852)		\$14,845
18	\$694,170	\$93,403	\$512,557	\$5,287	(\$439,657)		\$15,216
19	\$799,550	\$105,380	\$537,212	\$5,419	(\$452,847)		\$15,597
20	\$917,705	\$118,155	\$563,046	\$5,555	(\$466,433)		\$15,987



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Solar PV + Battery System Details

- Building Peak Load is 196 kW
- Solar PV Capacity is 356.4 kW DC (Fixed Tilt)
- Microgrid Switchgear & Controller Included
- Lower energy costs
- Locked-in energy rates
- Eliminates need for large standby generator
- Lowers dependency on fossil fuels
- 72 hours of backup power
- Keep our shade structure as is
- CEQA exempt as existing/ replacement facility



Proposed Solar Layout



Tesla Megapack Battery

Recommended Actions

- A) Conduct a public hearing and adopt a resolution making the findings required under Government Code Sections 4217.10, et. seq., determining that entering into a Microgrid Services Agreement with Scale Microgrid Solutions Operating, LLC is in the best interests of Sonoma Water and will result in cost savings and other benefits to the public and that the difference, if any, between the fair rental value for the real property subject to the facility lease and the agreed rent, is anticipated to be offset by below-market energy purchases or other benefits provided under the Microgrid Services Agreement.
- B) Authorize the Sonoma Water's General Manager to execute the Microgrid Services Agreement and lease with Scale Microgrid Solutions Operating, LLC and other documents necessary to complete the transaction in a form as approved by County Counsel.



Thank you for your time and consideration.



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