

Zero Net Carbon Resiliency Pilot Project

Board of Supervisors
7/18/2023

Title

- a) Adopt a Resolution making certain findings in accordance with California Government Code Sections 4217.10 et seq. and authorize the County Contracts Purchasing Officer to enter into a Master Energy Services Agreement, including the Power Purchase Agreement (PPA) Template, and other related agreements with Mynt Systems and their affiliates to implement and complete the proposed energy-related improvements to County facilities;
- b) Authorize non-standard indemnification and insurance provisions in those documents; and
- c) Provide other direction to staff as appropriate.

Agenda

Summary/Project Recap

4217 Discussion

Contract Structure

PPA Breakdown

Major Non-Standard Terms

FAQs

Next Steps

Timing Consideration

Conclusion

Project overview

Sites:

1441 Schilling Pl.

1414 Natividad Dr.-
Sheriff's Public Safety
Building

Future - 1410 Natividad
Dr. County Jail

Key dates:

10/27/2020: Board
approved Program Services
Agreement

5/18/2021:
Recommendations
presented to Budget
Committee

6/13/2023: Draft Capital
Improvement Plan approved
by Board

Benefits:

Energy Savings \$10M +
over 30 years

Emissions Reductions

Resiliency

Framework for future
projects, e.g. EV charging,
energy efficiency, solar,
etc...

County Office

1441 Schilling Place Salinas, CA
Solar and battery system

Target PV system – 1,010.7 kW

Target Battery system – 634.2 kW / 2,536.8 kWh

System Components

- (2,378) QCell 425 W modules
- (8) SolarEdge 100 kW inverters
- (1) Stem Tesla Megapack battery

Project Details

- Tilt angle: 10°
- Azimuth angle: 243°
- Module attachment type: ballasted racking
- 480v Interconnection at MSB



County Sheriff's Office

1414 Natividad Drive Salinas, CA
Solar system

Target PV system – 372.7 kW

System Components

- (793) Jinko 470 W modules
- (3) SolarEdge 100 kW inverters
- (1) SolarEdge 66.6 kW inverter

Project Details

- Tilt angle: 10°
- Azimuth angle: 202°
- Module attachment type: Ballasted racking
- 480v Interconnection at MSB



County Jail

1410 Natividad Drive Salinas, CA
Solar and battery system

Target PV system – 1,285.9 kW

Target Battery system – 1,072.8 kW / 2,145.6 kWh

System Components

- (2,736) Jinko 470 W modules
- (17) Sungrow SG60XC inverters
- (1) Stem Tesla Megapack battery

Project Details

- Tilt angle: 7°
- Azimuth angle: 202°
- Module attachment type: Structural steel, Dual-cantilevered carports with 10' min clearance
- 12kV Interconnection



Solar Array
(Carports)

Point of Interconnect

Battery Location

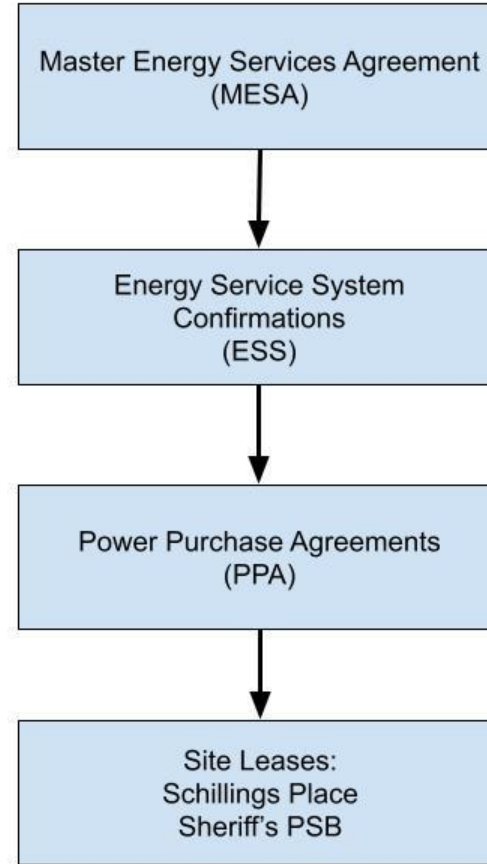
Gov. Code Sec. 4217.12

(a)[...] a public agency may enter into an energy service contract and any necessarily related facility ground lease on terms that its governing body determines are in the best interests of the public agency if the determination is made at a regularly scheduled public hearing, public notice of which is given at least two weeks in advance, and if the governing body finds:

- (1) That the anticipated cost to the public agency for thermal or electrical energy or conservation services provided by the energy conservation facility under the contract will be less than the anticipated marginal cost to the public agency of thermal, electrical, or other energy that would have been consumed by the public agency in the absence of those purchases.
- (2) That the difference, if any, between the fair rental value for the real property subject to the facility ground lease and the agreed rent, is anticipated to be offset by below market energy purchases or other benefits provided under the energy service contract.

Contract Structure

Goal: Provide a framework for the County to more quickly implement sustainability projects.



What is a Power Purchase Agreement?

- An agreement that allows a site host (I.e. County) to purchase renewable energy generated onsite at a fixed cost that is often lower than the cost the site host is currently purchasing power for.
- In a PPA structure, the site host does not own the renewable energy equipment and does not pay an upfront cost for the construction of the equipment.
- Both the site host and the owner have a vested interest in the project being completed on time and on budget because the site host will not see savings until the project is turned on and the owner/provider will not be paid until the project begins. In addition, the site host agrees to a fixed price for the power provided over the term of the project, if the system underperforms, the owner/provider will get paid less and the County will save less, but the County will always save money in this arrangement.
 - A PPA is executed under 4217 as it results in energy savings to the County without proving savings the project cannot go forward

PPA Key Provisions

Pricing is set at \$/kwh rate produced by system. Price escalates for 10 years. 25 year term maximizes positive cash flow to County.

Performance Guarantee to County: 90% of solar production

Options to purchase: The first day of years 7, 9, 11, 16, and 20.

Contract Year	Output (\$/kWh)
1	\$0.18940
2	\$0.19320
3	\$0.19710
4	\$0.20100
5	\$0.20500
6	\$0.20910
7	\$0.21330
8	\$0.21760
9	\$0.22190
10	\$0.22640
11	\$0.22640
12	\$0.22640
13	\$0.22640
14	\$0.22640
15	\$0.22640
16	\$0.22640
17	\$0.22640
18	\$0.22640
19	\$0.22640
20	\$0.22640
21	\$0.22640
22	\$0.22640
23	\$0.22640
24	\$0.22640
25	\$0.22640

Non-Standard Terms

Indemnification: MESA Article 10; PPAs Section 17

Mutual indemnification provided to each party

Insurance, PPAs Section 15

Commercial General Liability: Aggregate \$4M, Personal \$2M, \$4M/occurrence during construction \$1M during operation

Automobile liability: \$1M

Workers Compensation: \$1M/person, \$1M/accident, \$1M/disease

Professional Liability: \$2M/claim & \$4M aggregate during construction; \$1M/claim & \$2M aggregate during operation

Excess liability: \$5M

FAQs

Will the electricity bill go down? Yes and no.

PG&E costs will continue to rise, but not as much as they would have.

What does this cost the County?

No capital costs upfront, the County only pays for the electricity the solar system produces.

Maintenance: Who pays to maintain the systems?

Mynt Systems Inc., they own the solar system and are required to maintain it.

Roof warranty: Will this void the warranties on our roof?

No, Mynt warrants that they will not damage the roof during installation and will pay for any such damages, (14c PPA)

FAQs Pt. 2

Maintenance: What if we need to remove the system or shut down the system for repairs on our roof?

The system is modular and can be shut down and removed. The County does not have to pay for these removal costs, (6.11 Site Lease). County has an annual 96-hour grace window where we are not required to pay for energy system would have produced (7d PPA).

What about the Jail project?

We hope to bring this PPA to the Board soon.

What about On-Bill Financing and energy efficiency?

This will be a future ESS to be approved by the Board.

Next Steps

Reimbursable Services Agreement: Sustainability Program → PWFP. Cost TBD

Permitting, Design, & Construction: 7-10 Months

Jail PPA & On-Bill Financing Project: Future Energy Services System Confirmation, return to Board.

Internal Financing Discussion: Staff to formalize and return to Board.

A: How to make PPA payments?

Sustainability Program to receive appropriations from allocations from departments.

B: How to capture savings?

Due to County-Wide Cost Allocation Plan (COWCAP), Sustainability Program to bill departments for savings, create fund to redeploy savings for future sustainability projects and Community Climate Action & Adaptation Plan goals.

Timing Consideration

Self-Generation Incentive Program for Jail PPA

Incentive Amount: \$744,000

PG&E Deadline: 7/27/2023

Need: The Board package considered today OR Board approved MESA with a Letter of Intent for the Jail PPA

Conclusion: Title

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- c) Provide other direction to staff as appropriate.



Questions?

Supplementary Slides

A person with a large red backpack is walking across a suspension bridge that spans a deep valley filled with dense, lush green forest. The bridge is made of metal cables and a mesh floor. In the background, there are rolling mountains under a hazy sky. The overall scene is a scenic view of a natural landscape.

Schilling Place County Building PPA Savings



Year	Project Investment	Avoided Utility Costs	Avoided Cost (\$/kWh)	PPA Rate	Solar Production	Solar PPA Payments	O&M and OPEX	Net Annual Savings	Cumulative Cash Flow
1	\$0	\$315,648	\$0.204	\$0.189	1,546,788	(\$292,962)	\$0	\$22,686	\$22,686
2		\$325,117	\$0.211	\$0.193	1,539,054	(\$297,345)	\$0	\$27,772	\$50,458
3		\$334,871	\$0.219	\$0.197	1,531,359	(\$301,831)	\$0	\$33,040	\$83,498
4		\$344,917	\$0.226	\$0.201	1,523,702	(\$306,264)	\$0	\$38,653	\$122,150
5		\$355,264	\$0.234	\$0.205	1,516,083	(\$310,797)	\$0	\$44,467	\$166,617
6		\$365,922	\$0.243	\$0.209	1,508,503	(\$315,428)	\$0	\$50,494	\$217,111
7		\$376,900	\$0.251	\$0.213	1,500,961	(\$320,155)	\$0	\$56,745	\$273,856
8		\$388,207	\$0.260	\$0.218	1,493,456	(\$324,976)	\$0	\$63,231	\$337,087
9		\$399,853	\$0.269	\$0.222	1,485,988	(\$329,741)	\$0	\$70,112	\$407,199
10		\$411,849	\$0.279	\$0.226	1,478,559	(\$334,746)	\$0	\$77,103	\$484,302
11		\$424,204	\$0.288	\$0.226	1,471,166	(\$333,072)	\$0	\$91,132	\$575,434
12		\$436,930	\$0.298	\$0.226	1,463,810	(\$331,407)	\$0	\$105,524	\$680,958
13		\$450,038	\$0.309	\$0.226	1,456,491	(\$329,750)	\$0	\$120,289	\$801,246
14		\$463,539	\$0.320	\$0.226	1,449,208	(\$328,101)	\$0	\$135,438	\$936,684
15		\$477,445	\$0.331	\$0.226	1,441,962	(\$326,460)	\$0	\$150,985	\$1,087,670
16		\$491,769	\$0.343	\$0.226	1,434,753	(\$324,828)	\$0	\$166,941	\$1,254,610
17		\$506,522	\$0.355	\$0.226	1,427,579	(\$323,204)	\$0	\$183,318	\$1,437,928
18		\$521,717	\$0.367	\$0.226	1,420,441	(\$321,588)	\$0	\$200,130	\$1,638,058
19		\$537,369	\$0.380	\$0.226	1,413,339	(\$319,980)	\$0	\$217,389	\$1,855,447
20		\$553,490	\$0.394	\$0.226	1,406,272	(\$318,380)	\$0	\$235,110	\$2,090,557
21		\$556,230	\$0.398	\$0.226	1,399,241	(\$316,788)	\$0	\$239,442	\$2,329,999
22		\$558,983	\$0.401	\$0.226	1,392,244	(\$315,204)	\$0	\$243,779	\$2,573,778
23		\$561,750	\$0.406	\$0.226	1,385,283	(\$313,628)	\$0	\$248,122	\$2,821,900
24		\$564,531	\$0.410	\$0.226	1,378,357	(\$312,060)	\$0	\$252,471	\$3,074,370
25		\$567,325	\$0.414	\$0.226	1,371,465	(\$310,500)	\$0	\$256,826	\$3,331,196
TOTAL		\$11,290,389				(\$7,959,193)		\$3,331,196	

Sheriff's Office PPA Savings



Year	Project Investment	Avoided Utility Costs	Avoided Cost (\$/kWh)	PPA Rate	Solar Production	Solar PPA Payments	O&M and OPEX	Net Annual Savings	Cumulative Cash Flow
1	\$0	\$95,726	\$0.169	\$0.154	566,043	(\$87,397)	\$0	\$8,329	\$8,329
2		\$98,598	\$0.175	\$0.158	563,213	(\$88,706)	\$0	\$9,892	\$18,221
3		\$101,556	\$0.181	\$0.161	560,397	(\$90,000)	\$0	\$11,556	\$29,777
4		\$104,603	\$0.188	\$0.164	557,595	(\$91,390)	\$0	\$13,213	\$42,990
5		\$107,741	\$0.194	\$0.167	554,807	(\$92,708)	\$0	\$15,032	\$58,022
6		\$110,973	\$0.201	\$0.171	552,033	(\$94,122)	\$0	\$16,851	\$74,874
7		\$114,302	\$0.208	\$0.174	549,273	(\$95,518)	\$0	\$18,784	\$93,657
8		\$117,731	\$0.215	\$0.177	546,526	(\$96,954)	\$0	\$20,777	\$114,434
9		\$121,263	\$0.223	\$0.181	543,794	(\$98,372)	\$0	\$22,891	\$137,325
10		\$124,901	\$0.231	\$0.185	541,075	(\$99,828)	\$0	\$25,073	\$162,398
11		\$128,648	\$0.239	\$0.185	538,369	(\$99,329)	\$0	\$29,319	\$191,717
12		\$132,507	\$0.247	\$0.185	535,677	(\$98,832)	\$0	\$33,675	\$225,392
13		\$136,483	\$0.256	\$0.185	532,999	(\$98,338)	\$0	\$38,144	\$263,536
14		\$140,577	\$0.265	\$0.185	530,334	(\$97,847)	\$0	\$42,730	\$306,266
15		\$144,794	\$0.274	\$0.185	527,682	(\$97,357)	\$0	\$47,437	\$353,703
16		\$149,138	\$0.284	\$0.185	525,044	(\$96,871)	\$0	\$52,268	\$405,971
17		\$153,612	\$0.294	\$0.185	522,419	(\$96,386)	\$0	\$57,226	\$463,197
18		\$158,221	\$0.304	\$0.185	519,807	(\$95,904)	\$0	\$62,316	\$525,513
19		\$162,967	\$0.315	\$0.185	517,208	(\$95,425)	\$0	\$67,543	\$593,056
20		\$167,856	\$0.326	\$0.185	514,622	(\$94,948)	\$0	\$72,909	\$665,965
21		\$168,687	\$0.329	\$0.185	512,048	(\$94,473)	\$0	\$74,214	\$740,179
22		\$169,522	\$0.333	\$0.185	509,488	(\$94,001)	\$0	\$75,522	\$815,701
23		\$170,361	\$0.336	\$0.185	506,941	(\$93,531)	\$0	\$76,831	\$892,531
24		\$171,205	\$0.339	\$0.185	504,406	(\$93,063)	\$0	\$78,142	\$970,673
25		\$172,052	\$0.343	\$0.185	501,884	(\$92,598)	\$0	\$79,455	\$1,050,128
TOTAL		\$3,424,025				(\$2,373,897)		\$1,050,128	

Schilling Place County Building and Sheriff's Office PPA Savings



Year	Project Investment	Avoided Utility Costs	Avoided Cost (\$/kWh)	PPA Rate	Solar Production	Solar PPA Payments	O&M and OPEX	Net Annual Savings	Cumulative Cash Flow
1	\$0	\$411,374	\$0.195	\$0.180	2,112,831	(\$380,359)	\$0	\$31,015	\$31,015
2		\$423,715	\$0.202	\$0.184	2,102,267	(\$386,051)	\$0	\$37,664	\$68,679
3		\$436,426	\$0.209	\$0.187	2,091,756	(\$391,831)	\$0	\$44,596	\$113,275
4		\$449,519	\$0.216	\$0.191	2,081,297	(\$397,654)	\$0	\$51,865	\$165,140
5		\$463,005	\$0.224	\$0.195	2,070,890	(\$403,505)	\$0	\$59,499	\$224,639
6		\$476,895	\$0.231	\$0.199	2,060,536	(\$409,550)	\$0	\$67,345	\$291,985
7		\$491,202	\$0.240	\$0.203	2,050,233	(\$415,673)	\$0	\$75,528	\$367,513
8		\$505,938	\$0.248	\$0.207	2,039,982	(\$421,930)	\$0	\$84,008	\$451,521
9		\$521,116	\$0.257	\$0.211	2,029,782	(\$428,113)	\$0	\$93,003	\$544,524
10		\$536,749	\$0.266	\$0.215	2,019,633	(\$434,574)	\$0	\$102,176	\$646,700
11		\$552,852	\$0.275	\$0.215	2,009,535	(\$432,401)	\$0	\$120,451	\$767,151
12		\$569,437	\$0.285	\$0.215	1,999,487	(\$430,239)	\$0	\$139,198	\$906,349
13		\$586,521	\$0.295	\$0.215	1,989,490	(\$428,088)	\$0	\$158,433	\$1,064,782
14		\$604,116	\$0.305	\$0.215	1,979,542	(\$425,947)	\$0	\$178,169	\$1,242,951
15		\$622,240	\$0.316	\$0.215	1,969,645	(\$423,818)	\$0	\$198,422	\$1,441,373
16		\$640,907	\$0.327	\$0.215	1,959,796	(\$421,699)	\$0	\$219,208	\$1,660,581
17		\$660,134	\$0.339	\$0.215	1,949,997	(\$419,590)	\$0	\$240,544	\$1,901,125
18		\$679,938	\$0.350	\$0.215	1,940,248	(\$417,492)	\$0	\$262,446	\$2,163,571
19		\$700,336	\$0.363	\$0.215	1,930,546	(\$415,405)	\$0	\$284,932	\$2,448,503
20		\$721,346	\$0.376	\$0.215	1,920,894	(\$413,328)	\$0	\$308,019	\$2,756,521
21		\$724,917	\$0.379	\$0.215	1,911,289	(\$411,261)	\$0	\$313,656	\$3,070,177
22		\$728,505	\$0.383	\$0.215	1,901,733	(\$409,205)	\$0	\$319,301	\$3,389,478
23		\$732,111	\$0.387	\$0.215	1,892,224	(\$407,159)	\$0	\$324,953	\$3,714,431
24		\$735,735	\$0.391	\$0.215	1,882,763	(\$405,123)	\$0	\$330,613	\$4,045,044
25		\$739,377	\$0.395	\$0.215	1,873,349	(\$403,097)	\$0	\$336,280	\$4,381,324
TOTAL		\$14,714,414				(\$10,333,090)		\$4,381,324	

Schilling Place County Building and Sheriff's Office PPA Savings With BUYOUT



Year	Project Investment	Avoided Utility Costs	Avoided Cost (\$/kWh)	PPA Rate	Solar Production	Solar PPA Payments	O&M and OPEX	Net Annual Savings	Cumulative Cash Flow
1	\$0	\$411,374	\$0.195	\$0.180	2,112,831	(\$380,359)	\$0	\$31,015	\$31,015
2		\$423,715	\$0.202	\$0.184	2,102,267	(\$386,051)	\$0	\$37,664	\$68,679
3		\$436,426	\$0.209	\$0.187	2,091,756	(\$391,831)	\$0	\$44,596	\$113,275
4		\$449,519	\$0.216	\$0.191	2,081,297	(\$397,654)	\$0	\$51,865	\$165,140
5		\$463,005	\$0.224	\$0.195	2,070,890	(\$403,505)	\$0	\$59,499	\$224,639
6		\$476,895	\$0.231	\$0.199	2,060,536	(\$409,550)	\$0	\$67,345	\$291,985
7		\$491,202	\$0.240	\$0.203	2,050,233	(\$415,673)	\$0	\$75,528	\$367,513
8		\$505,938	\$0.248	\$0.207	2,039,982	(\$421,930)	\$0	\$84,008	\$451,521
9		\$521,116	\$0.257	\$0.211	2,029,782	(\$428,113)	\$0	\$93,003	\$544,524
10		\$536,749	\$0.266	\$0.215	2,019,633	(\$434,574)	\$0	\$102,176	\$646,700
11		\$552,852	\$0.275	\$0.215	2,009,535	(\$432,401)	\$0	\$120,451	\$767,151
12		\$569,437	\$0.285	\$0.215	1,999,487	(\$430,239)	\$0	\$139,198	\$906,349
13		\$586,521	\$0.295	\$0.215	1,989,490	(\$428,088)	\$0	\$158,433	\$1,064,782
14		\$604,116	\$0.305	\$0.215	1,979,542	(\$425,947)	\$0	\$178,169	\$1,242,951
15		\$622,240	\$0.316	\$0.215	1,969,645	(\$423,818)	\$0	\$198,422	\$1,441,373
16		\$640,907	\$0.327	\$0.215	1,959,796	(\$421,699)	\$0	\$219,208	\$1,660,581
17		\$660,134	\$0.339	\$0.215	1,949,997	(\$419,590)	\$0	\$240,544	\$1,901,125
18		\$679,938	\$0.350	\$0.215	1,940,248	(\$417,492)	\$0	\$262,446	\$2,163,571
19		\$700,336	\$0.363	\$0.215	1,930,546	(\$415,405)	\$0	\$284,932	\$2,448,503
20		\$721,346	\$0.376	\$0.215	1,920,894	(\$413,328)	\$0	\$308,019	\$2,756,521
21		\$724,917	\$0.379	\$0.215	1,911,289	(\$411,261)	\$0	\$313,656	\$3,070,177
22		\$728,505	\$0.383	\$0.215	1,901,733	(\$409,205)	\$0	\$319,301	\$3,389,478
23		\$732,111	\$0.387	\$0.215	1,892,224	(\$407,159)	\$0	\$324,953	\$3,714,431
24		\$735,735	\$0.391	\$0.215	1,882,763	(\$405,123)	\$0	\$330,613	\$4,045,044
25		\$739,377	\$0.395	\$0.215	1,873,349	(\$403,097)	\$0	\$336,280	\$4,381,324
26		\$743,037	\$0.399	\$0	1,863,982	(\$1,273,349)	\$0	(\$530,312)	\$3,851,011
27		\$746,715	\$0.403	\$0	1,854,662	\$0	\$0	\$746,715	\$4,597,727
28		\$750,412	\$0.407	\$0	1,845,389	\$0	\$0	\$750,412	\$5,348,138
29		\$754,126	\$0.411	\$0	1,836,162	\$0	\$0	\$754,126	\$6,102,264
30		\$757,859	\$0.415	\$0	1,826,981	\$0	\$0	\$757,859	\$6,860,123
TOTAL		\$18,466,563				(\$11,606,440)		\$6,860,123	