MYNT SYSTEMS
BUILDING PERFORMANCE

County of Monterey

Program Services Agreement

RECOMMENDATION:

It is recommended that the Board of Supervisors :

- Approve the Program Services Agreement with Mynt Systems Services US Inc (Mynt)
- Authorize the County Administrative Officer, or his designee, to sign the Program Services Agreement with Mynt to undertake an Energy Assessment at both the Natividad Jail Complex and Schilling Place.
- Provide other direction to staff as appropriate.

Recommendations from Referral 2019.13 Energy Efficiency and Building Modernization Strategy

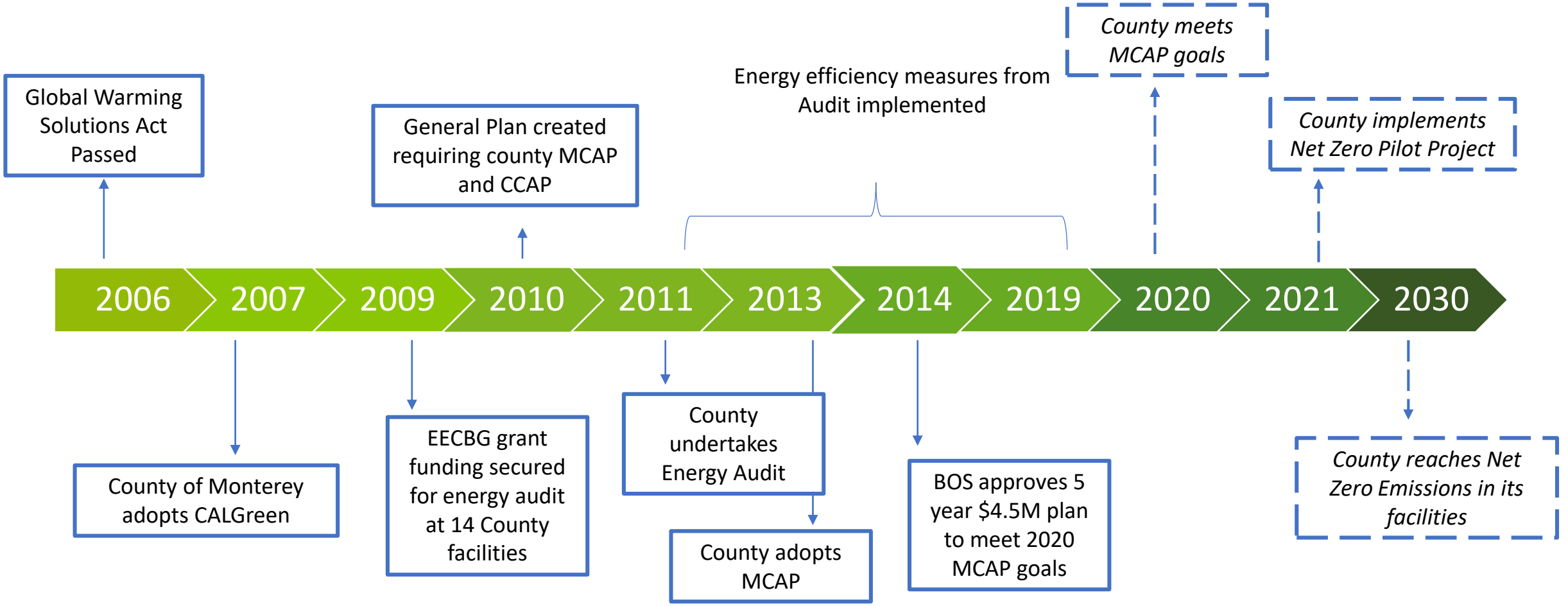
Audit and Report back on 2020 emissions to close out the 2013 MCAP

Set a Net Zero goal for building facilities by 2030 through the development of a Master Plan that includes an Asset Management Plan to include Capital and Maintenance Plans for all County-owned buildings and facilities.

Implement an Asset Management System for all County facilities

Conduct a Net Zero pilot program aimed at a critical facility using innovative financing methods and resiliency funds to drastically reduce energy use and emissions and potentially generate energy onsite.

County Facilities Energy Efficiency Timeline



How to Get to Net Zero (through Budget Neutral Measures)

- Select a location for a pilot project (Natividad Correctional Facility and Schilling Place have been selected as potential pilots) and conduct and **Energy Assessment and Investment Grade Audit** after executing initial Program Development Agreement
- Select energy efficiency measures to reduce energy consumption and utilize PG&E's **On Bill Financing** method to finance measures
- Apply for a variety of incentives, low interest loans and grants for local municipalities to get to net zero (i.e. SGIP)
- Install solar plus battery storage through a **PPA** to create a microgrid providing for added resiliency
- Utilize savings from both energy efficiency and renewable energy strategies to **electrify** the building bringing carbon emissions to zero.

Requires the use of an Energy Services Company to act as a single point of contact through all stages of the project including consultation, design, engineering, installation, financing, incentives and maintenance while avoiding any upfront costs.

THE MYNT ENERGY ASSESSMENT

Assess
Our assessment includes utility data, equipment type, age, condition, and occupancy.

Rebates/Tax Credits
We work closely with utility reps to ensure maximum rebates are received for upgrades.

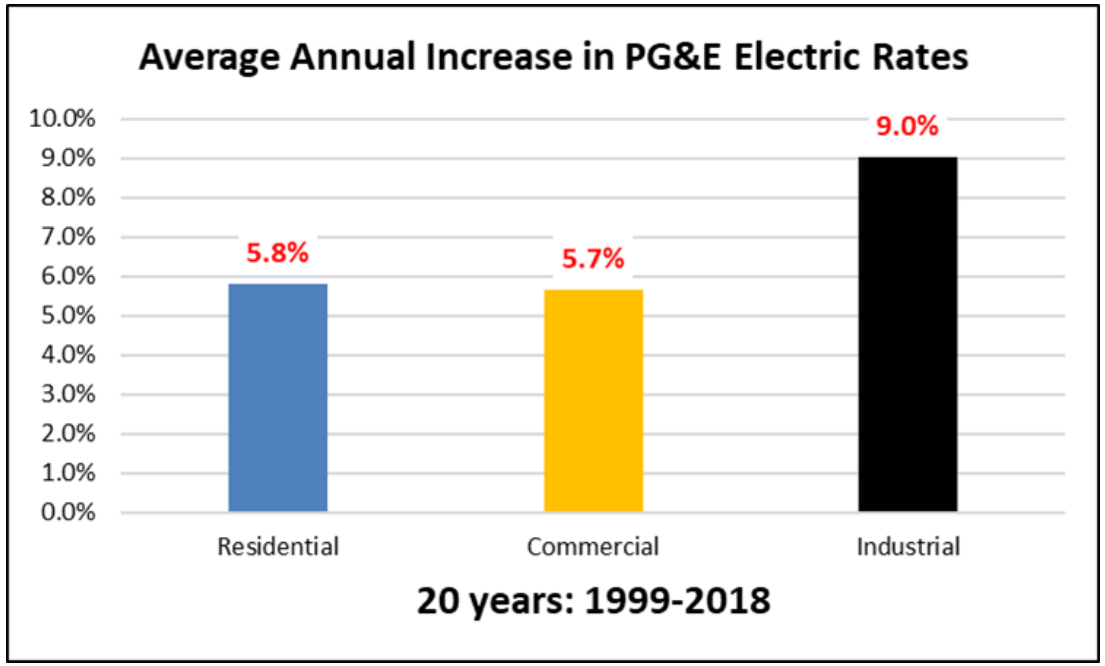
Finance
Multiple finance options are compared and/or combined to ensure the best fit.

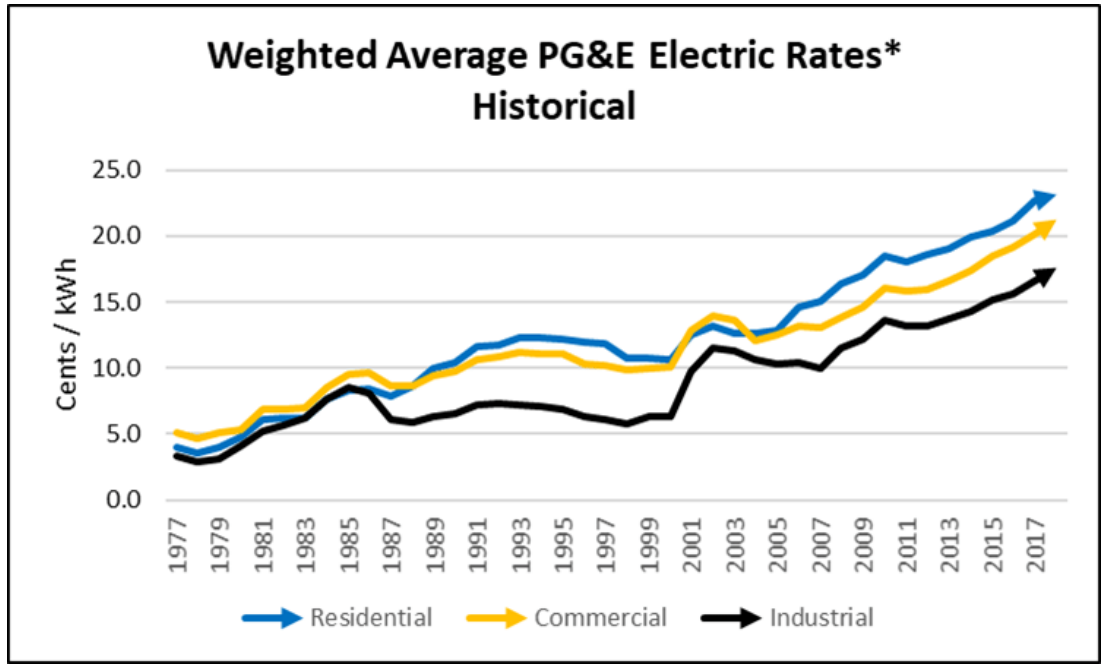
Design
Using the data from the assessment we design a plan that fits your building, budget and goals.

Mockup
Potential solutions are mocked up to ensure customer satisfaction and compatibility.

Implement
Our project managers provide daily or weekly status updates so you always know how the project is progressing.

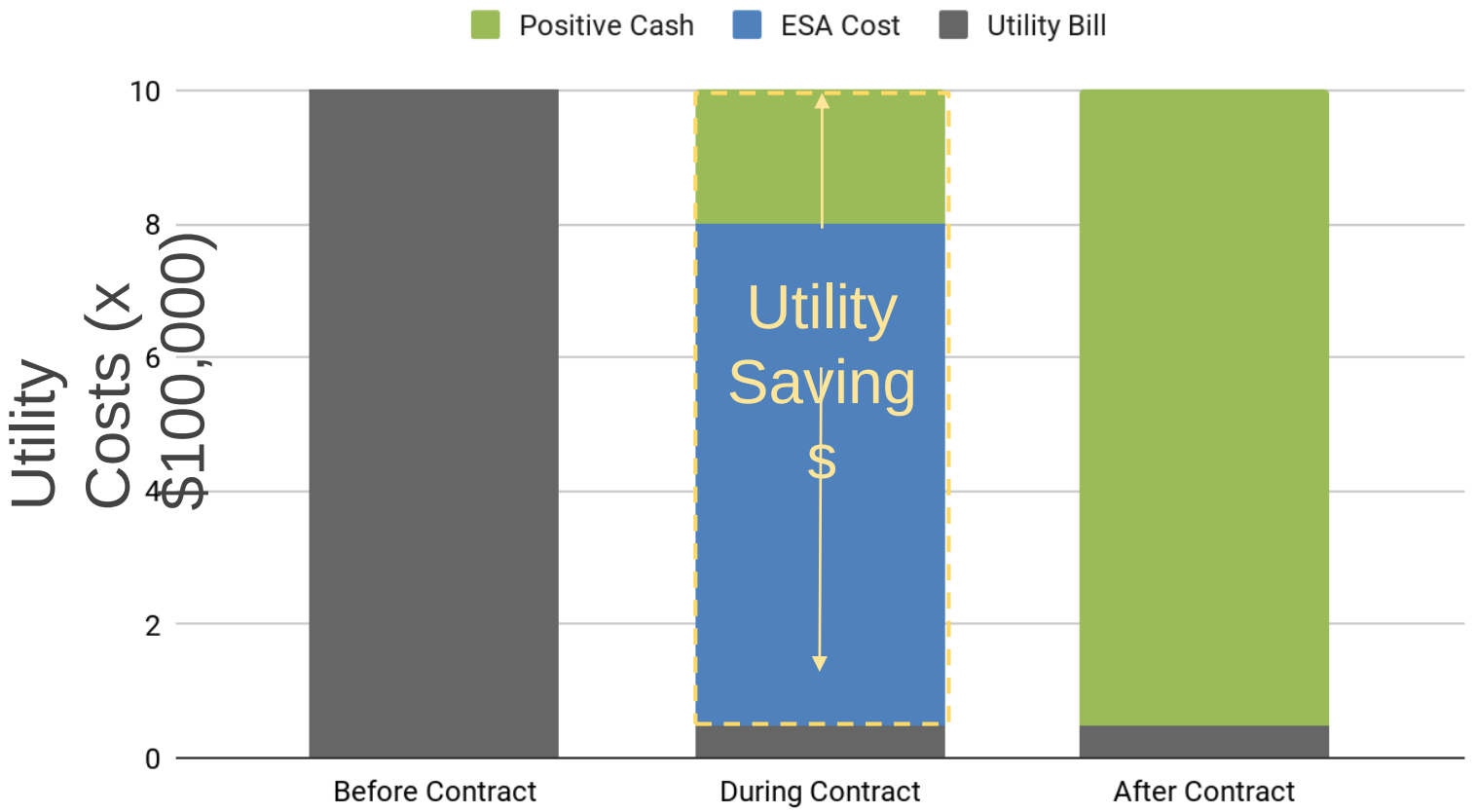
PGE Rate History





*Data based on historical rate information taken from CPUC data

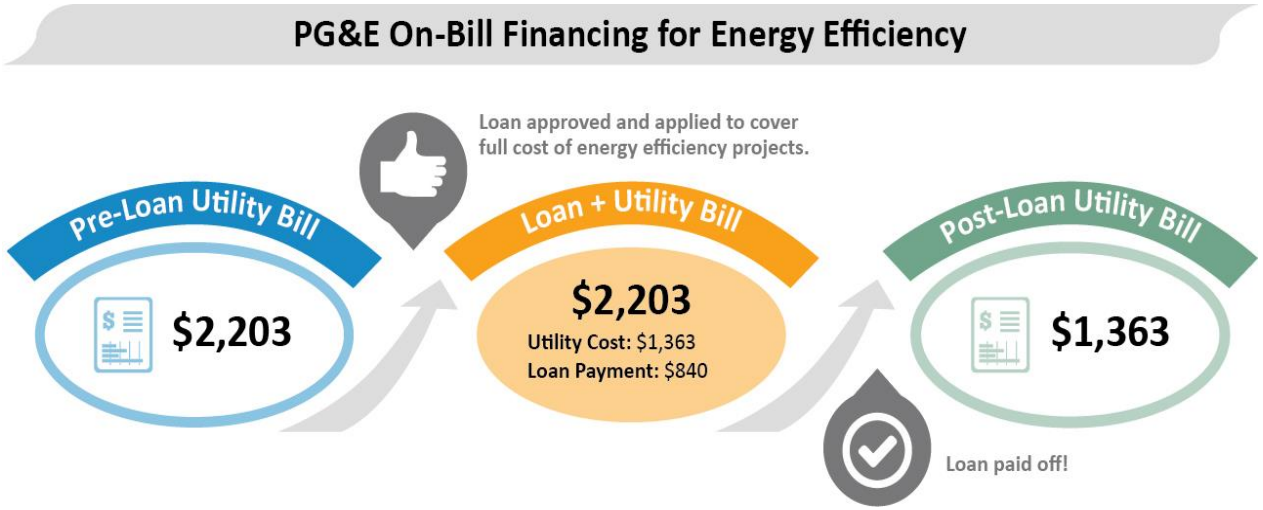
ESA - financing projects with energy savings



Financing Option - PG&E ‘On-Bill Financing’ (OBF)

Take advantage of PG&E’s zero-interest financing program for energy efficiency projects.

- PG&E funds 100% of the project (up to $4Mil) with a 0% interest loan
- Loan is paid back through your monthly PG&E bill
- Monthly payments are less than monthly savings



Solar and Battery Power Purchase Agreement (PPA)

No Money Down: Unlike a direct system purchase, there are no up-front costs associated with enjoying the immediate savings from the system.

Immediate Savings: The instant your system is energized, you start saving on your electricity bill. In addition, savings increase over time as grid electricity prices rise at a higher escalation rate than PG&E.

Pay Only for the Energy Your System Produces: With PPA, if your system doesn't perform, you don't pay. You buy the electricity that is produced at a guaranteed low rate every month.

Predictable Long-Term Costs: In California, electricity rates increase faster than any other state in the nation. With a PPA you get long-term predictability and a hedge against rising electricity costs for the next 25 years or more.

No Maintenance Costs or Worry: Your PPA partner will maintain the system and will have a vested financial interest in making sure the system runs efficiently.

Off-Balance Sheet: A PPA is an ideal way to reduce your energy costs without an impact to your balance sheet. A PPA is not a loan; it is a long- term service contract that qualifies as off-balance sheet.

Buy-Out Flexibility: Upon request, we are providing the option for you to purchase your system during the PPA term at a reduced cost after the tax benefits have been monetized.

Solar and Battery Third Party Financing
How a Tax-Exempt entity “captures” tax benefits

- The Federal Investment Tax Credit (**ITC**) effectively reduces the eligible project basis for all renewable energy installations.
- The County is tax-exempt and thus has no ability to monetize the ITC.
- A “Third Party” investor, who pays taxes, can own the system and capture the tax credits.
- The investor enters into a Power Purchase Agreement (**PPA**) with the County and then sells the generated solar energy to the County at a discounted rate.
- This investor must own and operate the system for minimum 6 years, to fully vest the ITC. Typically PPA terms are 20+ years in order for the investor to recoup their investment.
- The County shares in the benefit of the tax credits via the reduced cost of energy over the term of the PPA.

Impact of Battery and Solar

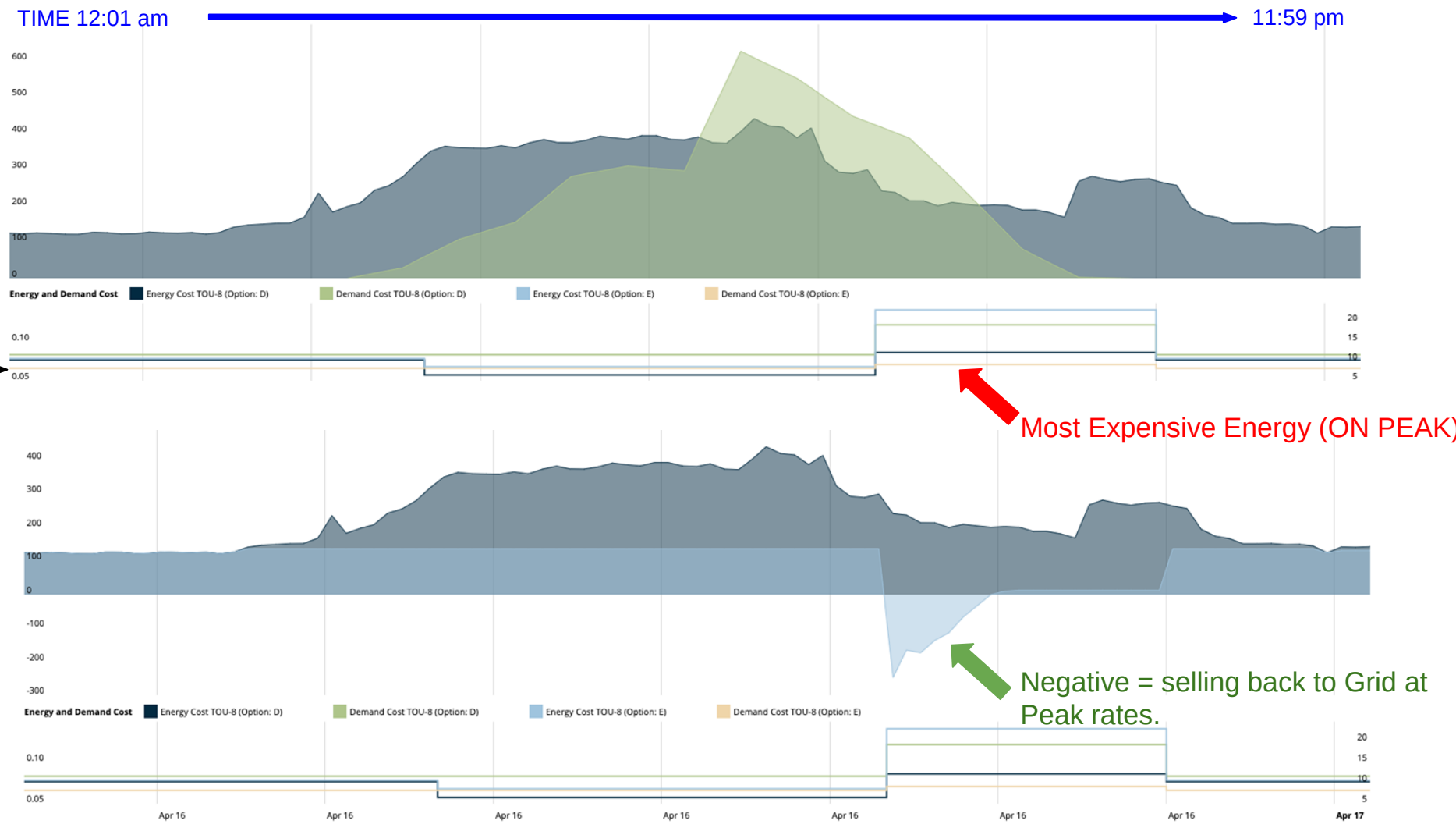
Solar and Battery work together to “shave peaks” and optimize value of generation by “load shifting”

Dark Blue = Current usage
Lt. Green = Solar Generation
(BEFORE)

Lines represent the value of energy at different **Time of Use** (TOU) throughout the day

Light Blue = Net effect of Solar and Battery.
(AFTER)

All peaks are “shaved” and usage during OnPeak (4-9pm) is reduced to zero or negative.



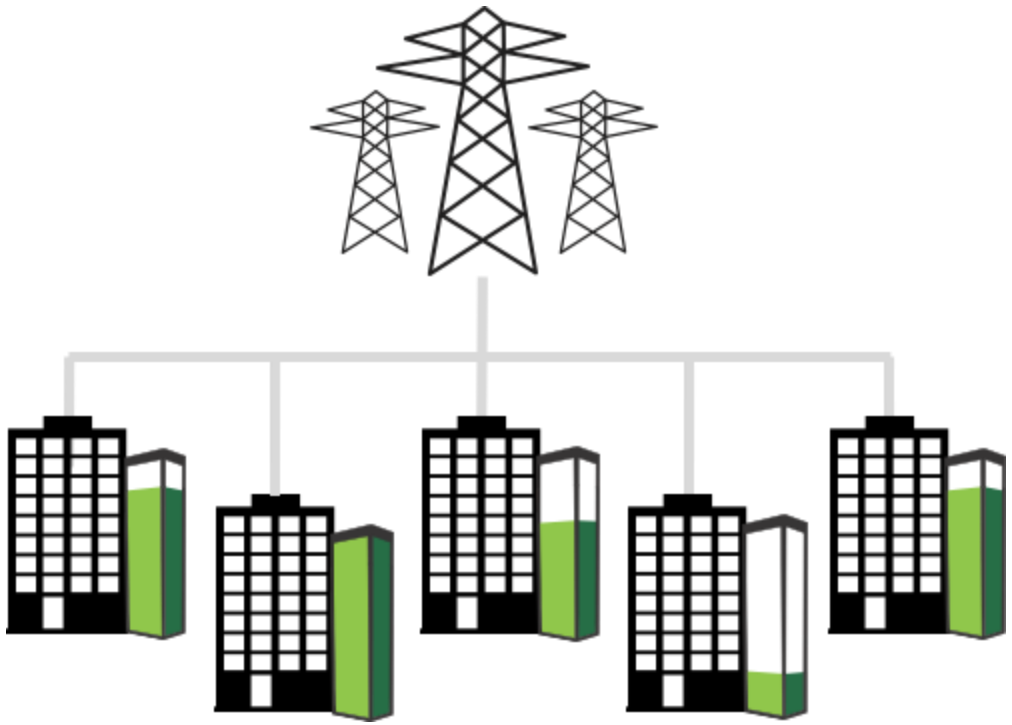
Monetizing Dormant Battery Capacity

There are a growing number of U.S. programs which will allow owners of energy storage assets to sell that unused capacity back to the grid at times when it's most valuable.

The California market for this type of "dispatchable" power is still young but rapidly expanding in size and value.

Utilities are eager to find businesses willing to dispatch "power-on-demand" to help them mitigate costs in keeping up with all of their customers asking for more and more power at the same time of day.

Mynt's ESS will come equipped with intelligent software enabling the County to take advantage of these markets as they become more lucrative.



Funding Options - Grants and Incentives

- **SGIP - Self Generation Incentive Program**
- Applied and on Waitlist.
- Seeking $1.8 Million for the Natividad Correctional Facility
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- **CEC - Multiple grants/Solicitations -** available thru Q2 2020
- Demonstrating Innovative Energy Storage Tech in Pressing CA Applications - $20 MM
- Emerging Storage Technologies Grants - $11 MM
- EPIC Microgrid Grants - $30 MM, Next round TBD
- 1% Municipal Loan Program for Energy Projects **-** 2020 funding TBD
-
- **MBCP - Long term loan for resiliency** - Open now for Public Entities
- Long term low rate loan for upto 50% of Resiliency project costs
- $25 Million in available funding

Pilot Project - Natividad Correctional Facility Solar PV

1410 Natividad Rd. Salinas, CA

PV System Size: 842 kW (carports)

Generation: 1,290,000 kWh (annual) *47% Offset of 2019 Consumption*

Fully Financed ESA - Solar, Battery, ECMs

	Capital Investment	Tax Benefits (to investor)	SGIP Battery Incentive (to investor)	On Bill Finance	ESA Payments	Utility Savings	Operations and Maintenance	Annual Cash Flow	Cumulative Cash Flow
	(A)	(B)	(C)	(D)	(E)	(E)	(F)		
Year 1	$0	$2,882,329	$916,300	($85,000)	($253,500)	$390,000	$0	$51,500	$51,500
Year 2		$193,807	$183,260	($85,000)	($256,035)	$405,600	$0	$64,565	$116,065
Year 3		$116,284	$183,260	($85,000)	($258,595)	$421,824	$0	$78,229	$194,294
Year 4		$69,771	$183,260	($85,000)	($261,181)	$438,697	$0	$92,516	$286,809
Year 5		$69,771	$183,260	($85,000)	($263,793)	$456,245	$0	$107,452	$394,261
Year 6		$34,885	$183,260	($85,000)	($266,431)	$474,495	$0	$123,064	$517,325
Year 7				($85,000)	($269,095)	$493,474	$0	$139,379	$656,704
Year 8				($85,000)	($271,786)	$513,213	$0	$156,427	$813,131
Year 9					($274,504)	$533,742	$0	$259,238	$1,072,369
Year 10					($277,249)	$555,092	$0	$277,842	**$1,350,211**
Year 11					($280,022)	$577,295	$0	$297,274	$1,647,484
Year 12					($282,822)	$600,387	$0	$317,565	$1,965,050
Year 13					($285,650)	$624,403	$0	$338,752	$2,303,802
Year 14					($288,507)	$649,379	$0	$360,872	$2,664,674
Year 15					($291,392)	$675,354	$0	$383,962	$3,048,636
Year 16					($294,306)	$702,368	$0	$408,062	$3,456,698
Year 17					($297,249)	$730,463	$0	$433,214	$3,889,912
Year 18					($300,221)	$759,681	$0	$459,460	$4,349,373
Year 19					($303,223)	$790,068	$0	$486,845	$4,836,218
Year 20					($306,256)	$821,671	$0	$515,416	$5,351,633
Year 21					($309,318)	$854,538	$0	$545,220	$5,896,853
Year 22					($312,411)	$888,720	$0	$576,308	$6,473,161
Year 23					($315,535)	$924,268	$0	$608,733	$7,081,894
Year 24					($318,691)	$961,239	$0	$642,548	$7,724,442
Year 25					($321,878)	$999,689	$0	$677,811	$8,402,253
TOTALS					($7,159,651)	$16,241,904	$0	$8,402,253	

**values are all preliminary and only to be used for illustrating the typical cash flow - ESA is 25 year term @ 1% escalation*

Energy Storage and Solar Economics

Bill Date Ranges			Energy Use (kWh)				Max Demand (kW)	Charges Before PV/ESS					Charges After PV/ESS				
Start Date	End Date	Season	On Peak	Part Peak	Off Peak	Super Off Pea	NC / Max	Other	NBC	Energy	Demand	Total	Other	NBC	Energy	Demand	Total
1/1/2019	2/1/2019	W1	53,108	-	195,877	-	446	$733	$6,225	$24,613	$8,719	$40,291	$733	$4,732	$18,123	$6,197	$29,786
2/1/2019	3/1/2019	W1	46,182	-	171,282	-	442	$662	$5,437	$21,489	$8,641	$36,229	$662	$3,871	$14,599	$5,904	$25,036
3/1/2019	4/1/2019	W2	47,707	-	129,612	52,236	423	$733	$5,739	$20,768	$8,270	$35,510	$733	$3,698	$11,834	$5,572	$21,837
4/1/2019	5/1/2019	W2	43,303	-	118,352	46,959	474	$710	$5,215	$18,890	$9,267	$34,082	$710	$2,505	$6,191	$4,497	$13,903
5/1/2019	6/1/2019	W2	46,501	-	128,402	51,480	456	$733	$5,660	$20,459	$8,915	$35,767	$733	$2,372	$4,498	$4,672	$12,276
6/1/2019	7/1/2019	S	46,950	38,521	140,765	-	461	$710	$5,656	$34,597	$10,309	$51,271	$710	$2,250	-$2,230	$5,378	$6,108
7/1/2019	8/1/2019	S	49,571	40,359	144,575	-	449	$733	$5,863	$36,108	$10,071	$52,775	$733	$2,442	-$667	$5,533	$8,041
8/1/2019	9/1/2019	S	51,702	41,641	149,864	-	492	$733	$6,080	$37,506	$10,996	$55,316	$733	$2,805	$2,781	$5,833	$12,153
9/1/2019	10/1/2019	S	50,126	41,309	145,393	-	467	$710	$5,921	$36,515	$10,531	$53,676	$710	$3,163	$7,523	$6,169	$17,564
10/1/2019	11/1/2019	W1	47,491	-	181,774	-	487	$733	$5,732	$22,604	$9,521	$38,590	$733	$3,442	$11,543	$5,650	$21,369
11/1/2019	12/1/2019	W1	46,356	-	176,821	-	453	$710	$5,579	$22,009	$8,856	$37,155	$710	$3,932	$14,787	$5,630	$25,058
12/1/2019	1/1/2020	W1	47,783	-	184,710	-	459	$733	$5,812	$22,907	$8,973	$38,426	$733	$4,374	$16,782	$5,650	$27,540
			576,780	**161,830**	**1,867,427**	**150,675**		**$8,634**	**$68,918**	**$318,466**	**$113,069**	**$509,087**	**$8,634**	**$39,587**	**$105,764**	**$66,686**	**$220,670**

The solar PV offsets the majority of your energy charges ($/kWh) while the ESS offsets your demand charges ($/kW) = **$289k in annual utility savings.**

Previous Clients

Mynt Systems has successfully completed projects for the following:

- Graniterock
- City of San Ramon
- Bonny Doon School District
- Pacific Elementary School District
- Westin LAX
- Visa Inc.
- Hyatt Regency
- Jones Lang LaSalle
- Boys and Girls Club
- Host Hotels
- Toll House Hotel
- Galleria Park Hotel
- San Benito Health Foundation
- Sonic Manufacturing
- Diocese of Monterey

San Benito Health Foundation – Net Zero Example

San Benito Health Foundation Net Zero Example

- Replaced all interior and exterior lighting with LED,
- Replaced (12) HVAC units,
- Added Building Automation System,
- Installed 86 kW solar system and 525 kWh battery backup system with grid-interactive and grid-islanding capabilities

- 214,291 annual kWh savings
- $42,366 first year savings