



Clean Energy for Colleges: Planning for Success



State Center Community College District



Agenda

- Overview of solar and energy storage
- Overview of procurement strategies
- Top things to be aware of right now
- Tips to maximize project success



Presenters

➤ **Shannon Robertson**

- State Center Community College District
- Construction Services Manager

➤ **Brian Taylor**

- ForeFront Power
- Sales Manager

➤ **Kevin Flanagan**

- School Project for Utility Rate Reduction (SPURR)
- Lead administrator for REAP Program



State Center Community College District

State Center Community College District (SCCCD) serves more than 50,000 students and covers 5,500 square miles in Fresno, Madera, Kings and Tulare counties. SCCC is made up of three colleges and three educational centers.

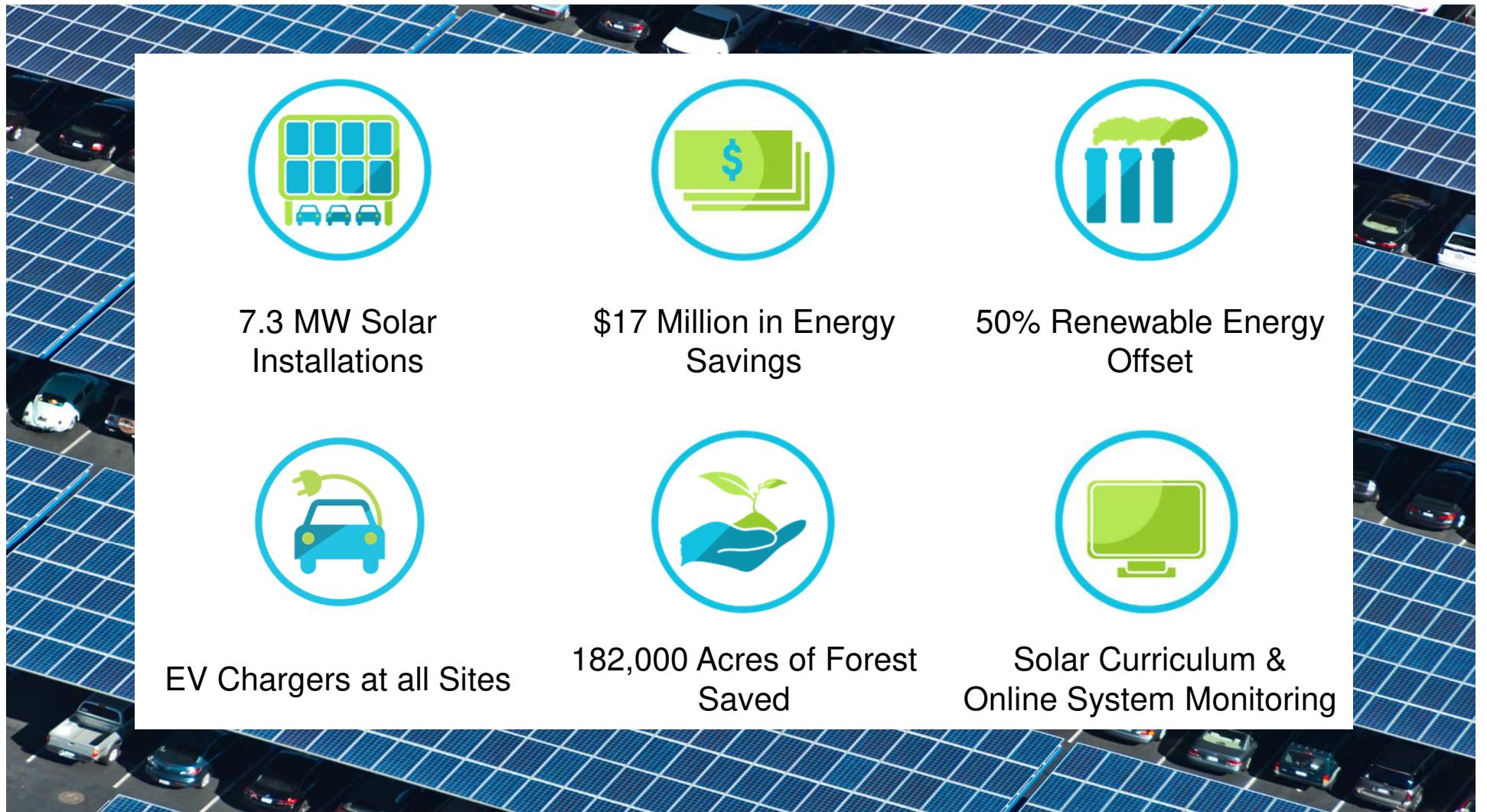
- Fresno City College
- Reedley College
- Clovis Community College
- Madera Community College Center
- Oakhurst Community College Center
- Career & Technology Center (CTC)





State Center CCD

Sustainability Leader for Colleges in California



Ex: Madera Community College Center

- 83% Energy Offset
- 21% Year 1 Energy Savings
- \$2.5 Million 20 Year Savings
- Shaded Parking
- LED Lighting
- EV Charging Stations

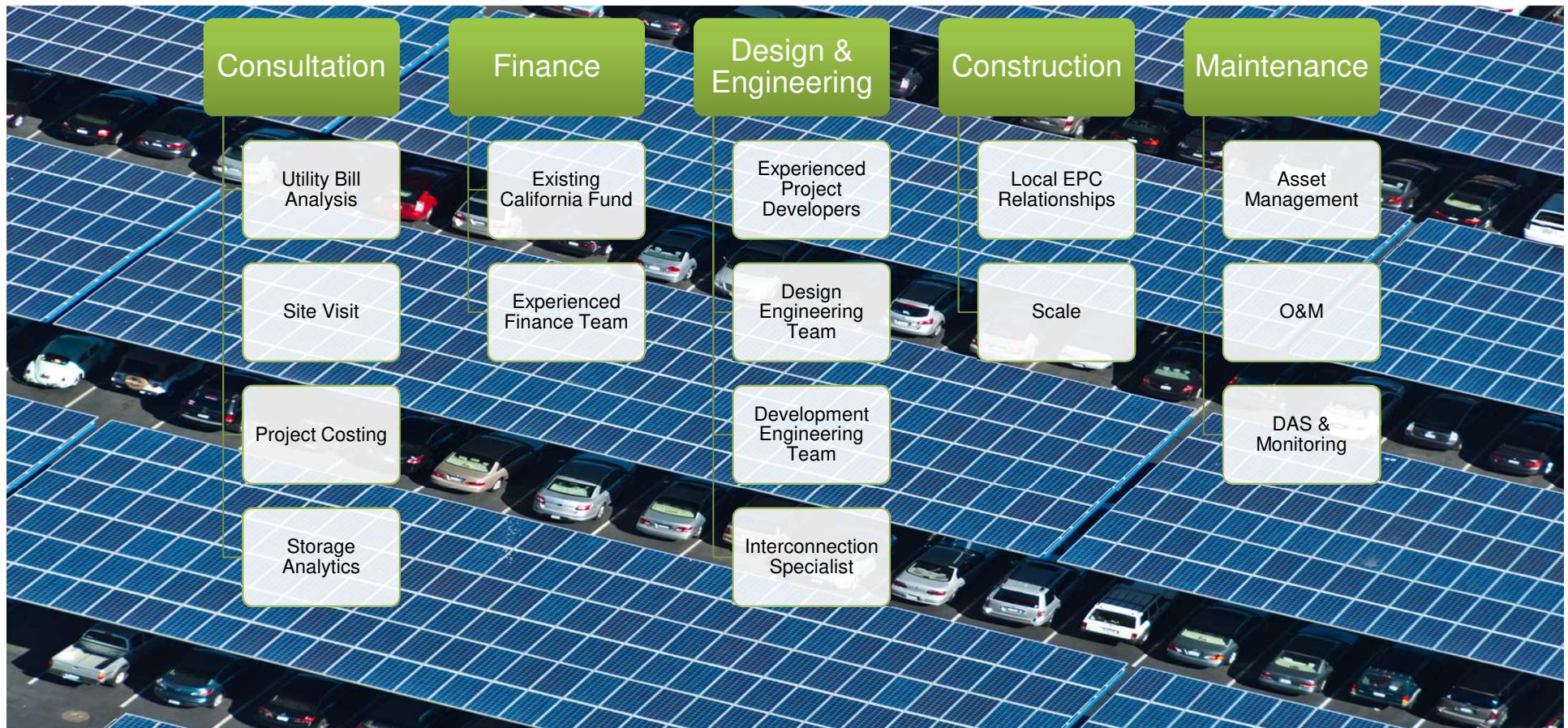






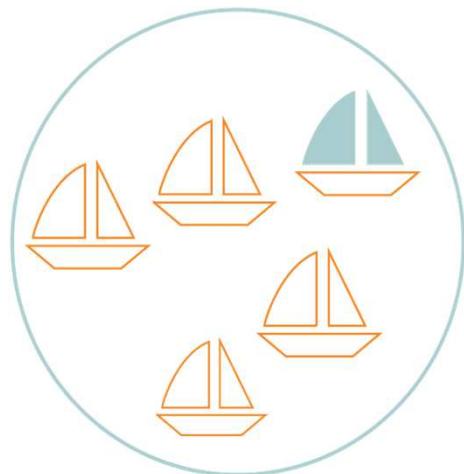
ForeFront Power

Development Experts



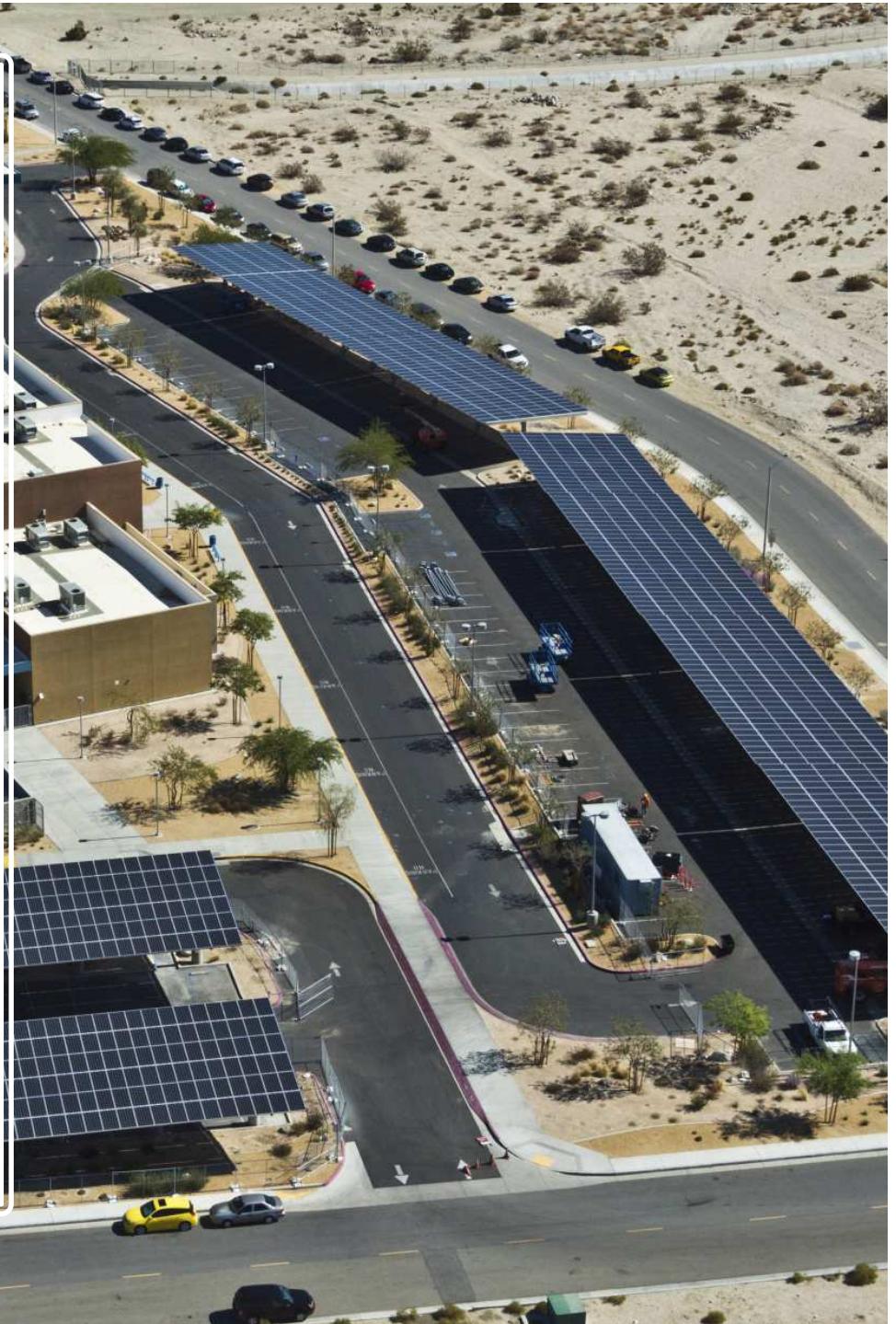
SPURR: School Project for Utility Rate Reduction

- Joint Powers Authority (JPA) formed in 1989 by California public school districts with 240 public agency members.
- Aggregates purchasing power and expertise → **Buying Together.
Buying Better.**
- Governed by Board of public agency administrators.
- No cost to join SPURR; all programs self-funded through transparent administrative fee.
- Renewable Energy Aggregated Procurement (REAP) Program



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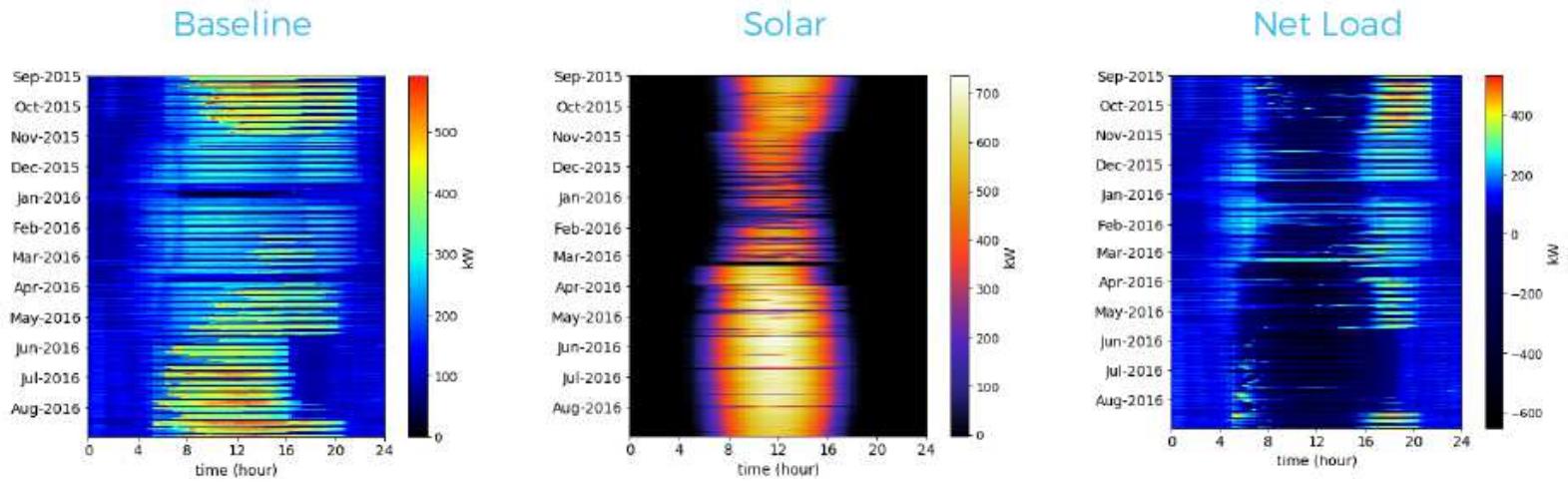
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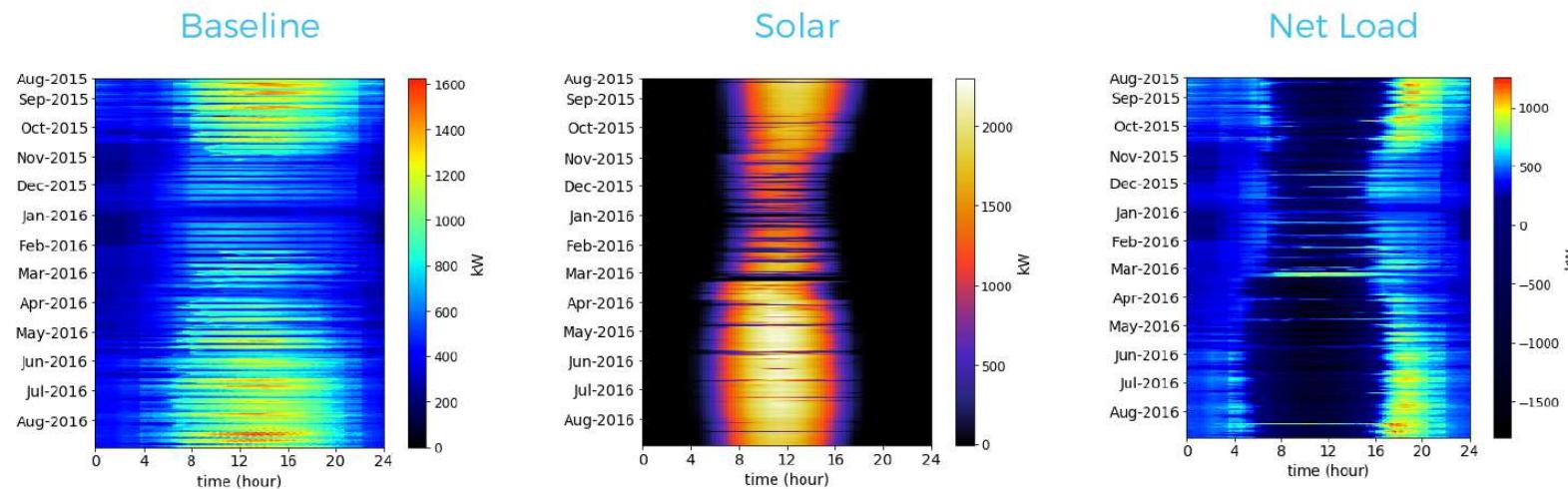


Heat Maps

Madera



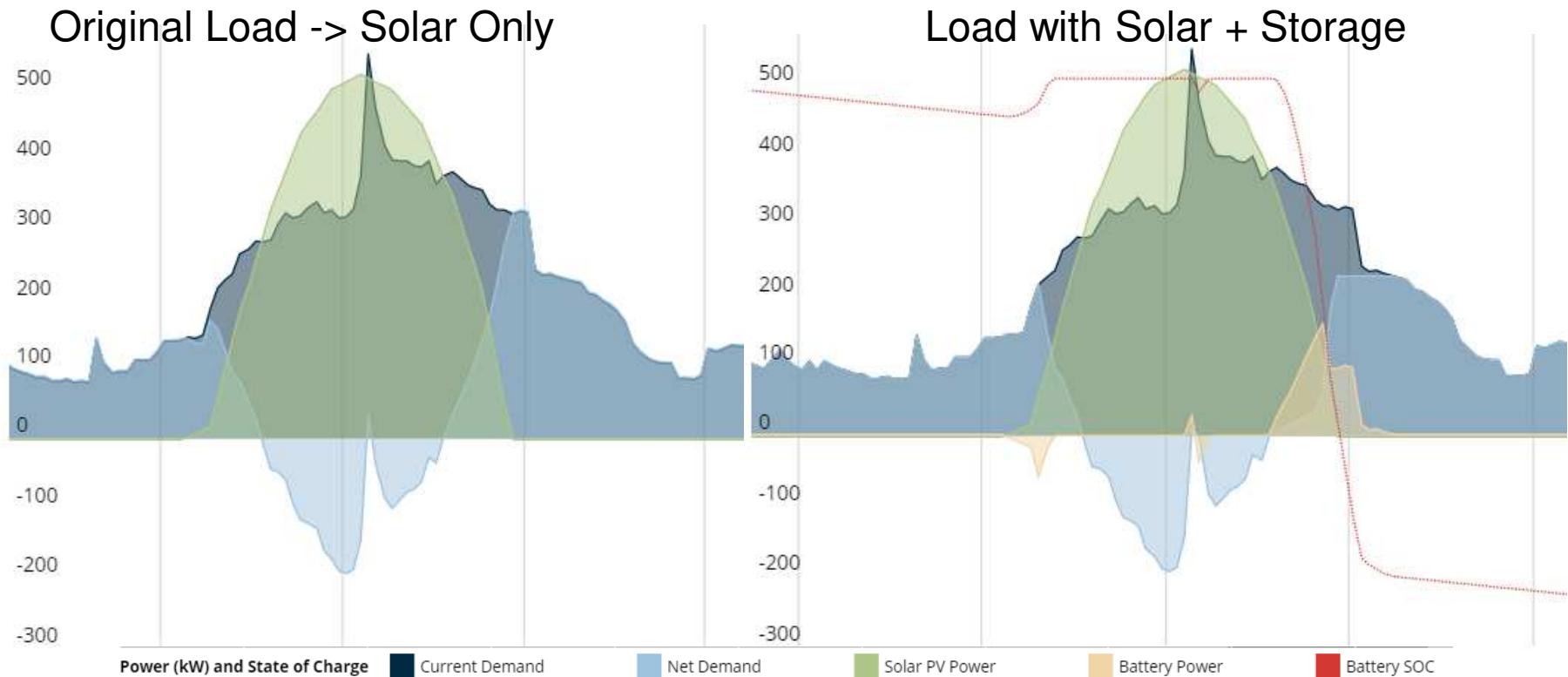
Clovis





Madera Center – Solar & Storage

Simulated day from historical usage: October 17, 2016



- Solar Reduces KWH Consumption
- Storage Shaves Demand Spikes & Firms Peak Reduction



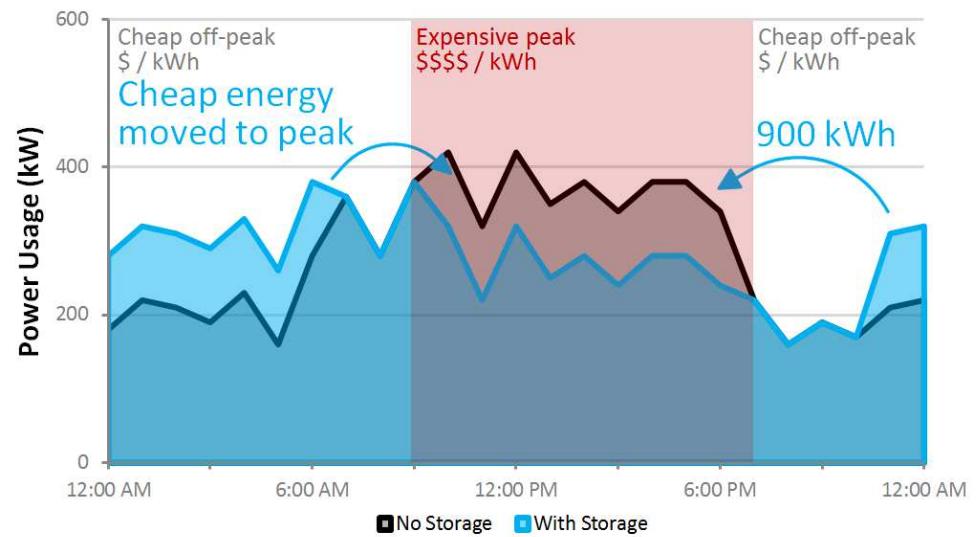
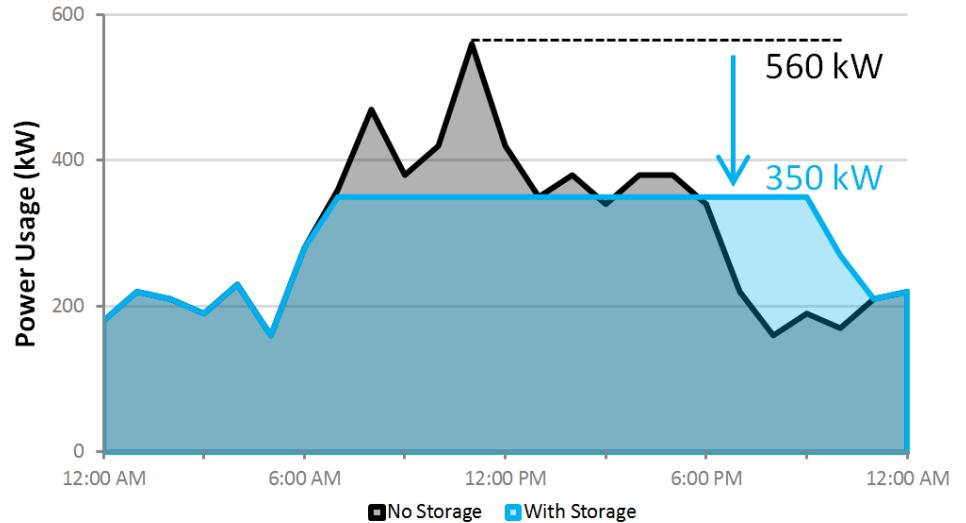
Energy Storage Strategy

Demand Charge Savings

Intelligently discharge the battery to shave demand charges.

Energy Arbitrage

Buy Low / Sell High





Carports Up Close



- Shade
- LED Light
- Security

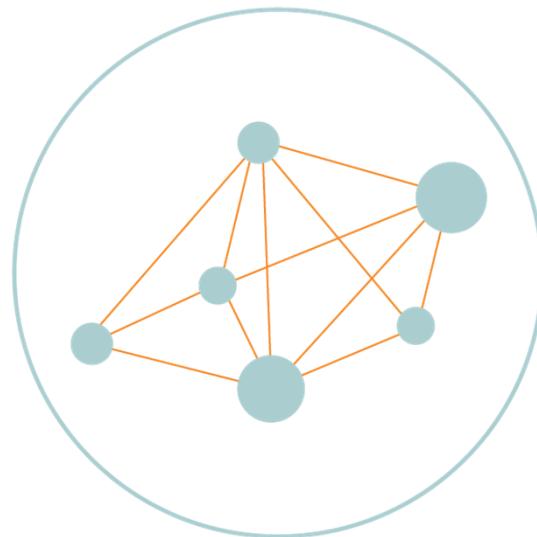
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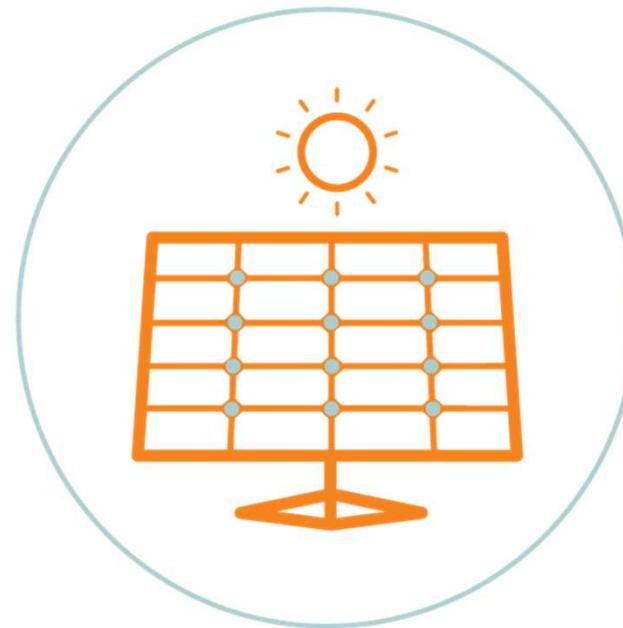
What is the REAP Program?

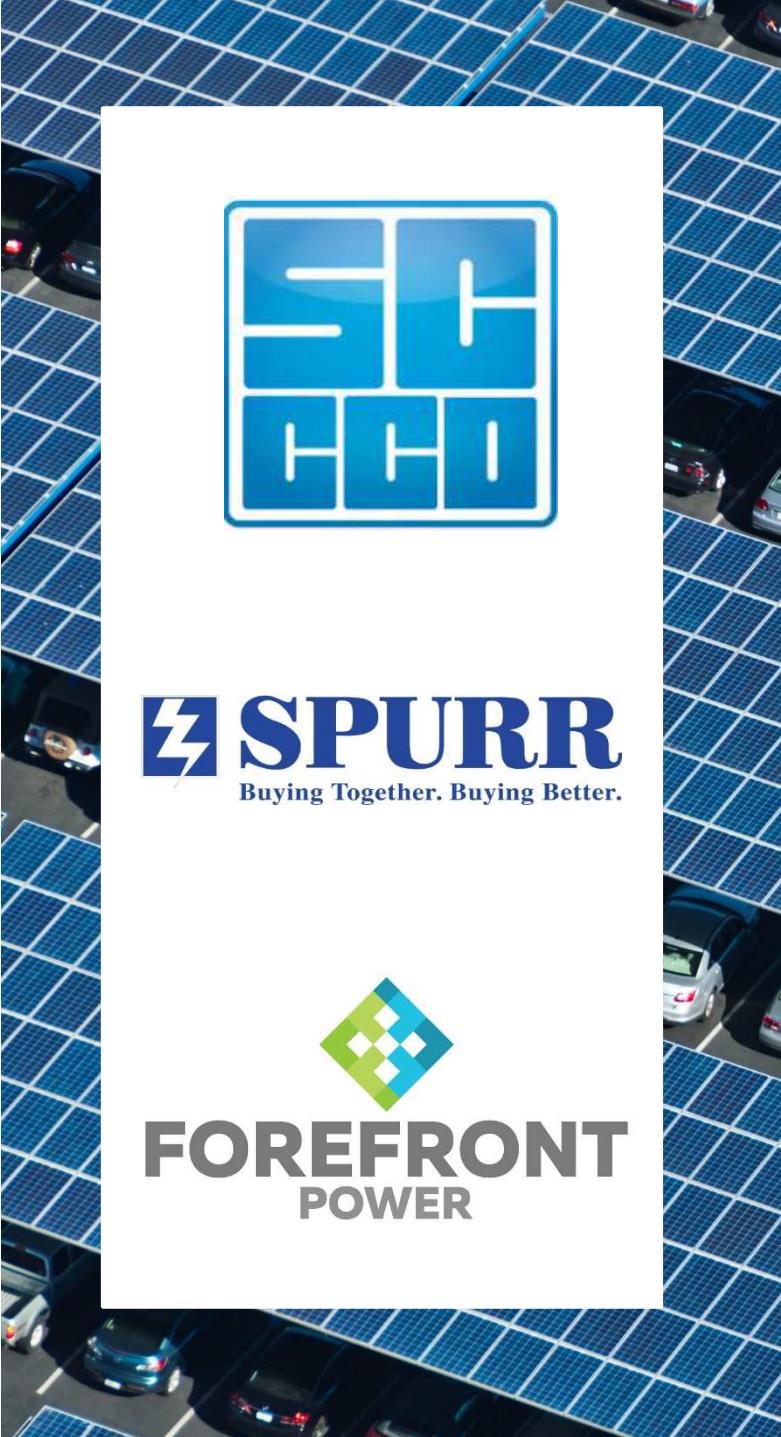
- Aggregated solar buying program that leverages the collective purchasing power of SPURR's large membership to:
 1. Streamline the solar buying process for CA public agencies → **Save time**
 2. Drive down solar project pricing for CA public agencies → **Save money**
 3. Improve project terms for CA public agencies. → **Reduce risk**
- Through a statewide competitive RFP, REAP secures pre-negotiated “piggybackable” solar project pricing and terms for SPURR members and eligible non-members.



REAP Program RFP Process

- First REAP Program RFP completed in 2014; second RFP completed October 2017.
- RFP solicits pricing and terms for many different solar/storage project types with very specific project includes, excludes, and assumptions.
- Vendor proposal: company experience, system designs, component specifications, O/M packages, contract documents, and firm pricing.
- Winning vendor's pricing and terms memorialized in a master contract:
 - All docs publicly available.
 - Transparent piggybackable offer.
 - Common-sense price adjustment mechanism to deal with site-specific conditions (tree removal for example)
- ForeFront Power was winning vendor.





SCCCD Relied On SPURR

- Low Pricing: Statewide RFP
- Accelerated Procurement: Capitalize on TOU 1.0 Grandfathering
- Trusted Partnership
- Proven track record of REAP Program
- Financially Strong Provider: ForeFront Power





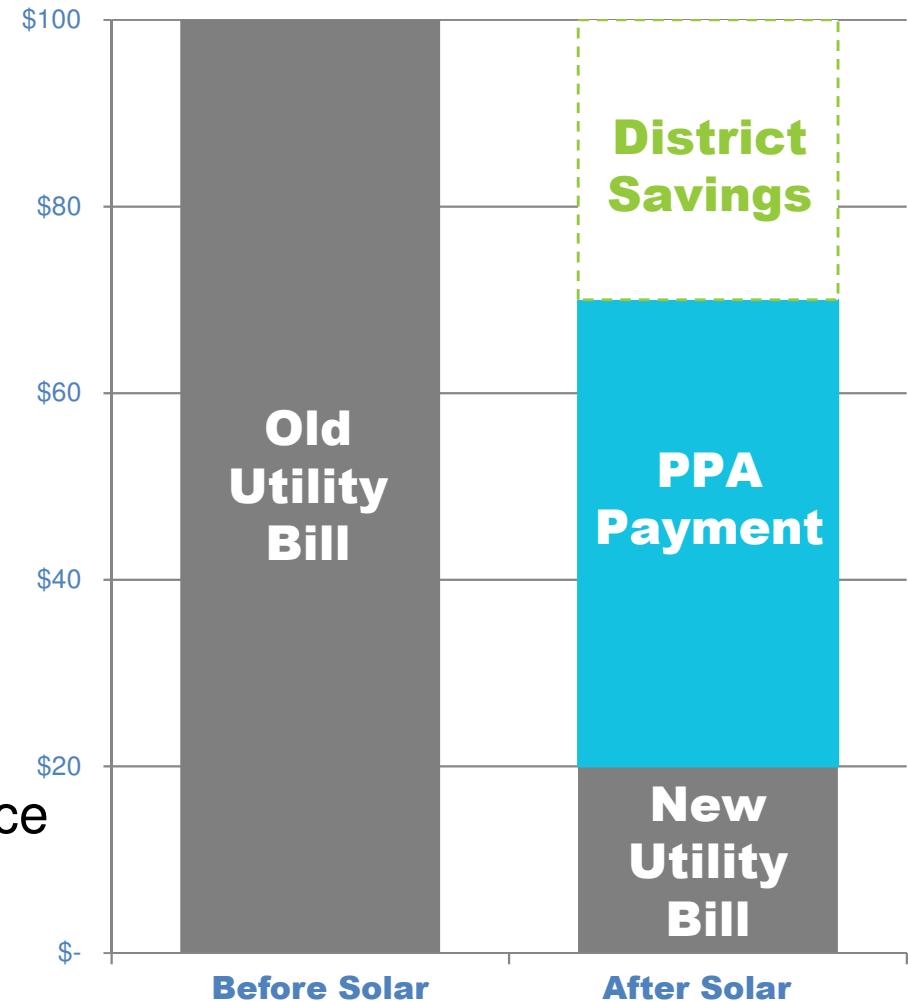
Solar Development Timing

2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4
				Feasibility Analysis / Contract Negotiations / Execution (December)
				Site Diligence – Title, Geotech, Survey (January / February)
				Design, Engineering, PG&E Study, & DSA Permitting (February / March)
			Procurement (April - May)	
		Phased Canopy Construction (Jun-Aug)		
		Balance of System (July - Oct)		



Power Purchase Agreement

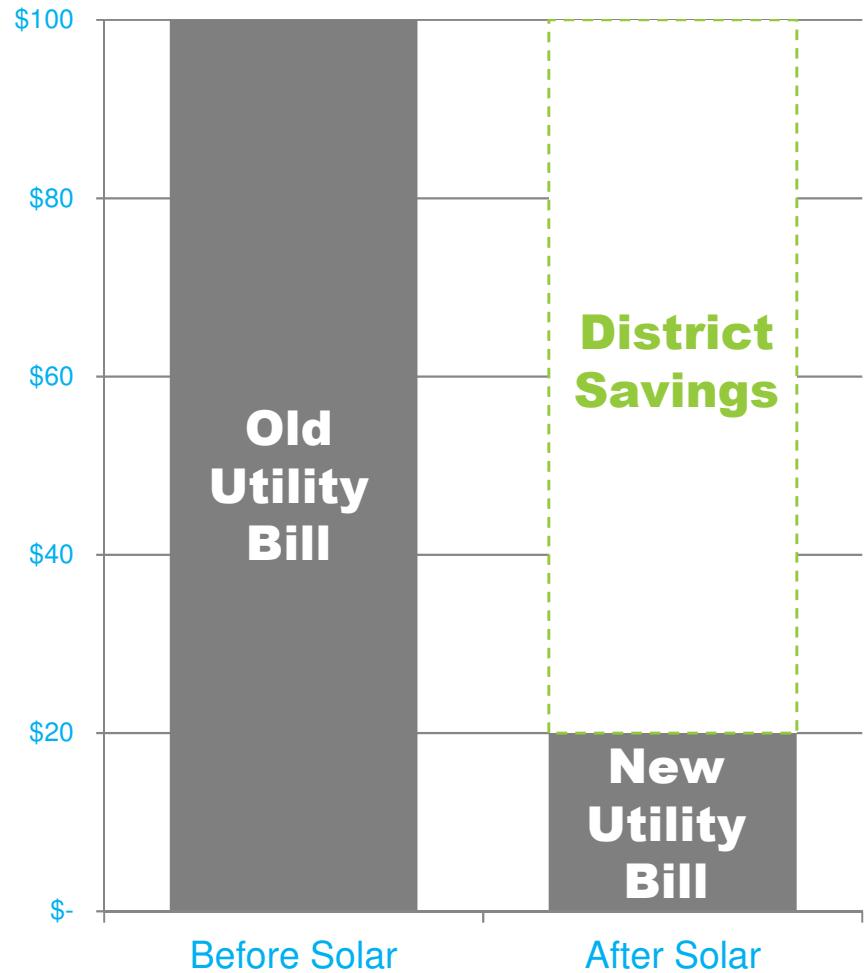
- No upfront cost / No Bonding
- Year 1 Savings
- 0% Escalator for 20 Years
- Utility Rate Hedge
- Monetize 30% Tax Credit
- Aligned Partnership
- Free Operations & Maintenance
- Guaranteed Performance





Design / Build

- Use of Bond / Prop 39 Funds
- Year 1 Savings
- No Tax Credits
- District Responsibility:
Operations & Maintenance
- +15 Year Payback
- Operating Expense -> CapEx

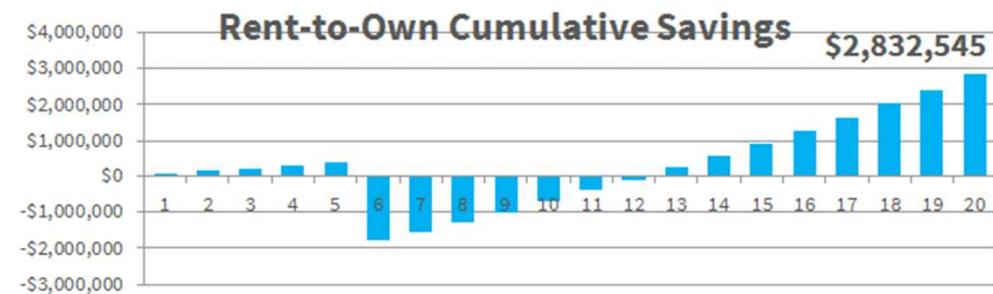
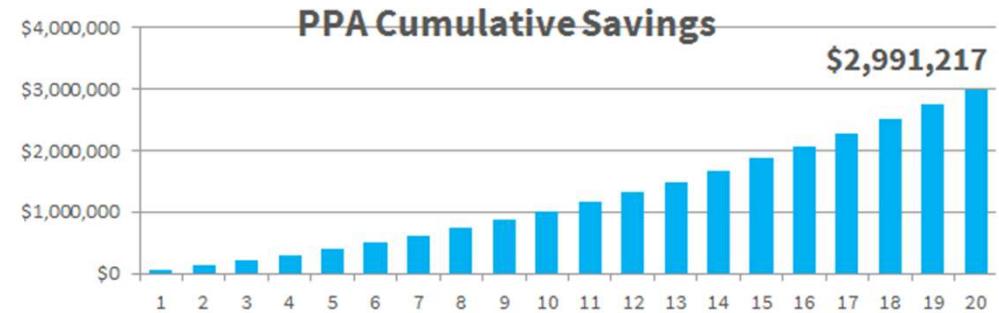




Procurement Methods & Savings

- PPA
 - \$0 Cash Outlay
 - Federal Tax Credits
 - Maximize Savings
 - Free O&M
- Rent to Own:
 - Investment in Y6
 - Federal Tax Credits
 - Optionality
- Cash Purchase
 - Investment In Y0
 - 10-15 Year Payback
 - No Federal Tax Credit

Sample Site – 1MW

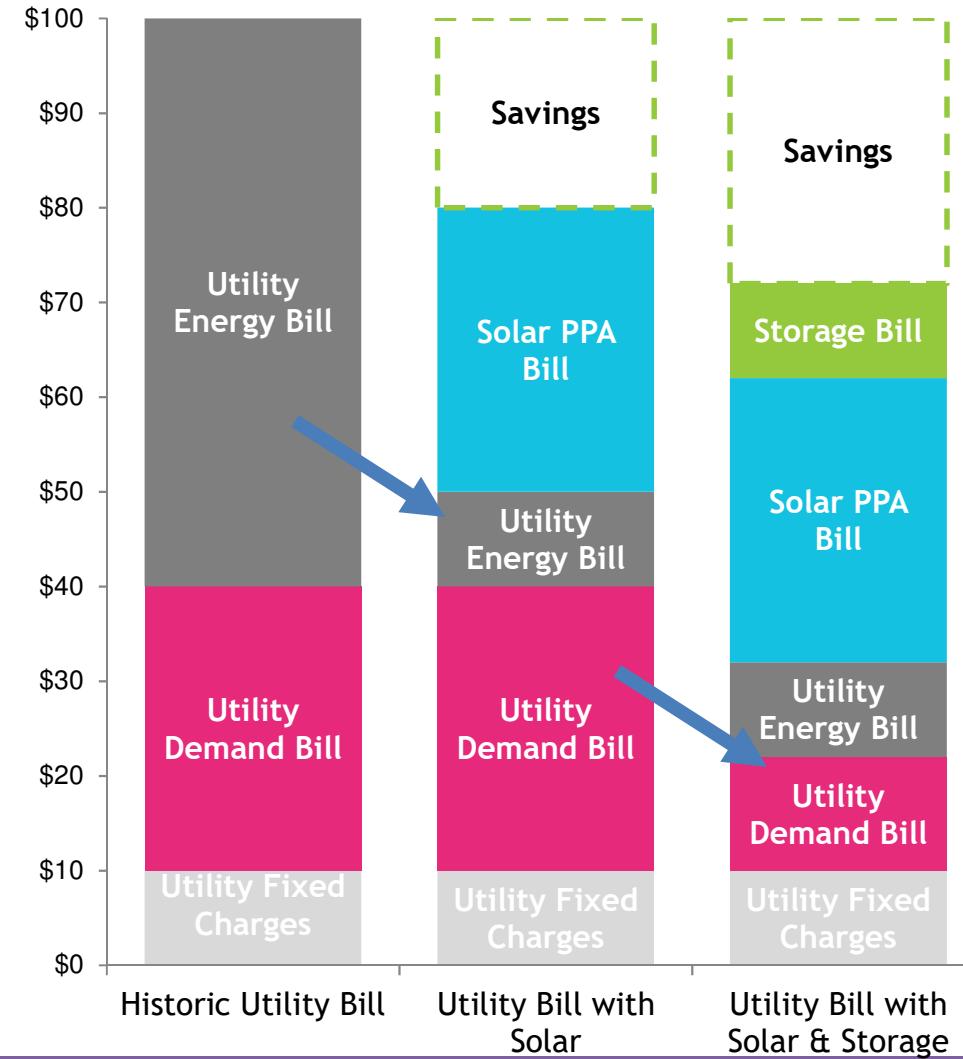


Assumes 3% Annual Utility Rate Increase, 3.0% Coupon, 20 Year Debt



Solar + Storage

- No Bonding / No Upfront Cost
- Save in Year 1
- Fixed Annual Payment
- Performance Guarantee
- Utility Hedge
- Aligned Partnership
- Free Operations and Maintenance



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Hot Topics - Solar Landscape

- Time-of-Use Period Shift (“TOU 2.0”)



- Grandfathering on TOU 1.0???



- ITC – Solar Module Tariff





TOU Changes

TOU 1.0

Summer: May - Oct



TOU 2.0 Proposed

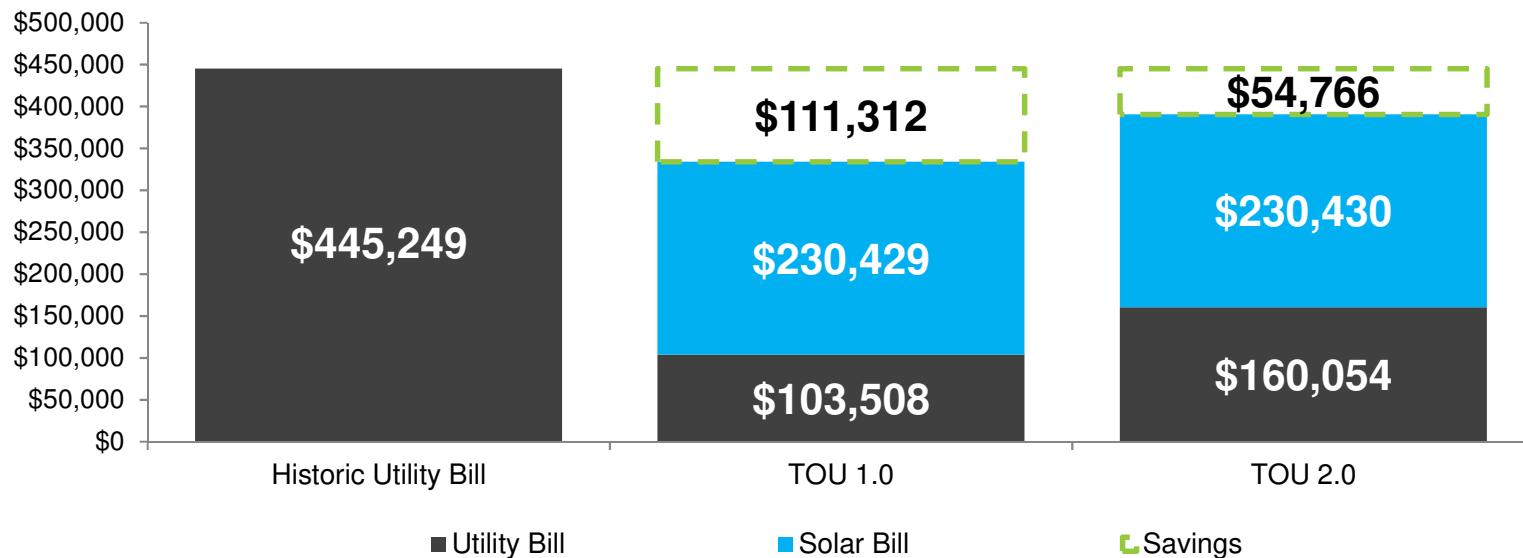
Summer: June - Sept





Impact of TOU 2.0

Total Year 1 Savings - Sample 1MW



- Peak TOU Period
 - Current 12-6PM
 - PG&E Proposed: 5-10PM
- CPUC Decision – December 2017
- *Grandfathering Appeal: Pending*



TOU 1.0 Grandfathering*



Interconnection Applications

- December 25, 2017 Deadline



TOU 1.0 Grandfathering

- Preserve For 10 Years
- No Construction Completion Deadline



Increase Savings

- 50%-100% Increase in Solar Savings

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SCCCD Solar: Challenges & Successes



Community Support

- Engage Stakeholders



Master Planning

- Long Term Projects



Parking Lot

- Phasing



Interconnection Upgrades

- Known Unknowns



Energize Fresno

- Community Approach

Questions?

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