



*Arts & Innovation*

## Amended and Restated PPA - San Bernardino Wells Solar PV Project

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**Board of Public Utilities**

December 12, 2016

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## Background

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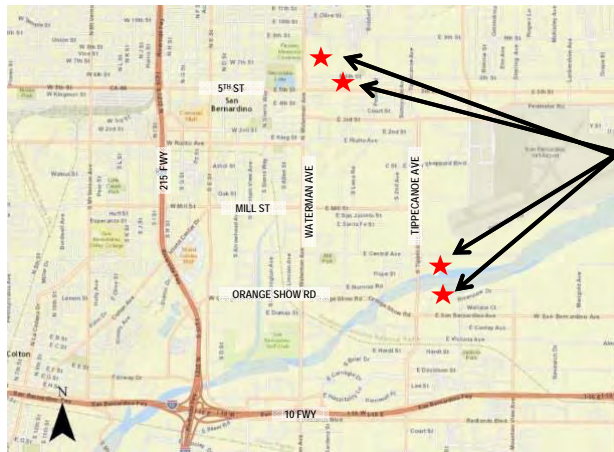
1. June 2012 – Water Energy Management Plan
  - ~ \$500K Annual Savings for Solar
2. April 2015 – Executed PPA with Solar Star
  - a. Scheuer, Garner, Gage & Tippecanoe (5.50 MW)
  - b. Anticipated \$23.5 million NPV
  - c. ~ \$1M Annual Savings

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## 2015 PPA Solar Sites



**Solar Sites**  
Scheuer  
Garner  
Gage  
Tippecanoe

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## Project Challenges

1. Environmental & Permitting Impacts
  - Tippecanoe & Gage Sites Eliminated (1.5 MW)
2. Greater than expected upgrades for SCE
  - a. 14 Month Delay
  - b. ~ \$500K impact
3. Costly Conditions from the City of San Bernardino
4. CEQA Mitigation Costs and Schedule Impacts

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# Amended PPA

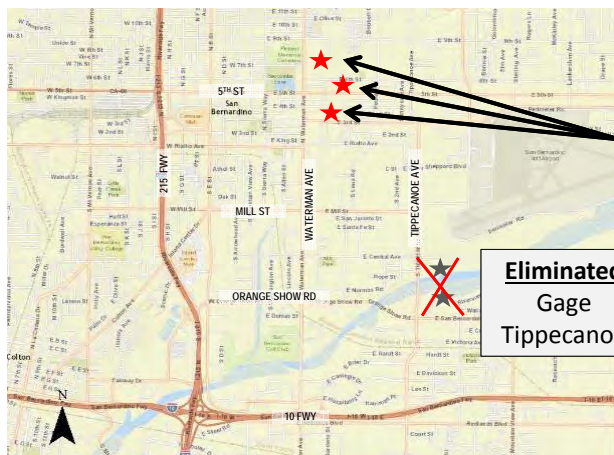
1. November 2016 – Amend PPA  
Scheuer, Garner and Cooley Sites (4.50 MW)
2. ~ 12,000 MWh / Year of renewable energy
3. ~ \$800K in Annual Cost Savings in Year 1
4. Average 59% Savings Compared to SCE Rate

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# Amended PPA Solar Sites



**Solar Sites**

Scheuer  
Garner  
Cooley

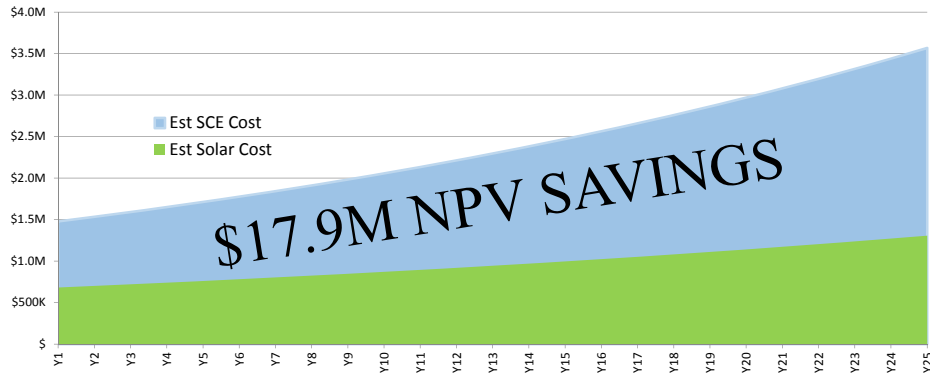
**Eliminated  
Gage  
Tippecanoe**

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## Amended PPA Savings



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## PPA Terms and Benefits Summary Comparison

| Attribute                         | 2015 PPA        | Amended PPA  |
|-----------------------------------|-----------------|--|
| Capacity                          | 5.50 MW         | 4.50 MW  |
| Rate                              | \$53.50/MWh     | \$57.75/MWh  |
| Escalation                        | 3%              | 3%   |
| Term                              | 25 Years        | 25 Years   |
| Buyout Option                     | Year 6 & 10     | Year 6 & 10  |
| Commercial Operation Date         | April 1, 2016   | Garner & Cooley – Oct 23, 2017<br>Scheuer – Dec 31, 2017   |
| Outside Commercial Operation Date | October 1, 2017 | Garner & Cooley – Dec 23, 2017<br>Scheuer – March 12, 2018 |

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## PPA Terms and Benefits Summary Comparison Cont'd

| Attribute                | 2015 PPA                             | Amended PPA  |
|--------------------------|--------------------------------------|--|
| NPV Savings              | \$23.5 Million at 5.5 MW             | \$17.9 Million at 4.5 MW                                   |
| Sites to be Developed    | Scheuer, Garner, Gage and Tippecanoe | Scheuer, Garner and Cooley                                 |
| Financial Penalty Cap    | \$250,000                            | \$625,000  |
| Daily Damage Penalty     | \$2,500/day                          | \$1,500/day for NEMA Sites<br>\$3,500/day for RES-BCT Site |
| Estimated Annual Savings | \$1 Million                          | \$0.8 Million  |

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## Other Amended PPA Attributes

- 1. Performance Guarantee** – Minimum of 85%
- 2. Buyer's Termination Option** – Terminate if project is not completed on time
- 3. Daily Delay Damages** – Penalties for late start
- 4. Regulatory Costs** – Share future regulatory costs up to \$30,000/year with a maximum \$200,000 over term of PPA

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# Project Schedule

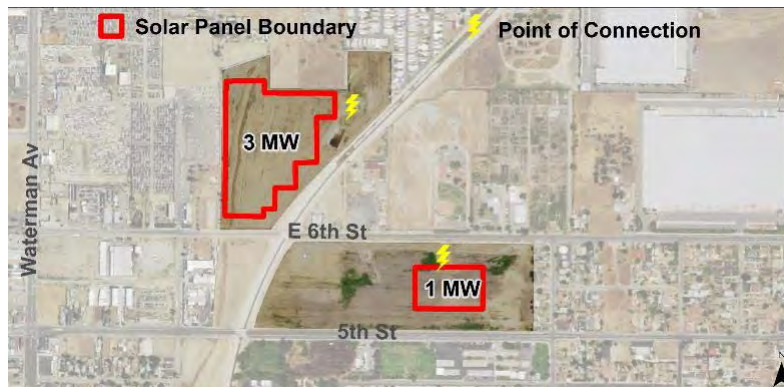
| Milestone             | Garner & Cooley   | Scheuer           |
|-----------------------|-------------------|-------------------|
| IS/MND Adoption       | January 10, 2017  |                   |
| Final Design          | December 19, 2016 | December 19, 2016 |
| Start of Construction | May 15, 2017      | May 15, 2017      |
| Guaranteed COD        | October 23, 2017  | December 31, 2017 |
| Outside COD           | December 23, 2017 | March 12, 2018    |



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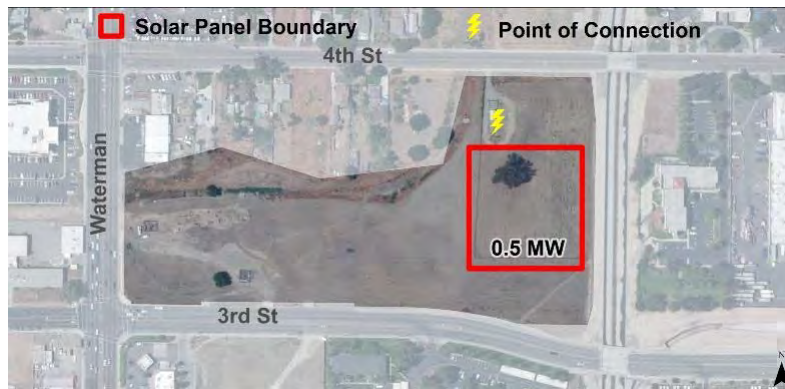
# Scheuer & Garner Site



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# Cooley Site



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# Recommendations

That the Board of Public Utilities recommend that the City Council:

1. Approve the 25-year Amended and Restated Power Purchase Agreement between Solar Star California XXXIX, LLC and the City of Riverside to design, construct, operate and maintain a cumulative 4.50 megawatt solar photovoltaic energy generation to be located on the Well Sites;
2. Authorize the City Manager, or his designee, to execute the Amended and Restated Power Purchase Agreement, as well as any future amendments or extensions to the Amended and Restated Power Purchase Agreement under the terms and conditions substantially similar or superior to this Amended and Restated Power Purchase Agreement;

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## Recommendations Cont'd

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3. Authorize the City Manager, or his designee, to execute any documents necessary to administer the Amended and Restated Power Purchase Agreement that are consistent with the established policies by the City Council; and
4. Authorize the City Manager, or his designee, to terminate the Amended and Restated Power Purchase Agreement for circumstances provided in the Amended and Restated Power Purchase Agreement.

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## Questions?