

---

# City of Atwater

July 13, 2020

---

Ashu Jain, P.E.

Senior Manager

Steve Ramirez

Senior Project Director

Carolyn Kiesner, CEM

Program Development Manager

Robert Kroner, P.E.

Project Manager

Torey Kocsik

Project Engineer



ENGIE



---

# Agenda

---

- About California Solar 3, LLC
- Program Scope of Work
- Community Impact
- Financial Analysis
- Project Benefits
- Roadmap



---

## Who is ENGIE? (California Solar 3)

---

**No. 1** supplier of energy services in the world

**\$70B Revenue** (2019)

**\$16.2B** in net renewable energy investment 2016-2018

**160,000 employees**  
total 60,000 in power and natural gas & **100,000**  
**in energy services**

**900 researchers** and experts in 11 R&D Centers



**OPERATIONS IN 70 COUNTRIES**



# Experience in the Central Valley

- City of Delano \$3.4 million
- City of Dinuba Phase 1 & 2 \$12.1 million
- City of Firebaugh \$4.2 million
- City of Gustine \$2.6 million
- City of Lemoore Phase 1, 2 & 3 \$17.5 million
- City of Madera \$18.9 million
- City of Mendota \$3.9 million
- City of Patterson \$5.4 million
- City of Waterford \$1.9 million
- County of Kings Phase 1, 2, 3 & 4 \$27.4 million
- County of Madera Phase 1 & 2 \$16.5 million
- County of Merced \$11.7 million
- County of Tulare Phase 1 & 2 \$34.8 million
- Alpaugh Unified School District \$1.7 million
- Escalon Unified School District \$6.9 million
- Gustine Unified School District \$3.5 million
- Merced Union High School District \$23.4 million
- Tulare Union High School District \$12.7 million
- Wasco Union Elementary School District \$4.4 million
- Fresno State University \$12.0 million
- Selma-Kingsburg-Fowler County Sanitation District \$9.8 million

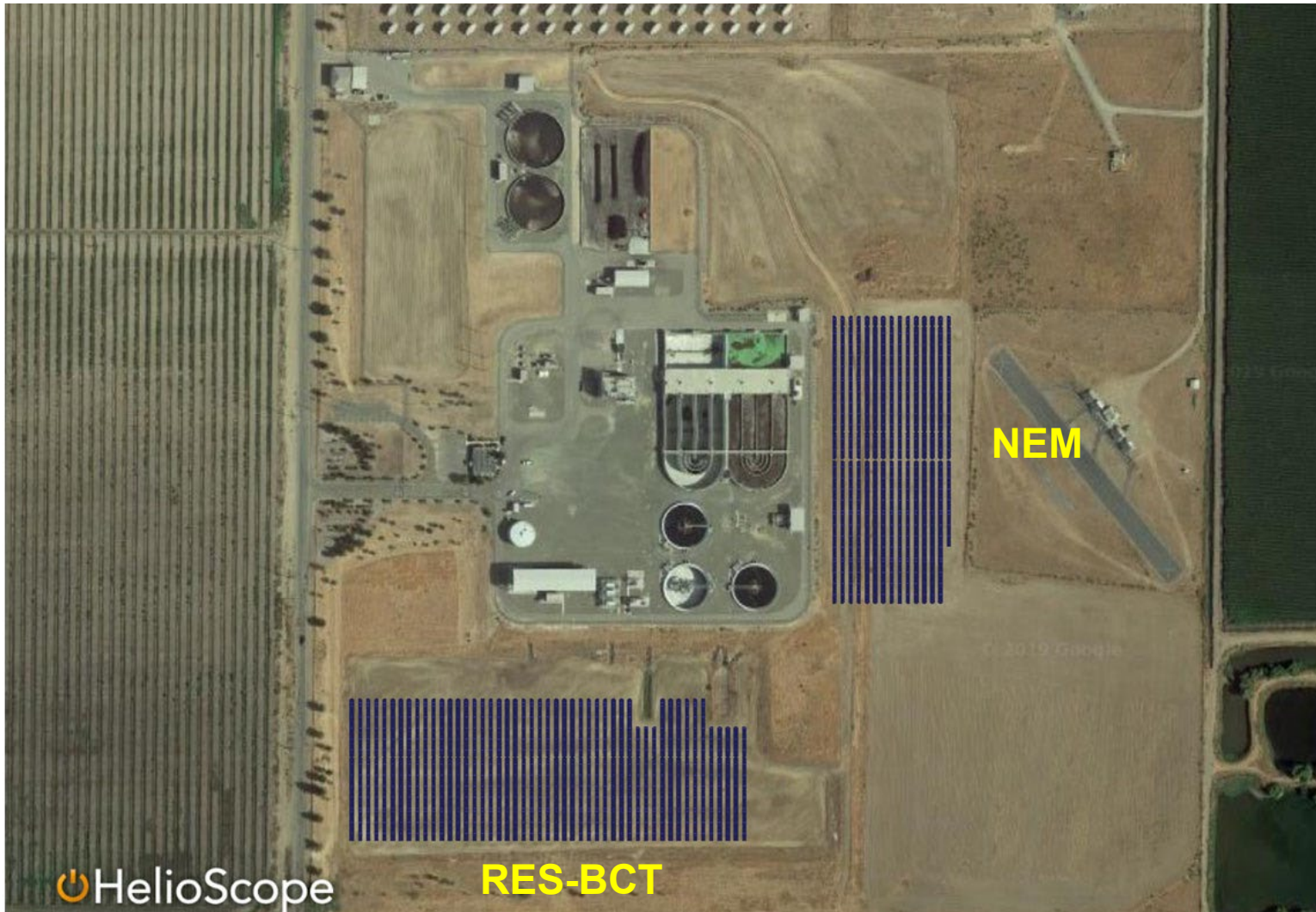
---

## Program Scope of Work

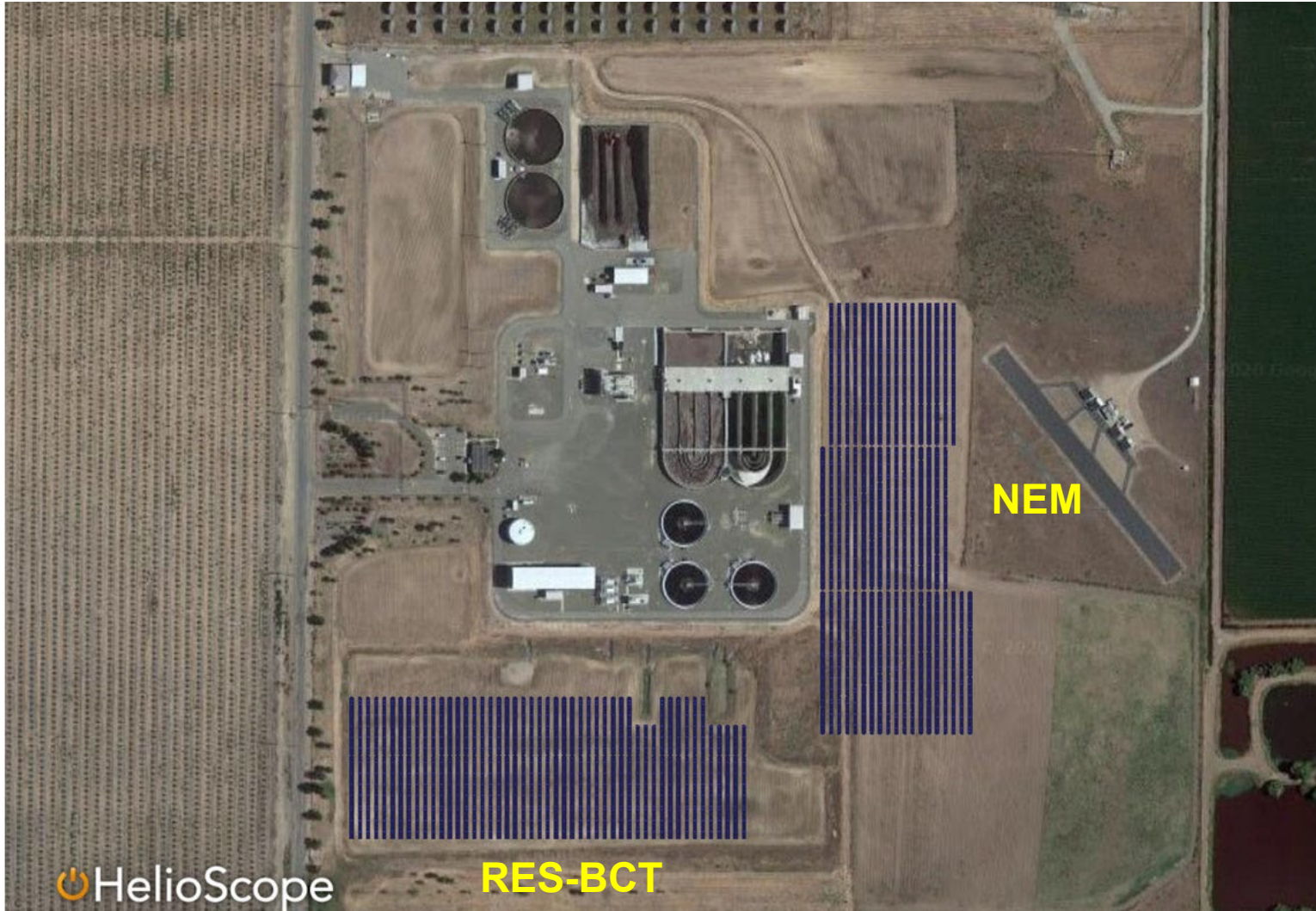
---

- 1,860 kW NEM (Net Energy Metered) Solar PV System for the WWTP – **instead of 1,079 kW earlier**
- 1,728 kW RES-BCT (Renewable Energy Self-Generation Bill Credit Transfer) Solar PV System located at the WWTP for Citywide Cost Avoidance – **No change**
- Community Impact Program – **no change**

# Existing Project – 2,807 kW Single-Axis Tracking Groundmount Solar PV Project at the WWTP



# Amended Project – 3,588 kW Single-Axis Tracking Groundmount Solar PV Project at the WWTP



# Project Financial Analysis – Existing Project

Total Solar System Size (kW)							2,807
Power Purchase Agreement (PPA) Term							28
Year	Total Project Savings	Annual PPA Cost	Buyout Price	Maintenance Cost	Total Project Costs	Net Savings	
Year 1	\$653,952	\$384,758	\$0	\$0	\$384,758	\$269,194	
Year 2	\$676,709	\$390,490	\$0	\$0	\$390,490	\$286,219	
Year 3	\$700,259	\$396,309	\$0	\$0	\$396,309	\$303,950	
Year 4	\$572,532	\$402,214	\$0	\$0	\$402,214	\$170,318	
Year 5	\$592,456	\$408,207	\$0	\$0	\$408,207	\$184,249	
Year 6	\$613,074	\$414,289	\$0	\$0	\$414,289	\$198,785	
Year 7	\$634,409	\$420,462	\$0	\$0	\$420,462	\$213,947	
Year 8	\$656,486	\$426,727	\$0	\$0	\$426,727	\$229,759	
Year 9	\$679,332	\$433,085	\$0	\$0	\$433,085	\$246,247	
Year 10	\$702,973	\$439,538	\$0	\$0	\$439,538	\$263,435	
Year 11	\$727,436	\$446,087	\$0	\$0	\$446,087	\$281,349	
Year 12	\$752,751	\$452,734	\$0	\$0	\$452,734	\$300,017	
Year 13	\$778,947	\$459,480	\$0	\$0	\$459,480	\$319,467	
Year 14	\$806,054	\$466,326	\$0	\$0	\$466,326	\$339,728	
Year 15	\$834,105	\$473,274	\$0	\$0	\$473,274	\$360,830	
Year 16	\$863,131	\$480,326	\$0	\$0	\$480,326	\$382,806	
Year 17	\$893,168	\$487,483	\$0	\$0	\$487,483	\$405,686	
Year 18	\$924,251	\$494,746	\$0	\$0	\$494,746	\$429,504	
Year 19	\$956,415	\$502,118	\$0	\$0	\$502,118	\$454,297	
Year 20	\$989,698	\$509,600	\$0	\$0	\$509,600	\$480,098	
Year 21	\$1,024,139	\$517,193	\$0	\$0	\$517,193	\$506,947	
Year 22	\$1,059,779	\$524,899	\$0	\$0	\$524,899	\$534,881	
Year 23	\$1,096,660	\$532,720	\$0	\$0	\$532,720	\$563,940	
Year 24	\$1,134,823	\$540,657	\$0	\$0	\$540,657	\$594,166	
Year 25	\$1,174,315	\$548,713	\$0	\$0	\$548,713	\$625,602	
Year 26	\$1,215,181	\$556,889	\$0	\$0	\$556,889	\$658,293	
Year 27	\$1,257,470	\$565,186	\$0	\$0	\$565,186	\$692,283	
Year 28	\$1,301,230	\$573,608	\$0	\$0	\$573,608	\$727,622	
Year 29	\$1,346,512	\$0	\$280,057	\$48,871	\$328,928	\$1,017,585	
Year 30	\$1,393,371	\$0	\$0	\$49,848	\$49,848	\$1,343,523	
<b>Totals</b>	<b>\$27,011,618</b>	<b>\$13,248,116</b>	<b>\$280,057</b>	<b>\$98,719</b>	<b>\$13,626,891</b>	<b>\$13,384,727</b>	



# Project Financial Analysis – Amended Project

Total Solar System Size (kW)							3,588
Power Purchase Agreement (PPA) Term							28
Year	Total Project Savings	Annual PPA Cost	Buyout Price	Maintenance Cost	Total Project Costs	Net Savings	
Year 1	\$699,748	\$439,621	\$0	\$0	\$439,621	\$260,127	
Year 2	\$724,100	\$450,377	\$0	\$0	\$450,377	\$273,723	
Year 3	\$733,879	\$461,440	\$0	\$0	\$461,440	\$272,439	
Year 4	\$759,418	\$472,819	\$0	\$0	\$472,819	\$286,599	
Year 5	\$785,846	\$484,524	\$0	\$0	\$484,524	\$301,322	
Year 6	\$813,193	\$496,566	\$0	\$0	\$496,566	\$316,627	
Year 7	\$841,492	\$508,955	\$0	\$0	\$508,955	\$332,538	
Year 8	\$870,776	\$521,702	\$0	\$0	\$521,702	\$349,074	
Year 9	\$901,079	\$534,819	\$0	\$0	\$534,819	\$366,260	
Year 10	\$932,437	\$548,317	\$0	\$0	\$548,317	\$384,120	
Year 11	\$964,885	\$562,209	\$0	\$0	\$562,209	\$402,677	
Year 12	\$998,463	\$576,507	\$0	\$0	\$576,507	\$421,957	
Year 13	\$1,033,210	\$591,224	\$0	\$0	\$591,224	\$441,986	
Year 14	\$1,069,166	\$606,373	\$0	\$0	\$606,373	\$462,792	
Year 15	\$1,106,373	\$621,969	\$0	\$0	\$621,969	\$484,403	
Year 16	\$1,144,874	\$638,026	\$0	\$0	\$638,026	\$506,848	
Year 17	\$1,184,716	\$654,558	\$0	\$0	\$654,558	\$530,158	
Year 18	\$1,225,944	\$671,581	\$0	\$0	\$671,581	\$554,363	
Year 19	\$1,268,607	\$689,111	\$0	\$0	\$689,111	\$579,496	
Year 20	\$1,312,755	\$707,163	\$0	\$0	\$707,163	\$605,591	
Year 21	\$1,358,438	\$725,756	\$0	\$0	\$725,756	\$632,683	
Year 22	\$1,405,712	\$744,906	\$0	\$0	\$744,906	\$660,807	
Year 23	\$1,454,631	\$764,631	\$0	\$0	\$764,631	\$690,000	
Year 24	\$1,505,252	\$784,950	\$0	\$0	\$784,950	\$720,302	
Year 25	\$1,557,635	\$805,883	\$0	\$0	\$805,883	\$751,752	
Year 26	\$1,611,840	\$827,449	\$0	\$0	\$827,449	\$784,391	
Year 27	\$1,667,932	\$849,669	\$0	\$0	\$849,669	\$818,263	
Year 28	\$1,725,977	\$872,565	\$0	\$0	\$872,565	\$853,412	
Year 29	\$1,786,040	\$0	\$412,194	\$62,468	\$474,662	\$1,311,379	
Year 30	\$1,848,195	\$0	\$0	\$63,717	\$63,717	\$1,784,477	
<b>Totals</b>	<b>\$35,292,613</b>	<b>\$17,613,666</b>	<b>\$412,194</b>	<b>\$126,185</b>	<b>\$18,152,046</b>	<b>\$17,140,567</b>	

---

## Project Benefits

---

- Create additional \$3.7 million in net savings after paying for all costs
- Generate 98% of the WWTP electricity consumption with the solar project
- Reduce City electricity spend by 45%
- Hedge against rising energy costs which are expected to increase substantially in the future
- Implement solar project before RES-BCT rate schedule reaches its cap
- City receives the full benefit of the 30% Investment Tax Credit
- California Solar 3 guarantees the energy generation
- Maintenance free – California Solar 3 will own, maintain and operate the systems
- Stimulate local economy and provide local jobs
- Communicate benefits of the project to the Atwater Community
- Fund non-profit of Council's choice
- Substantial environmental benefits – equivalent to removing 1,095 cars off the highways annually

---

# Roadmap

---

## ***Opportunity Assessment***

Mar 2019 – Apr 2019

## ***Program Development***

Jun 2019 – Sep 2019

## ***Contract Approval***

Dec 2019 and Jul 2020

## ***Implementation***

Jan 2020 – Dec 2021

