



# ENGIE Services U.S. Energizing Evolutions Fitness & Wellness Center

July 18, 2022



# Agenda

- **About ENGIE**
- **Energy Conservation Measures (ECMs)**
- **Scope of Work**
- **Preliminary Program Financial Analysis**
- **Program Benefits**
- **Program Roadmap**

# Why ENGIE? Experience & Track Record

## Delivering Value

- 48 years of experience
- Strong local experience: Tulare County, Tulare Union High School District, City of Dinuba, Alpaugh USD, Kings County, and many more.
- Eight (8) offices in CA
- Experienced PR Team:
  - Press releases
  - Town hall meetings
  - Ribbon cutting events

## Project Expertise

- Local, in-house project and O&M teams
- Local subcontractors
- More technical resources than any other company in California
- Installed over 400 MW of solar PV for public entities in CA
- Largest independent installer of battery storage systems in CA
- Comprehensive Energy Partner

## Fiscal Strength & Risk Mitigation

- #1 independent producer of electricity in the world
- 173,000 employees
- 185-year company history
- Annual revenue of \$62 billion
- Credit rating of A-/A2
- Achieved 109% of guaranteed savings
- Volume procurement through vendor competition

# Over \$300 Million of Successful Projects in the Central Valley

● City of Atwater	\$8.7 million
● City of Corcoran	\$10.8 million
● City of Delano	\$3.4 million
● City of Dinuba Phases 1 - 2	\$12.1 million
● City of Escalon	\$5.7 million
● City of Firebaugh	\$4.2 million
● City of Gustine	\$3.2 million
● City of Lemoore Phases 1 - 3	\$17.5 million
● City of Madera	\$18.8 million
● City of Mendota	\$3.9 million
● City of Patterson	\$5.4 million
● City of Waterford	\$1.9 million
● County of Kings Phases 1 - 4	\$27.4 million
● County of Madera Phases 1 - 2	\$16.5 million
● County of Merced	\$11.7 million
● County of Tulare Phases 1 - 3	\$44.5 million
● Central Unified School District	\$11.6 million
● Escalon Unified School District	\$6.9 million
● Gustine Unified School District	\$3.3 million
● Lemoore Union High School District	\$3.0 million
● Merced Union High School District	\$23.5 million
● Tulare Union High School District	\$12.7 million
● Wasco Union Elementary School District Phases 1-2	\$8.7 million
● Fresno State University	\$12.0 million
● Selma-Kingsburg-Fowler County Sanitation District	\$9.8 million
● Indian Wells Valley Water District Phases 1-2	\$7.6 million

# Energy Conservation Measures (ECMs)

- LED Interior Lighting Upgrade
- LED Exterior Lighting Upgrade
- Onsite Hypochlorite Generation for Swimming Pool
- Solar Photovoltaics – Carport Shade Structure

# Interior & Exterior LED Lighting Upgrades

- **Upgrade fluorescent lighting systems to efficient, low maintenance, and longer lasting LED fixtures and lamps**
  - Install motion sensors, where applicable
- **Retro-commission existing advanced lighting control system to operate in accordance with facility operating hours**
- **Lighting not included in scope:**
  - Pendant fixtures with LED lamps on second floor
  - Lighting fixtures over Lap Pool and Sauna Rooms
- **Benefits include:**
  - Higher quality lighting
  - Replaces old fluorescent lamps and ballasts
  - Reduces energy cost
  - Longer life of system
  - Reduces maintenance cost



# Interior & Exterior LED Lighting Upgrades

Solution Description	Quantity
RETROKIT 2x2 troffer kit, set to 25w and 4000k	15
RETROKIT 2x4 troffer kit, variable wattage and kelvin	94
RETROKIT 2x4 troffer kit, variable wattage and kelvin, BBU	12
Remove ballast and install (1) 2' Lightbar. Set to 12W and 4000K	5
Remove ballasts and install (1) Lightbar	14
Lamp 4 pin 15.5w 4000K (Bypass)	21
Replace (2) 4pin lamps and (2) ballasts	4
retrofit with 4 T5 LED direct wire dual end	10
Rewire Fixture for (2) Type B Lamps Dual Ended (3Foot Lamps)	10
Rewire Fixture for (2) Type B Lamps Dual Ended	47
Rewire Fixture for (2) Type B Lamps Dual Ended install BBU for Type B	1
Rewire Fixture for (4) Type B Lamps Dual Ended	41
Rewire Fixture for (4) Type B Lamps Dual Ended, add EM	8
replace 2 pin lamps and Bypass Ballast	1
Replace (2) 2 pin lamps. Lamp can be ballast or bypass	12
Replace existing screw in lamp with 9W LED screw in lamp	10
Retrofit fixture with downlight retrofit kit. Set wattage to 15W and color to 4000K.	134
Replace lamp and bypass ballast	5
Relamp track with MR16	4

Solution Description	Quantity
Replace fixture with double headed LED bullet fixture.	4
Remove Fixtures	9
Replace lamps with led module (set to 10W)	36
Retrofit square recessed fixture @12ft with Remphos led Module set to 17L	17
Replace fixture with 2' LED wall mount fixture with EM. Set to 20W/4K.	8
Replace under cab 3ft fixture	7
Replace Vapor Tight surface mount standing height	6
Replace (1) switch with wireless switch and add wireless ceiling sensor	1
Replace (1) switch with 5A wireless switch; Install (1) Wall Sensor.	1
Replace Switch and install 1 wireless switch	2
replace (2) switches with wireless switches and add (2) wireless ceiling sensor	1
Replace (2) switches with 5A wireless switches; Replace (2) switches with wireless companion switches; Install (2) Wall Sensors.	1
Install (2) 5A relays; Install (2) Ceiling Sensors.	2
Install (2) 8A relays and (3) Ceiling Sensors.	1
Install (2) 8A relays; Install (4) Ceiling Sensors.	1
Replace 2 line voltage dimming swithches pair with occ sensors	1
Install 1 Radio switch and 1 wall sensor	1
Control cont from line above	3
Replace Twist Timer	1
Replace Switch	23
Replace switch with PIR Switch	5



# Sodium Hypochlorite Generation and Controls

- **Produce chlorine onsite from salt on demand and inject into the pool through a venturi manifold**
- **Replace existing circulation motors with new high-efficiency motors with VFDs and Smart Pump Control System (SPCS)**
  - Designed to control the pH of the chlorine during the manufacturing process at a range of 7-8 (user adjustable) cutting costs in half for Muriatic/Sulfuric Acid required to control pH
- **Benefits include:**
  - Savings in chemical costs
  - Safe, non-hazardous, and eco-friendly
  - Eliminate need for chemical storage and handling
  - Salt is an inert, safe compound that is stored in a feeder on-site and used as required by the chlorine generator





# Solar Parking Shade Structures - 513 kW



# Preliminary Financial Analysis

Project Cost													\$3,287,607
Financing Cost													\$98,628
Amount to be Financed													\$3,386,235
Finance Term													25
Annual Interest Rate													5.00%
Annual Escalation of Electricity Cost													6.00%
Annual Escalation of Natural Gas Cost													3.00%
Annual Escalation of Pool Chemical Cost													3.00%
Annual Escalation of O&M Cost													3.00%
Annual Degradation of Solar Panels													0.50%
Year	Solar Energy Savings	Energy Efficiency Electricity Savings	Natural Gas Savings	Pool Chemical Savings	Projected O&M Savings	Total Program Savings	Guaranteed Savings	Lease Payment	Solar Operations & Maintenance Cost	Measurement & Verification Cost	Total Program Costs	Net Savings	
Year 1	\$119,530	\$30,030	\$1,543	\$22,386	\$2,084	\$175,572	\$135,833	\$133,512	\$10,952	\$3,407	\$147,871	\$27,702	
Year 2	\$126,068	\$31,832	\$1,589	\$23,057	\$2,094	\$184,641	\$143,381	\$142,149	\$11,280	\$3,509	\$156,939	\$27,702	
Year 3	\$132,964	\$33,742	\$1,637	\$23,749	\$2,105	\$194,196	\$151,349	\$151,262	\$11,619	\$3,614	\$166,495	\$27,702	
Year 4	\$140,237	\$35,766	\$1,686	\$24,461	\$2,115	\$204,266	\$159,761	\$160,874	\$11,967	\$3,723	\$176,564	\$27,702	
Year 5	\$147,908	\$37,912	\$1,737	\$25,195	\$2,126	\$214,878	\$168,640	\$171,016	\$12,326	\$3,835	\$187,176	\$27,702	
Year 6	\$155,999	\$40,187	\$1,789	\$25,951	\$2,136	\$226,062	\$178,014	\$181,715	\$12,696	\$3,950	\$198,360	\$27,702	
Year 7	\$164,532	\$42,598	\$1,842	\$26,730	\$2,147	\$237,849	\$187,909	\$193,002	\$13,077	\$4,068	\$210,147	\$27,702	
Year 8	\$173,532	\$45,154	\$1,898	\$27,531	\$2,158	\$250,273	\$198,356	\$204,912	\$13,469	\$4,190	\$222,571	\$27,702	
Year 9	\$183,024	\$47,864	\$1,954	\$28,357	\$2,169	\$263,368	\$209,383	\$217,477	\$13,873	\$4,316	\$235,666	\$27,702	
Year 10	\$193,035	\$50,735	\$2,013	\$29,208	\$2,179	\$277,171	\$221,025	\$230,735	\$14,289	\$4,445	\$249,470	\$27,702	
Year 11	\$203,594	\$53,780	\$2,074	\$30,084	\$2,190	\$291,722	\$233,314	\$244,724	\$14,718	\$4,579	\$264,020	\$27,702	
Year 12	\$214,731	\$57,006	\$2,136	\$30,987	\$2,201	\$307,061	\$246,288	\$259,484	\$15,160	\$4,716	\$279,359	\$27,702	
Year 13	\$226,477	\$60,427	\$2,200	\$31,917	\$2,212	\$323,232	\$259,984	\$275,058	\$15,614	\$4,858	\$295,530	\$27,702	
Year 14	\$238,865	\$64,052	\$2,266	\$32,874	\$2,223	\$340,280	\$274,443	\$291,493	\$16,083	\$5,003	\$312,579	\$27,702	
Year 15	\$251,931	\$67,895	\$2,334	\$33,860	\$2,234	\$358,255	\$289,707	\$308,834	\$16,565	\$5,153	\$330,553	\$27,702	
Year 16	\$265,712	\$71,969	\$2,404	\$34,876	\$2,246	\$377,206	\$305,821	\$327,134	\$17,062	\$5,308	\$349,504	\$27,702	
Year 17	\$280,246	\$76,287	\$2,476	\$35,922	\$2,257	\$397,188	\$322,832	\$346,445	\$17,574	\$5,467	\$369,487	\$27,702	
Year 18	\$295,575	\$80,865	\$2,550	\$37,000	\$2,268	\$418,258	\$340,791	\$366,824	\$18,101	\$5,631	\$390,557	\$27,702	
Year 19	\$311,743	\$85,716	\$2,627	\$38,110	\$2,279	\$440,476	\$359,750	\$388,330	\$18,645	\$5,800	\$412,774	\$27,702	
Year 20	\$328,796	\$90,859	\$2,705	\$39,253	\$2,291	\$463,905	\$379,765	\$411,025	\$19,204	\$5,974	\$436,203	\$27,702	
Year 21	\$346,781	\$0	\$0	\$0	\$0	\$346,781	\$0	\$299,299	\$19,780	\$0	\$319,079	\$27,702	
Year 22	\$365,750	\$0	\$0	\$0	\$0	\$365,750	\$0	\$317,675	\$20,373	\$0	\$338,048	\$27,702	
Year 23	\$385,756	\$0	\$0	\$0	\$0	\$385,756	\$0	\$337,070	\$20,985	\$0	\$358,055	\$27,702	
Year 24	\$406,857	\$0	\$0	\$0	\$0	\$406,857	\$0	\$357,541	\$21,614	\$0	\$379,155	\$27,702	
Year 25	\$429,112	\$0	\$0	\$0	\$0	\$429,112	\$0	\$379,148	\$22,263	\$0	\$401,411	\$27,702	
Year 26	\$452,585	\$0	\$0	\$0	\$0	\$452,585	\$0	\$0	\$22,930	\$0	\$22,930	\$429,654	
Year 27	\$477,341	\$0	\$0	\$0	\$0	\$477,341	\$0	\$0	\$23,618	\$0	\$23,618	\$453,723	
Year 28	\$503,452	\$0	\$0	\$0	\$0	\$503,452	\$0	\$0	\$24,327	\$0	\$24,327	\$479,125	
Year 29	\$530,990	\$0	\$0	\$0	\$0	\$530,990	\$0	\$0	\$25,057	\$0	\$25,057	\$505,934	
Year 30	\$560,036	\$0	\$0	\$0	\$0	\$560,036	\$0	\$0	\$25,808	\$0	\$25,808	\$534,227	
<b>Totals</b>	<b>\$8,613,159</b>	<b>\$1,104,679</b>	<b>\$41,458</b>	<b>\$601,510</b>	<b>\$43,715</b>	<b>\$10,404,521</b>	<b>\$4,766,345</b>	<b>\$6,696,737</b>	<b>\$521,031</b>	<b>\$91,547</b>	<b>\$7,309,315</b>	<b>\$3,095,206</b>	

# Energy Program Benefits

- ✓ **Create over \$3 million in net savings** after paying for all costs over the life of the program
- ✓ **Hedge against rising electricity costs** by saving 63% of your electricity bill
- ✓ **Eliminate chemical hazard** and reduce maintenance cost for pool treatment



**Carbon emissions reduction equivalent of removing 130 cars of the road annually**

- ✓ **Improve lighting quality** for employees and community members
- ✓ **Save maintenance staff's time** with long-life LED lighting
- ✓ **Save administrative time** by accomplishing multiple projects simultaneously
- ✓ **Stimulate local economy** and provide local jobs

# Energy Program Roadmap

- **Feasibility Study**  
November 17, 2021
- **Program Development Agreement**  
December 20, 2021
- **Present Energy Program**  
July 18, 2022
- **Tentative Staff and Board Approval of the Project**  
August 2022
- **Implementation**  
September 2022 – August 2023
- **Celebratory Ribbon Cutting**  
August 2023



# Project Team

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