



City of Greenfield

599 El Camino Real
Greenfield, CA 93927

City Council Special Agenda October 27, 2015 6:00 P.M.

Mayor John Huerta, Jr.

Mayor Pro-Tem, Raul Rodriguez

Councilmembers

Lance Walker

Avelina Torres

Leah Santibanez

Your courtesy is requested to help our meeting run smoothly.

Please follow the following rules of conduct for public participation in City Council meetings:

- Refraining from public displays or outbursts such as unsolicited applause, comments or cheering.
- Any disruptive activities that substantially interfere with the ability of the City Council to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.

Please turn off cell phones and pagers.

A. CALL TO ORDER

B. ROLL CALL – CITY COUNCIL

Mayor Huerta, Mayor Pro-tem Rodriguez, Councilmembers Walker, Torres and Santibanez

C. MOMENT OF SILENT PRAYER

D. PLEDGE OF ALLEGIANCE

**City Council Special Agenda
October 27, 2015**

E. AGENDA REVIEW

F. PUBLIC COMMENTS FROM THE AUDIENCE REGARDING ITEMS ONLY ON THE AGENDA

This portion of the Agenda allows an individual the opportunity to address the Council on any items not on closed session, consent calendar, public hearings, and city council business. Under state regulation, **no action can be taken on non-agenda items, including issues raised under this agenda item.** Members of the public should be aware of this when addressing the Council regarding items not specifically referenced on the Agenda. **PLEASE NOTE:** For record keeping purposes and in the event that staff may need to contact you, we request that all speakers step up to the lectern and use the microphone, stating your name and address, which is strictly voluntary. This will then be public information. A three-minute time limit may be imposed on all speakers other than staff members.

G. CITY COUNCIL BUSINESS

G-1. DISCUSSION of Energy Service Contract

- a. Staff Report
 - b. Public Comments
 - c. City Council Comments / Review / Action
- Staff Recommended Action – Review of Contract**

H. ADJOURN TO CLOSED SESSION

H-1. CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representative: City Manager
Employee Organization: Service Employees International Union, Local 521

H-2. CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representative: City Manager
Employee Organization: Greenfield Police Supervisors Association

H-3. CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representative: City Manager
Employee Organization: Greenfield Police Officers Association

H-4. DISCUSSION OF CONFIDENTIAL EMPLOYEE EVALUATION PROCESS

I. RECONVENE TO OPEN SESSION

J. ADJOURNMENT

This agenda is dually posted outside City Hall and on the City of Greenfield web site www.ci.greenfield.ca.us



City Council Memorandum

599 El Camino Real Greenfield CA 93937 831-674-5591
www.ci.greenfield.ca.us

MEMORANDUM: October 26, 2015

AGENDA DATE: October 27, 2015

TO: Mayor and City Council

FROM: Susan A. Stanton, ICMA-CM
City Manager

SUBJECT: DISCUSSION OF ENERGY SERVICE CONTRACT

BACKGROUND

Almost two years ago, the City began discussing the installation of a solar project in the City of Greenfield with Chevron Energy Solutions (which was subsequently sold to and is now OpTerra Energy Services). OpTerra Energy Services workforce is comprised of technical experts spanning a range of disciplines from engineering and design to project finance and workforce development. They bring a diverse group of specialists to each engagement so they can develop a deep understanding of each customer's situation and needs from multiple perspectives.

In April 2015, the City approved a development agreement with OpTerra Energy Services to perform an energy assessment for the installation of solar power at City Hall, the Wastewater Treatment Plant and Ponds, Water Wells #1, #6, and #7 and at Patriot Park and to prepare recommendations that would identify potential energy improvements and operational changes that could be implemented at each of these sites to realize future energy cost savings.

The primary purpose of the Assessment and the Recommendations was to provide an economic basis for the implementation of Energy Conservation Measures and to negotiate and execute an Energy Service Contract which would provide for, among other things, engineering, procurement, installation, construction and training service. The Energy Service Agreement outlines a master project schedule and the process that will be used to coordinate the work. If the City approves the proposed contract and has secured financing, OpTerra Energy Services will be given its authorization to begin the project.

Under the proposed contract, OpTerra Energy Services is responsible for obtaining all applicable Permits, except those issued by the City itself, and the City will assist OpTerra Energy Services

in obtaining the permits. The City will be responsible for obtaining and paying for all other permits or approvals that may be required, including annual operating permits and any approvals or exemptions required by CEQA, as applicable. The City is also responsible for paying all fees associated with plan checks, inspections and utility interconnection. After completion of the design phase and approval of the final plans and specifications by the City, OpTerra Energy Services will order the equipment identified in the scope of work, and any other necessary materials and supplies in order to meet the project schedule.

Proposed Scope of Work

The proposed scope of work is divided into two distinct phases. Phase I involves the installation of energy management equipment including the construction of solar panels Phase II would be the replacement of the City's outdated water meters and irrigation control systems and only be implemented after the Water Master Plan is complete and a the new Water User Fees are established during the next year. Both projects relate to increased effectiveness of city operations and the preservation of natural resources. The total construction cost for Phase I related to the Solar and Energy Conservation Measures is \$4,120,377. Including the cost of finance and interest charges, the total project cost is \$5,809,187 and will produce \$255,964 of annual savings related to reduced energy bills resulting from the production of solar energy, \$17,770 in savings related to energy conservation measures (ECM) (explained below) and \$5,078 in general savings related to reduced maintenance costs. The projected net benefits of the project (including solar, energy conservation and maintenance savings) for a twenty-five year period is \$4,469,248 as shown in Attachment #1. The total construction cost for Phase II related to the installation of new water meters and related improvements is \$2,856,465. Including the cost of finance and interest charges, the total project cost is \$3,844,724 which will generate \$137,962 in annual energy conservation savings (ECM) and \$100,475 in maintenance savings related to utility management. The projected net benefits of the project (including increased revenue from the new meters and maintenances savings) for a twenty-five year period is \$6,128,415 as shown in Attachment #2 Chart 1 summarizes this information.

Chart 1
Total Project Cost and Savings

Scope	Project Cost	Solar Savings	ECM Savings	Maintenance Savings
Solar and Energy Conservation Measures	\$5,809,187	\$255,964	\$17,770	\$5,078
Water Meters and Valves	\$3,844,724		\$137,962	\$100,475
Total	\$9,653,911	\$255,964	\$155,732	\$105,553

Solar and Energy Conservation Measures:

\$5,809,187 cost ÷ \$278,812 annual savings = 20.8 year breakeven/payback period

Water Meters and Valves:

\$3,844,724 cost ÷ \$238,437 annual savings = 16.1 year breakeven/payback period

The Energy Service Contract has a very complex and defined scope of work (See Attachment #3 for detail) that covers both Phase I relating to the Solar and Energy Conservation Measures well as Phase II relating to the Installation of Water Meters and Values. The scope of work for both parts of the project is best understood by examining its specific component parts. The Energy

Conservation element of this project involves the 1) Installation of solar generating facilities, 2) Retrofitting Interior and Exterior Lighting, 3) Retrofit of Streetlights and 4) Upgrade of Smart Thermostats. The Water Meter element of this project involves 1) Retrofitting Water Meters and installing a Fixed Network Communication System, 2) Installing Smart Irrigation Controls and 3) Installing Dissolved Oxygen (DO) Sensors at the Waste Water Treatment Plant. Each of the individual components will be discussed during the presentation and within this memorandum.

PHASE I: SOLAR AND ENERGY CONSERVATION MEASURES

Solar Generating Facilities are proposed for at City Hall, Patriot Park, Well #7, the Wastewater Treatment Percolation Pond, RES-BCT. As discussed with the City in previous work sessions, solar units at City Hall and Patriot Park will be installed on a canopy and remaining areas will be ground mounted. (See attached power point presentation.)

OpTerra Energy will prepare design drawings, required geotechnical evaluations, utility interconnection drawings and will provide and install solar canopy structures. The canopy structure design will include a painted canopy structure 9-12 feet in height and a pier depth of eight feet deep and assumes no de-watering, benching, shoring, or casing.

As shown below, the proposed system installation is projected to reduce energy costs by \$255,964 per year, most of which will be realized in the water and wastewater programs.

\$5,551,441 cost ÷ \$255,964 annual savings = 21.7 year breakeven/payback period

Chart 2
Projected Solar Savings

Location	KWh Usage (July 2024 - June 2015) from monthly Bills	Actual Bills	3% Utility User Tax Removal	kw DC	Year 1 kWh Solor Production	\$/kWh Offset	Year 1 PV Production Value
City Hall/PD	170,333	32,446	31,473	58.50	90,154	\$ 0.22	\$ 19,713
Wells #5 Patriot Park	186,965	33,901	32,884	87.75	135,731	\$ 0.24	\$ 32,267
Wells #7 Corp Yard	434,640	90,037	87,336	187.20	302,751	\$ 0.28	\$ 83,860
WWTP Ponds	213,407	37,167	36,052	187.20	299,904	\$ 0.20	\$ 61,042
RES-BCT				263.30	421,981	\$ 0.14	\$ 59,082
				783.95	1,250,521		255,964.00

Retrofitting Interior Lights will include the installation of High Efficiency light emitting diodes (LED) to replace 32-34 watt T8 and T12 lamps and ballasts with new LED lamps and drivers or new LED fixtures. The total cost for replacing these lights is \$235,139. While the standard warranty on a LED light is between 5 and 10 years, the typical lifespan of an LED light is about 80,000 to 100,000 hours. This equates to 20 to 25 years. It should be noted that the warranty does not equal the life of the product. As shown in the retrofits specified for the City Hall, the warranty is for 10 years, but the life expectancy is 88,000 hours. So for an average of 3,000 hours a year (6 am to 6 pm 5 days a week) at the City Hall, that equates to a 29 year life expectancy. Lighting Controls will include the installation of occupancy sensors and dimming controls. Emergency Ballasts will include the installation of 97 emergency ballasts at existing

locations. Exterior Retrofit includes replacement of high pressure sodium (HPS), low pressure sodium (LPS) and metal halide (MH) fixtures with new LED fixtures at eight separate sites.

As shown Chart 3, retrofitting these lights will save 72,501 total Kw hours and reduce the City’s annual cost of energy by \$14,748 and maintenance costs by \$2,692. (See Appendix B for the site details.)

\$235,139 cost ÷ \$17,440 annual savings = 13.5 year breakeven/payback period

Chart 3
Interior Light Projected Savings

Bldg Name	Existing		Retrofit		Electric Savings			Total Savings kWh
	kW	kWh	kW	kWh	kW	Retrofit kWh	Controls kWh	
Child Development Center	1.59	4,824	1.25	4,096	0.33	729	294	1,022
City Hall & Police Dept	27.67	77,631	12.94	36,185	14.72	41,448	3,039	44,487
Corp Yard	6.47	18,923	3.36	6,941	3.11	11,983	551	12,534
Patriot Park	3.95	17,318	1.84	8,037	2.12	9,281	-	9,281
WWTP-Main	1.50	6,570	0.32	1,393	1.18	5,177	-	5,177
Grand Total	41.18	125,266	19.71	56,651	21.47	68,617	3,883	72,501

Retrofitting Streetlights will include the replacement or retrofit of 21 City owned Street Light fixtures with LED light fixture, necessary traffic control and identification of light pole location for GIS mapping. The total cost of replacing these lights is \$16,808. Total annual projected savings is \$4,590. Chart 4 shows the location of each streetlight that will be retrofitted.

\$16,808 cost ÷ \$4,590 annual savings = 3.7 year breakeven/payback period

Chart 4
Street Light Location

Street Light Descriptive Address	Suspension	Sp Id	Prem Id	Retrofit Spec	Type	Wattage
EL CAMINO REAL & OAK ST SWC	10 FT OR 12 FT	6937007588	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & OAK AVE NWC	10 FT OR 12 FT	6937007544	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & OAK AVE NEC	10 FT OR 12 FT	6937007593	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & OAK AVE SEC	10 FT OR 12 FT	6937007568	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & ELM AVE SEC	10 FT OR 12 FT	6937007585	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & ELM AVE NWC	10 FT OR 12 FT	6937007594	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & ELM AVE NEC	10 FT OR 12 FT	6937007562	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & ELM AVE SEC	10 FT OR 12 FT	6937007557	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & TYLER AVE NEC	10 FT OR 12 FT	6937007587	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & TYLER AVE NWC	10 FT OR 12 FT	6937007547	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & TYLER AVE SEC	10 FT OR 12 FT	6937007577	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & TYLER AVE SWC	10 FT OR 12 FT	6937007534	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & WALNUT AVE NWC	10 FT OR 12 FT	6937007574	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & WALNUT AVE NEC	10 FT OR 12 FT	6937007575	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & WALNUT AVE SEC	10 FT OR 12 FT	6937007506	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
EL CAMINO REAL & WALNUT AVE SWC	10 FT OR 12 FT	6937007592	6937007541	BXSP C HT 2ME E 40K-UL SV N	LED	83
252 13TH ST NORTH OF	10 FT OR 12 FT	7944665457	7944665425	BXSP B HT 2ME A 40K-UL SV N	LED	53
252 13TH ST	10 FT OR 12 FT	7944665491	7944665425	BXSP B HT 2ME A 40K-UL SV N	LED	53
252 13TH ST SOUTH OF	10 FT OR 12 FT	7944665406	7944665425	BXSP B HT 2ME A 40K-UL SV N	LED	53
2025 EL CAMINO REAL	6 FT	5045188247	5045188221	BXSP C HT 2ME E 40K-UL SV N	LED	83
798 CHERRY AVE	6 FT	6355534634	6355534637	BXSP B HT 2ME A 40K-UL SV N	LED	45

Installation of Smart Thermostat Upgrade will be done at the Community Center for \$5,799. Currently the thermostats at the community center are manually controlled and are set to default time schedules. OpTerra Energy Services will replace existing manual thermostats with smart thermostats that are controlled wirelessly via the internet to access thermostats and set schedules of operation and temperature set points. As shown in Chart 5, the total annual savings associated with this improvement is \$818.

Chart 5
Community Center Smart Thermostat Savings

Unit #	Baseline Consumption (kWh)	Retrofit Consumption (kWh)	kWh Savings	\$ Savings (2016)
1	1,784	832	952	\$ 205.51
2	1,433	672	762	\$ 164.47
3	679	317	362	\$ 78.09
4	1,609	752	857	\$ 184.99
5	1,609	752	857	\$ 184.99
Total	7,113	3,325	3,788	\$ 818.05

\$5,799 cost ÷ \$818 annual savings = 7.1 year breakeven/payback period

PHASE II: WATER SYSTEM IMPROVEMENTS (Water Meters and Valves)

As indicated in beginning of this memo, Phase II would only occur after the City has completed the Water System Master Plan for the Water Utility and established new Water User Rates to cover the \$226,160 annual lease payment for fifteen years.

Greenfield currently has 3,698 water meters in the utility district, 580 have been upgraded and provided with drive-by communication capabilities. As part of the City's compliance with its 2010 Unban Water Management Plan, OpTerra Energy Services will replace the hardware of the remaining 3,118 meters, and upgrade all 3,698 meters with fixed communication radio transmitters. As shown in Chart 6, the City pumps 641,062,000 gallons of water annually.

Chart 6
Water Well Production

2013	WELL #5 GALLONS PUMPED	WELL # 1 GALLONS PUMPED	WELL #6 GALLONS PUMPED	WELL # 7 GALLONS PUMPED	TOTAL GALLONS PUMPED**	TOTAL ACRE FEET**
JANUARY	823,000	8,693,000	12,187,000	13,704,000	34,584,000	106.1
FEBRUARY	1,244,000	8,527,000	11,892,000	15,161,000	35,580,000	109.2
MARCH	2,842,000	13,868,000	19,384,000	14,360,000	47,612,000	146.1
APRIL	4,397,000	15,675,000	22,006,000	21,327,000	59,008,000	181.1
MAY	7,204,000	22,068,000	41,333,000	1,745,000	65,146,000	199.9
JUNE	7,259,000	18,066,000	48,616,000	0	66,682,000	204.6
JULY	1,786,000	4,069,000	62,588,000	0	66,657,000	204.6
AUGUST	0	1,676,000	61,139,000	0	62,815,000	192.8
SEPTEMBER	0	6,992,000	54,094,000	0	61,086,000	187.5
OCTOBER	0	2,020,000	53,374,000	0	55,394,000	170.0
NOVEMBER	0	2,368,000	42,213,000	0	44,581,000	136.8
DECEMBER	0	735,000	41,182,000	0	41,917,000	128.6
TOTAL *	25,555,000	104,757,000	470,008,000	66,297,000	641,062,000	1,967.3

The overwhelming majority of the City's water connections are for single family residential accounts which make up 83% of the service connections; multi-family customers (apartments, duplexes and trailer parks) make up approximately 11%; commercial (businesses, schools, churches and business parks) make up 4%; landscape (parks and medians) make up 1%; and 1% are "other" (fire protection, government, and hydrants). As noted in the City's 2010 Urban Water Management Plan, the Water Utility loses approximately 13% of all water in its distribution system due to old inaccurate water meters running slow and to water leaks in the system. It is projected that the City can reduce the loss of water by 9% with the installation of newer water meters and redirecting utility staff to increase maintenance of the water distribution system. The total cost of replacing meters is \$1,509,690; however, staff is recommending the addition of electronic shutoff valves to automate the process of turning water service on and off without manually sending a staff person to the address which is the current practice. The cost for this feature is \$590,707. As indicated, staff has been slowly replacing water meters during the year which is costly and inefficient.

As shown in Chart 7, annual savings associated with reducing water loss is estimated at \$81,969.

Chart 7
Projected Water Meter Upgrade Savings

2013 Total Gallons Pumped	641,062,000
Recoverable Losses	9%
Total Lost Gallons	57,695,580
Total Meters	3,698
Loss per meter	15,602
# of meters Upgrading	3,118
Total Water saved	48,646,517
Average Cost per Gallon July 2016	\$ 0.0017
Total \$	\$ 81,969

Replacing out dated water meters was an important component in the City's 2010 Urban Water Management Plan which requires the City to project water demands over the next 20 years to ensure there will be sufficient water supply to meet these demands. One of the most critical elements of this plan is the calculation and selection of water conservation targets required by the Water Conservation Act of 2009. The most important benefit associated with the replacement of new meters that can electronically communicate user data to the City without physically going to each customer address to read a meter is reduced staff cost. As shown in Chart 8, annual labor cost savings of \$67,200 can be realized by eliminating water meter readings.

Chart 8
Water Meter Readings Savings

Labor Days per Month (2 People X 10 days)	20
Months in Year Meter Read	12
Hours in Day	8
Total Hours per Year	1,920
Labor Rate	\$ 35
Total Cost per Year	\$ 67,200

As mentioned, the City will also save money by terminating water service to customers without having to dispatch a Utility Worker to the actual location of the customer. The ability to turn service on and off remotely has been used in the electric power industry and will enhance the customer service to City residents. As shown in Chart 9, the total labor cost savings associated with the ability to remotely turn off and turn on water service will save \$43,000 per year.

Chart 9
Manual Shut Off Value Savings

Labor Days per Month (2 People X 8 days)	16
Months in Year Valves closed	12
Hours in Day	8
Total Hours per Year	1,536
% of Labor Saved	80%
Labor Rate	\$ 35
Total Cost per Year	\$ 43,000

OpTerra Energy Services will assist the City with setting up both an internal and client website, and with the automatic transfer of usage data to our existing Tyler Technologies billing system.

The total cost of installing the new meters is \$2,484,421 and financing costs are \$1,059,271, for a total project cost of \$3,643,692. Annual labor cost savings and reduced water loss are estimated at \$180,119.

\$3,643,692 cost ÷ \$180,119 annual savings = 20.2 year breakeven/payback period

Upgrading Irrigation Control in City parks including the removal of existing controllers and the installation of weather-based irrigation smart controllers is projected to cost \$194,225 and will save \$39,205.

\$194,225 cost ÷ \$39,205 annual savings = 5.0 year breakeven/payback period

It should be noted that currently the City is not reimbursing the Water Fund for the water being used in Patriot Park. This practice should be discontinued when the City's General Fund has the ability to pay the Water Fund for the service it is using.

Chart 10
Smart Controller Savings

Address	Description	Jan-Dec 2014 Consumption (gallons)	Jan-Dec 2014 Cost (\$)	Jan-Dec 2014 \$/gallon	Estimated Annual Water Savings (gallons)	Annual Savings 2016
13th and Oak - Patriot Park	Patriot Park - Baseball fields	40,663,000	\$ 87,019	\$ 0.00214	10,165,750	\$ 26,976
	Patriot Park - Well #5					
	Patriot Park - Community Center					
221 PINOT AVE - CITY PARK	Vintage Park	2,530,580	\$ 5,588	\$ 0.00221	632,645	\$ 1,732
200 RAVA PARKWAY PARK	Rava Parkway	2,111,370	\$ 4,862	\$ 0.00230	527,843	\$ 1,507
207 TUSCANY AVENUE PARK	Tuscany Park	1,962,193	\$ 4,695	\$ 0.00239	0	
98 SEL CAMINO REAL-PARK	Village Green Park	1,679,793	\$ 3,812	\$ 0.00227	419,948	\$ 1,182
246 BORZINI CIRCLE	Rotary Centennial Park	1,116,613	\$ 2,461	\$ 0.00220	279,153	\$ 763
634 ST CHRISTOPHER LANE	St Christopher Lane	1,043,778	\$ 2,231	\$ 0.00214	260,945	\$ 692
890 TYLER AVE - CITY PARK	Tyler Park	964,920	\$ 2,128	\$ 0.00220	241,230	\$ 660
328 PARKSIDE Court	Parkside Park	843,767	\$ 1,847	\$ 0.00219	210,942	\$ 573
599 EL CAMINO REAL	City Hall & Police Dept.	644,302	\$ 1,740	\$ 0.00270	161,076	\$ 539
540 BAYWOOD DR-CITY PARK	Baywood Park	757,421	\$ 1,594	\$ 0.00210	189,355	\$ 494
801 APRICOT STREET PARK	Apricot Park	580,080	\$ 1,180	\$ 0.00203	145,020	\$ 366
0000 GIANOLINI PARKWAY	0000 GIANOLINI PARKWAY	390,490	\$ 805	\$ 0.00206	97,623	\$ 249
385 THORP AVE	385 THORP AVE	446,155	\$ 718	\$ 0.00161	111,539	\$ 222
326 WILSON CIRCLE	326 WILSON CIRCLE	382,177	\$ 642	\$ 0.00168	95,544	\$ 199
303 EL CAMINO REAL MUSEUM PK	Hicks Park/Library	368,718	\$ 568	\$ 0.00154	92,180	\$ 176
20 WALKER LANE ISLAND	20 WALKER LANE ISLAND	306,181	\$ 532	\$ 0.00174	76,545	\$ 165
235 THORP-WALNUT TREE LINE	235 THORP-WALNUT TREE LINE	289,207	\$ 476	\$ 0.00165	72,302	\$ 148
317 MORENO STREET	317 MORENO STREET	234,636	\$ 342	\$ 0.00146	58,659	\$ 106
131 SEL CAMINO REAL LS (El Camino	131 SEL CAMINO REAL LS	236,958	\$ 305	\$ 0.00129	59,240	\$ 94
632 VAZQUEZ AVENUE	632 VAZQUEZ AVENUE	188,295	\$ 275	\$ 0.00146	47,074	\$ 85
300 LAS MANZANITAS DRIVE	300 LAS MANZANITAS DRIVE	158,749	\$ 165	\$ 0.00104	39,687	\$ 51
Totals					13,984,298	\$ 36,980

Waste Water Treatment Plant Dissolved Oxygen (DO) Sensor Installation: The City of Greenfield is currently contracted with the Wallace Group to design and oversee the installation of 18 aerators in the percolation ponds at the Waste Water Treatment Plant. These new aerators are designed to run 12 hours a day, seven days a week. In order to reduce the power consumption of the aerators, their operating times will be operated based on Dissolved Oxygen (DO) concentrations. The DO data will be supplied by DO meters and sensors located in the ponds. OpTerra Energy Services will provide the Wallace Group with the design information needed to integrate DO Sensors into their design. OpTerra Energy Services will provide and install DO sensors during the installation of the aerators for a total cost of \$189,321. As shown below, the projected annual cost savings associated with this sensor installation is \$19,113.

\$189,321 cost ÷ \$19,113 annual savings = 9.9 year breakeven/payback period

Chart 11
Wastewater Treatment Plant Dissolved Oxygen (DO) Savings

Location		Pre DO Control					Post DO Control					kWh Savings
		Status	Motor kW	Run Hours	Days Per Yr	kWh/Year	Status	Motor kW	Run Hours	Days Per Yr	kWh/Year	
Pond 1	Aerator 1	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 2	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 3	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 4	On	3.36	12	365	14,723	Off	3.36	7.2	365	8,834	5,889
	Aerator 5	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
	Aerator 6	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
Pond 2	Aerator 7	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 8	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 9	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 10	On	3.36	12	365	14,723	Off	3.36	7.2	365	8,834	5,889
	Aerator 11	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
	Aerator 12	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
Pond 3	Aerator 13	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 14	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 15	On	3.36	12	365	14,723	On	3.36	12	365	14,723	0
	Aerator 16	On	3.36	12	365	14,723	Off	3.36	7.2	365	8,834	5,889
	Aerator 17	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
	Aerator 18	On	3.36	12	365	14,723	Off	3.36	0	365	0	14,723
				216		265,021			129.6		159,012	106,008

The proposed improvements will reduce the average hour reduction by which, based on an average blended rate for electrical service in 2016 at .01803 Kwh.

BUDGET AND FINANCIAL IMPACT

Excluding financing, the total cost of the proposed projects, which includes design, project management, construction, bonds, and overhead/profit, is \$6,976,842. The total cost, including \$2,677,069 in interest financing, is \$9,653,911.

If the City were to decide not to move forward on this project, it is contractually obligated to pay a one-time cost of \$30,00 to OpTerra Energy Services for the cost of engineering the proposed project. The proposed design fees for this project are reasonable and customary given the complexity and coordination that will be required in order to complete.

In order to fund the proposed City-Wide Energy Efficiency and Renewable Energy Project, staff recommends obtaining financing from PNC Equipment Finance. Financing includes the purchase, acquisition, and installation of Solar PV, Street Lighting, Interior/Exterior Lighting, Water Meters, Irrigation Controls, Thermostats and WWTP DO Sensors. The proposed Agreement is a net lease whereby the City is responsible for all costs of operation, maintenance, insurance, and taxes.

The lease term is 14 years plus 12 months of construction with a lease rate of 3.139%. At lease closing, PNC Equipment Finance will deposit the entire financed amount into an escrow account from which disbursements will be made to contractors and equipment providers as directed by the City. The lease rate may be adjusted prior to lease closing and the deposit of funds into an escrow account to reflect market conditions at the time of closing.

The lease rate will be indexed to the 10-year interest rate swap as published by the Federal Reserve. Legal title to the equipment during the lease term will be with the City. Upon performance of the terms and conditions of the lease agreement, the City will have the option to purchase all equipment for \$1.00.

The manufacturer's warranty for specific pieces of equipment is listed in the Energy Service Contract. OpTerra Energy Services will perform measurement and verification services at City Hall, Well #7 and the Corporation Yard, Patriot Park and Well #5, Wastewater Treatment Plant and the RES-BCT. The proposed contract has a two year guaranteed savings of \$237,063 for year one and \$244,133 for year two. OpTerra Energy Services will warrant that the City will realize these total Energy Consumption Savings during the first two years of the lease, subject to adjustment for changes in energy rate factors, energy use factors, and consequential revisions to the relevant baseline.

Annually during the first two years of the lease term, OpTerra Energy Services will submit to the City an energy savings report containing a precise calculation of the energy consumption savings realized by the City. OpTerra Energy Services will also perform preventive maintenance services with respect to the solar PV facilities during the first two years of the lease term. The annual maintenance fee for the first year will be \$25,114.

System performance is evaluated by comparing actual production data and actual local weather data to the production values predicted by modeling software. These evaluations are performed monthly; greater-than-predicted degradations may indicate the need for panel washing. One panel washing is included in the OpTerra Energy Services agreement. The City does have the option to purchase additional washings to maintain optimal performance. In the event that a second annual washing is recommended by OpTerra Energy Services in order to maintain optimal performance, but the City declines to purchase the additional washing, OpTerra Energy Services may adjust the Energy Savings Guarantee for that year. In years of extreme drought and/or where system performance is greater than 100%, OpTerra Energy Services and the City may agree not to wash the solar panels, and the City will receive a credit for that year's panel washing.

REVIEWED AND RECOMMENDED

As stated in the City 2013 Energy Action Strategy plan, "with the unprecedented energy challenges resulting from concerns about the limited supply of fossil fuels globally and our overall energy delivery infrastructure, coupled with an emerging public interest in energy conservation and sustainability, it is clear that action must be taken in communities throughout California. In order to address these concerns, Greenfield is committed to reducing community-wide energy use through the enactment of policies, strategies, and actions that are both cost-effective and environmentally sound."

As noted in this report, official energy consumption and Green House Gas emission reduction targets have not yet been established or adopted by the City. At the time of this report, Energy Watch staff suggested, and the City approved the following goal and GHG reduction targets:

Support achievement of a 15% reduction below 2005 baseline community-wide GHG emissions levels by 2020—consistent with the State-recommended reduction targets identified by AB 32—through implementation of cost-saving energy efficiency and conservation measures included in this Energy Action Strategy.

The goal of reducing GHG emissions by 15% is consistent with state guidance established by AB 32 and supports local compliance with the California Environmental Quality Act (CEQA) Guidelines for GHG emissions. This policy statement is one of the important factors to understanding the contribution of energy efficiency to compliance with the evolving regulatory framework related to GHG emissions.

Admittedly, the project that is being recommended for approval at the next regular City Council Meeting on November 11, 2015, is substantial and will impact all City operations. Staff has worked very closely with OpTerra Energy Services engineers designing the proposed project and has taken a very long term prospective on managing our limited city assets. ***Approving this project is an investment in sustainable progressive city government.*** Since the City has limited financial assets, it is imperative that we use our resources wisely and integrate technology into our daily operations. Given the small size of our Public Works staff, the City is losing its most critical resources when staff is forced to spend thousands of hours walking every four weeks to every house in the City reading water meters. Even worse is the lost time devoted to manually turning customer water service off on Monday ...and then...manually turning it back on Tuesday after payment is received. The use of technology in this area will allow staff to focus its efforts on system maintenance and customer service as the City is required to do by state law.

Most of the financing of this project will be the obligation of our Utilities services that need to be run like independent enterprises. The projected savings from the energy conservation measures and the efficiencies in the distribution of water and utilization of staff offset the initial investment that the City will make with the approval of this Energy Conservation Project.

Based on the benefits of this project, Community Services Director Mic Steinman, Utility Manager Arturo Felix and your City Manager recommend approval of the proposed Energy Conservation Contract.

SUBSEQUENT ACTIONS

The adoption of a Resolution providing for financing the project with PNC will be placed on the November 11, 2015 Council Agenda for approval. Once the City approves financing for Phase I of the project, the City will need to approve the Energy Conservation Agreement. Phase II notice to precede will not be authorized until the completion of the Water Utility Master Plan and adoption of new Water User Rates.

The proposed FY 2016 Budget provides funds for conducting a Capital Planning and Funding Analysis to evaluate the timing and funding sources for the recommended capital improvement plans and individual projects. Concurrent with this analysis, the City will also be conducting a Revenue Sufficiency Analysis which will provide a multi-year projection on the sufficiency of the of the Water and Sewer Fund's revenues to meet all of its current and projected financial

requirements. Completing these two studies, the Water and Wastewater System Master Plans, will enable the City to determine the level of rate adjustments necessary in each year to provide adequate revenues to fund all of the Utility's cost requirements and capital needs.

Both the City's Water and Sewer Utilities are critical to the community's economic development but are undercapitalized and in need of substantial infrastructure improvement and expansion. The FY 2016 and 2017 Water Fund Budget included \$250,000 for the purchase of new water meters and \$90,000 each year for replacing existing water meters which will not be necessary with the approval of this project

The Finance Department will facilitate the necessary execution of loan documents with PNC Equipment Finance for moving forward on the project and establishing an internal amortization schedule for loan repayment from all impacted City funds.

**Financials - Cash and Financing Option
City of Greenfield
4217 Code Compliance Test**

TELP Funded - 17 Year, 3.45%
City-Wide Energy Program
No Capital

Project Cost	\$4,120,377
Solar PV and Energy Efficiency	\$4,120,377
Capital Contribution	\$0
Financed Amount	\$ 4,120,377

INPUTS

Projected Utility Annual Energy Escalation Factor	3.25%
Projected Solar Production 1st year of operation ⁽¹⁾	1,250,521
Solar Avoided Electricity Energy Rate ⁽²⁾	\$0.205
Solar Electricity Production Degradation Factor	0.50%

Year	Solar Electricity Produced (kWh)	Solar Avoided Electric Rate (\$/kWh)	Net Solar Project Savings	Energy Conservation Rebates	Energy Conservation Savings	O&M and M&V Costs	Maintenance Savings	Net Program Savings	Estimated Lease Payment	Project Net Benefit	Cumulative Program Savings
	W	Z	A = W x Z	B	C	D	E	G = A+B+C+E+F-D	H	J= G - H	K
1	1,250,521	\$0.205	\$255,964	\$13,585	\$36,703	\$40,638	\$5,079	\$270,693	\$241,603	\$29,090	\$29,090
2	1,244,268	\$0.211	\$262,962		\$37,896	\$42,056	\$5,231	\$264,033	\$234,942	\$29,090	\$58,181
3	1,238,047	\$0.218	\$270,150		\$39,127	\$0	\$5,388	\$314,666	\$285,575	\$29,090	\$87,271
4	1,231,857	\$0.225	\$277,536		\$40,399	\$0	\$5,550	\$323,484	\$294,394	\$29,090	\$116,362
5	1,225,698	\$0.233	\$285,123		\$41,712	\$0	\$5,716	\$332,551	\$303,461	\$29,090	\$145,452
6	1,219,569	\$0.240	\$292,917		\$43,068	\$0	\$5,888	\$341,873	\$312,782	\$29,090	\$174,543
7	1,213,471	\$0.248	\$300,925		\$44,467	\$0	\$6,064	\$351,457	\$322,366	\$29,090	\$203,633
8	1,207,404	\$0.256	\$309,151		\$45,913	\$0	\$6,246	\$361,310	\$332,220	\$29,090	\$232,724
9	1,201,367	\$0.264	\$317,603		\$47,405	\$0	\$6,434	\$371,441	\$342,351	\$29,090	\$261,814
10	1,195,360	\$0.273	\$326,285		\$48,945	\$0	\$6,627	\$381,857	\$352,767	\$29,090	\$290,905
11	1,189,383	\$0.282	\$335,205		\$50,536	\$0	\$6,826	\$392,567	\$363,476	\$29,090	\$319,995
12	1,183,436	\$0.291	\$344,369		\$52,179	\$0	\$7,030	\$403,578	\$374,487	\$29,090	\$349,086
13	1,177,519	\$0.300	\$353,783		\$53,874	\$0	\$7,241	\$414,899	\$385,808	\$29,090	\$378,176
14	1,171,631	\$0.310	\$363,454		\$55,625	\$0	\$7,459	\$426,538	\$397,448	\$29,090	\$407,267
15	1,165,773	\$0.320	\$373,390		\$57,433	\$0	\$7,682	\$438,506	\$409,415	\$29,090	\$436,357
16	1,159,944	\$0.331	\$383,598		\$59,300	\$0	\$7,913	\$450,810	\$421,720	\$29,090	\$465,448
17	1,154,145	\$0.341	\$394,085		\$61,227	\$0	\$8,150	\$463,462	\$434,371	\$29,090	\$494,538
18	1,148,374	\$0.353	\$404,858		\$63,217	\$0	\$8,395	\$476,469		\$476,469	\$971,008
19	1,142,632	\$0.364	\$415,926		\$65,271	\$0	\$8,647	\$489,843		\$489,843	\$1,460,851
20	1,136,919	\$0.376	\$427,296		\$67,393	\$0	\$8,906	\$503,595		\$503,595	\$1,964,446
21	1,131,234	\$0.388	\$438,977		\$31,797	\$0	\$9,173	\$479,947		\$479,947	\$2,444,393
22	1,125,578	\$0.401	\$450,978		\$32,830	\$0	\$9,448	\$493,256		\$493,256	\$2,937,649
23	1,119,950	\$0.414	\$463,306		\$33,897	\$0	\$9,732	\$506,935		\$506,935	\$3,444,585
24	1,114,351	\$0.427	\$475,972		\$34,999	\$0	\$10,024	\$520,995		\$520,995	\$3,965,579
25	1,108,779	\$0.441	\$488,984		\$4,361	\$0	\$10,324	\$503,669		\$503,669	\$4,469,248
Total			\$9,012,796	\$13,585	\$1,149,575	\$82,694	\$185,174	\$10,278,435	5,809,187	\$4,469,248	

**Financials - Cash and Financing Option
City of Greenfield
4217 Code Compliance Test**

TELP Funded - 17 Year, 3.45%
City-Wide Energy Program
Water Utility Funded

Project Cost	\$2,856,465
Water Meter	\$2,856,465
Capital Contribution	\$0
Financed Amount	\$ 2,856,465

Year	Energy Conservation Rebates	Increased Revenue (Meter Accuracy)	Maintenance Savings	Net Program Savings	Estimated Lease Payment	Water Utility Contribution	Project Net Benefit	Cumulative Program Savings
	B	C	E	G = B+C+E+F	H	I	J= G	K
1	\$0	\$95,964	\$103,422	\$199,386	\$226,160	\$226,160	\$199,386	\$199,386
2		\$99,083	\$106,525	\$205,608	\$226,160	\$226,160	\$205,608	\$404,994
3		\$102,303	\$109,721	\$212,024	\$226,160	\$226,160	\$212,024	\$617,018
4		\$105,628	\$113,012	\$218,640	\$226,160	\$226,160	\$218,640	\$835,658
5		\$109,061	\$116,403	\$225,463	\$226,160	\$226,160	\$225,463	\$1,061,122
6		\$112,605	\$113,178	\$225,783	\$226,160	\$226,160	\$225,783	\$1,286,905
7		\$116,265	\$116,573	\$232,838	\$226,160	\$226,160	\$232,838	\$1,519,743
8		\$120,044	\$120,070	\$240,114	\$226,160	\$226,160	\$240,114	\$1,759,856
9		\$123,945	\$123,672	\$247,617	\$226,160	\$226,160	\$247,617	\$2,007,474
10		\$127,973	\$127,383	\$255,356	\$226,160	\$226,160	\$255,356	\$2,262,830
11		\$132,132	\$131,204	\$263,336	\$226,160	\$226,160	\$263,336	\$2,526,166
12		\$136,427	\$135,140	\$271,567	\$226,160	\$226,160	\$271,567	\$2,797,733
13		\$140,860	\$139,194	\$280,055	\$226,160	\$226,160	\$280,055	\$3,077,788
14		\$145,438	\$143,370	\$288,809	\$226,160	\$226,160	\$288,809	\$3,366,596
15		\$150,165	\$147,671	\$297,837	\$226,160	\$226,160	\$297,837	\$3,664,433
16		\$155,046	\$152,101	\$307,147	\$226,160	\$226,160	\$307,147	\$3,971,580
17		\$160,085	\$156,665	\$316,749	\$226,160	\$226,160	\$316,749	\$4,288,329
18		\$165,287	\$161,364	\$326,652			\$326,652	\$4,614,981
19		\$170,659	\$166,205	\$336,864			\$336,864	\$4,951,845
20		\$176,206	\$171,192	\$347,397			\$347,397	\$5,299,242
21		\$155,400	\$0	\$155,400			\$155,400	\$5,454,642
22		\$160,450	\$0	\$160,450			\$160,450	\$5,615,092
23		\$165,665	\$0	\$165,665			\$165,665	\$5,780,758
24		\$171,049	\$0	\$171,049			\$171,049	\$5,951,807
25		\$176,608	\$0	\$176,608			\$176,608	\$6,128,415
Total	\$0	\$3,474,348	\$2,654,067	\$6,128,415	3,844,724	3,844,724	\$6,128,415	



Energy Services Contract
Greenfield and OpTerra Energy Services
DIR Project Registration # _____
OpTerra ES Project #: ACECN00051
OpTerra ES Contract # R _____

Appendix A: ENERGY SERVICES CONTRACT

DRAFT DATED September 2, 2015

This **ENERGY SERVICES CONTRACT** (this "Contract") is made and entered into as of [●] (the "Contract Effective Date") by and between **OpTerra Energy Services, Inc.**, a Delaware corporation, with California State Contractor's License Number 995037 ("OpTerra Energy Services"), and the **City of Greenfield** ("Greenfield") and together with OpTerra Energy Services the "Parties" and each of Greenfield and OpTerra Energy Services a "Party").

CONTRACT RECITALS

WHEREAS, Greenfield owns and/or operates certain public facilities specifically described in Attachment A (the "Facilities") and Greenfield wishes to reduce the Facilities' energy consumption and costs and improve the Facilities' energy quality and reliability; and

WHEREAS, OpTerra Energy Services is a full-service energy services company with the technical capabilities to provide services to Greenfield including identifying supply-side and/or demand-side energy conservation measures ("ECMs"), engineering, procurement, construction management, installation, construction and training; and

WHEREAS, Greenfield executed a Program Development Agreement with OpTerra Energy Services to perform an integrated energy assessment and present Greenfield with recommendations (the "Recommendations") for the implementation of certain ECMs; and

WHEREAS, in the Recommendations, OpTerra Energy Services identified potential energy and operational savings opportunities at Greenfield's Facilities and estimated program costs to implement the recommended ECMs and presented an overall potential energy cost and consumption savings for implementing the ECM recommendations; and

WHEREAS, Greenfield has accepted the recommended ECMs and determined that the anticipated cost to Greenfield to implement the recommended ECMs will be less than the anticipated cost to Greenfield for thermal, electrical, and other energy, together with anticipated operational, maintenance and other costs, that would have been consumed by Greenfield in the absence of the recommended ECMs in compliance with California Government Code §§4217.10 through 4217.18; and

WHEREAS, pursuant to California Government Code §4217.12, Greenfield held a regularly scheduled public hearing on [●], of which two weeks advance public notice was given regarding this Contract and its subject matter, and

WHEREAS, Greenfield has determined that entering into this energy services contract to implement the ECM recommendations is in the best interests of Greenfield and that California Government Code §4217.10 *et seq.* allows Greenfield to enter into this Contract; and

WHEREAS, by adoption of Resolution No. [●] at the above-referenced meeting, Greenfield approved this Contract and authorized its execution.

NOW, THEREFORE, Greenfield and OpTerra Energy Services hereby agree as follows:

ARTICLE 1. DEFINITIONS

For purposes of this Contract and its Attachments, defined terms will have the following meanings:

"Abnormally Severe Weather Conditions" means typhoons, hurricanes, tornadoes, lightning storms and other climatic and weather conditions that are abnormally severe for the period of time when, and the area where, such storms or conditions occur, in each case occurring at a property, the access roads to a property, or any other location where Work or Professional Services are then being performed. The term "Abnormally Severe Weather Conditions" specifically includes rain, snow or sleet in excess of one hundred fifty percent (150%) of the median level over the preceding ten (10) year period for the local geographic area and time of year in which such rain, snow or sleet accumulates.

"Act" is defined in ARTICLE 13.

“**Affiliate**” means any Person that directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the Person specified. For purposes of this definition, control of a Person means the power, direct or indirect, to direct or cause the direction of the management and policies of such Person whether by contract or otherwise; ownership of fifty percent (50%) or more of the voting securities of another Person creates a rebuttable presumption that such Person controls such other Person.

“**Applicable Law**” means any statute, law, treaty, building code, rule, regulation, ordinance, code, enactment, injunction, writ, order, decision, authorization, judgment, decree, protocol, procedure or other legal or regulatory determination or restriction by a court or Governmental Authority of competent jurisdiction, as may be in effect at the time the Work or Professional Services are undertaken.

“**Applicable Permits**” means all permits and approvals required to be issued by any Governmental Authority in connection with the Professional Services or the building, installation and start-up of the Work as of the Contract Effective Date.

“**Application for Payment**” means a monthly progress payment as described in Section 8.01 or an invoice for materials stored off-site as described in Section 8.02.

“**Arbitral Panel**” is defined in Section 18.04(ii).

“**Arbitration Rules**” is defined in Section 18.04(ii).

“**Attachment**” means the following attachments to this Contract, each of which is an “Attachment:”

Attachment A	Greenfield’s Facilities and Existing Equipment
Attachment B	Standards of Occupancy and Control
Attachment C	Scope of Work
Attachment D	Scope of Monitoring Installation
Attachment E	M&V Services
Attachment F	Maintenance Services

“**Beneficial Use**” means when major new equipment and systems included in the Scope of Work are properly installed, inspected, operational, and are capable of being used for their intended purpose. Criteria for Beneficial Use of equipment / systems will be established as defined in Attachment C.

“**Business Day**” means any calendar day other than a Saturday, a Sunday or a calendar day on which banking institutions in San Francisco, California, are authorized or obligated by law or executive order to be closed.

“**CEQA**” means the California Environmental Quality Act, codified at California Public Resource Code § 21000 *et seq.*, and the applicable state and local guidelines promulgated thereunder.

“**Certificate of Beneficial Use**” means the certificate, issued by OpTerra Energy Services to Greenfield and subcontractor(s), which identifies when Greenfield took Beneficial Use of the Work or any portion thereof. A Certificate of Beneficial Use may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

“**Certificate of Final Completion**” means the certificate issued by OpTerra Energy Services to Greenfield, in accordance with Section 6.03. A Certificate of Final Completion may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

“**Certificate of Substantial Completion**” means the certificate issued by OpTerra Energy Services to Greenfield, in accordance with Section 6.02. A Certificate of Substantial Completion may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

“**Change**” means any addition to, deletion from, suspension of, or other modification to the quality, function, or intent of the Work or Professional Services.

“**Change in Law**” means any of the following events or circumstances occurring after the Contract Effective Date: (i) an amendment, modification, interpretation, construction, enforcement standard, supplement or other change in or repeal of an existing Applicable Law; or (ii) an enactment or making of a new Applicable Law (excluding a change in any income or franchise tax law, worker’s compensation, payroll or withholding tax law).

“**Change Order**” means a written document, signed by both OpTerra Energy Services and Greenfield, authorizing OpTerra Energy Services to perform a Change. The Change Order modifies the Scope of Work and should identify: (i) the applicable Change; (ii) any additional or reduction in compensation to be paid to OpTerra Energy Services to perform such Change; and (iii) any extension of time to complete the Project.

“Construction” means any and all Work to be performed that involves construction, alteration, repair, installation or removal of equipment, addition to, subtraction from, improving, moving, wrecking or demolishing any building, parking facility, excavation, or other structure or improvement, or any part thereof.

“Construction Documents” means the final designs, drawings, specifications and submittals that are used for Construction, and any Change Orders affecting those documents, that describe the technical requirements for the installation of all the materials and equipment pursuant to this Contract.

“Construction Period” means the period beginning with the first day of the month in which material or equipment is first installed at the Facilities and continuing until the M&V Commencement Date.

“Contract” is defined in the Preamble, and includes all Attachments hereto (all of which are incorporated herein by this reference), as well as all Change Orders, amendments, restatements, supplements and other modifications hereto.

“Contract Amount” means Six Million Nine Hundred Seventy-Six Thousand Eight Hundred Forty-Two Dollars (\$6,976,842), which is inclusive of the assessment fee for the Recommendations and the mobilization payment, as set forth in Section 8.01, but exclusive of any fees for Professional Services.

“Contract Bonds” is defined in Section 11.04.

“Contract Effective Date” is defined in the Preamble.

“Delay” means any circumstances involving delay, disruption, hindrance or interference affecting the time of performance of the Work or the Professional Services.

“Dispute” is defined in Section 18.02.

“DOE Guidelines” is defined in Section 12.01.

“ECM” is defined in the Recitals.

“EMS” means an energy management system.

“Energy Delivery Point” means, for each Generating Facility, the point at which Utility meter energy is being delivered, as designated in the Interconnection Agreement.

“Energy Usage Data” is defined in Section 2.06.

“Event of Default” is defined in ARTICLE 15.

“Excusable Event” means an act, event, occurrence, condition or cause beyond the control of OpTerra Energy Services, including, , the following: (i) any act or failure to act of, or other Delay caused by The City of Greenfield (ii) the failure to obtain, or delay in obtaining, any approval of a Governmental Authority (including due to failure to make timely inspection), or Delays caused by Changes and/or modifications to the Scope of Work required by a Governmental Authority, other than a failure caused by the action or inaction of OpTerra Energy Services; (iii) changes in the design, scope or schedule of the Work required by any Governmental Authority; (iv) undisclosed or unforeseen conditions encountered at the Project Location, including discovery or existence of Hazardous Substances; (v) the failure to obtain, or delay in obtaining, approval of any Governmental Authority for design and installation of any portion of the Work, including any further or subsequent approval required with respect to any Change, other than a failure caused by the action or inaction of OpTerra Energy Services; (vi) information provided to OpTerra Energy Services by Greenfield Utility is later found to be inaccurate or incomplete; (vii) any Change in Law that impacts the scope of work; (viii) Delay caused by pending arbitration caused by Greenfield; (ix) acts of God; (x) acts of the public enemy or terrorist acts; (xi); (xii) work by Greenfield Utility; (xiii) flood, earthquake, tornado, storm, fire, explosions, lightning, landslide or similar cataclysmic occurrence; (xiv) sabotage, vandalism, riots or civil disobedience; (xv) labor disputes or strikes; (xvi) labor or material shortages, delay in manufacturing and deliveries of equipment; (xvii) Abnormally Severe Weather Conditions; (xviii) an annual level of direct beam solar resource availability that is less than or equal to 90% of historical averages as measured by long-term weather data (minimum 5 years) collected at the applicable Facility and/or other reliable calibrated and appropriate weather station representative of such Facility; (xix) requirement by Utility that any Generating Facility discontinue operation; (xx) any action by a Governmental Authority that prevents or inhibits the Parties from carrying out their respective obligations under this Contractxxi) any Utility power outage at a Facility.

“Facilities” is defined in the Recitals.

“Final Completion” means the stage in the progress of the Work at which the Construction Work as identified in the Scope of Work, or a designated portion thereof, has been completed and commissioned, including completion of all Punch List items, completion of all required training, and delivery and accepted by Greenfield of the final documentation (as-built drawings, operation and maintenance manuals, warranty documentation and final submittals).

“Generating Facility” means each of the photovoltaic, solar powered generating facilities located at the sites listed in Attachment E, and includes all associated photovoltaic panels, mounting assemblies, inverters, converters, metering, lighting fixtures, transformers, ballasts, disconnects, combiners, switches, wires and other equipment that may be necessary to connect the Generating Facility to the applicable Energy Delivery Point.

“Governmental Authority” means any federal, state, regional, town, county, city, municipal or local government agency, department or regulatory body having jurisdiction under Applicable Law over the matter in question.

“Greenfield” is defined in the Preamble.

“

“Greenhouse Gas” is defined in Section 12.01.

“Hazardous Substances” means (i) any hazardous, toxic, or dangerous wastes, substances, chemicals, constituents, contaminants, pollutants, and materials and any other carcinogenic, liquids, corrosive, ignitable, radioactive, reactive, toxic, or otherwise hazardous substances or mixtures (whether solids, liquids, gases) now or at any time subject to regulation, control, remediation, or otherwise addressed under Applicable Laws; (ii) any “hazardous substance” as defined by the Resource, Conservation and Recovery Act of 1976 (42 U.S.C. §6901 *et seq.*), as amended, and regulations promulgated thereunder; (iii) any “hazardous, toxic or dangerous waste, substance or material” specifically defined as such in 42 U.S.C. §9601 *et seq.*), as amended and regulations promulgated thereunder; and (iv) any hazardous, toxic or dangerous waste, substance, or material as defined in any so-called “superfund” or “superlien” law.

“Incentive Funds” is defined in Section 8.06.

“Installation” means the setting up, construction, and placement of any equipment or materials in the manner it will be operated, in accordance with the Scope of Work and in accordance with all Applicable Laws.

“Instruments of Service” is defined in Section 10.01(c).

“Interconnection Agreement” means the Interconnection Agreement to be entered into between Greenfield and the Utility with respect to the Generating Facilities.

“Interconnection Facilities” is defined in Section 17.02.

“Interest” means interest calculated at the lesser of (i) the prime rate plus two percent (2%) or (ii) the maximum rate permitted by Applicable Law. The “prime rate” will be the “Prime Rate” of interest per annum for domestic banks as published in The Wall Street Journal in the “Money Rates” section.

“Losses” is defined in Section 11.01.

“M&V Commencement Date” means the first day of the month immediately following the later of (i) OpTerra Energy Services’ receipt of the fully signed Certificate of Final Completion, and (ii) OpTerra Energy Services’ receipt of the full Contract Amount.

“M&V Services” (if any) are defined in Attachment E.

“Maintenance Services” (if any) are defined in Attachment F.

“Measurement Period” means each one-year period following the M&V Commencement Date.

“NEC” means the National Electric Code.

“Notice to Proceed” is defined in Section 2.05.

“OpTerra Energy Services” is defined in the Preamble.

“OpTerra Energy Services Warranty” is defined in Section 9.01.

“Party” and **“Parties”** are defined in the Preamble.

“Person” means any natural person, corporation, general partnership, limited partnership, limited liability company, proprietorship, other business organization, trust, union, association or Governmental Authority.

“Professional Services” means professional services (such as Maintenance Services and M&V Services, if any) provided by OpTerra Energy Services to Greenfield under this Contract.

“Project” means the entirety of Work to be performed by OpTerra Energy Services pursuant to the Scope of Work, and any Change Orders.

“Project Location” means the area or areas where the Project materials and equipment and any other energy related equipment, as described in the Scope of Work, are installed, and the general area where the Work is performed.

“**Punch List**” means, with respect to any portion of the Work, a list of minor corrective items which need to be completed or corrected in order to complete such portion of the Work, but do not impair Greenfield’s ability to beneficially operate and utilize such portion of the Work.

“**Recommendations**” is defined in the Recitals.

“**Retained Items**” is defined in Section 10.02.

“**Retention**” is defined in Section 8.03.

“**Schedule of Values**” is defined in Section 8.01.

“**Scope of Work**” means the Work set forth in Attachments C and D, as modified by any Change Order.

“**Substantial Completion**” means the stage in the progress of the Work at which the Work, or a designated portion thereof, is sufficiently complete, in conformance with the Scope of Work, the Construction Documents and any Change Orders, so that Greenfield can take Beneficial Use thereof.

“**Surety**” means the surety supplying the Contract Bonds, which must be an “admitted surety insurer,” as defined by California Code of Civil Procedure §995.120, authorized to do business in the State of California, and reasonably satisfactory to Greenfield.

“**Utility**” is defined in Section 17.02.

“**Work**” means the Work to be done by OpTerra Energy Services pursuant to the Scope of Work, subject to any Change Orders.

ARTICLE 2. TERM; PERFORMANCE OF THE WORK

Section 2.01 Contract Term. The term of this Contract commences on the Contract Effective Date and ends on the last day of the Energy Savings Term, unless terminated earlier as provided in this Contract.

Section 2.02 Performance of Work. The Work and Professional Services to be performed hereunder will be provided in accordance with the terms of this Contract and the applicable standard of care. OpTerra Energy Services will perform its obligations under this Contract (i) using the degree of skill and care that is required by current, good and sound professional procedures and practices, and (ii) in conformance with (x) generally accepted professional standards prevailing at the time the Work is performed, (y) the covenants, terms and conditions of this Contract, and (z) applicable laws, codes, rules and regulations, including, without limitation, the applicable provisions of the California Building Code. OpTerra Energy Services represents and warrants that it is fully experienced in projects of the nature and scope of the Work and Professional Services, and that it is properly qualified, licensed and equipped to supply and perform the Work and Professional Services. The Work completed herein must meet the approval of Greenfield, such approval to be granted or denied in accordance with the requirements set forth in this Contract, and will be subject to Greenfield’s general right of inspection and supervision to secure the satisfactory completion thereof in accordance with this Contract.

Section 2.03 Scope of Work.

- (a) The Scope of Work may not exceed that set forth in Attachments C and D, except pursuant to a Change Order approved by both the City of Greenfield and OpTerra Energy Services.
- (b) The Professional Services may not exceed those set forth in Attachments E, F and G, except pursuant to a Change Order.

Section 2.04 Project Schedule. After the Contract Effective Date, OpTerra Energy Services will develop, with input from Greenfield, a master project schedule using Microsoft Project®. OpTerra Energy Services will establish a weekly construction meeting at which time the Work of the previous week will be reviewed and a two-week look ahead will be coordinated. The project schedule will be updated monthly.

Section 2.05 Notice to Proceed. Within ten (10) days after Greenfield has closed the financing referenced in Section 2.07, Greenfield will issue to OpTerra Energy Services a written Notice to Proceed (“Notice to Proceed”). OpTerra Energy Services will begin Work within thirty (30) calendar days after OpTerra Energy Services’ receipt of the Notice to Proceed. If Greenfield fails to issue the Notice to Proceed within twenty (20) calendar days after the financing has closed, OpTerra Energy Services -may be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount as a result of such delay if that delay in the result of negligence on behalf of the City of Greenfield.

Section 2.06 Greenfield’s Energy and Operational Records and Data. If OpTerra Energy Services requests, Greenfield will request from PG&E and provide to OpTerra Energy Services, within thirty (30) calendar days after such request, Greenfield’s Energy Usage Data for the twelve (12) months preceding the Contract Effective Date, and will request from PG&E and provide the Energy Usage Data for the thirty-six (36) months preceding the Contract Effective Date. “Energy Usage Data” means all of Greenfield’s records and complete data obtainable from PG&E

concerning energy usage, energy-related maintenance, and other related costs for the Facilities, and including, without limitation, utility records; occupancy information; descriptions of any available present or anticipated changes in a building's structure or its heating, cooling, lighting or other systems or energy requirements; descriptions of all energy consuming or saving equipment used in the Facilities; applicable building drawings, specifications, existing AutoCAD files, operation and maintenance manuals, and as-built; bills and records relating to operation and maintenance of systems and equipment within the Facilities, and a description of operation and management procedures currently utilized. . If OpTerra Energy Services requests, Greenfield will also provide to OpTerra Energy Services, within thirty (30) calendar days after such request, copies of Greenfield's financial statements and records related to energy usage and operational costs for said time period at the Facilities, and will authorize its agents and employees to provide and freely discuss such records and to make themselves available for consultations and discussions with authorized representatives, employees, subcontractors, and agents of OpTerra Energy Services.

Section 2.07 Finance Contingency. It is acknowledged and agreed by the Parties that the continued existence of this Contract is expressly contingent upon Greenfield closing financing that will allow it to make the payments to OpTerra Energy Services required by this Contract. Upon execution of this Contract, Greenfield will have thirty (30) calendar days to close such financing. If the financing is not closed within this time, for any reason, either Party may by written notice to the other Party declare this Contract to be null and void; and the Contract will be null and void as of the other Party's receipt of this notice. It is acknowledged and agreed that OpTerra Energy Services will have no obligation to commence performance of the Work unless and until the financing has been closed.

Section 2.08 Proof of Financial Arrangements. Prior to the commencement of the Work, Greenfield will provide OpTerra Energy Services proof that financial arrangements have been made to fulfill Greenfield's obligations under this Contract. Greenfield's requirement to furnish such proof to OpTerra Energy Services is a condition precedent to commencement of the Work. After commencement of the Work, OpTerra Energy Services may request such proof if (i) Greenfield fails to make payments to OpTerra Energy Services as this Contract requires; (ii) a Change in the Work materially changes the Contract Amount; or. Greenfield will furnish such proof as a condition precedent to commencement of the Work or the portion of the Work affected by a material change.

ARTICLE 3. PROJECT IMPLEMENTATION - GENERAL

Section 3.01 Registrations, Permits and Approvals.

- (a) Prior to issuing the Notice to Proceed, Greenfield must register the Project with the California Department of Industrial Relations, using Form PWC-100.
- (b) Greenfield will cooperate fully with and assist OpTerra Energy Services in obtaining all Applicable Permits required under this Contract. OpTerra Energy Services is responsible for obtaining (but not paying for) Applicable Permits, except those Applicable Permits to be issued by Greenfield itself. Greenfield will be responsible for obtaining and paying for all other permits or approvals that may be required, including annual operating permits and any approvals or exemptions required by CEQA, as applicable.
- (c) Greenfield is responsible for all fees associated with plan checks), permits, inspections and utility interconnection(s), including any additional Scope of Work that may be required by the Utilities as part of the Interconnection Agreement(s).

Section 3.02 .

Section 3.03 Project Meetings/Status Updates. During the course of the Work, OpTerra Energy Services will periodically meet with Greenfield to report on the general status and progress of the Work.

Section 3.04 Project Location Access. Greenfield hereby grants to OpTerra Energy Services, without cost to OpTerra Energy Services, all rights of ingress and egress at the Project Location (excluding those areas involving law enforcement operations, necessary for OpTerra Energy Services to perform the Work and provide all services contemplated by this Contract. OpTerra Energy Services will provide twenty-four-hour advance notice to Greenfield for access to any Greenfield Facilities. All persons entering the Project Location, including Greenfield and its employees and agents, must follow OpTerra Energy Services' safety procedures.

Section 3.05 Consents; Cooperation. Whenever a Party's consent, approval, satisfaction, or determination will be required or permitted under this Contract, and this Contract does not expressly state that the Party may act in its sole discretion, such consent, approval, satisfaction, or determination will not be unreasonably withheld, qualified, conditioned, or delayed, whether or not such a "reasonableness" standard is expressly stated in this Contract. Whenever a Party's cooperation is required for the other Party to carry out its obligations hereunder, each Party agrees that it will act in good faith and reasonably in so cooperating with the other Party or its designated representatives or assignees or subcontractors. Each Party will furnish decisions, information, and approvals required by this Contract in a timely manner so as not to delay the other Party's performance under this Contract.

Section 3.06 Independent Contractor. The Parties hereto agree that OpTerra Energy Services, and any agents and employees of OpTerra Energy Services, its subcontractors and/or consultants, is acting in an independent capacity in the performance of this Contract, and not as a public official, officer, employee, consultant, or agent of Greenfield for purposes of conflict of interest laws or any other Applicable Law.

ARTICLE 4. FINAL DESIGN PHASE – CONSTRUCTION DOCUMENTS / EQUIPMENT PROCUREMENT

Section 4.01 General Provisions.

- (a) After the Contract Effective Date, OpTerra Energy Services will proceed with the preparation of any necessary designs, drawings, and specifications related to the Scope of Work.
- (b) After completion of the design phase and approval of the final plans and specifications by Greenfield, OpTerra Energy Services will order the equipment identified in the Scope of Work, and any other necessary materials and supplies in order to meet the project schedule. Procurement shall be accomplished in compliance with the California Public Contract Code
- (c) Greenfield will designate a single-point representative with whom OpTerra Energy Services may consult on a reasonable, regular basis and who is authorized to act on Greenfield's behalf with respect to the Project design. Greenfield's representative will render decisions in a timely manner with regard to any documents submitted by OpTerra Energy Services and to other requests made by OpTerra Energy Services in order to avoid delay in the orderly and sequential progress of OpTerra Energy Services' design services.
- (d) Within ten (30 Business Days after OpTerra Energy Services' request, Greenfield will:
 - (i) furnish all surveys or other information in Greenfield's possession not requested by OpTerra Energy Services but available to Greenfield prior to the execution of this Contract that describe the physical characteristics, legal limitations, and utility locations in and around the Project Location;
 - (ii) ;
 - (iii) supply OpTerra Energy Services with all relevant information in Greenfield's possession, including any as-built drawings and photographs, of prior construction undertaken at the Project Location;
 - (iv) obtain any and all easements, , planning approvals, including any resolution of any environmental impact issues, and any other legal authorization regarding utilization of the Project Location for the execution of the Work; and
 - (v) obtain any and all title reports for those Project Locations reasonably requested by OpTerra Energy Services.
- (e) All information furnished pursuant to this Section 4.01 will be supplied at Greenfield's expense, and OpTerra Energy Services will be entitled to rely upon the accuracy and completeness of all information provided. If OpTerra Energy Services is adversely affected by any failure to provide, or delay in providing, the information specified in Section 4.01(d), OpTerra Energy Services will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount.
- (f) If any information disclosed under this Section 4.01 gives rise to a Change to the Work or an Excusable Event, OpTerra Energy Services will notify Greenfield. The Parties will meet and confer with respect to those Changes, and OpTerra Energy Services will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount. If the Parties, however, are unable to agree on whether Greenfield's disclosed information gives rise to a Change to the Work or an Excusable Event, those disputes are to be resolved in accordance with ARTICLE 18.
- (g) OpTerra Energy Services contemplates that it will not encounter any Hazardous Substances at the Project Location, except as has been disclosed as a pre-existing condition by Greenfield prior to the execution of this Contract. However, any disclosure of Hazardous Substances that will affect the performance of the Work after the execution of this Contract will constitute a valid basis for a Change Order.

Section 4.02 Review of Construction Documents. OpTerra Energy Services will prepare and submit all drawings and specifications to Greenfield for review. Greenfield will review the documents and provide any comments in writing to OpTerra Energy Services within ten (30) Business Days after receipt of the documents. OpTerra Energy Services will incorporate appropriate Greenfield comments into the applicable drawings and specifications. OpTerra Energy Services reserves the right to issue the drawings and specifications in phases to allow Construction to be performed in phases. If Greenfield fails to provide written comments within the ten 30 Business Day period, Greenfield will be deemed to have no comments regarding the documents.

Section 4.03 Permits. The respective obligations of the Parties in obtaining permits are as specified in Section 3.01. Greenfield will agree to any nonmaterial changes to the designs, drawings, and specifications required by any Governmental Authority. The Contract Amount must be increased by any additional cost incurred by OpTerra Energy Services due to a Change required by a Governmental Authority, with exception of code compliance comments, and the time required to complete the Work must be increased by the number of additional days required to complete the Work because of a Change imposed by a Governmental Authority.

Section 4.04 Changes during Final Design Phase. If during the design phase Greenfield requests Changes and/or modifications to the Work and/or an Excusable Event occurs, OpTerra Energy Services will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount. Valid bases for additional compensation and/or time extension include: (i) Greenfield requested changes and/or modifications to the Project Scope of Work during the Project design phase; (ii) (iii) the discovery of subsurface or other site conditions that were not reasonably anticipated or disclosed by Greenfield as of the Contract Effective Date; (iv) the discovery of Hazardous Substances at or impacting the Project Location; (v) changes to the Scope of Work required to obtain Applicable Permits; (vi) damage to any equipment or other Work installed by OpTerra Energy Services caused by the act of Greenfield (vii) changes and/or modifications to Scope of Work ordered by any Governmental Authority; and (viii) any other extraordinary condition that would not reasonably have been anticipated by OpTerra Energy Services, that substantially modifies and/or changes the Scope of Work, that increases the agreed-upon Contract Amount or increases the time needed to complete the Work.

ARTICLE 5. CONSTRUCTION PHASE

Section 5.01 General Provisions. Upon securing the requisite Applicable Permits pursuant to Section 3.01, and completion of Construction Documents, OpTerra Energy Services will commence the construction of the Project in accordance with the Construction Documents. The construction will be performed in accordance with all Applicable Laws and Applicable Permits, by OpTerra Energy Services and/or one or more licensed subcontractors qualified to perform the Work.

Section 5.02 OpTerra Energy Services' Responsibilities during Construction Phase.

- (a) As an independent contractor to Greenfield, OpTerra Energy Services will provide, or cause to be provided by its subcontractor(s), all labor, materials, equipment, tools, transportation, and other facilities and services necessary for the proper execution, construction, and completion of the Work. OpTerra Energy Services will purchase in advance all necessary materials and supplies for the construction of the Project in order to assure the prompt and timely delivery of the completed Work pursuant to the project schedule. OpTerra Energy Services will also be responsible for all means, methods, techniques, sequences, and procedures required by the Construction Documents.
- (b) OpTerra Energy Services will make it's best efforts and do everything which is usual, necessary and proper to coordinate construction activities and perform the Work to minimize disruption to Greenfield's operations at the Project Location. OpTerra Energy Services will provide at least thirty (30) calendar days' written notice to Greenfield of any planned power outages that will be necessary for the construction. OpTerra Energy Services will cooperate with Greenfield in scheduling such outages, and Greenfield agrees to provide its reasonable approval of any scheduled outage.
- (c) OpTerra Energy Services will initiate and maintain a safety program in connection with its Construction of the Project. OpTerra Energy Services will take appropriate precautions which are usual, necessary and proper for the safety of, and will provide protection to prevent damage, injury, or loss to:
 - (i) employees of OpTerra Energy Services and subcontractors performing Work under this Contract;
 - (ii) OpTerra Energy Services' property and other materials to be incorporated into the Project, under the care, custody, and control of OpTerra Energy Services or its subcontractors; and (iii) other property at or adjacent to the Project Location not designated for removal, relocation, or replacement during the course of construction. OpTerra Energy Services will not be responsible for Greenfield's employees' safety unless OpTerra Energy Services' negligence in the performance of its Work is the proximate cause of the employee's injury.
- (d) OpTerra Energy Services will provide five (5) days advanced notice, when feasible, to Greenfield of scheduled test(s) of installed equipment, if any, and Greenfield and/or its designees will have the right to be present at any or all such tests conducted by OpTerra Energy Services, any subcontractor, and/or manufacturers of the equipment.
- (e) Pursuant to California Labor Code §6705, if the Work is a public work involving an estimated expenditure in excess of \$25,000 and includes the excavation of any trench or trenches five (5) feet or more in depth, OpTerra Energy Services will, in advance of excavation, submit to Greenfield and/or a registered civil or structural engineer, employed by Greenfield, to whom authority to accept has been delegated, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or

trenches, which provisions will be no less effective than the current and applicable CAL-OSHA Construction Safety Orders. No excavation of such trench or trenches may be commenced until this detailed plan has been accepted by Greenfield or by the person to whom authority to accept has been delegated by Greenfield. Pursuant to California Labor Code §6705, nothing in this Section 5.02(e) imposes tort liability on Greenfield or any of its employees.

- (f) Pursuant to California Public Contract Code §7104, if the Work is a public work involving digging trenches or other excavations that extend deeper than four (4) feet below the surface of the ground:
 - (i) OpTerra Energy Services will promptly, and before the following conditions are disturbed, notify Greenfield, in writing, of any:
 - 1) Material that OpTerra Energy Services believes may be material that is hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law;
 - 2) Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to OpTerra Energy Services before the Contract Effective Date;
 - 3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.
 - (ii) Greenfield will promptly investigate the conditions and, if it finds that the conditions do materially so differ or do involve hazardous waste, and cause a decrease or increase in OpTerra Energy Services' cost of, or the time required for, performance of any part of the Work will issue a Change Order under the procedures described in this Contract.
 - (iii) If a dispute arises between Greenfield and OpTerra Energy Services, whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in OpTerra Energy Services' cost of, or time required for, performance of any part of the Work, OpTerra Energy Services will not be excused from any scheduled completion date provided for by this Contract but will proceed with all Work to be performed under this Contract. OpTerra Energy Services will retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the Parties.

Section 5.03 Greenfield's Responsibilities during Construction Phase.

- (a) Greenfield will designate a single-point representative authorized to act on Greenfield's behalf with respect to Project construction and/or equipment installation. Greenfield may from time to time change the designated representative and will provide written notice to OpTerra Energy Services of such change. Any independent review of the construction will be undertaken at Greenfield's sole expense, and will be performed in a timely manner so as to not unreasonably delay the orderly progress of OpTerra Energy Services' Work.
- (b) Greenfield will provide a temporary staging area for OpTerra Energy Services, or its subcontractors, to use during the construction phase to store and assemble equipment for completion of the Work, if needed. Greenfield will provide sufficient space, so far as is possible at the Facilities for the performance of the Work and the storage, installation, and operation of any equipment and materials and will take reasonable steps to protect any such equipment and materials from harm, theft and misuse. Greenfield will provide access to the Facilities, including parking permits and identification tags, for OpTerra Energy Services and subcontractors to perform the Work during regular business hours, or such other reasonable hours as may be requested by OpTerra Energy Services and acceptable to Greenfield. Greenfield will also either provide a set or sets of keys to OpTerra Energy Services and its subcontractors (signed out per Greenfield policy) or provide a readily available security escort to unlock and lock doors. Greenfield will not unreasonably restrict OpTerra Energy Services' access to Facilities to make emergency repairs or corrections as OpTerra Energy Services may determine are needed. . All police facilities will require escort, which will be provided by the City on a reasonable basis.
- (c) Greenfield will maintain the portion of the Project Location that is not directly affected by OpTerra Energy Services' Work. Greenfield will keep the designated Project Location and staging area for the Project free of obstructions, waste, and materials within the control of Greenfield.
- (d) As lead agency for the work, the City shall provide a certified Notice of Exemption for exempt projects. Mitigated Negative Declarations or full EIR's will need to be contracted and prepared by a consultant, including any special studies required. Mitigations will need to be considered and evaluated prior to this level of environmental effort and associate permitting

- (e) Greenfield will prepare the Project Location for construction, including, but not limited to, clearance of all above ground obstructions, such as vegetation, buildings, appurtenances, and utilities. Underground utilities shall be marked by contacting Underground Service Alert (USA), with the City marking their facilities in their standard fashion according to USA qualified accuracy declarations. If appropriate or necessary for the work, contracted installations performed by OpTerra shall perform pot-holing to determine alignment and depth of potentially conflicting underground services.. If OpTerra Energy Services encounters such unforeseen conditions in the performance of the Work which could not have reasonably been anticipated by OpTerra at the design phase of the project, OpTerra Energy Services will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount.
- (f) Known or anticipated hazardous substances shall be accounted for in the design for resolution during construction. Unanticipated hazardous substances encountered during work shall be dealt with by the City or as extra services to the contract with OpTerra..
- (g) It is not anticipated that the City of Greenfield will perform any work in support of or as a result of any eventuality or discovery during OpTerra's work utilizing it's own crews. In the unusual event that Greenfield hires a separate contractor to provide ancillary work, Greenfield will coordinate the Work to be performed by OpTerra Energy Services with its contract operations and with any other construction project that is ongoing at or around the Project Location, with the exception that OpTerra Energy Services will coordinate the Interconnection Facilities work, if any, which will be performed by the local utility.
- (h) Greenfield will allow OpTerra Energy Services and its subcontractors access to and reasonable use of necessary quantities of Greenfield's water and other utilities, including electrical power, as needed for the construction of the Work, at no cost to OpTerra Energy Services. The City may, at its option, meter construction water to monitor usage.
- (i) Greenfield will, provide OpTerra Energy Services and/or its subcontractors with reasonable access to the Project Location to perform the Work, including without limitation and at no extra cost to OpTerra Energy Services, access to perform Work on Saturdays, Sundays, legal holidays, and non-regular working hours. OpTerra Energy will ensure that all work performed by its employees or subcontractors is not disruptive to surrounding property owners and take reasonable steps to mitigate loud noises or ground vibrations that interfere with other property owners during evening and weekend hours.
- (j) Greenfield will also do the following:
 - (i) Attend the regularly scheduled progress meetings. Participate as needed regarding scheduling of the Work.
 - (ii) When requested by OpTerra Energy Services, participate in the job inspection walk-through with OpTerra Energy Services to determine Substantial Completion or Beneficial Use of major equipment, and will sign the Certificate(s) of Substantial Completion.
 - (iii) Perform a final walk-through of the Project and, upon receipt of the operation and maintenance manuals and as-built drawings, sign the Certificate of Final Completion for the related Work.
 - (iv) Upon the completion of the entire Scope of Work listed in Attachment C, including training, if any, and submission of close-out documents, sign a Certificate of Final Completion for the entire Project.

Section 5.04 Changes.

- (a) Change Orders Generally. Changes and/or modifications to the Scope of Work will be authorized by a written Change Order. The Change Order should state the change and/or modification to the Scope of Work, any additional compensation to be paid, and any applicable extension of time. OpTerra Energy Services may, at its election, suspend performance of that portion of the Work affected by any proposed Change until a written Change Order with respect to the Changed or modified Work has been signed by both Greenfield and OpTerra Energy Services. OpTerra Energy Services will use its best efforts to continue other portions of the Work not affected or impacted by such proposed Change until such time as the applicable Change Order is resolved. In addition, if any Greenfield Person requests a proposal from OpTerra Energy Services for a Change and Greenfield subsequently elects to not proceed with such Change, Greenfield agrees that a Change Order will be issued to reimburse OpTerra Energy Services for any direct costs incurred for estimating services, design services, and/or preparation of the proposal requested by such Greenfield Person.
- (b) Change Orders Requiring Additional Compensation. If during construction Greenfield requests changes and/or modifications to the Work, and/or there are Excusable Events, Greenfield will pay the extra costs caused by such modifications and/or changes and/or Excusable Event and OpTerra Energy

Services will be entitled to additional compensation for the following reasons, that include (i) any Greenfield authorized requested changes and/or modifications to the Scope of Work during the construction phase of the Project; (ii) Greenfield delays during OpTerra Energy Services' construction work; (iii) discovery of subsurface or other site conditions that were known but not reasonably anticipated or disclosed by Greenfield prior to the commencement of the Work; (v) changes and/or modifications to the Scope of Work required to obtain required permits and approvals as required by any Governmental Authority; (vi) damage to any equipment or other Work installed by OpTerra Energy Services caused by the act of Greenfield (vii) changes and/or modifications to Scope of Work ordered by any Governmental Authority; and (viii) any other extraordinary condition that would not reasonably have been anticipated by OpTerra Energy Services, that modifies and/or changes the Scope of Work or the Contract Amount.

- (c) Change Orders Requiring Additional Time. If during construction Greenfield requests changes and/or modifications to the Scope of Work and/or an Excusable Event occurs, the Parties agree that an equitable extension of time to complete the Work may be necessary. Prior to any extension of time, OpTerra Energy Services will use its best efforts to make up such delays, including authorizing necessary overtime payments; *provided* that Greenfield has issued a Change Order authorizing any such overtime payment and has specifically agreed to pay all costs, including administrative charges and expenses, associated therewith.
- (d) Method for Adjustment. An increase or decrease in the Contract Amount and/or time resulting from a Change in the Work and/or Excusable Event must be determined by one or more of the following methods:
 - (i) unit prices set forth in this Contract or as subsequently agreed;
 - (ii) a mutually accepted, itemized lump sum; or
 - (iii) costs calculated on a basis agreed upon by Greenfield and OpTerra Energy Services plus a fee (either a lump sum or a fee based on a percentage of cost) to which the Parties agree.
- (e) Disagreements. If there is a disagreement between Greenfield and OpTerra Energy Services as to whether OpTerra Energy Services is entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount, those disputes are to be resolved in accordance with the provisions of ARTICLE 18. Pending the resolution of any such dispute, OpTerra Energy Services may suspend Work.

Section 5.05 Minor Changes to Scope of Work. OpTerra Energy Services has the authority to make minor changes that do not change the scope of work or the Construction Documents, without prior notice to Greenfield. OpTerra Energy Services will either promptly inform Greenfield, in writing, of any minor changes made during the implementation of the Project, or make available to Greenfield at the site a set of as-built drawings that will be kept current to show those minor changes.

Section 5.06 Hazardous Substances.

- (a) OpTerra Energy Services will promptly provide written notice to Greenfield if OpTerra Energy Services observes any Hazardous Substance, as defined herein, at or around the Facilities during the course of construction or installation of any equipment which have not been addressed as part of the Scope of Work. OpTerra Energy Services will have no obligation to investigate the Facilities for the presence of Hazardous Substances prior to commencement of the Work unless otherwise specified in the Scope of Work.. OpTerra Energy Services will comply with all Applicable Laws in connection with the use, handling, and disposal of any Hazardous Substances in the performance of its Work. In connection with the foregoing, Greenfield will provide OpTerra Energy Services, within ten (10) Business Days of the execution of this Contract, a written statement that represents and warrants (i) whether or not, to its knowledge, there are Hazardous Substances either on or within the walls, ceiling or other structural components, or otherwise located in the Project Location, including, but not limited to, asbestos-containing materials; (ii) whether or not, to its knowledge, conditions or situations exist at the Facilities which are subject to special precautions or equipment required by federal, state, or local health or safety regulations; and (iii) whether or not, to its knowledge, there are unsafe working conditions at the Facilities.
- (b) Greenfield will indemnify, defend, and hold OpTerra Energy Services harmless from and against any and all Losses that in any way result from, or arise under, such Greenfield owned or generated Hazardous Substances that were known by Greenfield but not timely communicated to OpTerra Energy Services, except for liabilities due to the negligence or willful misconduct of OpTerra Energy Services, or its subcontractors, agents or representatives, in the handling, disturbance or release of Hazardous Substances. This indemnification will survive any termination of this Contract.

Section 5.07 Pre-Existing Conditions. Certain pre-existing conditions may be present within the Facilities that (i) are non-compliant with applicable codes, (ii) may become non-compliant with applicable codes upon completion of OpTerra Energy Services' Work, (iii) may cause OpTerra Energy Services' completed Work to be non-compliant with applicable codes, (iv) may prevent Greenfield from realizing the full benefits of OpTerra Energy Services' Work, (v) may present a safety or equipment hazard, or (vi) are otherwise outside the scope of OpTerra Energy Services' Work. Regardless of whether or not such conditions may have been readily identifiable prior to the commencement of Work, OpTerra Energy Services will not be responsible for repairing such pre-existing conditions unless such responsibility is expressly provided for in the Scope of Work or an approved Change Order. OpTerra Energy Services, in its sole discretion, may determine whether it will bring said pre-existing conditions into compliance by agreeing to execute a Change Order with Greenfield for additional compensation and, if appropriate, an extension of time. If a pre-existing condition within Greenfield Facilities are non-compliant with applicable codes and cannot be remediated within the approved scope of work, OpTerra Energy Service and Greenfield will negotiate a deductive change order and remove this work from the construction documents.

ARTICLE 6. PROJECT COMPLETION

Section 6.01 Occupancy or Use of Work. Greenfield may take occupancy or use of any completed or partially completed portion of the Work at any stage, whether or not such portion is Substantially Complete, *provided* that such occupancy or use is authorized by Governmental Authority and, *provided further*, that Greenfield assumes responsibility for the security of, insurance coverage for, maintenance, utilities for, and damage to or destruction of such portion of the Work. If Substantial Completion of a portion of the Construction Work is not yet achieved, occupancy or use of such portion of the Work will not commence until Greenfield's insurance company has consented to such occupancy or use. When occupancy or use of a portion of the Work occurs before Substantial Completion of such portion, Greenfield and OpTerra Energy Services will accept in writing the responsibilities assigned to each of them for title to materials and equipment, payments and Retention with respect to such portion.

Section 6.02 Substantial Completion. When OpTerra Energy Services considers the Work, or any portion thereof, to be Substantially Complete, OpTerra Energy Services will supply to Greenfield a written Certificate of Substantial Completion with respect to such portion of the Work, including a Punch List of items and the time for their completion or correction. Greenfield will within ten (10) Business Days of receipt of the Certificate of Substantial Completion, review such portion of the Work for the sole purpose of determining that it is Substantially Complete, and sign and return the Certificate of Substantial Completion to OpTerra Energy Services acknowledging and agreeing: (i) that such portion of the Work is Substantially Complete; (ii) the date of such Substantial Completion; (iii) that from the date of Substantial Completion Greenfield will assume responsibility for the security of, insurance coverage for, maintenance, utilities for, and damage to or destruction of such portion of the Work. Greenfield agrees that approval of a Certificate of Substantial Completion will not be unreasonably withheld, delayed or conditioned.

Section 6.03 Final Completion. When OpTerra Energy Services considers the entirety of the Work to be Finally Complete, OpTerra Energy Services will notify Greenfield that the Work is fully complete and ready for final inspection. Greenfield will inspect the Work to verify the status of Final Completion within ten (10) Business Days after its receipt of OpTerra Energy Services' certification that the Work is complete. . When Greenfield agrees that the Work is fully completed, OpTerra Energy Services will issue a Certificate of Final Completion, which Greenfield must sign. Greenfield agrees that its signing of the Certificate of Final Completion will not be unreasonably withheld, delayed or conditioned. At that time, Greenfield will pay OpTerra Energy Services any remaining Contract Amount due and any outstanding Retention being withheld by Greenfield, in accordance with Section 8.03. Greenfield may give OpTerra Energy Services written notice of acceptance of the Work and will promptly record a notice of completion or notice of acceptance in the office of the county recorder in accordance with California Civil Code §9204. Final completion shall include all final submittals to include shop drawings, record drawings (as-builts) required for City on-going operations, equipment vendor warranties and contact information, maintenance and operation manuals, start-up and training to City staff as applicable

Section 6.04 Transfer of Title; Risk of Loss. Title to all or a portion of the Project equipment, supplies and other components of the Construction Work will pass to Greenfield upon the earlier of (i) the date payment for such Project equipment, supplies or components is made by Greenfield or (ii) the date any such items are incorporated into the Project Location. OpTerra Energy Services will retain care, custody and control and risk of loss of such Project equipment, supplies and components until Substantial Completion. Transfer of title to Greenfield will in no way affect Greenfield's and OpTerra Energy Services' rights and obligations as set forth in other provisions of this Contract. Except as provided in this Section 6.04, after the date of Substantial Completion, OpTerra Energy Services will have no further obligations or liabilities to Greenfield arising out of or relating to this Contract, except for the obligation to complete any Punch List items, the obligation to perform any warranty service under Section 9.01, and obligations which, pursuant to their terms, survive the termination of this Contract.

ARTICLE 7. SUBCONTRACTORS

Section 7.01 Authority to Subcontract. OpTerra Energy Services may not delegate its duties and performance under this Contract without approval by Greenfield, and has the right to enter into agreements with any subcontractors and other service or material providers as OpTerra Energy Services may select in its discretion to perform the Work. OpTerra Energy Services will not be required to enter into any subcontracts with parties whom OpTerra Energy Services has not selected or subcontractors whom OpTerra Energy Services has objection to using.

Section 7.02 Prompt Payment of Subcontractors. OpTerra Energy Services will promptly pay, when due, all amounts payable for labor and materials furnished in the performance of this Contract and will take all reasonable, necessary and prudent steps to prevent any lien or other claim under any provision of Applicable Law from arising against any Greenfield property, against OpTerra Energy Services' rights to payments hereunder, or against Greenfield.

Section 7.03 Relationship. Nothing in this Contract constitutes or will be deemed to constitute a contractual relationship between any of OpTerra Energy Services' subcontractors and Greenfield, or any obligation on the part of Greenfield to pay any sums to any of OpTerra Energy Services' subcontractors.

Section 7.04 Prevailing Wages. To the extent required by California Labor Code §1771 or other Applicable Law, all employees of OpTerra Energy Services and OpTerra Energy Services' subcontractors performing Work at the Project Location will be paid the per diem prevailing wages for the employee's job classification in the locality in which the Work is performed. In accordance with California Labor Code §§1773 and 1773.2, On behalf of Greenfield, OpTerra Energy Services will obtain from the Director of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work, in the locality in which the Work is to be performed, for each craft, classification or type of worker needed to execute the Work at the Project Location, and will cause copies of such determinations to be kept on file at its principal office and posted at each Project Location. OpTerra Energy Services will promptly notify Greenfield of any changes to any such prevailing wage determination.

ARTICLE 8. PAYMENTS

Section 8.01 Monthly Progress Payments. Upon execution of this Contract, OpTerra Energy Services will invoice Greenfield for the assessment fee for the Recommendations in the amount of [●] plus a mobilization payment in the amount of [●]. These amounts must be paid to OpTerra Energy Services within thirty (30) calendar days after Greenfield's receipt of an invoice for those amounts. In addition, as the Work progresses, OpTerra Energy Services will submit to Greenfield its applications for monthly payments based on the progress made on the Project through the date on which OpTerra Energy Services submits such Application for Payment. Within twenty-one (21) calendar days from the Contract Effective Date, OpTerra Energy Services will prepare and submit to Greenfield a schedule of values apportioned to the various divisions or phases of the Work ("Schedule of Values"). Each line item contained in the Schedule of Values will be assigned a value such that the total of all items equals the Contract Amount. All Applications for Payment will be in accordance with the Schedule of Values.

Section 8.02 Materials Stored Off-Site. In addition to the monthly progress payments specified in Section 8.01, OpTerra Energy Services may invoice Greenfield for materials purchased in advance and not stored at the Project Location. Each such Application for Payment will be accompanied by proof of off-site material purchases, evidence that the materials have been delivered to a warehouse reasonably acceptable to Greenfield and evidence of appropriate insurance coverage. OpTerra Energy Services will furnish to Greenfield written consent from the Surety approving the advance payment for materials stored off site. Greenfield will pre-pay one hundred percent (100%) of OpTerra Energy Services' Application for Payment for the materials delivered, less Retention as indicated in Section 8.03. OpTerra Energy Services will protect stored materials from damage. Damaged materials, even though paid for, will not be incorporated into the Work.

Section 8.03 Retention. OpTerra Energy Services and Greenfield acknowledge that this project is substantially unique and not customarily performed by Greenfield. Greenfield, or its designee, will approve and pay each Application for Payment, less a retention amount ("Retention") of – ten (10) percent (in accordance with California Public Contract Code §7201(b) (4), within thirty (30) calendar days after its receipt of the Application for Payment; *provided, however,* that there is to be no Retention with respect to the mobilization payment and any fee for the Recommendations. A failure to approve and pay an Application for Payment in a timely manner is a material default by Greenfield under this Contract. Greenfield may make progress payments in full without Retention at any time after fifty percent (50%) of the Work has been completed, as permitted pursuant to California Public Contract Code §9203. Upon Substantial Completion, the Retention will be reduced to four (4) percent of the Contract Amount, and OpTerra Energy Services may invoice and Greenfield will pay this amount. Greenfield will pay OpTerra Energy Services the remaining six percent (6) Retention amount upon achieving Final Completion.

Section 8.04 Final Payment. The final Application for Payment may be submitted after Final Completion. The final payment amount must also include payment to OpTerra Energy Services for any remaining Retention withheld by Greenfield.

Section 8.05 Disputed Invoices/Late Payments. Greenfield may in good faith dispute any Application for Payment, or part thereof, within fifteen (15) calendar days after the date the Application for Payment was received by Greenfield. If Greenfield disputes all or a portion of any Application for Payment, Greenfield will pay the undisputed portion when due and provide OpTerra Energy Services a written notice and explanation of the basis for the dispute and the amount of the Application for Payment being withheld related to the dispute. d. If any amount disputed by Greenfield is finally determined to be due to OpTerra Energy Services, either by agreement between the Parties or as a result of dispute resolution pursuant to ARTICLE 18 below, it will be paid to OpTerra Energy Services within ten (10) Business Days after such final determination, plus Interest from the date billed or claimed until such amount is paid.

Section 8.06 Rebate Programs. OpTerra Energy Services will assist Greenfield in the preparation and submission to the applicable agencies of applications and documentation necessary for the following energy efficiency rebate, incentive, and/or loan program(s) _____. OpTerra Energy Services makes no guarantee that Greenfield will receive funding from any energy efficiency rebate, incentive, and/or loan program(s), including those listed above (collectively, "Incentive Funds"), or any portion thereof; OpTerra Energy Services expressly disclaims any liability for Greenfield's failure to receive any portion of the Incentive Funds, and Greenfield acknowledges and agrees that OpTerra Energy Services will have no liability for any failure to receive all or any portion of the Incentive Funds. Procurement, or lack thereof, of the Incentive Funds will not alter the Contract Amount of this Contract or the payment timeline associated with payment of the Contract Amount.

ARTICLE 9. WARRANTY / LIMITATION OF LIABILITY

EXCEPT FOR THE WARRANTIES PROVIDED IN THIS ARTICLE 9, OPTERRA ENERGY SERVICES WARRANTS THAT THE GOODS AND SERVICES PURCHASED UNDER THIS CONTRACT CONFORM TO ORDINARY STANDARDS OF CARE AND THAT THEY ARE OF THE SAME AVERAGE GRADE, QUALITY, AND VALUE AS SIMILAR GOODS SOLD UNDER SIMILAR CIRCUMSTANCES AND THAT THE MERCHANTABLE GOODS ARE APPROPRIATE FOR THE ORDINARY PURPOSES FOR WHICH THEY ARE TO BE USED AND INCORPORATED WITHIN THIS SCOPE OF WORK. ANY DEFECTIVE MATERIALS OR EQUIPMENT INSTALLED BY OPTERRA ENERGY SERVICES OR ANY OPTERRA ENERGY SERVICES SUBCONTRACTOR OR VENDOR SHALL BE REPAIRED OR REPLACED. IN ACCORDANCE WITH THE WARRANTIES INDICATED BELOW. SPECIFICALLY, NEITHER OPTERRA ENERGY SERVICES, NOR OPTERRA ENERGY SERVICES' SUBCONTRACTORS OR VENDORS, WILL BE LIABLE TO GREENFIELD FOR LOSS OF PROFITS OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY.

Section 9.01 OpTerra Energy Services warrants to Greenfield that material and equipment furnished under this Contract will be of good quality and new and fit for the ordinary purposes for which they are to be used and incorporated within this scope of work, unless otherwise specifically required or permitted by this Contract. OpTerra Energy Services further warrants that its workmanship provided hereunder, including its subcontractors' workmanship, will be free of material defects for a period of one (1) year from the date of Substantial Completion as indicated on the executed Certificate of Substantial Completion as indicated on the executed Certificate of Beneficial Use ("OpTerra Energy Services Warranty"). Notwithstanding the preceding sentence, the date the OpTerra Energy Services Warranty commences with respect to a specific piece or pieces of equipment may be further defined in Attachment C.

Section 9.02 Equipment and material warranties that exceed the OpTerra Energy Services Warranty period will be provided directly by the equipment and/or material manufacturers and such warranties will be assigned directly to Greenfield, after the one (1) year period. During the OpTerra Energy Services Warranty period, OpTerra Energy Services will be Greenfield's agent in working with the equipment and material manufacturers in resolving any equipment or material warranty issues. If any material defects are discovered within the OpTerra Energy Services Warranty period, OpTerra Energy Services, or OpTerra Energy Services' subcontractors, will correct its defects, and/or OpTerra Energy Services will work with the equipment or material manufacturer as Greenfield's agent to facilitate the manufacturer's correction of the equipment or material defect. Such warranty services will be performed in a timely manner and at the reasonable convenience of Greenfield. If a warranty issue arises on any equipment or material installed after the OpTerra Energy Services Warranty period, and the equipment or material has a warranty period will be extended until the material or equipment defect is corrected to the satisfaction of both Greenfield and OpTerra Energy Services. The warranties in this ARTICLE 9 expressly exclude any remedy for damage or defect caused by improper or inadequate maintenance of the installed equipment by service providers other than OpTerra Energy Services or its subcontractors, corrosion, erosion, deterioration, abuse, modifications or repairs not performed by an authorized OpTerra Energy Services subcontractor, improper use or operation, or normal wear and tear under normal usage. Unless otherwise specified, all warranties hereunder, including without limitation those for defects, whether latent or patent, in design, engineering, or construction, will terminate one (1) year from the date of Substantial Completion or Beneficial Use; and thereafter, OpTerra Energy Services will have no liability for breach of any warranty or for any latent or patent defect of any kind pursuant to California Code of Civil Procedure §§337.15 and 338.

Section 9.03 .

ARTICLE 10. OWNERSHIP OF CERTAIN PROPERTY AND EXISTING EQUIPMENT

Section 10.01 Ownership of Certain Proprietary Property Rights.

- (a) Ownership: Except as expressly provided in this Contract, Greenfield will not acquire, by virtue of this Contract, any rights or interest in any formulas, patterns, devices, software, inventions or processes, copyrights, patents, trade secrets, other intellectual property rights, or similar items of property which are or may be used in connection with the Work. OpTerra Energy Services will own all inventions, improvements, technical data, models, processes, methods, and information and all other work products developed or used in connection with the Work, including all intellectual property rights therein. All third-party non-proprietary vendor supplied, hardware, equipment, software as well as standard, non-proprietary installations shall become the full property, without restriction, of the City of Greenfield.
- (b) License: Solely in connection with the Facilities, OpTerra Energy Services grants to Greenfield a limited, perpetual, royalty-free, non-transferrable license for any OpTerra Energy Services intellectual property rights necessary for Greenfield to operate, maintain, and repair any modifications or additions to Facilities, or equipment delivered, as a part of the Work.
- (c) Ownership and Use of Instruments of Service. All data, reports, proposals, plans, specifications, flow sheets, drawings, and other products of the Work (the "Instruments of Service") furnished directly or indirectly, in writing or otherwise, to Greenfield by OpTerra Energy Services under this Contract will remain OpTerra Energy Services' property and may be used by Greenfield only for the Work. OpTerra Energy Services will be deemed the author and owner of such Instruments of Service and will retain all common law, statutory and other reserved rights, including copyrights. The Instruments of Service may not be used by Greenfield for future additions or alterations to the Project or for other projects, without the prior written agreement of OpTerra Energy Services. Any unauthorized use of the Instruments of Service will be at Greenfield's sole risk and without liability to OpTerra Energy Services. If Greenfield uses the Instruments of Service for implementation purposes, including additions to or completion of the Project, without the written permission of OpTerra Energy Services, Greenfield agrees to waive and release, and indemnify and hold harmless, OpTerra Energy Services, its subcontractors, and their directors, employees, subcontractors, and agents from any and all Losses associated with or resulting from such use.
- (d) In the event that OpTerra Energy Services ceases to do business in the State of California, All ownership and license restrictions on all installations, equipment and instruments of service are released to the City of Greenfield.

Section 10.02 Ownership of any Existing Equipment. Ownership of any equipment and materials presently existing at the Facilities at the time of execution of this Contract will remain the property of Greenfield even if such equipment or materials are replaced or their operation made unnecessary by work performed by OpTerra Energy Services. If applicable, OpTerra Energy Services will advise Greenfield in writing of all equipment and materials that will be replaced at the Facilities and Greenfield will, within five (5) Business Days of OpTerra Energy Services' notice, designate in writing to OpTerra Energy Services which replaced equipment and materials should not be disposed of off-site by OpTerra Energy Services (the "Retained Items"). Greenfield will be responsible for and designate the location and storage for the Retained Items. OpTerra Energy Services will be responsible for the disposal of replaced equipment and materials, except for the Retained Items. OpTerra Energy Services will use commercially reasonable efforts to remove the Retained Items in such a manner as to avoid damage thereto, or if it is unreasonable to avoid damage altogether, to minimize the damage done. OpTerra Energy Services will not be responsible for the removal and/or disposal of any Hazardous Substances except as required by the Scope of Work.

ARTICLE 11. INDEMNIFICATION / INSURANCE / BONDS

Section 11.01 Indemnification. To the full extent permitted by Applicable Laws, each Party will indemnify, hold harmless, release and defend the other Party, its officers, employees, and agents from and against any and all actions, claims, demands, damages, disabilities, fines, penalties, losses, costs, expenses (including consultants' and attorneys' fees and other defense expenses) and liabilities of any nature ("Losses") that may be asserted by any person or entity, to the extent arising out of that Party's performance or activities hereunder, including the performance or activities of other persons employed or utilized by that Party in the performance of this Contract, excepting liabilities to the extent due to the negligence or willful misconduct of the indemnified party. This indemnification obligation will continue to bind the Parties after the termination of this Contract.

Section 11.02 Waiver of Consequential Damages and Limitation of Liability. The liability of a defaulting Party will be limited to direct, actual damages. Neither Party shall be liable to the other Party for any special, indirect, incidental or consequential damages whatsoever, whether in contract, tort (including negligence) or strict liability,

including, but not limited to, operational losses in the performance of business such as lost profits or revenues or any increase in operating expense. Additionally, each Party waives any claims for negligence against the other Party to the greatest extent permitted by Applicable Law.

Section 11.03 OpTerra Energy Services Insurance. OpTerra Energy Services will maintain, or cause to be maintained, for the duration of this Contract, the insurance coverage outlined in (a) through (f) below, and all such other insurance as required by Applicable Law. Evidence of coverage will be provided to Greenfield via an insurance certificate.

- (a) Workers' Compensation/Employers Liability for states in which OpTerra Energy Services is not a qualified self-insured. Limits as follows:

- * Workers' Compensation: Statutory
- * Employers Liability: Bodily Injury by accident \$1,000,000 each accident
Bodily Injury by disease \$1,000,000 each employee
Bodily Injury by disease \$1,000,000 policy limit

- (b) Commercial General Liability insurance with limits of:

- * \$2,000,000 each occurrence for Bodily Injury and Property Damage
- * \$4,000,000 General Aggregate - other than Products/Completed Operations
- * \$4,000,000 Products/Completed Operations Aggregate
- * \$2,000,000 Personal and Advertising Injury
- * \$ 100,000 Damage to premises rented to OpTerra Energy Services

Coverage to be written on an occurrence form. Coverage to be at least as broad as ISO form CG 0001 (04/13) or its equivalent forms, without endorsements that limit the policy terms with respect to: (1) provisions for severability of interest or (2) explosion, collapse, underground hazard.

- (c) Auto Liability insurance for owned, hired and non-owned vehicles with limits of \$1,000,000 per accident. Coverage to be written on an occurrence form.

- (d) Professional Liability insurance with limits of:

- * \$1,000,000 per occurrence
- * \$1,000,000 aggregate

Coverage to be written on a claims-made form.

- (e) Umbrella/Excess Liability Insurance. Limits as follows:

- * \$1,000,000 each occurrence
- * \$1,000,000 aggregate

Coverage terms and limits to apply excess of the per occurrence and/or aggregate limits provided for Commercial General Liability and Professional Liability written on a claims made form. Coverage terms and limits also to apply in excess of those required for Employers Liability and Auto Liability written on an occurrence form.

- (f) Policy Endorsements.

- * The insurance provided for Workers' Compensation and Employers' Liability above will contain waivers of subrogation rights against Greenfield, but only to the extent of the indemnity obligations contained in this Contract.
- * The insurance provided for Commercial General Liability and Auto Liability above will:
 - (i) include Greenfield as an additional insured with respect to Work performed under this Contract, but only to the extent of the indemnity obligations contained in this Contract, and
 - (ii) provide that the insurance is primary coverage with respect to all insureds, but only to the extent of the indemnity obligations contained in this Contract.

Section 11.04 Performance and Payment Bonds. Prior to commencing Work under this Contract, OpTerra Energy Services will furnish a performance bond, in an amount equal to one hundred percent (100%) of the Contract Amount, and a payment bond to guarantee payment of all claims for labor and materials furnished, in an amount equal to one hundred percent (100%) of the Contract Amount (collectively, the "Contract Bonds"). The Contract Bonds are not being furnished to cover the performance of any Professional Services, including any energy guaranty or guaranteed savings under this Contract, nor to cover any equipment and/or material manufacturer's warranty or other third-party warranty being assigned to Greenfield.

ARTICLE 12. DOE GUIDELINES; ENERGY POLICY ACT

Section 12.01 As authorized by §1605(b) of the Energy Policy Act of 1992 (Pub. L. No. 102-486) the U.S. Department of Energy has issued, and may issue in the future, guidelines for the voluntary reporting of Greenhouse Gas emissions (“DOE Guidelines”). “Greenhouse Gases” means those gases and other particles as defined in the DOE Guidelines. Greenfield hereby assigns and transfers to OpTerra Energy Services, and its Affiliates and assigns, any Greenhouse Gas emission reduction credits that result from the Work.

Section 12.02 As authorized by §1331 of the Energy Policy Act of 2005 (Pub. L. No. 109-58) Greenfield agrees that for the Work, OpTerra Energy Services will be the “designer” as that term is identified in Internal Revenue Bulletin 2008-14, Notice 2008-40, and OpTerra Energy Services will have the exclusive right to report to any federal, state, or local agency, authority or other party any tax benefit associated with the Work. Upon Final Completion, Greenfield agrees to execute a written allocation including a declaration related to Internal Revenue Code §179D. OpTerra Energy Services will prepare the declaration and all accompanying documentation. OpTerra Energy Services will be designated the §179D beneficiary.

ARTICLE 13. MUNICIPAL ADVISOR

Section 13.01 THE PARTIES ACKNOWLEDGE AND AGREE THAT OPTERRA ENERGY SERVICES IS NOT A MUNICIPAL ADVISOR AND CANNOT GIVE ADVICE TO GREENFIELD WITH RESPECT TO MUNICIPAL SECURITIES OR MUNICIPAL FINANCIAL PRODUCTS ABSENT GREENFIELD BEING REPRESENTED BY, AND RELYING UPON THE ADVICE OF, AN INDEPENDENT REGISTERED MUNICIPAL ADVISOR. OPTERRA ENERGY SERVICES IS NOT SUBJECT TO A FIDUCIARY DUTY WITH REGARD TO GREENFIELD OR THE PROVISION OF INFORMATION TO GREENFIELD. GREENFIELD WILL CONSULT WITH AN INDEPENDENT REGISTERED MUNICIPAL ADVISOR ABOUT THE FINANCING OPTION APPROPRIATE FOR GREENFIELD’S SITUATION.

ARTICLE 14. TRADE SECRETS

If any materials or information provided by OpTerra Energy Services to Greenfield under this Contract are designated by OpTerra Energy Services as a “trade secret” or otherwise designated by OpTerra Energy Services as exempt from disclosure under the Public Records Act (California Government Code §6250 *et seq.*, the “Act”) and if a third party makes a request for disclosure of the materials under the Act, as soon as practical (but not later than five (5) calendar days) after receipt of such request, Greenfield will notify OpTerra Energy Services of such request and advise OpTerra Energy Services whether Greenfield believes that there is a reasonable possibility that the materials may not be exempt from disclosure. Within ten (10) calendar days after a third party’s request for disclosure of materials under the Act, OpTerra Energy Services will (i) authorize Greenfield to release the documents or information sought; or (ii) if OpTerra Energy Services reasonably believes that the information is exempt from disclosure, advise Greenfield not to release the materials. In the event that OpTerra Energy Services does not authorize Greenfield to release materials Greenfield believes are not exempt from disclosure, OpTerra Energy Service will indemnify and hold harmless Greenfield from all legal expense and court ordered judgements associated with not releasing requested documents.

ARTICLE 15. EVENTS OF DEFAULT

Section 15.01 Events of Default by OpTerra Energy Services. Each of the following events or conditions will constitute an “Event of Default” by OpTerra Energy Services:

- (i) any substantial failure by OpTerra Energy Services to perform or comply with this Contract, including a material breach of any covenant contained herein, and such failure continues for thirty (30) calendar days after notice to OpTerra Energy Services demanding that such failure to perform be cured; *provided* that such failure to perform will not be deemed a default hereunder if it is excused by a provision of this Contract, f; or
- (ii) any representation or warranty furnished by OpTerra Energy Services in this Contract which was false or misleading in any material respect when made.

Section 15.02 Events of Default by Greenfield. Each of the following events or conditions will constitute an “Event of Default” by Greenfield:

- (i) any substantial failure by Greenfield to perform or comply with this Contract, including a material breach of any covenant contained herein, and such failure continues for thirty (30) calendar days after notice to Greenfield demanding that such failure to perform be cured; *provided* that (y) such failure to perform will not be deemed a default hereunder if it is excused by a provision of this Contract; and (z) if such cure cannot be effected in thirty (30) calendar days, Greenfield will be deemed to have cured the default upon the commencement of a cure within thirty (30) calendar days and diligent subsequent completion thereof; or

- (ii) any representation or warranty furnished by Greenfield in this Contract which was false or misleading in any material respect when made; or
- (iii) .

ARTICLE 16. REMEDIES UPON DEFAULT

Section 16.01 Termination for Cause. If there is an Event of Default by either Party under this Contract, unless such Event of Default has been cured within the applicable time periods for a cure set forth in ARTICLE 15, the non-defaulting Party may terminate this Contract by providing three (3) Business Days' written notice to the defaulting Party in the case of a monetary default and ten (10) Business Days' written notice to the defaulting Party in the case of a non-monetary default. Upon termination of this Contract, each Party will promptly return to the other all papers, materials, and property of the other held by such Party in connection with this Contract. Each Party will also assist the other in the orderly termination of this Contract and the transfer of all aspects hereof, tangible and intangible, as may be necessary for the orderly, non-disrupted business continuation of each Party. If this Contract is so terminated, OpTerra Energy Services will be entitled to payment for Work satisfactorily performed and accepted by Greenfield, earned profit and overhead, and costs incurred in accordance with this Contract up to the date of termination.

Section 16.02 Remedies upon Default by OpTerra Energy Services. If an Event of Default by OpTerra Energy Services occurs, Greenfield will be entitled to obtain any available legal or equitable remedies through arbitration proceedings instituted pursuant to ARTICLE 18, including, without limitation, terminating this Contract, or recovering amounts due and unpaid by OpTerra Energy Services and/or damages, which will include Greenfield's reasonable, actual, direct out-of-pocket losses incurred by reason of such Event of Default and any cost of funding; loss of anticipated payment obligations; and any payment or delivery required to have been made on or before the date of the Event of Default and not made, including interest on any sums due, and losses and costs incurred as a result of terminating this Contract and all costs and expenses reasonably incurred in exercising the foregoing remedies.

Section 16.03 Remedies upon Default by Greenfield. If an Event of Default by Greenfield occurs, OpTerra Energy Services will be entitled to obtain any available legal or equitable remedies through arbitration proceedings instituted pursuant to ARTICLE 18 including, without limitation, terminating this Contract or recovering amounts due and unpaid by Greenfield, and/or damages which will include OpTerra Energy Services' reasonable, actual, direct out-of-pocket losses incurred by reason of such Event of Default and any cost of funding; loss of anticipated payment obligations; and any payment or delivery required to have been made on or before the date of the Event of Default and not made, including Interest on any sums due, and losses and costs incurred as a result of terminating this Contract and all costs and expenses reasonably incurred in exercising the foregoing remedies.

ARTICLE 17. CONDITIONS BEYOND CONTROL OF THE PARTIES

Section 17.01 Excusable Events. If any Party is delayed in, or prevented from, performing or carrying out its obligations under this Contract by reason of any Excusable Event, such circumstance will not constitute an Event of Default, and such Party will be excused from performance hereunder and will not be liable to the other Party for or on account of any loss, damage, injury or expense resulting from, or arising out of, such delay or prevention. Notwithstanding the foregoing, no Party will be excused from any payment obligations under this Contract as a result of an Excusable Event.

Section 17.02 Utility Work. Greenfield expressly understands and agrees that Excusable Event may occur due to Interconnection Facilities work that may need to be performed by the local electric utility ("Utility") in order for OpTerra Energy Services to fully implement the Project. "Interconnection Facilities" means any distribution or transmission lines and other facilities that may be required to connect equipment supplied under this Contract to an electrical distribution/transmission system owned and maintained by the Utility. Any Interconnection Facilities work that may be required will be performed by the Utility under the Interconnection Agreement.

ARTICLE 18. GOVERNING LAW AND RESOLUTION OF DISPUTES

Section 18.01 Governing Law. This Contract is governed by and must be interpreted under the laws of the State where the Work is performed, without regard to the jurisdiction's choice of law rules.

Section 18.02 Initial Dispute Resolution. If a dispute arises out of or relates to this Contract, the transaction contemplated by this Contract, or the breach of this Contract (a "Dispute"), either Party may initiate the dispute resolution process set forth in this ARTICLE 18 by giving notice to the other Party. The Parties will endeavor to settle the Dispute as follows:

- (i) *Field Representatives' Meeting*: Within fifteen (15) Business Days after notice of the Dispute, OpTerra Energy Services' senior project management personnel will meet with Greenfield's project representative in a good faith attempt to resolve the Dispute.

- (ii) *Management Representatives' Meeting*: If OpTerra Energy Services' and Greenfield's project representatives fail to meet, or if they are unable to resolve the Dispute, senior executives for OpTerra Energy Services and for Greenfield, neither of whom have had day-to-day management responsibilities for the Project, will meet, within thirty (30) calendar days after notice of the Dispute, in an attempt to resolve the Dispute and any other identified disputes or any unresolved issues that may lead to a dispute. If the senior executives of OpTerra Energy Services and Greenfield are unable to resolve a Dispute or if a senior management conference is not held within the time provided herein, either Party may submit the Dispute to mediation in accordance with Section 18.03.

Section 18.03 Mediation. If the Dispute is not settled pursuant to Section 18.02, the Parties will endeavor to settle the Dispute by mediation under the Commercial Mediation Procedures of the American Arbitration Association. Mediation is a condition precedent to arbitration or the institution of legal or equitable proceedings by either Party. Once one Party files a request for mediation with the other Party and with the American Arbitration Association, the Parties agree to conclude the mediation within sixty (60) calendar days after filing the request. Either Party may terminate the mediation at any time after the first session, but the decision to terminate must be delivered in person by the Party's representative to the other Party's representative and the mediator. If the Dispute is not resolved by mediation within sixty (60) calendar days after the date of filing of the request for mediation, then the exclusive means to resolve the Dispute is final and binding arbitration, as described in Section 18.04. Either Party may initiate arbitration proceedings by notice to the other Party and the American Arbitration Association.

Section 18.04 Arbitration Proceedings. The following provisions apply to all arbitration proceedings pursuant to this ARTICLE 18:

- (i) The place of arbitration will be the American Arbitration Association office closest to where the Work was performed.
- (ii) One arbitrator (or three arbitrators if the monetary value of the Dispute is more than \$2,000,000) (the "Arbitral Panel") will conduct the arbitral proceedings in accordance with the Commercial Arbitration Rules and Mediation Procedures (Excluding the Procedures for Large, Complex Commercial Disputes) of the American Arbitration Association currently in effect ("Arbitration Rules"). To the extent of any conflicts between the Arbitration Rules and the provisions of this Contract, the provisions of this Contract prevail.
- (iii) The Parties will submit true copies of all documents considered relevant with their respective statement of claim or defense, and any counterclaim or reply. In the discretion of the Arbitral Panel, the production of additional documents that are relevant and material to the determination of the Dispute may be required.
- (iv) The Arbitral Panel does not have the power to award, and may not award, any punitive, indirect or consequential damages (however denominated). All arbitration fees and costs are to be shared equally by the parties, regardless of which Party prevails. Each Party will pay its own costs of legal representation and witness expenses.
- (v) The award must be in the form of a reasoned award.
- (vi) The Dispute will be resolved as quickly as possible. The Arbitral Panel will endeavor to issue the arbitration award within six (6) months after the date on which the arbitration proceedings were commenced.
- (vii) The award will be final and binding and subject to confirmation and enforcement proceedings in any court of competent jurisdiction.

Section 18.05 Multiparty Proceeding. Either Party may join third parties whose joinder would facilitate complete resolution of the Dispute and matters arising from the resolution of the Dispute.

Section 18.06 Lien Rights. Nothing in this ARTICLE 18 limits any rights or remedies not expressly waived by OpTerra Energy Services that OpTerra Energy Services may have under any lien laws or stop notice laws.

ARTICLE 19. REPRESENTATIONS AND WARRANTIES

Section 19.01 Each Party warrants and represents to the other that:

- (i) it has all requisite power and authority to enter into this Contract, to perform its obligations hereunder and to consummate the transactions contemplated hereby;
- (ii) the execution, delivery, and performance of this Contract have been duly authorized by its governing body, or are in accordance with its organizational documents, and this Contract has

ARTICLE 25. HEADINGS

Headings and subtitles used throughout this Contract are for the purpose of convenience only, and no heading or subtitle will modify or be used to interpret the text of any section.

ARTICLE 26. COUNTERPARTS; INTEGRATION

This Contract may be executed in counterparts (and by different Parties hereto in different counterparts), each of which will constitute an original, but all of which when taken together will constitute a single contract. This Contract constitutes the entire contract among the Parties relating to the subject matter hereof and supersedes any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Delivery of an executed counterpart of a signature page of this Contract by email or fax will be effective as delivery of a manually executed counterpart of this Contract.

[the Parties' signatures appear on the following page]

**Energy Services Contract
Greenfield and OpTerra Energy Services**

IN WITNESS WHEREOF, and intending to be legally bound, the Parties hereto subscribe their names to this Contract by their duly authorized officers as of the Contract Effective Date.

OPTERRA ENERGY SERVICES:

OpTerra Energy Services, Inc.

GREENFIELD:

City of Greenfield

By: DRAFT DO NOT SIGN
Name:
Title:

By: DRAFT DO NOT SIGN
Name:
Title:

ATTACHMENT A

GREENFIELD'S FACILITIES and EXISTING EQUIPMENT

(a) The following Greenfield Facilities are included under the Scope of Work as listed below:

Facility	Address
City Hall and Police Department	599 El Camino Real
Well #7 and Corp Yard	502 10 th Street
Well #1 and 6	14 th between Pine & Walnut Avenue
Well #5	Oak Avenue & 13 th Street
Community Center	1351 Oak Avenue
Child Development Center	131 13 th Street
Patriot Park Lighting	Oak Avenue & 13 th Street
Waste Water Treatment Plant - Main	41901 Walnut Avenue
Waste Water Treatment Plant - Percolation Ponds	East End Of Walnut Avenue
Street Lights	Citywide
Irrigation Controls	Citywide

(b) The existing equipment is that which is listed in OpTerra Energy Services' Recommendations dated 8 September 2015.



**Energy Services Contract
Greenfield and OpTerra Energy Services**

ATTACHMENT B

[Not Used]

ATTACHMENT C

SCOPE OF WORK

California State Contractor's License Number 995037

Energy Conservation & Infrastructure Measures to Be Implemented

ECM	Description
1	Interior and Exterior Lighting Retrofits
2	Streetlight Retrofits
3	Water Meter Retrofits - Fixed Network
4	Smart Irrigation Control Upgrade
5	Smart Thermostat Upgrade
6	Waste Water Treatment Plant DO Sensor Installation

Solar Generating Facilities to Be Installed

Facility	Address
City Hall and Police Department	599 El Camino Real
Well #7 and Corp Yard	502 10 th Street
Patriot Park - Well #5	Oak Avenue & 13 th Street
Waste Water Treatment Plant - Percolation Ponds	East End Of Walnut Avenue
RES-BCT	East End Of Walnut Avenue

ECM 1 - Interior and Exterior Lighting Retrofits

The table below lists the locations of the interior and exterior lighting retrofits. For detailed descriptions of each interior and exterior lighting retrofit refer to Attachment G.

Facility	Interior	Exterior
City Hall and Police Department	X	X
Well #7 and Corp Yard	X	X
Community Center		X
Child Development Center	X	X
Patriot Park Lighting		X
Waste Water Treatment Plant - Main		X

Scope of Work:

- 1) Provide and install new lighting fixtures or retrofit kits as identified in Attachment G.
 - a. Interior Retrofits
 - i. **High Efficiency light emitting diode (LED) Upgrades** – where indicated, replace 32-34 watt T8 and T12 lamps and ballasts with new LED lamps and drivers or new LED fixtures per Attachment G.
 - ii. **Lighting Controls** – Provide and install occupancy sensors and dimming controls in locations per Attachment G.
 - iii. **Emergency Ballasts** – Provide and install new (97) emergency ballasts at existing locations.
 - b. Exterior Retrofit
 - i. **LED Lighting for Exterior Applications** – where indicated, replace high pressure sodium (HPS), low pressure sodium (LPS) and metal halide (MH) fixtures throughout the 8 sites with new LED fixtures as set forth in Attachment G.

- ii. **Lighting Controls** – Provide and install occupancy sensors, photocells and dimming controls in locations per Attachment G.
- 2) Replacement of existing occupancy or dimming sensors is not included.
- 3) The Scope of work assumes that there are no broken lenses or ceiling tiles. No provisions have been made for replacing any existing lenses or ceiling tiles.

ECM 2 - Streetlight Retrofits

General Scope of Work:

This scope of work applies to the street lighting listed in Attachment H, and includes replacement or retrofit of all fixtures with LED light fixture, necessary traffic control and identification of light pole location for GIS mapping.

Detailed Scope of Work:

Refer to Attachment H for quantities and fixture types.

ECM 3 - Water Meter Retrofits - Fixed Network

General Scope of Work:

Greenfield currently has 3,698 water meters in their utility district, 580 of which have been recently upgraded and provided with drive-by communication capabilities. OpTerra Energy Services will replace the hardware of the remaining 3,118 meters, and upgrade all 3,698 meters with fixed communication radio transmitters. OpTerra Energy Services will provide reasonable assistance to Greenfield with setting up both an internal and client website, and with the automatic transfer of usage data to their existing Taylor Technologies billing system.

Detailed Scope of Work

- 1) Verify existing Greenfield meter location data.
- 2) Record existing water meter readings and other pertinent Meter/ ERT readings (including meter serial number) prior to installation.
- 3) Remove each existing water meter identified in this Scope of Work and replace each with a new water meter and transmitter in the existing meter box.
- 4) Replace meter gaskets and bolts during installation.
- 5) Install automated shutoff valve if meter is included in Attachment I, "Automated Shutoff Valve Scope"
 - a. Automated shutoff valves will be installed using a setter. If a setter cannot be installed in existing meter box due to existing conditions, the automated shutoff valve will not be installed.
 - b. Customer will be informed of location and reason the automated valve was not installed.
- 6) To provide functioning transmitter communications, meter lids will be replaced with lids designed for the AMI registers, where required.
- 7) Air and debris will be bled through exterior spigot.
- 8) Meters and registers will be supplied with serial numbers in the UPC bar code format on equipment.
- 9) Deliver all removed water meters to the Greenfield Corporation Yard. Old meters to be labeled and stored in the new meters' boxes.
- 10) OpTerra Energy Services to provide water meter installation weekly progress reports to Greenfield.
- 11) Meters that have been recently upgraded with MasterMeter meters will not be changed out. These meters will be retrofit with new registers capable of communicating with the AMI system.
 - a. Disconnect existing Encoder Receiver Transmitter (ERT) at meter connector. Replace with a new register and connect register to meter.
 - b. Meter lids will be replaced with lids designed for the AMI registers, where required.
 - c. Deliver removed registers to the Greenfield Corporation Yard.

Special Conditions

- 1) Report any field conditions to Greenfield that warrant correction.
- 2) In order to avoid the need to add contingency to cover uniquely challenging specific installations, Greenfield agrees to perform the installation of OpTerra Energy Services-supplied water meters and/or registers on existing units that are found to be too difficult or unusual to install (total of up to 5% of the meters in each size, 2" or less). In this case, the district will receive a credit as shown below on the **Labor Unit Pricing for Skipped Meters**.
- 3) Greenfield to provide assistance in locating meters as required.

- 4) Greenfield to provide adequate personnel to assist in the shutting off of large meters, and/or where isolation valves are not functional. Any broken valves will be the responsibility of Greenfield.
- 5) Lines will be bled to remove air and debris through external building spigot. If there is no readily available spigot the line will not be bled and it will be the responsibility of Greenfield to adequately bleed the system.
- 6) Greenfield will provide a clearly designated equipment and construction lay-down area at the Greenfield Corporation Yard for new and removed equipment and materials storage as well as for subcontractor trailers and supplies required to perform the Work.
- 7) Greenfield to advertise and notify their water customers of planned meter exchange and retrofit via door hangers and a letter in their water bill. Greenfield to communicate timing of planned major water outages.
- 8) Excess or removed soil from the meter boxes shall be spread evenly around the outside of the meter boxes.
- 9) Any water quality testing will be performed by Greenfield.
- 10) Provision of access during normal working hours (7:00 am to 6:00 pm, Monday - Friday) to the Project sites and Greenfield Corporation Yard.
- 11) Greenfield will coordinate with any large scale customers who require assistance with scheduled equipment shutdowns required for implementation of this Scope of Work.

Exclusions

- 1) Yearly fees for fixed network, including receiver cell fees, internal and client website fees, billing provider fees.
- 2) Provision and/or installation of water meters above and beyond the totals provided in the AMI Water Meters Project Bill of Materials listed below.
- 3) Repair of major leaks, existing piping deficiencies, and other work not specifically identified.
- 4) Greenfield will repair curb valve(s) if identified as inoperable.
- 5) If recommended locations for data collectors are not owned by Greenfield, Greenfield is responsible for any on-going agreements and costs associated with the data collector locations.
- 6) Repair or replacement of old or damaged service pipe on either side of the meter that extends outside the meter boxes (for small meters) or more than 18" from the meter (for large meter installations).
- 7) Locking meter box covers have not been included in this Project. Any requirements for locking lids will be the responsibility of Greenfield.
- 8) If new meter box covers do not fit correctly due to damaged box lip, Greenfield will be responsible for repair of existing box.
- 9) Any (pre-cast or cast in place) concrete work (including lids and/or boxes).
- 10) Any communication, paperwork, authorizations, and/or fees required by the California Department of Transportation (Cal Trans) will be the responsibility of Greenfield.

AMI Water Meters Project Bill of Materials

** Note: the annual fees are between Greenfield and the vendor directly and are a separate contractual agreement.*

Description	Specification	Register Specification	Quantity
5/8"	Disc Series Meter	Fixed Network Endpoint	1,701
3/4"	Disc Series Meter	Fixed Network Endpoint	16
1"	Disc Series Meter	Fixed Network Endpoint	1,236
1 1/2"	Disc Series Meter	Fixed Network Endpoint	33
2"	Disc Series Meter	Fixed Network Endpoint	47
3"	Turbo Series Meter	Fixed Network Endpoint	38
4"	Turbo Series Meter	Fixed Network Endpoint	38
6"	Badger Recordall Turbo Series Meter	Fixed Network Endpoint	9
Base Station	Network Receiver		4
Register Retrofit		Fixed Network Endpoint	580
Meter Lid Replacements			3,698

Labor Unit Pricing for Skipped Meters

In order to avoid the need to add contingency to cover uniquely challenging specific installations, OpTerra and Greenfield have agreed to let the meter installers skip the installation of meters and/or mobile registers on existing units that are found to be too difficult or unusual to install (total of up to 5% of the meters in each size, 2" or less).

In these instances (should they occur) the equipment to be installed will be delivered to Greenfield for installation and Greenfield will receive a credit as follows for labor:

5/8" and 3/4" and 1" water meters	\$60 each
1.5" and 2" water meters	\$180 each
Register Retrofit	\$60 each

Materials Pricing for Skipped Automated Shutoff Valves

If an automated shutoff valve cannot be installed due to existing meter box conditions, Greenfield will be credited for the cost of equipment not installed. There will be no labor credit included. The credit amount will be calculated using manufacturer's invoiced cost for the valve type not installed.

ECM 4 - Smart Irrigation Control Upgrade

Scope of Work:

Remove existing controller and install weather-based irrigation controllers in locations listed below. OpTerra Energy Services will assist Greenfield staff with the setup of WeatherTRAK Central, a cloud based solution for irrigation controller management. This setup includes the setting of an irrigation schedule for each controller.

Location	Existing Controller	Stations used	New WeatherTRAK Controller	Mounting
Patriot Park - Baseball Fields	Hunter ACC	15	WTPRO3-C-18-CWM	Wall Mounted
Patriot Park - Well #5	Hunter I-Core	14	WTLC-C-18-PL	Wall Mounted
Patriot Park - Community Center	Hunter ICC	24	WTPRO3-C-24-CWM	Wall Mounted
Vintage Park	Weathermatic Pro Line - E-PL1600	13	WTLC-C-18-PL	Wall Mounted
Rava Parkway	Hunter ICC-801	32	WTPRO3-C-36-CWM	Pedestal
Tuscany Park	Irritrol RainMaster Sentar II-RME24SE	24	WTPRO3-C-48-CWM	Wall Mounted
	Irritrol RainMaster Sentar II-RME24SE	24		Wall Mounted
	Irritrol RainMaster Sentar II-RME24SE	24	WTPRO3-C-48-CWM	Wall Mounted
	Irritrol RainMaster Sentar II-RME24SE	24		Wall Mounted
Village Green Park	Irritrol RainMaster Eagle - RME24EG	24	WTPRO3-C-36-CWM	Wall Mounted
	Irritrol RainMaster Eagle - RME12EG	12		Wall Mounted
Rotary Centennial Park	Hunter ICC-800M	24	WTPRO3-C-24-CWM	Pedestal
St Christopher Lane	Irritrol MC-18 PLUS-B	18	WTLC-C-18-PL	Wall Mounted
Tyler Park	Irritrol DIAL-18	13	WTLC-C-18-PL	Wall Mounted
Parkside Park	Weathermatic Pro Line - E-PL1600	9	WTLC-C-12-PL	Wall Mounted
City Hall & Police Dept.	Irritrol MC-36E	13	WTLC-C-18-PL	Wall Mounted
Baywood Park	Weathermatic Pro Line - E-PL1600	7	WTLC-C-12-PL	Wall Mounted
Apricot Park	Hunter ICC-800M	10	WTLC-C-12-PL	Wall Mounted
0000 Gianolini Parkway	Hunter PRO-C	8	WTLC-C-12-PL	Wall

Location	Existing Controller	Stations used	New WeatherTRAK Controller	Mounting
				Mounted
385 Thorp Ave	Irritrol RainMaster Sentar II-RME18SE	18	WTPRO3-C-42-CWM	Wall Mounted
	Irritrol RainMaster Sentar II-RME24SE	24		Wall Mounted
326 Wilson Circle	Hunter ICC-800M	16	WTLC-C-18-PL	Pedestal
Hicks Park/Library	Hunter WVC	4	WTPRO3-C-24-CWM	Wall Mounted
	Hunter WVC	4		Wall Mounted
	Irritrol MC-18 PLUS-B	18		Wall Mounted
20 Walker Lane Island	Irritrol MC-12 PLUS (MC-12E)	12	WTLC-C-12-PL	Wall Mounted
235 Thorp-Walnut Tree Line	Irritrol RainMaster Sentar II-RME18SE	18	WTLC-C-18-PL	Wall Mounted
317 Moreno Street	Hunter PRO-C	7	WTLC-C-12-PL	Wall Mounted
131 El Camino Real	Rain Bird ESP	9	WTLC-C-12-PL	Wall Mounted
632 Vazquez Avenue	Irritrol MC-8 PLUS-B		WTLC-C-12-PL	Wall Mounted
300 Las Manzanitas Drive	Irritrol RainMaster Sentar II-RME12SE	12	WTLC-C-12-PL	Wall Mounted

Assumptions, Exceptions, Exclusions:

- 1) Greenfield shall be responsible for providing power if it is not available at the locations selected for installation of the controller
- 2) Valves not working currently will be repaired on a time and material basis.
- 3) Greenfield will be responsible for all ongoing operation and website fees beyond the first five years that are included in this contract.
- 4) Repair or replacement of old or damaged service pipe on either side of the meter that extends outside the meter boxes for small meters or more than 18” from the meter for large meter installations.

ECM 5 - Smart Thermostat Upgrade

Facility	Specifications	Number of Thermostats
Community Center	Network Thermostat RP32-WIFI	5

Scope of Work:

Currently the thermostats at the community center are manually controlled and are set to default time schedules. OpTerra Energy Services will replace existing manual thermostats with smart thermostats that are controlled wirelessly through a website. Greenfield will access thermostats via the internet and set schedules of operation and temperature set points.

Assumptions:

New thermostats will be able to communicate with existing wireless Ethernet network currently installed at Community Center. If signal is not linking, a signal repeater may be required.

ECM 6 - Waste Water Treatment Plant DO Sensor Installation

General Scope of Work for Pond DO Controls:

- The City of Greenfield is currently contracted with the Wallace Group to design and oversee the installation of 18 aerators in the percolation ponds at their Waste Water Treatment Plant. These new aerators are designed to run 12 hours a day, seven days a week. In order to reduce the power consumption in the ponds, the mechanical aerators will be operated based on Dissolved Oxygen (DO) concentration. The DO data will be supplied by DO meters and sensors located in the ponds.
- OpTerra Energy Services will provide the Wallace Group with the design information needed to integrate DO Sensors into their design. OES will provide and install DO sensors during the installation of the aerators.

Detailed Scope of Work for Pond Mixers and DO Controls:

1. Provide and install three DO controllers/sensors and air blast cleaning systems. Power and control conduits and wiring (to be provided by others) to receive signals from the DO probe controllers and return signals to a new PLC.
2. Provide one (1) Programmable Logic Controller (PLC). Program PLC board per the preliminary control narrative summarized below to control the on/off status of the HP aerators. The installation will require field adjustments/coordination and finalization to the approach will be determined during implementation.

Tests and Inspections:

1. Perform functionality testing of installed DO controls and PLC(s). Adjust control strategy as required based on field conditions.

ECM - Solar Generating Facilities

Location	Structure Type	Tilt	Year 1 kWh Solar Production
City Hall/ PD	Canopy	5	98,069
Well #5/ Patriot Park	Canopy	5	135,731
Well #7/ Corp Yard	Ground Mount	25	302,751
WWTP Percolation Ponds	Ground Mount	20	299,904
RES-BCT	Ground Mount	20	422,000
Totals			1,258,455

Scope of Work

Scope of work will include:

1. Prepare and submit design drawings to Greenfield for approval and to local Utility for interconnection permits.
2. Provide geotechnical evaluations necessary for design requirements.
3. Provide Utility interconnection drawings and application management services.
4. Provide and coordinate installation of the NGOM and NEM metering.
5. Procure materials and equipment necessary for construction.
6. Provide labor, supervision, and coordination with Greenfield for the installation of photovoltaic modules and supporting structures, electrical distribution and control systems.
7. Install inverters and all necessary electrical equipment and conduits to connect to the electrical switchgear or meter. Electrical shut-downs are anticipated at each site. Time of shutdown will be coordinated with Greenfield and Utility and may include weekends.
8. Provide and install solar canopy structures. The canopy structure design will include a painted canopy structure 9-12 feet in height and a pier depth of eight feet deep and assumes no de-watering, benching, shoring, or casing.
9. Install new lighting fixtures mounted under new canopies (one for each 27' bay)
10. Provide as-built drawings and Operations & Maintenance manuals upon Project completion.
11. Provide tree and lighting removal, as required.
12. Provide miscellaneous backfill. An allowance of \$5,000 is included in the Contract Amount for restoration of landscaping in areas of work.

13. Start-up, test, and commission the Generating Facilities in accordance with design plan and applicable industry standards.

Assumptions, Exceptions, Exclusions:

1. Work will be completed in two phases:
 - o Phase1: will commence upon receipt of the Notice to Proceed and includes City Hall, Well #7/Corp Yard and Well #5/Patriot Park
 - o Phase 2: will commence after both the following have occurred: (1) RES-BCT interconnection has been approved by PG&E and new service has been installed, and (2) ditch at south end of percolation ponds has been filled in with soil from pond upgrade project.
2. The Contract Amount includes an allowance of \$150,000 to cover the cost of Utility RES-BCT Interconnection fees. If the cost of the interconnection is above this amount, then Greenfield can either agree to pay additional Interconnection costs or negotiate a Change Order with OpTerra Energy Services to remove the RES-BCT solar PV installation from this Project.
3. The location for the new RES-BCT PV system assumes that Greenfield will fill in and compact soil to 90% at the south east corner of the percolation ponds by August 31, 2016.
4. Cost for ADA accessibility upgrades to existing buildings or parking lots for path of travel, if required, are not included and will be calculated based upon final design.
5. Remediation and/or removal of hazardous materials, hazardous wastes, or spoils are not included.
6. CEQA or other environmental studies, if required, will be the responsibility of Greenfield.
7. Public Hearings, if required, will be the responsibility of Greenfield
8. Access to areas of construction will be blocked to public during construction for safety.

Preliminary Photovoltaic Layout

The following photos are schematic engineering layouts. These schematic engineering layouts and the electrical routing related to them are subject to change due to field conditions and upon completion of final engineering.

City Hall



Well #7 and Corp Yard



Well #5, Patriot Park



WWTP – Percolation Ponds and RES-BCT



General Project Exclusions and Clarifications:

1. Inspector costs are excluded.
2. The schedule assumes construction will proceed smoothly and in a continuous flow. No allowance has been made to demobilize and remobilize resources due to schedule interruptions except for Phase 1 and Phase 2 of the solar installation.
3. Removal and disposal of Hazardous Substances, including asbestos containing materials, to be by Greenfield. If OpTerra Energy Services encounters material suspected to be hazardous, OpTerra Energy Services will notify Greenfield representatives and stop further work in the area until the material is removed.
4. OpTerra Energy Services will require the assistance of Greenfield personnel to secure the Project Location and to provide traffic redirection during rigging operations, and during the move-in and move-out of large equipment.
5. No allowance has been made for structural upgrades to existing structures, except as specifically set forth in this Scope of Work.
6. No allowance has been made for screening of new or existing equipment, except as specifically set forth in this Scope of Work.
7. OpTerra Energy Services standard construction means and methods will be used.
8. Greenfield will provide access to the Facilities, laydown areas at the work sites, and a reasonable number of parking spaces for OpTerra Energy Services and OpTerra Energy Services' subcontractor vehicles in parking lots at the Facilities.
9. Work will be performed during normal work hours; no overtime hours are included in the Contract Amount. The lighting retrofit work will be performed so as not to unreasonably interfere with the building schedule and if necessary, will take place during off hours.
10. The Scope of Work assumes that unless specifically identified otherwise, all existing systems are functioning properly and are up to current codes. OpTerra Energy Services will not be responsible for repairs or upgrades to existing systems that are not functioning properly or compliant with current codes. No allowances have been made to bring existing systems up to code.
11. No allowance has been made to repair or replace damaged or inoperable existing equipment that is not specifically being replaced under the Scope of Work. When such items are discovered, OpTerra Energy Services will immediately notify Greenfield representative.
12. No allowance has been made for underground obstructions or unsuitable soil conditions encountered during trenching or other excavation.
13. The PV shade structure is not weather tight and will not provide shelter from rain.
14. Water hose bibs for washing the panels are excluded.
15. Decorative fascia along the perimeter of the panels and decorative covering underneath the panels are excluded.
16. Parking lot repairs are excluded, except to the extent of damage caused by OpTerra Energy Services or its subcontractors.
17. Repair or replacement of existing housekeeping pads, concrete pads, or base repair of existing walkway lighting are excluded, except as specifically set forth in this Scope of Work.
18. Painting, unless specified, is excluded.
19. With respect to lighting equipment maintenance and/or lamp and ballast retrofitting, Greenfield will properly ground lighting fixtures before OpTerra Energy Services commences work in compliance with applicable codes.
20. With respect to installation of new lighting fixture installations, prior to commencement of the lighting fixture installation, Greenfield will provide an existing or new grounding conductor or solidly grounded raceway with listed fittings at the lighting fixture junction box that is properly connected to the facility grounding electrode system in compliance with the latest NEC requirements. This Scope of Work includes, if applicable, properly terminating the lighting fixtures to the existing grounding conductor or to the existing solidly grounded raceway with listed fittings at the lighting fixture junction box.
21. Where this Scope of Work includes pulling new wiring for lighting fixtures from an existing lighting panel, a grounding conductor must be included in the lighting circuits. Greenfield is responsible for providing an existing or new grounding conductor terminal bar at the lighting panel that is properly connected to the Facility grounding electrode system in compliance with the latest NEC guidelines.
22. With respect to projects with new equipment connecting to the Facility's existing electrical distribution system, OpTerra Energy Services will not be responsible for the electrical integrity of the existing electrical system, e.g., the condition and proper termination of current-carrying, grounded, and grounding conductors, bus taps, protective elements, the proper protection of existing wire through knockouts, or missing components. Greenfield is responsible for providing and maintaining the facility's electrical distribution system that meets the latest NEC guidelines.
23. OpTerra Energy Services is not responsible for repairing or replacing existing damaged, blocked, or leaky ductwork, or cleaning dirt or mildew. OpTerra Energy Services will not be responsible for existing damaged pipes, valves, and related parts and components.

Manufacturer’s Warranty criteria for specific pieces of equipment:

ECM/Scope	Equipment Type	Manufacturer Limited Warranty Duration (Years)**
ECM 1 - Lighting Retrofits		5 - 10 Years
ECM 2 - Streetlight Retrofits	Fixture	10 Years
ECM 3 - Water Meter Retrofits	Badger Meter	25 Years (5/8" – 2") 1 Year (3"-6")
	Badger Encoder	20 Years
	Orion Endpoints	20 Years
	Orion Network Gateway Receiver	1 Year
ECM 4 - Irrigation Control Upgrade		3 Years (LC model) 5 Years (PRO model)
ECM 5 - Smart Thermostat Upgrade		1 Year
ECM 6 – DO Sensor Installation	DO Probe	3 years
	Controller	2 years
Solar PV	Modules	25 Years
	Inverters	15 Years
	Monitoring Components	5 Years

**Note that most warranties start when materials are delivered

Lighting Retrofit Spec	Manufacturer Warranty (Years)**
Terralux TLK-DR6A-A-213-40-DO-BB	7
Terralux TLK-DR6A-A-213-40-DO-0	7
(2) Linmore Tubes LL-T8-2-1-ED-F-41K, (1) LL-DR-18W-DIM-T2	10
(1) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-15W-DIM-T1	10
(2) Linmore Tubes LL-T8-2-1-ED-F-41K, (1) LL-DR-18W-DIM-T2, (1) Em Battery Driver	5
(2) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-36W-DIM-T2	10
(2) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-36W-DIM-T2, (1) Em Battery Driver	5
(6) Linmore Tubes LL-T8-4-1-ED-F-41K, (2) LL-DR-44W-DIM-T3	10
(3) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-36W-DIM-T2, (1) LL-DR-18W-DIM-T1, Maintain I/O	10
(3) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-26W-DIM-T2, (1) LL-DR-18W-DIM-T1, Maintain I/O	10
(3) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-36W-DIM-T2, (1) LL-DR-18W-DIM-T1, Maintain I/O, (1) Em Battery Driver	5
(4) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-72W-DIM-T4	10
(6) Linmore Tubes LL-T8-4-1-ED-F-41K, (2) LL-DR-60W-DIM-T3	10
(8) Linmore Tubes LL-T8-4-1-ED-F-41K, (2) LL-DR-72W-DIM-T4	10
(4) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-60W-DIM-T4	10
(2) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-26W-DIM-T2, (1) Em Battery Driver	5
(2) Linmore Tubes LL-T8-4-1-ED-F-41K, (1) LL-DR-26W-DIM-T2	10

Lighting Retrofit Spec	Manufacturer Warranty (Years)**
Linmore Universal Retrofit System - 4ft, 41K, 4 bars, 60W total: LL-URS-4NA-4-41K-60	10
Philips EvoKit 2x4 P 42L 39W 835 2 STEP 7 G3	5
Philips EvoKit 2x4 P 42L 39W 835 2 STEP 7 G3; (1) Bodine emergency backup BSL310	5
CREE BXSP B HT 2ME A 40K-UL SV N	10
Cree XSPW A02FG-UT	10
RAB Flood FFLED26SF (26w, 2900 lm)	5
National Lighting Solutions #DRLI-T5-30W-700-4000K-LED-UNIVERSAL VOLT-DFM-WHITE (30W, 2000 lm). Optic: Type 3	5
RAB - RWLED3T50	10
(2) RAB - RWLED3T50 (180 deg)	10
(2) RAB - RWLED3T50 (90 deg)	10
Terralux TLK-DRVA-A-126-40-DO-BB	7
Terralux TLK-DRVA-A-126-40-DO-0	7

**Note that most warranties start when materials are delivered

ECM's – With respect to the ECM Scopes of Work, the OpTerra Energy Services Warranty commences immediately upon uninterrupted operation for a duration, as necessary, with a maximum of 2 weeks, to determine proper operation. OpTerra Energy Services will provide written notice to Greenfield of the date the OpTerra Energy Services Warranty commences.

SOLAR SYSTEM – The OpTerra Energy Services Warranty commences immediately when the Generating Facility is capable of generating expected energy and the Utility is ready to issue the permission-to-operate letter.

Substantial & Final Completion Forms per Scope of Work:

The table below provides the number of substantial and final completion forms that will be used to document beneficial use and final completion of each scope of work.

Scope of Work	Location	Total Quantity of Substantial Completions	Total Quantity of Final Completions
ECM 1 - Interior and Exterior Lighting Retrofits	6 Sites	6; for entire ECM	1; for entire ECM
ECM 2 - Streetlight Retrofits	Citywide	1; for entire ECM	1; for entire ECM
ECM 3 - Water Meter Retrofits	Citywide	1; for entire ECM	1; for entire ECM
ECM 4 - Smart Irrigation Control Upgrade	20 Sites	1; for entire ECM	1; for entire ECM
ECM 5 - Smart Thermostat Upgrade	1 Sites	1; for entire ECM	1; for entire ECM
ECM 6 - DO Sensor Installation	1 Sites	1; for entire ECM	1; for entire ECM
Solar Generating Facilities (SGF)	5 Sites	5; 1 for each SGF	2: 1 for each phase

ATTACHMENT D
MONITORING INSTALLATION SCOPE OF WORK

Overview of DAS Network Installation and Equipment Requirements

OpTerra Energy Services will provide a revenue-grade billing, data acquisition system (DAS). This will provide readily available access to various internal and external information collected on the distributive generation (i.e., solar PV) plant.

OpTerra Energy Services DAS Monitoring Installation:

- Supply and install hardware specific to the DAS system.
- Supply and install, terminate, label, and test all Data Point of Connection (DPOC) communication cabling from each DAS node to the predetermined and respective DPOC(s); in accordance with Greenfield's specifications.
- Test and verify Greenfield/Facility network connectivity.
 - a. TCP/IP internal addressing and verification
- Supply, install, and configure a Modbus based digital Net Energy Meter (NEM).
- Connect the data portion of digital NEM(s) to their respective DPOC(s).
- Supply, install, and configure a Modbus based digital Net Generation Output Meter (NGOM).
- Perform the physical installation, labeling, testing and certification testing of each data circuit from the digital NEM(s) to their respective DPOC(s).
- Provide basic system training to designated Greenfield/Facility maintenance staff.

Greenfield/Facility Responsibilities:

- Provide four (4) external static IP addresses, subnet mask default gateway, and DNS-information to allow remote access to DAS panel(s).
- Provide network connectivity to each DAS panel location.
- Provide OpTerra Energy Services five (5) Business Days prior notification of any IP addressing scheme changes or changes made to restrict network access to ensure maximum uptime is maintained.

ATTACHMENT E
M&V SERVICES

EQUIPMENT AND FACILITIES COVERED

OpTerra Energy Services will perform measurement and verification services (“M&V Services”) as set forth in this Attachment E with respect to Greenfield’s property at the following Project Locations:

Facility	Address
City Hall and Police Department	599 El Camino Real
Well #7 and Corp Yard	502 10 th Street
Patriot Park - Well #5	Oak Avenue & 13 th Street
Waste Water Treatment Plant - Percolation Ponds	East End Of Walnut Avenue
RES-BCT	East End Of Walnut Avenue

I. Definitions:

Capitalized terms used in this Attachment E and not defined in the Contract, have the meanings set forth below:

“**Accumulated Savings**” means, as of any date of determination, the cumulative total of Excess Savings.

“**Actual Energy Rate**” means, for any Measurement Period, utility rates calculated by OpTerra Energy Services using actual utility billing information supplied by Greenfield for that Measurement Period.

“**Annual M&V Fee**” means a fee payable annually in advance by Greenfield to OpTerra Energy Services, in consideration of the provision of up to two (2) years of M&V Services. The Annual M&V Fee for the first Measurement Period will be Fifteen Thousand Eight Hundred Thirty-Six Dollars (\$15,836). The Annual M&V Fee will be increased annually thereafter at the rate of four percent (4%) per annum, each increase to be effective on the first day of the corresponding Measurement Period.

“**Assessment Work**” means work required to assess the effect on EC Savings for any significant changes to the Facilities (including, but not limited to, building additions, new buildings, and new or changed HVAC equipment) proposed or implemented by Greenfield.

“**Base Energy Rate**” means the dollars per energy unit for each building and/or each ECM, set forth in this Attachment E, Section (III), and used by OpTerra Energy Services to calculate the EC Savings.

“**Baseline**” means the energy use established by OpTerra Energy Services from time to time for each building in the Facilities, taking into consideration Energy Use Factors for such buildings.

“**EC Savings**” means the savings in units of dollars (\$) calculated by OpTerra Energy Services in the manner set forth in this Attachment E, Section (III), achieved through the reduction in consumption or demand through implementation of the Work.

“**Energy Savings Report**” is defined in this Attachment E, Section (II)(D).

“**Energy Savings Term**” means the period beginning on the first day of the Construction Period and ending on the earlier of: (i) the day immediately preceding the second (2nd) anniversary of the M&V Commencement Date; (ii) the termination of the Contract; (iii) the termination by Greenfield of the M&V Services in accordance with this Attachment E, Section (II)(G); or (iv) the failure by Greenfield to pay the Annual M&V Fee in accordance with this Attachment E, Section (II)(H)(i).

“**Energy Unit Savings**” means the savings in units of energy, power, water, etc., calculated by OpTerra Energy Services in the manner set forth in this Attachment E, Section (III), achieved through the reduction in consumption or demand through implementation of the Work.

“**Energy Use Factors**” means factors reasonably identified by OpTerra Energy Services which may affect the Baselines or energy use for the Facilities, including but not limited to: hours and levels of occupancy; adjustments in labor force; building use and operational procedures; temperature, humidification, and ventilation levels; installed lighting and scheduled use; building construction and size; general level of repair and efficiency of heating and air conditioning equipment and other energy-using equipment; and amount of heating and air conditioning and other energy-using equipment.

“**Energy Use Savings**” means, for any Measurement Period, those savings, having units of dollars (\$), achieved for such Measurement Period through reductions in energy use, energy demand, water use, and the use of other commodities.

“**Excess Savings**” means the excess of EC Savings over Guaranteed Savings, calculated in the manner set forth in this Attachment E, Section (II)(I)(iv).

“**Guarantee Payment**” means, for any Measurement Period, either: (i) a cash payment by OpTerra Energy Services to Greenfield in an amount equal to the Guarantee Shortfall for that Measurement Period pursuant to this Attachment E, Section (II)(A)(ii); or, at Greenfield’s election (ii) additional energy services or energy saving retrofits requested by Greenfield with an agreed value equal to the Guarantee Shortfall for that Measurement Period pursuant to this Attachment E, Section (II)(A)(iii).

“**Guarantee Shortfall**” means an amount calculated in accordance with this Attachment E, Section (II)(I)(v).

“**Guaranteed Savings**” means, for any Measurement Period, the dollar amount set forth below for such Measurement Period, as the same may be adjusted from time to time by OpTerra Energy Services for changes in Energy Use Factors and consequential revisions to the relevant Baseline:

Measurement Period	Guaranteed Savings
1	\$237,063
2	\$244,133

“**IPMVP**” means the International Performance Measurement and Verification Protocol prepared by Efficiency Valuation Organization.

“**Projected Energy Savings**” means those Energy Unit Savings, which OpTerra Energy Services anticipates will be realized from the installation and continued operation of the Work, as set forth in this Attachment E, Section (III).

“**Savings Guarantee**” is defined in this Attachment E, Section (II)(A)(i).

II. Terms and Conditions

A. Guaranteed Savings.

- i. Savings Guarantee. In consideration of the payment of the Annual M&V Fee, and upon the terms and subject to the conditions set forth herein, OpTerra Energy Services warrants that Greenfield will realize total EC Savings during the Energy Savings Term of not less than the total Guaranteed Savings (the “Savings Guarantee”), as the same may be adjusted from time to time for changes in Energy Rate Factors, Energy Use Factors and consequential revisions to the relevant Baseline.
- ii. Guarantee Payment. For any Measurement Period in which there is a Guarantee Shortfall, OpTerra Energy Services will pay to Greenfield, within thirty (30) calendar days after the acceptance by Greenfield of the Energy Savings Report for such Measurement Period, the Guarantee Payment for that Measurement Period.
- iii. Services or Retrofits in Lieu of Guarantee Payment. If in the judgment of Greenfield, Greenfield would benefit from additional energy services or energy saving retrofits, Greenfield and OpTerra Energy Services may mutually agree that OpTerra Energy Services will provide such services or retrofits in lieu of the Guarantee Payment for such Measurement Period. For the purposes of this Contract, such services or retrofits will have a deemed value equal to the Guarantee Shortfall for that Measurement Period.
- iv. Excess Savings. For any Measurement Period in which there are Excess Savings, Greenfield will repay to OpTerra Energy Services, to the extent of such Excess Savings, any Guarantee Payments previously paid by OpTerra Energy Services to Greenfield and not previously repaid to OpTerra Energy Services by Greenfield, and the Excess Savings for such Measurement Period will be reduced by the amount of such repayment. If OpTerra Energy Services has provided services or retrofits in lieu of the Guarantee Payment for a prior Measurement Period, such that the Guarantee Payment for such Measurement Period cannot be repaid by Greenfield, then in lieu of such repayment Excess Savings will be increased by the deemed value of such services or retrofits.
- v. Excusable Events. If OpTerra Energy Services is delayed in, or prevented from, accurately calculating the actual EC Savings for any day of any Measurement Period by reason of any event beyond its control, such circumstance will not constitute a default, and OpTerra Energy Services will be excused

from performing the M&V Services while such event is continuing. During such event, Projected Energy Savings for the month(s) in which such event is continuing will be used in lieu of actual data; *provided* that if three (3) or more years of post M&V Commencement Date data are available for such month(s), the historical average of such data for such month(s) will be used in lieu of Projected Energy Savings.

B. Changes in Energy Use Factors.

- i. Adjustments to Baselines. Greenfield will notify OpTerra Energy Services in writing within ten (10) Business Days of any change in any Energy Use Factor. In addition, data collected by OpTerra Energy Services during or before the Energy Savings Term may indicate a change in the energy use pattern at the Facilities or any portion thereof and require a change to one or more Baselines. OpTerra Energy Services will determine the effect that any such change will have on EC Savings and present to Greenfield a written analysis of the effects of such changes. OpTerra Energy Services will also make corresponding revisions to the Baselines and/or EC Savings that it deems appropriate in its reasonable discretion.
- ii. Adjustments to Guaranteed Savings. If a change in any Energy Rate Factor or Energy Use Factor results in a reduction of EC Savings, then the Guaranteed Savings for the corresponding Measurement Period(s) will be decreased by the same amount. OpTerra Energy Services will notify Greenfield, in writing, of all such changes.
- iii. Changes to Facilities. Greenfield or OpTerra Energy Services may from time to time propose to make changes to the Facilities for the express purpose of increasing EC Savings or addressing events beyond its control. It is agreed that these changes will only be made with the written consent of both Parties, which will not be unreasonably withheld. The Baseline will not be adjusted to reflect any changes agreed to under this Attachment E, Section (II)(B)(iii).
- iv. Baseline Adjustment. If OpTerra Energy Services proposes changes to the Facilities that would not unreasonably interfere with the conduct of Greenfield's business or cause Greenfield to incur additional costs, and Greenfield does not consent to the changes, then OpTerra Energy Services will adjust the Baselines upward by the amount of savings projected from the changes.
- v. Projected Energy Savings. During the Energy Savings Term, when the ultimate effect of the Work on EC Savings cannot be accurately determined due to pending construction or changes to the Scope of Work, Projected Energy Savings for the Facilities will be used until the effect of the changes can be determined by OpTerra Energy Services.
- vi. Assessment Work. OpTerra Energy Services has the right to charge Greenfield for Assessment Work, which will be billed at current OpTerra Energy Services engineering rates and will be paid by Greenfield within thirty (30) calendar days after receiving OpTerra Energy Services' invoice. Before initiating Assessment Work, OpTerra Energy Services will notify Greenfield in writing of the intent and estimated cost associated with the Assessment Work. Greenfield will, within forty-five (45) calendar days, give OpTerra Energy Services written permission to proceed or, alternatively at no charge to OpTerra Energy Services, to stipulate that the Projected Energy Savings for the portion of the Facility in question be used for the purpose of meeting the Savings Guarantee for such Measurement Period and thereafter. If OpTerra Energy Services does not receive written notice within forty-five (45) calendar days, the Projected Energy Savings for the portion of the Facility in question will be used until such time as Greenfield approves the Assessment Work.
- vii. Changes in Energy Use Factors. If Greenfield fails to notify OpTerra Energy Services of changes in Energy Use Factors or fails to supply OpTerra Energy Services in a timely manner with information that is requested by OpTerra Energy Services for the calculation of EC Savings, the Energy Unit Savings for the relevant Measurement Period will be deemed equal to the corresponding Projected Energy Savings for such period. If information for the relevant Measurement Period is supplied at a later date, the Energy Unit Savings will be modified only if and to the extent that the calculated savings for such period exceed the Projected Energy Savings for such period.
- viii. Change Order – Savings Effect. OpTerra Energy Services will calculate the energy impact of any Change Orders.
- ix. Changes in Savings Calculations. Any changes made by OpTerra Energy Services to the savings calculations will be presented to Greenfield in advance. Greenfield will have thirty (30) calendar days to challenge or question the changes in writing.
- x. Inspection of Facilities. Greenfield agrees that OpTerra Energy Services will have the right, with or without prior notice, to inspect the Facilities to determine if Greenfield has consistently complied with its obligations as set forth above. If any inspection discloses that Greenfield has failed, on or prior to the

date of such inspection, to be in compliance with any of its obligations, then the Guaranteed Savings will be assumed to have been achieved for the portion of the Energy Savings Term during which such failure will have existed.

- xi. Interference. Greenfield may not cause, and will take all commercially reasonable steps to prevent any third party from causing, any overshadowing, shading or other interference with the solar insolation that falls on the Generating Facility. Upon discovering, or otherwise becoming aware of, any actual or potential overshadowing, shading or other interference with insolation, Greenfield will promptly notify OpTerra Energy Services. If an unforeseeable overshadowing or shading condition not caused by OpTerra Energy Services or its subcontractors exists and continues for five (5) Business Days or more, Greenfield agrees that the Guaranteed Savings for such Generating Facility will be reduced based upon such shading condition, and OpTerra Energy Services may present Greenfield with a proposed reduction to the Guaranteed Savings reflecting such overshadowing, shading or other interference.

C. Greenfield Maintenance. Beginning at Beneficial Use or Substantial Completion for any portion of the Work, Greenfield will maintain such portion of the Work and upon Final Completion will maintain the Project, in accordance with the maintenance schedules and procedures recommended by OpTerra Energy Services and by the manufacturers of the relevant equipment, such maintenance to include maintaining all landscaping (including tree trimming) in and around the Generating Facilities. Greenfield is also responsible for managing the benefitting accounts designated to receive generation credits in regard to the Utility's RES-BCT tariff to ensure that generation is credited at the preferred rate.

D. Energy Savings Report. Annually during the Energy Savings Term, OpTerra Energy Services will submit to Greenfield an energy savings report containing a precise calculation of the EC Savings during the applicable Measurement Period (an "Energy Savings Report"). OpTerra Energy Services will use its best efforts to submit such Energy Savings Report within ninety (90) calendar days after receipt of all needed information for a Measurement Period, unless additional information is needed to accurately calculate the EC Savings, in which case Greenfield will be notified of such a situation within the ninety (90) calendar-day period.

E. On-Site Measurements. Greenfield irrevocably grants to OpTerra Energy Services the right, during the Energy Savings Term, to monitor EC Savings and energy management performance by conducting on-site measurements, including, but not limited to, reading meters and installing and observing on-site monitoring equipment. OpTerra Energy Services will not exercise such right in a manner that unreasonably interferes with the business of Greenfield as conducted at the Facilities as of the date hereof. Greenfield will cooperate fully with the exercise of such right by OpTerra Energy Services pursuant to this Attachment E, Section (II)(E). Greenfield will further cooperate with OpTerra Energy Services' performance of the M&V Services by providing utility information, changes in Energy Use Factors, and/or additional information as reasonably requested by OpTerra Energy Services.

F. Internet Communication Path. At OpTerra Energy Services' request, to facilitate OpTerra Energy Services' monitoring of the Work, Greenfield will open an internet communication path between Greenfield's energy management system(s) and OpTerra Energy Services' office in Overland Park, Kansas. Greenfield will provide, at Greenfield's expense, all networking, telecommunication, encryption, and security hardware and/or software OpTerra Energy Services deems necessary to achieve such communication path, as well as any similar hardware, software, or encryption devices necessary for use at OpTerra Energy Services' office. OpTerra Energy Services will provide Greenfield with the precise locations for network communication ports within Greenfield's Facilities. Greenfield agrees not to charge OpTerra Energy Services to install or maintain such communication paths.

G. Termination of Guaranteed Savings. If (i) Greenfield notifies OpTerra Energy Services in writing of its intent to terminate the M&V Services, (ii) the Contract is terminated by OpTerra Energy Services for default by Greenfield or by Greenfield for any reason permitted by the Contract or (iii) Greenfield fails to maintain the Project in accordance with this Attachment E, Section (II)(C), or is in default of any of its other obligations under this Attachment E, the obligation of OpTerra Energy Services to prepare and deliver the Energy Savings Report and to make a Guarantee Payment will also be terminated. If such termination occurs on a date other than the last day of a Measurement Period, OpTerra Energy Services will have no obligation to make a Guarantee Payment or prepare and deliver an Energy Savings Report for such Measurement Period.

H. Annual M&V Fee.

- i. Invoicing and Payment. The Annual M&V Fee for the first Measurement Period will be invoiced by OpTerra Energy Services to Greenfield in a lump sum on the M&V Commencement Date. All subsequent Annual M&V Fees will be invoiced by OpTerra Energy Services on the first day of the corresponding Measurement Period. Greenfield, or its designee, will pay OpTerra Energy Services such Annual M&V Fee, without any retention amount withheld, within thirty (30) calendar days after its receipt of the corresponding invoice. Unless Greenfield gives OpTerra Energy Services prior written notice of its intent to terminate the M&V Services, any failure to timely pay the Annual M&V Fee in

accordance with this Attachment E, Section (II)(H) will be a material default by Greenfield under the Contract, and OpTerra Energy Services, in addition to any other legal, contractual and equitable remedies available to it, will have no obligation thereafter to perform M&V Services or to make Guarantee Payments.

- ii. Any amount not paid when due will, from and after the due date, bear Interest. Accrued and unpaid Interest on past due amounts (including Interest on past due Interest) will be due and payable upon demand.
- iii. Not Refundable. The Annual M&V Fee is not refundable for any reason.

I. Calculations.

- i. Calculation of Accumulated Savings. Accumulated Savings will be increased, for any Measurement Period, by the amount of Excess Savings during such Measurement Period, and will be decreased, for any Measurement Period, by the *difference*, to the extent positive, between (i) the Guaranteed Savings for such Measurement Period *minus* (ii) the EC Savings for such Measurement Period. For the avoidance of doubt, Accumulated Savings will not be reduced below zero.
- ii. Calculation of EC Savings. EC Savings for any Measurement Period will be equal to the Energy Use Savings, as adjusted for changes in Energy Use Factors during such Measurement Period. EC Savings achieved during the Construction Period will be included in the EC Savings for the first Measurement Period.
- iii. Calculation of Energy Use Savings. Energy Use Savings will be calculated by OpTerra Energy Services as the *product* of (i) the Energy Unit Savings *multiplied by* (ii) the greater of (a) the applicable Base Energy Rate or (b) the applicable Actual Energy Rate.
- iv. Calculation of Excess Savings. From and after the M&V Commencement Date, Excess Savings will be calculated by OpTerra Energy Services as the *difference*, to the extent positive, between (i) the EC Savings for the relevant Measurement Period *minus* (ii) the Guaranteed Savings for such Measurement Period. During the Construction Period, Excess Savings will be calculated by OpTerra Energy Services in the manner set forth in this Attachment E, Section (III). For the avoidance of doubt, Excess Savings will not be reduced below zero.
- v. Calculation of Guarantee Shortfall. The Guarantee Shortfall, for any Measurement Period, will be calculated by OpTerra Energy Services as the *difference*, to the extent positive, between (i) the Guaranteed Savings for such Measurement Period *minus* (ii) the sum of (a) EC Savings for such Measurement Period plus (b) Accumulated Savings then outstanding.

III. Methodologies & Calculations

The following details the methodologies and calculations to be used in determining the Energy Unit Savings under this Contract.

ECM	Location	Description	M&V Method
SG-1	City Hall and Police Department	Solar Shade Canopy	Option B
SG-2	Patriot Park – Well #5	Ground Mount	Option B
SG-3	Well #7 and Corp Yard	Solar Shade Canopy	Option B
SG-4	Waste Water Treatment Plant - Percolation Ponds	Ground Mount	Option B
SG-5	RES-BCT	Ground Mount	Option B

- 1. M&V Option B: Energy savings performance of Scope of Work are measured and verified at the end-use site. Option B techniques are designed for projects where long-term continuous measurement of performance is desired and warranted. Under Option B, while some parameter may be stipulated or measured once then stipulated, some individual loads are continuously monitored to determine performance; and this measured performance is compared with an equipment-use Baseline to determine the Energy Unit Savings.
 - a. OpTerra Energy Services will supply a one-time report to Greenfield detailing any initial measurements taken to establish usage Baselines or other parameters. Ongoing post-retrofit measurements will be compared to the Baselines, and the quantified Energy Unit Savings will be calculated and presented in ongoing reports. During the Construction Period, the Energy Unit Savings will be calculated by adding the savings measured for the whole months between Substantial Completion or Beneficial Use of the ECM and the M&V Commencement Date.
 - b. Scope of Work

No baseline measurements are necessary because pre-retrofit PV production is zero. Kilowatt-hours produced by the PV system will be measured using automated metering. Measured interval production kilowatt-hours will be compared against production shown on the monthly utility bills and any differences will be reconciled. Projected kWh production is shown in the table below, and is projected to degrade by 0.5% per year.

- c. Assumptions: Once Work is Substantially Complete, these savings will be measured and verified monthly for the Energy Savings Term.
- d. Baselines and Projected Savings: EC Savings will be determined by multiplying the Energy Unit savings by the applicable Base Energy Rate. EC Savings will be calculated and presented in ongoing reports. During the Construction Period, the EC Savings will be calculated by adding the production measured for the period between Substantial Completion of the ECM and the M&V Commencement Date.

Projected Annual Production for Solar Generating Facilities

	Location	Description	Projected Annual Electric Savings (kWh)
SG-1	City Hall and Police Department	Solar Shade Canopy	93,167
SG-2	Patriot Park – Well #5	Ground Mount	128,944
SG-3	Well #7 and Corp Yard	Solar Shade Canopy	287,613
SG-4	Waste Water Treatment Plant - Percolation Ponds	Ground Mount	284,905
SG-5	RES-BCT	Ground Mount	400,900

- 2. Base Energy Rates: EC Savings will be calculated using the Base Energy Rates or Actual Energy Rates for that meter, whichever results in greater EC Savings. Actual Energy Rates will be calculated at the end of each Measurement Period using utility billing information for that Measurement Period and using the same methodology as was employed to determine the base energy rate in the Report.

The Base Energy Rates listed here are to be increased each Measurement Period on a cumulative basis by three and one-half percent (3.5%) beginning on the first anniversary of the M&V Commencement Date and continuing on the first day of each Measurement Period thereafter.

Base Energy Rates

ECM	Location	\$ per kWh
SG-1	City Hall and Police Department	0.2175917
SG-2	Patriot Park – Well #5	0.2296896
SG-3	Well #7 and Corp Yard	0.2676259
SG-4	Waste Water Treatment Plant - Percolation Ponds	0.1966563
SG-5	RES-BCT	0.1351256

ATTACHMENT F
MAINTENANCE SERVICES

EQUIPMENT AND FACILITIES COVERED

OpTerra Energy Services will perform preventive maintenance services (“Maintenance Services”) as set forth in this Attachment F with respect to Generating Facilities being constructed on Greenfield’s property at the Generating Facilities being constructed at the Project Locations listed in Attachment C.

Capitalized terms used in this Attachment F and not defined in the Contract, have the meanings set forth below:

I. Definitions

“**Annual Maintenance Fee**” means a fee payable annually in advance by Greenfield to OpTerra Energy Services, in consideration of the performance of up to two (2) years of Maintenance Services. The Annual Maintenance Fee for the first Measurement Period will be Twenty-Five Thousand One Hundred Fourteen Dollars (\$25,114). The Annual Maintenance Fee will be increased annually thereafter at the rate of three percent (3%) per annum, each increase to be effective on the first day of the corresponding Measurement Period.

II. Term

So long as Greenfield pays to OpTerra Energy Services the Annual Maintenance Fee, OpTerra Energy Services will provide the Maintenance Services, as described herein, up to two (2) years from the M&V Commencement Date on an annualized basis. At the end of this term, Greenfield may:

- a. Enter into another agreement with OpTerra Energy Services to perform Maintenance Services
- b. Enter into an agreement with another service provider
- c. Self-perform preventive maintenance

III. Annual Maintenance Fee; Reporting

The Annual Maintenance Fee for the first Measurement Period will be invoiced by OpTerra Energy Services to Greenfield in a lump sum on the M&V Commencement Date. All subsequent Annual Maintenance Fees will be invoiced by OpTerra Energy Services on the first day of the corresponding Measurement Period. Greenfield, or its designee, will pay OpTerra Energy Services such Annual Maintenance Fee, without any retention amount withheld, within thirty (30) calendar days after its receipt of the corresponding invoice. Any failure to timely pay the Annual Maintenance Fee in accordance with this Attachment F will be a material default by Greenfield, and OpTerra Energy Services, in addition to any other legal, contractual and equitable remedies available to it, will have no obligation thereafter to provide Maintenance Services.

Any amount not paid when due will, from and after the due date, bear Interest. Accrued and unpaid Interest on past due amounts (including Interest on past due Interest) will be due and payable upon demand.

The Annual Maintenance Fee is not refundable for any reason.

Upon completion of any maintenance or repair work, OpTerra Energy Services will update service logs detailing the work performed, location and any notes relevant to safe and efficient operations. These service logs will be compiled and submitted to Greenfield on a quarterly basis.

If OpTerra Energy Services is no longer the provider of Maintenance Services, Greenfield’s new provider will maintain similar service logs. OpTerra Energy Services will have reasonable access to inspect service logs to determine that adequate Maintenance Services are being performed.

IV. Preventive Maintenance Services Provided

OpTerra Energy Services will provide the following Maintenance Services during the term:

- a. Inspection: Inspect PV modules, combiner boxes, inverters, isolation transformers, and PV service roof penetrations and support structure on an annual basis.
- b. Testing: Perform voltage testing, amperage testing, and infrared scans of inverters, combiner boxes, disconnects and switchgear on an annual basis.
- c. Monitoring: Monitor system performance on a daily basis.

d. Cleaning:

- i. Remove dust, dirt, and debris from outside cabinets of combiner boxes, inverters, transformers, and disconnect switches on an annual basis.
- ii Wash PV modules and remove accumulated dust and debris for optimal system performance on an annual basis.

System performance is evaluated by comparing actual production data and actual local weather data to the production values predicted by modeling software. These evaluations are performed monthly; greater-than-predicted degradations may indicate the need for panel washing. One panel washing per year is included in the Maintenance Services, which may be adjusted as follows:

- Additional washings can be purchased by Greenfield, at its option, to maintain optimal performance.
- In the event that a second annual washing is recommended by OpTerra Energy Services in order to maintain optimal performance, but Greenfield declines to purchase the additional washing, OpTerra Energy Services may at its sole discretion adjust the Energy Savings Guarantee for that year.
- In years of extreme drought and/or where system performance is greater than 100%, OpTerra Energy Services and Greenfield may agree not to wash the solar panels. In that case, Greenfield will receive a credit for that year's panel washing.

V. Repair Services

If a Generating Facility is damaged and requires safe-off, repair, demolition and/or reconstruction, Greenfield must contact the OpTerra Energy Services PV Operations & Maintenance Manager. In the event of damage, any component of the Generating Facility installed by OpTerra Energy Services can be repaired or reconstructed by OpTerra Energy Services at Greenfield's request. Greenfield must submit a request for quotation to the OpTerra Energy Services PV Operations & Maintenance Manager. OpTerra Energy Services will inspect the damage and provide a written quotation and complete scope of work to Greenfield to restore the Generating Facility to normal operational condition. Before proceeding with repairs, OpTerra Energy Services and Greenfield must execute a work order, on OpTerra Energy Services' form, for the agreed scope of work and quotation amount. Repair work is done on a time and materials basis.

- Hourly technician labor rate \$150/hr.
- Materials markup 15%

VI. Warranty Services

The OpTerra Energy Services PV Operations & Maintenance Manager will also be Greenfield's point of contact for all issues related to the OpTerra Energy Services Warranty set forth in Section 9.01 of the Contract. Greenfield should refer to Section 9.02 of the Contract for services provided by OpTerra Energy Services to Greenfield in relation to manufacturer's warranties. The terms and conditions of the relevant manufacturer's warranties can be found in the operation and maintenance manuals delivered to Greenfield at Final Completion.

VII. Services and Equipment to Be Covered By Greenfield

OpTerra Energy Services' obligations under this Attachment F are expressly conditioned upon Greenfield's payment of the Annual Maintenance Fee and providing and being responsible for the following, without cost to OpTerra Energy Services:

- a. Making the Generating Facilities described herein available to OpTerra Energy Services as of the Contract Effective Date.
- b. Operating and maintaining security systems associated with the Generating Facilities.
- c. Managing the benefitting accounts designated to receive generation credits in regard to the Utility's RES-BCT tariff to ensure that generation is credited at the preferred rate.
- d. Maintaining all landscaping in and around Generating Facilities including tree trimming.
- e. Allowing OpTerra Energy Services and its personnel access as necessary to the Generating Facilities, and any related areas that may be reasonably necessary for performance of the Maintenance Services, including reasonable work, parking, and equipment staging areas.
- f. Allowing OpTerra Energy Services and its personnel to access electrical power and other utilities then existing at the Generating Facilities as necessary for OpTerra Energy Services to satisfy its obligations under the Contract.
- g. Remediating, pursuant to Applicable Law, any known Hazardous Substances encountered by OpTerra Energy Services during the performance of the Maintenance Services which Hazardous Substances were not deposited by OpTerra Energy Services, including any backfill with clean soil as may be reasonably required.
- h. Insuring the Generating Facilities against loss due to acts of God and the public enemy; flood, earthquake, tornado, storm, fire; civil disobedience, sabotage, and vandalism.

OpTerra Energy Services will have no obligation to provide the Maintenance Services to the extent such provision of Maintenance Services is materially adversely affected by Greenfield's failure to satisfy the conditions set forth in this Attachment F.

ATTACHMENT G
SCOPE OF WORK FOR LIGHTING RETROFIT

[See Attached PDF]

ATTACHMENT H
SCOPE OF WORK FOR STREETLIGHTING RETROFIT

[See Attached PDF]