

Measure K Charter School Committee Members

Blue Oak Charter School: Susan Domenighini & Buck Ernest

Chico Country Day Charter School: Margaret Reece, co-chair & Lori McGlone

CORE Butte Charter School: Mary Cox, Vice Chair & Susan Smith

Forest Ranch Charter School: Kiersten Morgan & Christia Marasco

Inspire School of Arts and Sciences: Doris Luther, co-chair & Dan La Bar

Nord Country School: Lisa Speegle & Kathy Dahlgren

Sherwood Montessori: Michelle Yezbick & Monica Woodward

Wildflower Open Classroom: Tom Hicks & Jonas Herzo

Chico Unified School District Measure K Charter School Committee Meeting Notice

Date: December 16, 2019

Time/Location: 3:45pm at CORE Butte Charter School, 2847 Notre Dame Blvd, Chico, 95928

REGULAR MEETING AGENDA

1. REGULAR SESSION

- 1.1 Call to Order and Roll Call
- 1.2 Approval of Regular Agenda
- 1.3 Approval of Minutes from Regular Meeting of 11/18/19

2. PUBLIC COMMENTS

3. DISCUSSION/ACTION ITEMS

- 3.1 FOREST RANCH: Project Request - whole school Generator
- 3.2 FOREST RANCH: Project Request - Solar array project
- 3.4 Calendar dates for Measure K meetings in 2020 - CUSD board meeting dates

4. ITEMS FROM COMMITTEE MEMBERS

5. ADJOURNMENT

- 4.1 Adjourn; Next meeting January 27, 2020 at CORE Butte Charter

Information, Procedures and Conduct of CUSD Measure K Charter School Committee Meetings:

Student Participation:

At the discretion of the Chair, students may be given priority to address items to the Committee

Public input on specific agenda items and those items not on the agenda:

The CUSD Measure K Charter School Committee welcomes and encourages public comments. Any person of the public desiring to speak shall be allowed to speak during public comment time and has the option of speaking once on any agenda item when it is being discussed. Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Committee Chair. In the case of numerous requests to address the same item, the Committee may select representatives to speak on each side of the item. Each person who addresses the Committee must be first recognized by the presiding officer and give his or her name. Comments must be directed to the Committee as a whole and not to individual committee members. The Committee shall not take action or enter into discussion or dialog on any matter that is not on the meeting agenda, except as allowed by law. Items brought forth at this part of the meeting may be taken under advisement by the Committee and may be placed on the agenda of a subsequent meeting for discussion or action by the Committee at the discretion of the Committee Chair & Vice Chair.

Special Needs: If you have special needs because of a disability or you require assistance or auxiliary aids to participate in the meeting, please contact the CUSD office at 530.891.3000. CUSD will attempt to accommodate your disability.

Copies of Agendas and Related Materials: Materials are available at the meeting, on the CUSD website at www.chicousd.org, or in the district office prior to the meeting @ 1163 East 7th Street, Chico, CA 95928.

Measure K Charter School Committee Members

Blue Oak Charter School: Susan Domenighini & Buck Ernest

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Forest Ranch Charter School: Kiersten Morgan & Christia Marasco

Wildflower Open Classroom: Tom Hicks & Jonas Herzo

Chico Unified School District Measure K Charter School Committee Meeting Notice

Date: November 18, 2019

Time/Location: 3:45pm at CORE Butte Charter School, 2847 Notre Dame Blvd, Chico, 95928

REGULAR MEETING MINUTES

1. REGULAR SESSION

1.1 Call to Order and Roll Call

Meeting called to order at 3:47

Attendance:

Blue Oak Charter School: Buck Ernest

Inspire School of Arts and Sciences: Doris Luther, co-chair

Chico Country Day Charter School: Margaret Reece

Nord Country School: Lisa Speegle

CORE Butte Charter School: Mary Cox

Sherwood Montessori: Michelle Yezbick

Forest Ranch Charter School: Kiersten Morgan (absent)

Wildflower Open Classroom: Tom Hicks

1.2 Approval of Regular Agenda

Michelle Y. motioned to approve the agenda, Doris L. seconded the motion. Motion passes.

1.3 Approval of Minutes from Regular Meeting of 7/29/19 & 8/26/19 & 10/28/19

Doris motioned to approve the minutes from 7/29/19, 8/26/19, and 10/28/19, Michelle Y. seconded the motion. Motion passes.

Approved 7/0/0/1	Aye	Nay	Abstain	Absent
BOCS: Buck Ernest	x			

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Student Participation:

At the discretion of the Chair, students may be given priority to address items to the Committee

Public input on specific agenda items and those items not on the agenda:

The CUSD Measure K Charter School Committee welcomes and encourages public comments. Any person of the public desiring to speak shall be allowed to speak during public comment time and has the option of speaking once on any agenda item when it is being discussed. Speaking time shall generally be limited to three minutes, unless a longer period is permitted by the Committee Chair. In the case of numerous requests to address the same item, the Committee may select representatives to speak on each side of the item. Each person who addresses the Committee must be first recognized by the presiding officer and give his or her name. Comments must be directed to the Committee as a whole and not to individual committee members. The Committee shall not take action or enter into discussion or dialog on any matter that is not on the meeting agenda, except as allowed by law. Items brought forth at this part of the meeting may be taken under advisement by the Committee and may be placed on the agenda of a subsequent meeting for discussion or action by the Committee at the discretion of the Committee Chair & Vice Chair.

Special Needs: If you have special needs because of a disability or you require assistance or auxiliary aids to participate in the meeting, please contact the CUSD office at 530.891.3000. CUSD will attempt to accommodate your disability.

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CCDS: Margaret Reece	x			
CBCS: Mary Cox	x			
Nord: Lisa Speegle	x			
Inspire: Doris Luther	x			
FRCS: Kiersten Morgan				x
Sherwood: Michelle Yezbick	x			
WOC: Tom Hicks	x			

2. PUBLIC COMMENTS - none

3. DISCUSSION/ACTION ITEMS

3.1 INSPIRE: Completion Reports

Project S was right on the amount quoted and Project Q was quoted slightly over expenditures.

Michelle motions to approve Inspire School of Arts and Sciences completion reports, Lisa seconded the motion. Motion Passes

Approved 7/0/0/1	Aye	Nay	Abstain	Absent
BOCS: Buck Ernest	x			
CCDS: Margaret Reece	x			
CBCS: Mary Cox	x			
Nord: Lisa Speegle	x			
Inspire: Doris Luther	x			
FRCS: Kiersten Morgan				x
Sherwood: Michelle Yezbick	x			
WOC: Tom Hicks	x			

3.2 SHERWOOD: Relocatable Classroom Project Request

Doris motioned to approve, Mary seconded the motion. Motion Passes.

Approved 7/0/0/1	Aye	Nay	Abstain	Absent
BOCS: Buck Ernest	x			
CCDS: Margaret Reece	x			

CBCS: Mary Cox	x			
Nord: Lisa Speegle	x			
Inspire: Doris Luther	x			
FRCS: Kiersten Morgan				x
Sherwood: Michelle Yezbick	x			
WOC: Tom Hicks	x			

3.3 Election of Officers for 2020: The Committee shall elect the Chair and Secretary of the Measure K Committee for the 2020 year.

Lisa motioned to approve Doris and Margaret as co-chairs, and Michelle as Secretary, Tom seconded the motion. Motion Passes.

Approved 5/0/0/3	Aye	Nay	Abstain	Absent
BOCS: Buck Ernest	x			
CCDS: Margaret Reece	x			
CBCS: Mary Cox	x			
Nord: Lisa Speegle	x			
Inspire: Doris Luther	x			
FRCS: Kiersten Morgan				x
Sherwood: Michelle Yezbick	x			
WOC: Tom Hicks	x			

3.4 Calendar dates for Measure K meetings in 2020

Proposed meeting calendar presents meeting on the last Monday of the month with the exception of. Doris motioned to approve the proposed scheduled, Lisa seconded the motion, motion passes.

Approved 5/0/0/3	Aye	Nay	Abstain	Absent
BOCS: Buck Ernest	x			
CCDS: Margaret Reece	x			
CBCS: Mary Cox	x			
Nord: Lisa Speegle	x			

Inspire: Doris Luther	x			
FRCS: Kiersten Morgan				x
Sherwood: Michelle Yezbick	x			
WOC: Tom Hicks	x			

4. ITEMS FROM COMMITTEE MEMBERS - none

5. ADJOURNMENT

4.1 Adjourn at 4:05.

Doris motioned to adjourn, Buck seconded the motion. Motion passes.

Next meeting December 16, 2019 at CORE Butte Charter

Project Recommendation Form for Consideration by CUSD Board of Trustees

GENERAL INFORMATION:

Submission Mtg Date	December 16, 2019
Name of School	Forest Ranch Charter School
Address of School	15815 Cedar Creek Rd. Forest Ranch CA 95942
Contact Name	Christia Marasco
Contact Phone/Email	(530) 891-3154/cmarasco@forestranchcharter.org
Year Established	2008
Charter Renewal Date	2020
CDS Code	04-6144-0118042
Charter Number	1019
Website	www.forestranchcharter.org

1. Type of Project:

- Planning
- Construction
- Health Safety (Including ADA)
- Modernization/Repair/Renovation/Improve
- Purchase or Lease Project
- Other (including FF&E)

2. Project Narrative:

Generator to run whole school that can be switched over during planned and unplanned power outages

3. Charter School Property Project Location: *(If project location is different from address above.)*

- a. Does your school currently operate on a CUSD School Site: yes no
- b. Does your school lease property/buildings from a private owner: yes no

4. Current enrollment and ADA: 130

5. Financial Questions

- a. Was your prior annual audit report free of any negative findings?*please explain* yes no *(if no,*

What were your cash reserves as a percent of expenditures at the end of the prior fiscal year?
30%

6. Project Schedule: Winter 2020

7. Preliminary Estimate (Cost)

Remaining Round I Allocation \$12,369	Round II Allocation \$517,418 Total \$528,359
Less Previously Allocated Funds Round II	\$0

Less Current Project Funds Requested	\$100,000.
Remaining Round II Allocation	\$428,359.

School Facilities Projects to be Funded with Proceeds of Bonds

“Bond proceeds will be expended to repair, modernize, replace, renovate, expand, construct, acquire, equip, furnish and otherwise improve the classrooms and school facilities the [charter’s] existing schools, new school sites, and other [charter] owned properties to provide equity among campuses, improved facilities, and student access to instructional technology.”—Measure K

Documentation (please indicate those completed)

All Projects

Project Narrative: general scope of work ___x___
 Enrollment Capacity: Current Facility and/or Proposed Included ___
 Preliminary Estimate (Cost) Included x
 Project Schedule Included

Building/Modernization/Renovation Projects

Included

Feasibility Study and Site Review ___ Included _x_ Not Applicable
 Enrollment Capacity: Current Facility and/or Proposed ___ Included _x_ Not Applicable
 Pre-Schematics (to be completed by a District approved architect and/or engineering team) ___ Included _x_ Not Applicable
 Facility Assessment ___ Included _x_ NotApplicable
 Schematic Drawing(s) (areas of work) ___ Included ___ Not Applicable
 CEQA Process Determination (pre-CEQA-form) ___ Included _x_ NotApplicable
 Design Development Drawings ___ Included _x_ NotApplicable
 Design or Bid Estimate _x_ Included ___ Not Applicable
 Construction Documents ___ Included _x_ Not Applicable

For Committee Use:

All necessary documents were included: ___x___ yes ___no
 (if no: request for additional documentation)

CORE QUESTIONS:

1. Does the project fall under the bond language? Yes
2. Given the life span of a bond, did the proposal explain how this project was an appropriate use of funds?
3. Has the school demonstrated the feasibility of project completion? Yes
4. Has the local school board approved the project? Pending approval at Special Meeting on Dec. 12, 2019

MEASURE K—CHARTER FACILITIES COMMITTEE APPROVAL

Date of Committee Approval: _____

Attestation of Committee Secretary: _____

*For questions or clarifications relative to the completion of this application, please contact:
Kevin Bultema at kbultema@chicousd.org or (530) 891-3000 x. 112*

Q.PEAK DUO-G5 305-330

Q.ANTUM SOLAR MODULE

The new **Q.PEAK DUO-G5** solar module from Q CELLS impresses thanks to innovative **Q.ANTUM DUO Technology**, which enables particularly high performance on a small surface. **Q.ANTUM's** world-record-holding cell concept has now been combined with state-of-the-art circuitry half cells and a six-busbar design, thus achieving outstanding performance under real conditions - both with low-intensity solar radiation as well as on hot, clear summer days.



Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.9%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID and Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa) regarding IEC.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance guarantee².



STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.



THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings



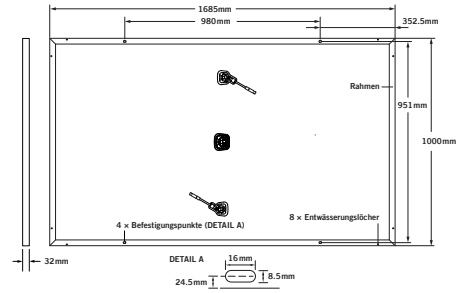
Rooftop arrays on commercial/industrial buildings

¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500V, 168h)

² See data sheet on rear for further information.

MECHANICAL SPECIFICATION

Format	66.3 in × 39.4 in × 1.26 in (including frame) (1685 mm × 1000 mm × 32 mm)
Weight	41.2 lbs (18.7 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 20 monocrystalline Q.ANTUM solar half-cells
Junction box	2.76-3.35 in × 1.97-2.76 in × 0.51-0.83 in (70-85 mm × 50-70 mm × 13-21 mm), decentralized, IP67
Cable	4 mm ² Solar cable; (+) ≥ 43.3 in (1100 mm), (-) ≥ 43.3 in (1100 mm)
Connector	Multi-Contact MC4, IP65 and IP68



ELECTRICAL CHARACTERISTICS

POWER CLASS			305	310	315	320	325	330
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)								
Minimum	Power at MPP ²	P _{MPP} [W]	305	310	315	320	325	330
	Short Circuit Current*	I _{SC} [A]	9.93	9.98	10.04	10.09	10.14	10.20
	Open Circuit Voltage*	V _{OC} [V]	39.35	39.61	39.87	40.13	40.40	40.66
	Current at MPP*	I _{MPP} [A]	9.44	9.50	9.55	9.60	9.66	9.71
	Voltage at MPP*	V _{MPP} [V]	32.30	32.64	32.98	33.32	33.65	33.98
	Efficiency ²	η [%]	≥ 18.1	≥ 18.4	≥ 18.7	≥ 19.0	≥ 19.3	≥ 19.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NOC ³								
Minimum	Power at MPP ²	P _{MPP} [W]	226.0	229.7	233.4	237.2	240.9	244.6
	Short Circuit Current*	I _{SC} [A]	8.00	8.05	8.09	8.14	8.18	8.22
	Open Circuit Voltage*	V _{OC} [V]	36.80	37.05	37.30	37.54	37.79	38.04
	Current at MPP*	I _{MPP} [A]	7.43	7.47	7.51	7.56	7.60	7.64
	Voltage at MPP*	V _{MPP} [V]	30.43	30.75	31.07	31.39	31.70	32.01

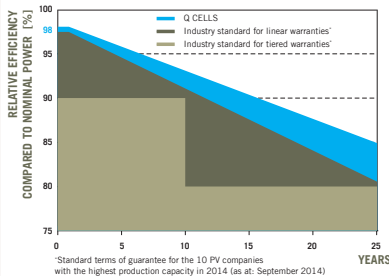
¹ 1000 W/m², 25 °C, spectrum AM 1.5 G

² Measurement tolerances STC ± 3 %; NOC ± 5 %

³ 800 W/m², NOCT, spectrum AM 1.5 G

* typical values, actual values may differ

Q CELLS PERFORMANCE WARRANTY

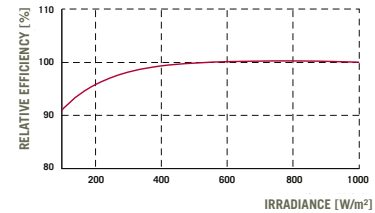


At least 98 % of nominal power during first year. Thereafter max. 0.54 % degradation per year. At least 93.1 % of nominal power up to 10 years. At least 85 % of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organization of your respective country.

*Standard terms of guarantee for the 10 PV companies with the highest production capacity in 2014 (as at: September 2014)

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β	[%/K]	-0.28
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.37	Normal Operating Cell Temperature	NOCT	[°F]	113 ± 5.4 (45 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC) / 1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating	C (IEC) / TYPE 1 (UL)
Design load, push (UL) ²	[lbs/ft ²]	75 (3600 Pa)	Permitted module temperature on continuous duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Design load, pull (UL) ²	[lbs/ft ²]	55.6 (2666 Pa)		² see installation manual

QUALIFICATIONS AND CERTIFICATES

UL 1703; VDE Quality Tested; CE-compliant; IEC 61215 (Ed.2); IEC 61730 (Ed.1) application class A



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Trailer	30
Number of Pallets per 40' High Cube Container	26
Pallet Dimensions (L × W × H)	69.3 in × 45.3 in × 46.9 in (1760 mm × 1150 mm × 1190 mm)
Pallet Weight	1415 lbs (642 kg)

NOTE: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.

300 Spectrum Center Drive, Suite 1250, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL inquiry@us.q-cells.com | WEB www.q-cells.us

Project Recommendation Form for Consideration by CUSD Board of Trustees

GENERAL INFORMATION:

Submission Mtg Date	December 16, 2019
Name of School	Forest Ranch Charter School
Address of School	15815 Cedar Creek Rd. Forest Ranch CA 95942
Contact Name	Christia Marasco
Contact Phone/Email	(530) 891-3154/cmarasco@forestranchcharter.org
Year Established	2008
Charter Renewal Date	2020
CDS Code	04-6144-0118042
Charter Number	1019
Website	www.forestranchcharter.org

1. Type of Project:

- Planning
- Construction
- Health Safety (Including ADA)
- Modernization/Repair/Renovation/Improve
- Purchase or Lease Project
- Other (including FF&E)

2. Project Narrative:

FRCS has contracted with United Sun for approx \$96,760 of Clean Energy funding to set up a small scale solar system. FRCS would like to expand the project to cover the majority of our electrical cost. The estimate we received for the larger scale project is \$229, 620, which would be an additional \$132, 860.

3. Charter School Property Project Location: *(If project location is different from address above.)*

- a. Does your school currently operate on a CUSD School Site: yes no
- b. Does your school lease property/buildings from a private owner: yes no

4. Current enrollment and ADA: 128/121

5. Financial Questions

- a. Was your prior annual audit report free of any negative findings? yes no *(if no, please explain)*

What were your cash reserves as a percent of expenditures at the end of the prior fiscal year?
30%

6. Project Schedule: Winter/Spring2020

7. Preliminary Estimate (Cost)

Round I Allocation \$12,369	Round II Allocation \$517,418 Total 528,359
Less Previously Allocated Funds	\$100,000.

Less Current Project Funds Requested	\$140,000
Remaining Round I Allocation	\$288,359

School Facilities Projects to be Funded with Proceeds of Bonds

“Bond proceeds will be expended to repair, modernize, replace, renovate, expand, construct, acquire, equip, furnish and otherwise improve the classrooms and school facilities the [charter’s] existing schools, new school sites, and other [charter] owned properties to provide equity among campuses, improved facilities, and student access to instructional technology.”—Measure K

Documentation (please indicate those completed)

All Projects

Project Narrative: general scope of work ___x___
 Enrollment Capacity: Current Facility and/or Proposed Included ___
 Preliminary Estimate (Cost) Included x
 Project Schedule Included

Building/Modernization/Renovation Projects

Feasibility Study and Site Review ___ Included _x_ Not Applicable
 Enrollment Capacity: Current Facility and/or Proposed ___ Included _x_ Not Applicable
 Pre-Schematics (to be completed by a District approved architect and/or engineering team) ___ Included _x_ Not Applicable
 Facility Assessment ___ Included _x_ NotApplicable
 Schematic Drawing(s) (areas of work) _X_ Included ___ Not Applicable
 CEQA Process Determination (pre-CEQA-form) ___ Included _x_ NotApplicable
 Design Development Drawings ___ Included _x_ NotApplicable
 Design or Bid Estimate _x_ Included ___ Not Applicable
 Construction Documents ___ Included _x_ Not Applicable

For Committee Use:

All necessary documents were included: ___x___ yes ___ no
 (if no: request for additional documentation)

CORE QUESTIONS:

1. Does the project fall under the bond language? Yes
2. Given the life span of a bond, did the proposal explain how this project was an appropriate use of funds?
3. Has the school demonstrated the feasibility of project completion? Yes
4. Has the local school board approved the project? Yes; approved at August, 2019 meeting.

MEASURE K—CHARTER FACILITIES COMMITTEE APPROVAL

Date of Committee Approval: _____

Attestation of Committee Secretary: _____

*For questions or clarifications relative to the completion of this application, please contact:
Kevin Bultema at kbultema@chicousd.org or (530) 891-3000 x. 112*



SUNNY TRIPOWER CORE1 33-US / 50-US / 62-US

STP 33-US-41 / STP 50-US-41 / STP 62-US-41

**UP TO 60% FASTER
INSTALLATION FOR
COMMERCIAL PV SYSTEMS**



Fully integrated

- Innovative design requires no additional racking for rooftop installation
- Integrated DC and AC disconnects and overvoltage protection
- 12 direct string inputs for reduced labor and material costs

Increased power, flexibility

- Multiple power ratings for small to large scale commercial PV installations
- Six MPP trackers for flexible stringing and maximum power production
- OptiTrac™ Global Peak shade tolerant MPP tracking

Enhanced safety, reliability

- Integrated SunSpec PLC signal for module-level rapid shutdown compliance to 2017 NEC
- Next-gen DC AFCI arc-fault protection certified to new Standard UL 1699B Ed. 1

Smart monitoring, control, service

- Advanced smart inverter grid support capabilities
- Increased ROI with SMA ennexOS cross sector energy management platform
- SMA Smart Connected proactive O&M solution reduces time spent diagnosing and servicing in the field

SUNNY TRIPOWER CORE1 33-US / 50-US / 62-US

It stands on its own

The Sunny Tripower CORE1 is the world's first free-standing PV inverter for commercial rooftops, carports, ground mount and repowering legacy solar projects. Now with expanded features and new power classes, the CORE1 is the most versatile, cost-effective commercial solution available. From distribution to construction to operation, the Sunny Tripower CORE1 enables logistical, material, labor and service cost reductions. Integrated SunSpec PLC for rapid shutdown and enhanced DC AFCI arc-fault protection ensure compliance to the latest safety codes and standards. With Sunny Tripower CORE1 and SMA's ennexOS cross sector energy management platform, system integrators can deliver comprehensive commercial energy solutions for increased ROI.

Technical data	Sunny Tripower CORE1 33-US	Sunny Tripower CORE1 50-US	Sunny Tripower CORE1 62-US
Input (DC)			
Maximum array power	50000 Wp STC	75000 Wp STC	93750 Wp STC
Maximum system voltage	1000 V		
Rated MPP voltage range	330 V... 800 V	500 V... 800 V	550 V... 800 V
MPPT operating voltage range	150 V... 1000 V		
Minimum DC voltage / start voltage	150 V / 188 V		
MPP trackers / strings per MPP input	6 / 2		
Maximum operating input current / per MPP tracker	120 A / 20 A		
Maximum short circuit current per MPPT / per string input	30 A / 30 A		
Output (AC)			
AC nominal power	33300 W	50000 W	62500 W
Maximum apparent power	33300 VA	53000 VA	66000 VA
Output phases / line connections	3 / 3-(N)-PE		
Nominal AC voltage	480 V / 277 V WYE		
AC voltage range	244 V... 305 V		
Maximum output current	40 A	64 A	80 A
Rated grid frequency	60 Hz		
Grid frequency / range	50 Hz, 60 Hz / -6 Hz... +6 Hz		
Power factor at rated power / adjustable displacement	1 / 0.0 leading... 0.0 lagging		
Harmonics THD	<3%		
Efficiency			
CEC efficiency	97.5%	97.5%	97.5%
Protection and safety features			
Load rated DC disconnect	●		
Load rated AC disconnect	●		
Ground fault monitoring: Riso / Differential current	● / ●		
DC AFCI arc-fault protection	●		
SunSpec PLC signal for rapid shutdown	●		
DC reverse polarity protection	●		
AC short circuit protection	●		
DC surge protection: Type 2 / Type 1+2	○ / ○		
AC surge protection: Type 2 / Type 1+2	○ / ○		
Protection class / overvoltage category (as per UL 840)	I / IV		
General data			
Device dimensions (W/H/D)	621 mm / 733 mm / 569 mm (24.4 in x 28.8 in x 22.4 in)		
Device weight	84 kg (185 lbs)		
Operating temperature range	-25 °C... +60 °C (-13 °F... +140 °F)		
Storage temperature range	-40 °C... +70 °C (-40 °F... +158 °F)		
Audible noise emissions (full power @ 1m and 25 °C)	65 dB(A)		
Internal consumption at night	5 W		
Topology	Transformerless		
Cooling concept	OptiCool (forced convection, variable speed fans)		
Enclosure protection rating	Type 4X, 3SX (as per UL 50E)		
Maximum permissible relative humidity (non-condensing)	100%		
Additional information			
Mounting	Free-standing with included mounting feet		
DC connection	Amphenol UTX PV connectors		
AC connection	Screw terminals - 4 AWG to 4/0 AWG CU/AL		
LED indicators (Status / Fault / Communication)	●		
Network interfaces: Ethernet / WLAN / RS485	● (2 ports) / ● / ○		
Data protocols: SMA Modbus / SunSpec Modbus / Webconnect	● / ● / ●		
Multifunction relay	●		
OptiTrac Global Peak (shade-tolerant MPP tracking)	●		
Integrated Plant Control / Q on Demand 24/7	● / ●		
Off-Grid capable / SMA Fuel Save Controller compatible	● / ●		
SMA Smart Connected (proactive monitoring and service support)	●		
Certifications			
Certifications and approvals	UL 1741, UL 1699B Ed. 1, UL 1998, CSA 22.2 107-1, PV Rapid Shutdown System Equipment		
FCC compliance	FCC Part 15 Class A		
Grid interconnection standards	IEEE 1547, UL 1741 SA - CA Rule 21, HECO Rule 14H		
Advanced grid support capabilities	L/HVRT, L/HVRT, Volt-VAr, Volt-Watt, Frequency-Watt, Ramp Rate Control, Fixed Power Factor		
Warranty			
Standard	10 years		
Optional extensions	15 / 20 years		
○ Optional features ● Standard features - Not available			
Type designation	STP 33-US-41	STP 50-US-41	STP 62-US-41



SMA Data Manager M
EDMM-US-10



SMA Sensor Module
MD.SEN-US-40



Universal Mounting System
UMS_KIT-10



AC Surge Protection Module Kit
AC_SPD_KIT1-10, AC_SPD_KIT2_T1T2
DC Surge Protection Module Kit
DC_SPD_KIT4-10, DC_SPD_KIT5_T1T2



2625 AZTEC DR., SUITE B
Chico, CA 95928
Tel: 530.345.0400
www.UnitedSunEnergy.com

COMMERCIAL SOLAR ELECTRIC CONTRACT

This Commercial Solar Electric Contract (the "Contract") is entered into by and between **Forest Ranch Charter School** ("Customer") and **United Sun Energy, Inc.** ("UNITED SUN ENERGY") for the sale and installation of a solar photovoltaic system (the "PV System") as of the last date they sign. UNITED SUN ENERGY is a licensed California contractor (License No.977269) with a C-10 electrical license. This Contract includes and incorporates by reference the following Exhibits signed and dated by UNITED SUN ENERGY and Customer:

Exhibit A: System Specifications

Exhibit B: Contract Price, Payment and Installation Schedule

1.0 SCOPE OF WORK. UNITED SUN ENERGY will provide all labor, equipment, and materials required to install a fully functioning PV System (the "Work") as morefully described in, and at the location identified in **Exhibit A.**

1.1. **Assumptions.** UNITED SUN ENERGY's design of any PV System, its size, output and other parameters are based on information supplied by Customer and its current utility consumption. UNITED SUN ENERGY has no control over, and therefore is not liable for, any changes in a Customer's electricity consumption patterns or charges imposed by Customer's utility providers.

1.2. **Exclusions.** The PV System and Contract Price (as defined below) excludes the following items and work:

1.2.1. **New Utility Service.** Unless specifically included in **Exhibit A,** UNITED SUN ENERGY anticipates no change to Customer's existing electrical service panel(s)/meter(s). Contract does not include the installation, upgrade or modification of Customer's electrical service panel(s) and/or meter(s).

1.2.2. **Existing Utility Electrical Transmission System.** Unless specifically included in Exhibit A, Contract does not include the installation of new or upgrades/modifications to any existing utility transmission lines, transformers or any other electrical component on the Customer's utility provider's side of the electrical service panel, engineering or any other associated costs or fees. UNITED SUN ENERGY is not responsible for any changes or additional requirements imposed by the Customer's utility provider associated with the installation of the PV System.

1.2.3. **Tree Trimming/Removal.** Unless specifically included in Exhibit A, Contract does not include trimming or removal of any trees, branches, bushes, roots, stumps or stump grinding. Any trees or bushes which were recommended in the proposal to be trimmed or removed shall be the responsibility of the customer. Should Customer fail to trim/remove recommended trees or bushes, UNITED SUN ENERGY shall not be liable for any underperformance or underproduction of the PV System.

2.0 CONTRACT PRICE AND PAYMENT TERMS

2.1. **Contract Price.** The total cost for performing UNITED SUN ENERGY's Work to construct the PV System (the "Contract Price") includes charges for materials and labor for installation of the PV System, including use tax, shipping and handling of all equipment and materials, site preparation, and clean up (the "Work"), and any building permit costs, except as provided in **Exhibit B**. The Contract Price is set forth in the Contract Price, Payment and Installation Schedule at **Exhibit B**.

2.2. **Price Fluctuations.** In order to protect Customer and UNITED SUN ENERGY against price fluctuations in equipment and materials, the Contract Price will be fixed for three (3) months from the date this Contract is signed. In the event UNITED SUN ENERGY is unable to mobilize on site (defined as beginning Work at Customer's location) within that three (3) month period, either due to Customer, project changes or delays of any cause, excluding delays caused by UNITED SUN ENERGY, and if material costs should change, UNITED SUN ENERGY reserves the right to submit updated pricing in the form of a written change order to be approved by Customer. If Customer does not approve such change order, then UNITED SUN ENERGY has the right to terminate this Contract as provided herein.

2.3. **Schedule of Payments.** Customer payments to UNITED SUN ENERGY are due upon receipt of invoice and according to the schedule provided in **Exhibit B**. Interim progress billings correlating to the above-listed milestones will be submitted to Customer upon achieving the milestones described, or at regular intervals not to exceed 30 days, whichever occurs first. If any interim billing cycle occurs when a milestone is partially complete, then UNITED SUN ENERGY shall bill based on the percentage completion of each such milestone. Customer's final payment is due in full upon building department signing off on the permit.

2.4. **Prompt Payment.** Payments paid more than (30) thirty days after the due date shall be late payments. Late payments will be subject to interest charged at 1.5% per month or 18% per year, or such lesser rate constituting the maximum rate permitted by law. Malfunction, minor damage or blemishes to installed equipment and materials are not grounds for withholding payment to UNITED SUN ENERGY. If payments are not timely paid, then UNITED SUN ENERGY may, in its sole discretion, discontinue all Work until the entire balance has been paid. Customer grants UNITED SUN ENERGY a security interest in the equipment included in the Work and acknowledges that UNITED SUN ENERGY may file a mechanic's lien against Customer's property to secure the payment of unpaid amounts due under this Contract.

3.0 **GOVERNMENTAL FINANCIAL INCENTIVES.** Customer's project may qualify for rebates, tax credits and/or other financial incentives available through local, state and/or federal government programs or Customer's utility (collective "Financial Incentives"). Unless otherwise agreed in writing, any Financial Incentives shall be paid, or otherwise accrue, directly to Customer. The availability and amount of such Financial Incentives are constantly changing and often depend on Customer's specific characteristics and tax situation. UNITED SUN ENERGY lacks such specific information and knowledge, so it cannot guarantee the availability or amount of any Financial Incentives. Therefore, this Contract is not conditioned on Customer's ability to obtain any such Financial Incentives, and UNITED SUN ENERGY encourages Customer to consult with its lawyer and accountant to determine the availability of such incentives. Customer is responsible for satisfying any eligibility criteria applicable to such Financial Incentives and any applicable costs. UNITED SUN ENERGY will not accept an assignment of any Financial Incentive on behalf of the customer.

- 4.0 TIME OF COMPLETION; SITE ACCESS.** UNITED SUN ENERGY will promptly begin mobilization and installation after a building permit is issued. UNITED SUN ENERGY will diligently perform the work. Customer recognizes that changes in the Work, weather, equipment and material supply problems, labor disruptions and events beyond UNITED SUN ENERGY's reasonable control can alter any scheduled completion date. Accordingly and unless otherwise specified in **Exhibit B**, UNITED SUN ENERGY cannot and does not guarantee any specific completion date for the Work. Customer will grant UNITED SUN ENERGY reasonable access to work areas, provide areas for storage of materials and garbage, and provide electricity and water necessary to perform the Work. Customer agrees to keep driveways clear and available for movement and parking of trucks during normal work hours.
- 5.0 SUBSTITUTIONS; EXTRAS AND CHANGES.** UNITED SUN ENERGY may substitute substantially equal or better equipment and materials for those specified in this Contract. Any additions, changes, or alterations from the original drawings or specifications which may be required by Customer, unforeseen conditions, or any government entity or utility will constitute an extra for which UNITED SUN ENERGY will receive an equitable adjustment in the Contract Price and time for performing this Contract. No such changes (excluding substitutions) will be performed without written authorization from Customer.
- 6.0 ADEQUACY OF STRUCTURE.** If the PV System will be mounted on any existing building or structure, UNITED SUN ENERGY will evaluate its structural capacity to determine whether improvements are required to support the PV System. The Cost for any such improvements is excluded from the Contract Price, and will be performed as additional Work pursuant to a written change order specifying the cost and time necessary to perform such additional Work.
- 7.0 INDEMNIFICATION.** UNITED SUN ENERGY will indemnify and hold Customer harmless from all liabilities to the proportional extent caused by the negligent acts of UNITED SUN ENERGY, its agents, or employees.
- 8.0 LIMITED WARRANTY.** UNITED SUN ENERGY warrants its Work against defects in material and labor for a period of twenty-five (25) years following completion of the Work, including any leaks in the roof caused by UNITED SUN ENERGY as a result of the Work. UNITED SUN ENERGY will facilitate processing of any manufacturer warranty claims on Customer's behalf. UNITED SUN ENERGY disclaims all other warranties, express and implied, including the warranties of merchantability and fitness for a particular purpose. UNITED SUN ENERGY charges a service fee for all service calls; however, this fee will be waived if UNITED SUN ENERGY determines that Customer's complaint is covered by any applicable warranty. System monitoring requires a constant and consistent internet connection. Warranty does not cover service for monitoring issues that are a result of Customer's computer network or associated connection.
- 9.0 OPPORTUNITY TO REPAIR.** UNITED SUN ENERGY works hard to avoid disputes. In an effort to productively resolve any disputes that do arise, Customer agrees to provide UNITED SUN ENERGY written notice of any claimed defects and/or warranty claims within two weeks after discovery, together with a reasonable opportunity to investigate and repair the problem. Customer will immediately report urgent problems or defects, including those presenting health or safety risks. Customer's full compliance with these obligations is a condition precedent to pursuing the matter in arbitration or court against UNITED SUN ENERGY, its subcontractors or suppliers. If Customer does not fully comply with these obligations, then UNITED SUN ENERGY will not be liable for any costs or damages which reasonably might have been mitigated or avoided by Customer's timely compliance. Nothing in this section establishes any UNITED SUN ENERGY duty or obligation beyond those provided elsewhere in this Contract.

10. DISPUTE RESOLUTION. The parties agree that, in the event of a dispute arising under the Agreement, said dispute shall be submitted to voluntary Judicial Reference in accordance with the provisions of California Code of Civil Procedure Section 638, et seq. Neither party to this Agreement shall have any obligation to arbitrate any dispute arising under the Agreement.

11. INSURANCE. UNITED SUN ENERGY will maintain at the least the following minimum insurance coverage throughout the performance of this Contract:

11.1. **General Liability.** \$1,000,000.00 per occurrence and \$2,000,000.00 aggregate

11.2. **Automobile Liability.** \$1,000,000.00 combined single limit

11.3. **Employer's Liability:** \$1,000,000.00 per occurrence.

11.4. **Workers Compensation.** As required by applicable law.

Customer's existing property insurance may provide coverage for loss or damage to the PV System during construction from various causes, including but not limited to, vandalism and adverse weather (like hail storms). UNITED SUN ENERGY encourages Customer to evaluate this issue with its insurance broker and to obtain such coverage if it is not already provided by Customer's existing insurance. Accordingly, Customer bears the risk of loss for loss or damage to the PV System (or any component of it) during construction, and UNITED SUN ENERGY shall have no such liability, except to the comparative extent that such loss or damage is caused by UNITED SUN ENERGY's negligence.

12. PRE-EXISTING CONDITIONS. Customer acknowledges that proper operation of the equipment purchased under this Contract may be dependent upon Customer's existing equipment, and UNITED SUN ENERGY will have no liability for equipment not purchased under this Contract. While UNITED SUN ENERGY will exercise all due care, UNITED SUN ENERGY will not be responsible for pre-existing conditions or damage resulting from normal traffic and material handling procedures on Customer's property (roof included) associated with performing the Work.

13. MARKETING AND SIGNAGE. In connection with the marketing and promotion of UNITED SUN ENERGY's business, UNITED SUN ENERGY will be entitled to photograph the PV System and building of Customer. UNITED SUN ENERGY may use these photographs in its promotional materials and advertising with prior written Customer approval. Customer pledges to be reasonable and pragmatic in the approval process. Customer agrees that UNITED SUN ENERGY will have the exclusive ownership of such photographs, promotional materials and associated intellectual property. Under no circumstances will UNITED SUN ENERGY release Customer's address without Customer's prior consent. UNITED SUN ENERGY may place at the project location during installation of the PV System reasonable signage identifying UNITED SUN ENERGY as the project contractor. UNITED SUN ENERGY and Customer may also separately agree on permanent signage to reflect UNITED SUN ENERGY's installation of the PV System.

14. LICENSING NOTICE. Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a

latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, CA 95826.

15. TERMINATION.

15.1. UNITED SUN ENERGY's Termination Rights. UNITED SUN ENERGY may terminate this Contract in the event that the Customer becomes insolvent or commits a breach or default under this Contract, including, but not limited to, failure to timely pay undisputed amounts owed to UNITED SUN ENERGY, and failure to act in good faith to remedy the same within ten calendar days after receipt of written notice of default from UNITED SUN ENERGY. UNITED SUN ENERGY shall be entitled to all damages incurred as a result of such termination, including, but not limited to, reasonable overhead and profit that would have been earned by UNITED SUN ENERGY and any subcontractors or suppliers if the Project had been fully performed.

15.2. Customer's Termination Rights. Customer may terminate performance of this Contract for cause under the following circumstances if UNITED SUN ENERGY fails to act in good faith to remedy same within twenty (20) days after receipt of written demand by Customer: (i) UNITED SUN ENERGY becomes insolvent; (ii) UNITED SUN ENERGY refuses or neglects to supply a sufficient number of properly skilled workmen, tools, or material within UNITED SUN ENERGY's control; or (iii) UNITED SUN ENERGY commits a material breach of this Contract. Customer shall pay UNITED SUN ENERGY for all Work performed as of the date of such termination for cause, including reasonable overhead and profit allocable to such Work performed.

16. MISCELLANEOUS.

16.1. Limitation of Liability. Neither UNITED SUN ENERGY, nor any of its affiliates, officers, shareholders, directors, employees or agents shall be liable to Customer, whether in contract (including warranty), in tort or under any other legal theory or doctrine, for any indirect, special, incidental or consequential loss or damage of Customer, including without limitation, loss of profits or use, even if such loss or damage was or could have been foreseen. Without limiting the generality of the foregoing, Customer acknowledges and agrees that UNITED SUN ENERGY'S total liability for all claims is limited to amounts Customer paid to UNITED SUN ENERGY under this Contract.

16.2. California law. This Contract will be governed by and construed in accordance with the laws of the State of California. Any dispute, arbitration or lawsuit or action will be venued in Butte County, California.

16.3. Scope of Contract. Time is of the essence in this Contract. No contractual rights arise until this Contract is accepted in writing, as evidenced by the signatures of both Customer and UNITED SUN ENERGY below. No modification or waiver of this Contract is valid unless in writing and signed by both the parties. This Contract constitutes the entire integrated agreement and supersedes all prior agreements and discussions. Neither party is bound by any representation, warranty, promise, statement, or information, unless it is specifically incorporated into this Contract. If a part of this Contract is held to be unenforceable for any reason, then that part will be stricken and the remainder of this Contract will remain in full force and effect. This Contract will bind and inure to the benefit of the parties' respective

heirs, executors, administrators, successors, and assigns. This Contract may be executed and initialed in one or more counterparts. Faxed or e-mailed signatures are equally as effective and binding as originals. UNITED SUN ENERGY may at its discretion engage subcontractors to perform the entirety or any part of the Work. UNITED SUN ENERGY will pay such subcontractors and in all instances remain responsible for the proper completion of the Work.

16.4. Customer declares that no promise or agreement not contained herein has been made by UNITED SUN ENERGY or any of UNITED SUN ENERGY's sales people, personnel, officers, directors, agents or affiliates and that this Contract contains the full and entire agreement between the Parties.
Board, P.O. Box 26000, Sacramento, CA 95826.

CUSTOMER: Forest Ranch Charter School

UNITED SUN ENERGY, INC.

Signature

Signature

Print Name

John Dausman

Print Name

Title

Vice President of Sales

Title

Date

8/1/2019

Date

EXHIBIT A
System Specifications

Installation Address	15815 Cedar Creek Rd, Forest Ranch, CA 95942	
kW DC (STC)	71.500	
Component	Description*	Quantity
Modules	Hanwha Q CELLS Q.PEAK DUO-G5 325	220
Inverter(s)	SMA Tripower CORE1 50kW (480V)	1
Mounting Method	Ground Mount	As needed
Monitoring	Sunny Portal	N/A

*See Section 5: SUBSTITUTIONS; EXTRAS AND CHANGES

INITIAL _____
UNITED SUN ENERGY CUSTOMER

EXHIBIT B
Contract Price, Payment, and Installation Schedule

Contract Price

Installed System Cost **\$229,620**

Any payments made by Customer via credit card will be assessed a fee of 2.5% of the amount paid via credit card.

Payment and Installation Schedule

<u>DUE UPON</u>	<u>AMOUNT</u>	<u>APPROXIMATE DATE</u>
1. Initial Deposit upon Signing	\$1,000	Contract Date
2. Upon Submission of Engineering	\$3,400	Within 1 Week of Step 1 Above
3. Upon Submitting Building Permit	\$4,600	Within 3 Weeks of Step 2 Above
4. Upon Ordering of Materials	\$45,900	Within 5 Weeks of Step 3 Above
5. Upon Arrival of Materials to Job Site or Storage Facility	\$45,900	Within 5 Weeks of Step 4 Above
6. Upon Installation of Solar Array	\$107,020	Within 5 Weeks of Step 5 Above
7. Upon Approval of Building Department (Permit Signed Off)	\$21,800	Within 4 Weeks of Step 6 Above
8. Intentionally Left Blank		
Total Sales Price	\$229,620	

INITIAL _____
 UNITED SUN ENERGY CUSTOMER

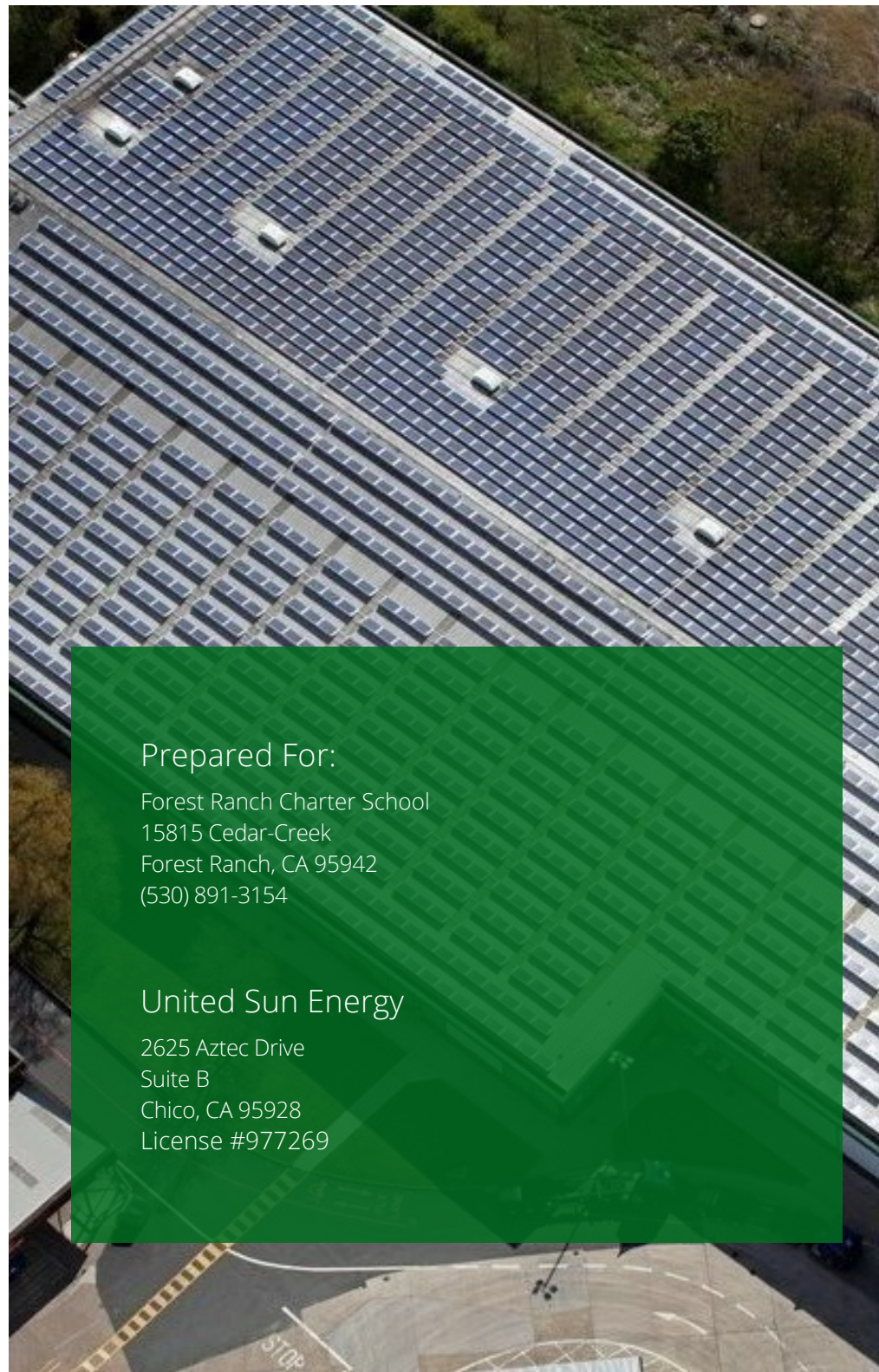


Smart Money. Intelligent Solar.

Forest Ranch Charter School

Inside You'll Find:

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3	Solar PV System Details	4
4	Your Future Utility, With Solar	5
5	Financing Summary	6
5.1	Cash Purchase - Cash Flow Analysis	7



Prepared For:

Forest Ranch Charter School
15815 Cedar-Creek
Forest Ranch, CA 95942
(530) 891-3154

United Sun Energy

2625 Aztec Drive
Suite B
Chico, CA 95928
License #977269

Your Utility Today, Without Solar

Utility Details			Cost Details		
Utility Company	Current Rate Schedule	Utility Escalation Rate	Total Utility Bill	Total Usage (kWh)	Avg blended cost
PG&E	A-1	4.0%	\$27,712	115,055 kWh	\$0.241/kWh

Your monthly usage & billing data:

Time Periods Bill Ranges & Seasons	Energy Use (kWh)			Charges		
	On Peak	Part Peak	Off Peak	Other	Energy	Total
1/1/2019 - 2/1/2019 W	0	5,329	5,209	\$20	\$2,385	\$2,405
2/1/2019 - 3/1/2019 W	0	6,638	5,767	\$18	\$2,815	\$2,834
3/1/2019 - 4/1/2019 W	0	5,278	4,630	\$20	\$2,248	\$2,268
4/1/2018 - 5/1/2018 W	0	5,221	4,609	\$20	\$2,230	\$2,250
5/1/2018 - 6/1/2018 S	2,544	2,707	4,566	\$20	\$2,461	\$2,481
6/1/2018 - 7/1/2018 S	2,465	1,997	3,569	\$20	\$2,027	\$2,047
7/1/2018 - 8/1/2018 S	1,584	1,651	3,463	\$20	\$1,666	\$1,686
8/1/2018 - 9/1/2018 S	2,666	2,304	4,579	\$20	\$2,395	\$2,415
9/1/2018 - 10/1/2018 S	3,669	2,960	4,310	\$20	\$2,783	\$2,803
10/1/2018 - 11/1/2018 S	3,355	2,413	4,263	\$20	\$2,543	\$2,564
11/1/2018 - 12/1/2018 W	0	3,251	4,041	\$20	\$1,641	\$1,661
12/1/2018 - 1/1/2019 W	0	5,556	4,461	\$20	\$2,277	\$2,298
Totals:	16,283	45,305	53,467	\$240	\$27,472	\$27,712

Your Information

Forest Ranch Charter School
15815 Cedar-Creek
Forest Ranch, CA 95942

About Your Utility

No choice:

Your utility is 100+ year old monopoly, meaning they don't have competition, they have guaranteed profits and you don't have any say.

Rates are rising:

California has some of the highest average retail electricity prices in the country. On average we anticipate rates will increase by 4.0% annually.

Pollution:

Over 2/3rds of utility energy generation comes from fossil-fuel plants, like coal or natural gas. This leads to pollution, climate change, and health impacts in our communities.

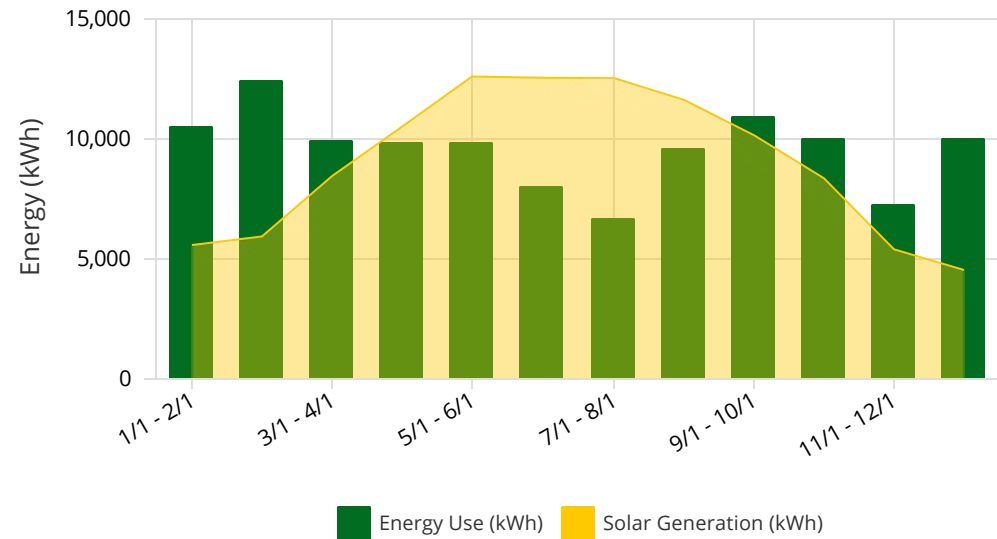
Solar PV System Details

System Size & Generation:

71.5 kW-DC System Size (DC)

64.2 kW-AC System Size (AC)

108,260 kWh 1st Year Generation



Ground Mount layout rendering:



Equipment:

(220) Hanwha Q-Cells Q.PEAK DUO-G5 325 Solar panels

(1) SMA Solar Technology SB7.7-1SP-US-40 (240V) Inverter(s)

System Pricing & Incentives:

Solar PV System Cost \$229,620

Net Solar PV System Cost: \$229,620

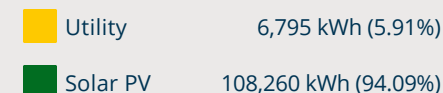
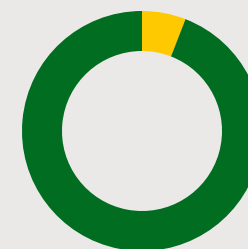
Your Future Utility, With Solar

Utility Details			Savings Details		
Utility Company	Post-solar Rate Schedule	Annual usage	Total Savings	Total Solar Production	Avg blended savings
PG&E	A-6 - Poly Phase	115,055 kWh	\$25,858	108,260 kWh	\$0.239/kWh

Monthly Utility Bills, Post-Solar

Time Periods Bill Ranges & Seasons	PV Generation (kWh)			Energy Use (kWh)			Charges			
	On Peak	Part Peak	Off Peak	On Peak	Part Peak	Off Peak	Other	NBC	Energy	Total
1/1/2019 - 2/1/2019 W	0	4,058	1,522	0	1,271	3,687	\$27	\$179	\$863	\$1,069
2/1/2019 - 3/1/2019 W	0	4,157	1,781	0	2,481	3,986	\$24	\$204	\$1,127	\$1,355
3/1/2019 - 4/1/2019 W	0	5,647	2,805	0	-369	1,825	\$27	\$135	\$253	\$414
4/1/2018 - 5/1/2018 W	0	7,311	3,199	0	-2,090	1,410	\$26	\$118	-\$120	\$23
5/1/2018 - 6/1/2018 S	5,953	3,399	3,251	-3,409	-692	1,315	\$27	\$106	-\$869	-\$736
6/1/2018 - 7/1/2018 S	5,208	3,126	4,215	-2,743	-1,129	-646	\$26	\$72	-\$1,148	-\$1,050
7/1/2018 - 8/1/2018 S	5,404	3,105	4,028	-3,820	-1,454	-565	\$27	\$67	-\$1,509	-\$1,415
8/1/2018 - 9/1/2018 S	5,305	2,907	3,416	-2,639	-603	1,163	\$27	\$105	-\$662	-\$530
9/1/2018 - 10/1/2018 S	4,251	2,352	3,554	-582	608	756	\$26	\$122	\$121	\$269
10/1/2018 - 11/1/2018 S	4,073	2,180	2,110	-718	233	2,153	\$27	\$132	\$251	\$410
11/1/2018 - 12/1/2018 W	0	3,748	1,655	0	-497	2,386	\$26	\$120	\$328	\$473
12/1/2018 - 1/1/2019 W	0	2,759	1,782	0	2,797	2,679	\$27	\$180	\$955	\$1,162
Totals:	30,194	44,749	33,318	-13,911	556	20,149	\$313	\$1,541	-	\$1,854

Solar Production Offset %:



Avoided Cost calculation:

Pre-solar utility bill: \$27,712

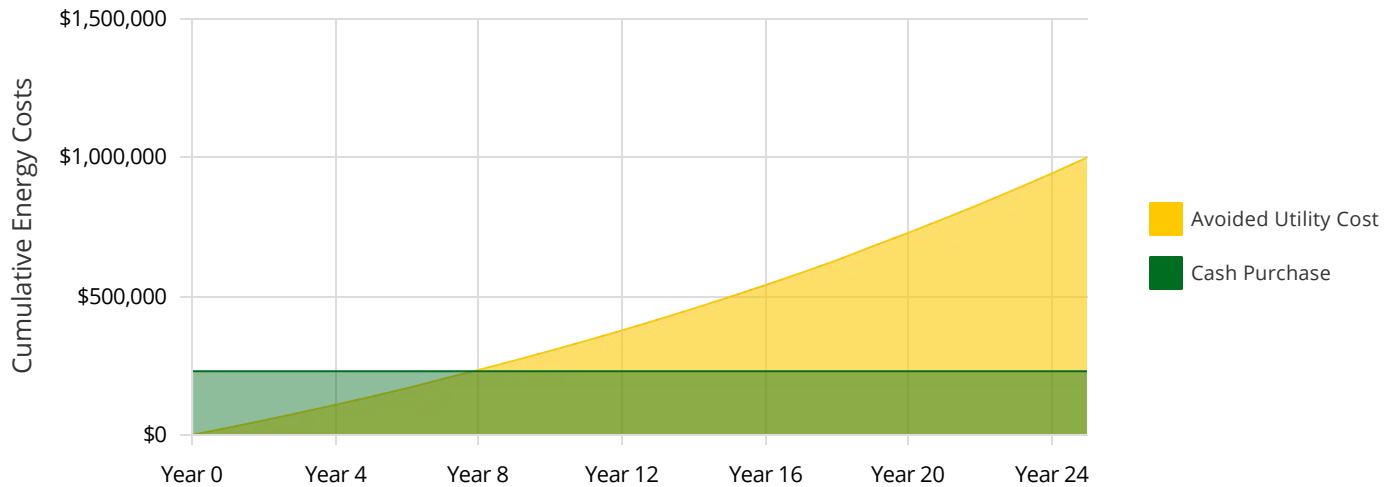
Post-solar utility bill: \$1,854

Savings: \$25,858

Financing Summary

Payment Options	Cash Purchase
Upfront Payment	\$229,620
Total Payments	\$229,620
Rebates and Incentives	-
Net Payments	\$229,620
25-Year Electric Bill Savings	\$1,001,459
25-Year IRR	13.65%
25-Year LCOE PV	\$0.09
25-Year NPV	\$288,921
Payback Period	7.9 Years

Cummulative Energy Costs By Payment Option



Benefits of Payment Options:

Cash Purchase:

- Maximize your savings by owning a secure long-term investment.
- Use federal investment tax credit to reduce your tax liability.
- Increase the market value of your home.

Loan:

- No money out of pocket
- Numerous low-cost, low interest rate loan programs are available.
- 'Own' an asset that generates significant financial value, unlike other home improvement loans.
- Achieve immediate savings, as you repay the loan over time.

Pace:

- Property-based financing (does not consider FICO score, debt-to-income ratio or personal income).
- No money out of pocket
- Low interest rates are available.
- Flexible repayment terms
- 'Own' an asset that generates significant financial value, unlike other home improvement loans.

About United Sun Energy

Proven Track Record

At United Sun Energy, we have been installing PV systems for residential, commercial, agricultural, and non-profit organizations since 2012.

Customer First

At United Sun Energy, it is our mission to empower our customer to make intelligent decisions that fit their needs, no one else's. Our unique "Customer First" approach to the evaluation, design and implementation of your solar system focuses on YOU, the customer.



We Stand By You

Beyond our quality workmanship and system components, United Sun Energy has industry-leading warranties and exceptional post-installation customer service. Our satisfied customers are how we continue to grow. We have extremely competitive pricing WITHOUT cutting corners or sacrificing quality or service.

Highest Quality

We hire and train the best installers in the business, many of which have been with us for over a decade. We do everything in-house, allowing us to design and install high-performance integrated solar energy systems, and then guarantee the performance and production.

Customer Testimonials

"We couldn't be happier with the investment of purchasing solar from United Sun Energy. They were very efficient, professional & easy to work with. The end product on the roof is super clean, no lines or breaker boxes visible anywhere! If your looking to make a solar investment, United Sun Energy is the company to go with, you won't be disappointed!"

Patrice J.

"We have had solar installed twice by United Sun Energy--once for our house and then just recently for our Ag well. They are trustworthy people who are always helpful and on time! Both jobs went smoothly and as planned. I appreciate the professionalism and customer service!"

Rhiannon C.

"Amazing service! Installation was a breeze. They installed 44 panels on my house and zero problems. Now my energy bill is almost \$0. I completely trusted them and they were so open and willing to explain all fees and potential issues that may occur long term. No hidden agenda! This is the best place for solar in NorCal!"

Ashley & Adam H.

See our Customer Reviews

