

## Solar PV Projects at Colorado State University

Updated 2/26/2021

										Panels			Inverters			
	Project	Size [kWDC]	Annual Output [kWh]	GHG Reductions [kg CO <sub>2</sub> E]	Mounting	Tilt Angle	Owner	Date Installed	REC Ownership	Manufacturer	Rating [W]	Number of Panels	Manufacturer	Rating [kW]	Number of Inverters	Designed & Installed
1	Christman Field - Phase 1	2,000	3,500,000	2,450,000	Single Axis tracking	0	Longroad Energy	12/31/2009	Xcel Energy	Trina	230	8,697	Advanced Energy	500 & 333	4	AMEC
1	Christman Field - Phase 2	3,300	5,000,000	3,500,000	Fixed Tilt	25	Longroad Energy	12/31/2010	Xcel Energy	Trina	230	14,352	Advanced Energy	500	6	GES
<b>Subtotal Christman Field</b>		<b>5,300</b>	<b>8,500,000</b>	<b>5,950,000</b>								<b>23,049</b>		<b>4,833</b>	<b>10</b>	
2	Engineering Building	18.90	27,000	18,900	Fixed Tilt	40	CSU	6/17/2009	CSU	BP Solar	175	108	SMA Sunny Boy	7	3	Bella Energy
3	Academic Village	12.60	18,000	12,600	Fixed Tilt	40	CSU	8/14/2009	CSU	Sharp	175	72	SMA Sunny Boy	6	2	Bella Energy
4	Behavioral Sciences Building	15.75	23,000	16,100	Fixed Tilt	40	CSU	5/1/2010	CSU	BP Solar	175	90	SMA Sunny Boy	6	3	Bella Energy
5	Lake Street Parking Garage	132.54	174,500	122,200	Fixed Tilt	10	CSU	5/1/2010	CSU	Sharp	235	564	Satcon PowerGate	135	1	Bella Energy
6	Research Innovation Center	54	78,300	54,800	Fixed Tilt	30	CSU	5/1/2010	CSU	ET Solar	270	200	PV Power	75	1	Encore Electric
7	Morgan Library - Study Cube	4.32	5,900	4,100	Fixed Tilt	15	CSU	4/1/2012	CSU	Phono Solar	240	18	SMA Sunny Boy	3	1	Merit Electric
8	Powerhouse Energy Campus	21.60	28,442	19,900	Fixed Tilt	15	CSU	11/1/2013	CSU	Yingli Solar	240	90	Power One PV1-10.0-1	10	2	Collins Control
9	Braiden Hall	99.96	133,700	93,600	Fixed Tilt	See note	Atmosphere Conservancy	11/1/2014	Fort Collins Utilities	ReneSola	255	392	Advanced Energy	23 (2), 16 (1), 12(2)	5	Namaste
10	Recreation Center	544.73	717,278	502,100	Fixed Tilt	12	Atmosphere Conservancy	3/17/2015	Fort Collins Utilities	Trina	305	1,786	Advanced Energy	23 (18), 20 (1)	19	Namaste
11	Parmalee Hall	139.08	183,135	128,200	Fixed Tilt	See note	Atmosphere Conservancy	4/22/2015	Fort Collins Utilities	Trina	305	456	Advanced Energy	23(4), 20(1)	5	Namaste
12	University Center for the Arts	98.52	129,721	90,800	Fixed Tilt	12	Atmosphere Conservancy	6/2/2015	Fort Collins Utilities	Trina	305	323	SMA	24(1), 20(3)	4	Namaste
13	Veterinary Teaching Hospital	220.21	289,964	203,000	Fixed Tilt	12	Atmosphere Conservancy	6/3/2015	Fort Collins Utilities	Trina	305	722	SMA	24(6), 20(2)	8	Namaste
14	Edwards Hall	91.81	120,885	84,600	Fixed Tilt	12	Atmosphere Conservancy	6/18/2015	Fort Collins Utilities	Trina	305	301	SMA	24(1), 20(2), 15(1)	4	Namaste
15	Student Recreation Center - Spotlight Solar Curve	1.71	2,252	1,600	Fixed Tilt		CSU	8/15/2018	CSU	Lumos	285	6	Fronius	1.5	1	Microgrid
16	Arkansas Valley Research Center - Rocky Ford	12	19,719	13,800	Fixed Tilt	20	CSU	5/1/2019	CSU	Mission Solar	305	41	Solar Edge	14.4	1	T&T Electric
17	Western Colorado Research Center - Orchard Mesa (COB)	14.8	23,641	16,500	Fixed Tilt		CSU	5/1/2019	CSU	SunPower	435	34	Solar Edge	20	1	High Noon Solar
18	Western Colorado Research Center - Orchard Mesa (VDL)	14.8	23,641	16,500	Fixed Tilt		CSU	5/1/2019	CSU	SunPower	435	34	Solar Edge	20	1	High Noon Solar
19	Facilities Services North - Bike Shelter	4.2	5,770	4,000	Fixed Tilt	10	CSU	7/3/2019	CSU	Solaria	350	12	Enphase	0.3	12	Sandbox Solar
20	Agricultural Research Development & Educational Center (ARDEC)	8.2	14,457	10,100	Fixed Tilt w/ manual adj.	35	CSU	4/1/2020	CSU	Jinko & Longi	325 & 360	24	Solar Edge	11.4	1	Sandbox Solar
21	Lory Student Center	80	110,500	77,400	Fixed Tilt	10	CSU	1/7/2021	CSU	Trina	400	200	SMA	25	3	EnergyLink
<b>Subtotal - COMPLETED w/o Christman</b>		<b>1,590</b>	<b>2,129,804</b>	<b>1,490,800</b>								<b>5,273</b>			<b>78</b>	
<b>Subtotal - COMPLETED</b>		<b>6,890</b>	<b>10,629,804</b>	<b>7,440,800</b>								<b>28,322</b>			<b>88</b>	
<b>Subtotal - CSU Owned</b>		<b>315</b>	<b>444,622</b>	<b>311,100</b>								<b>1,293</b>			<b>30</b>	

	Pending Project	Size [kWDC]	Annual Output [kWh]	GHG Reductions [kg CO <sub>2</sub> e]	Mounting	Tilt Angle	Owner	Date Started	REC Ownership	Panels			Inverters			Designed & Installed
										Manufacturer	Rating [W]	Number of Panels	Manufacturer	Rating [kW]	Number of Inverters	
22	Laurel Village - Alpine	136	184,200	128,900	Fixed Tilt	20	Solaris	Q2 2021	CSU	Boviet	400	340	CPS	50, 60	2	Namaste
23	Laurel Village - Pinon	170	224,000	156,800	Fixed Tilt		Solaris	Q2 2021	CSU							
24	South College Parking Garage	258.4	338,900	237,200	Fixed Tilt		Solaris	Q2 2021	CSU							
25	Johnson Family Equine Hospital	625	862,200	603,500	Fixed Tilt		Solaris	Q2 2021	CSU							
26	ARDEC - Ground Mount	360.4	595,800	417,100	Fixed Tilt		Solaris	Q3 2021	CSU							
27	Parmalee - South Wings	61.2	93,000	65,100	Fixed Tilt		Solaris	Q3 2021	CSU							
28	Academic Village - Engineering	68.8	104,000	72,800	Fixed Tilt		Solaris	Q3 2021	CSU							
29	Richardson Design Center	108.8	149,300	104,500	Fixed Tilt		Solaris	Q3 2021	CSU							
30	NRRC B	231.2	336,100	235,300	Fixed Tilt		Solaris	Q3 2021	CSU							
31	NRRC D	81.6	116,400	81,500	Fixed Tilt		Solaris	Q3 2021	CSU							
32	ARDEC - HQ and Shop	299.2	396,500	277,600	Fixed Tilt		Solaris	Q4 2021	CSU							
33	Global Foods Innovation Center - Animal Science Addition	224.4	302,700	211,900	Fixed Tilt		Solaris	Q4 2021	CSU							
34	Corbett - Center Section	108.8	158,200	110,700	Fixed Tilt		Solaris	Q4 2021	CSU							
35	Natural Resources	163.2	236,100	165,300	Fixed Tilt		Solaris	Q4 2021	CSU							
36	Ingersoll - Center Section	88.4	127,200	89,000	Fixed Tilt		Solaris	Q4 2021	CSU							
37	Health and Medical Center	183.6	262,100	183,500	Fixed Tilt		Solaris	Q4 2021	CSU							
38	Translational Medicine Institute	319.6	440,300	308,200	Fixed Tilt		Solaris	Q1 2022	CSU							
39	Westfall Lot Parking Canopy	1,122	1,466,000	1,026,200	Fixed Tilt		Solaris	Q2 2022	CSU							
40	Aggie Village North - Cottonwood	414.8	547,900	383,500	Fixed Tilt		Solaris	Q2 2022	CSU							
41	Aggie Village North - Lodgepole	231.2	304,700	213,300	Fixed Tilt		Solaris	Q2 2022	CSU							
42	Aggie Village North - Walnut	204	284,000	198,800	Fixed Tilt		Solaris	Q2 2022	CSU							

<b>Subtotal - PENDING</b>	<b>5,461</b>	<b>7,529,600</b>	<b>5,270,700</b>													
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<b>Grand Total (completed &amp; pending)</b>	<b>12,350</b>	<b>18,159,404</b>	<b>12,711,500</b>								<b>28,322</b>			<b>88</b>		
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kW DC = Kilowatts of Direct Current Power  
W = Watts  
kW = Kilowatts (1,000 Watts)  
kWh = Kilowatt Hours; a kilowatt hour is a measure of electricity use; an average home in Fort Collins uses 750 kWh every month  
kg CO<sub>2</sub>e = Kilograms of Carbon Dioxide Equivalent; the amount of CO<sub>2</sub> which would have the equivalent global warming impact