

Glenn County

Measure Number	Included in Project	Energy Efficiency Measure Description	Project Cost	First Year Annual Energy Savings	kWh Savings	Natural Gas Savings, Therms	Maintenance Savings
Willows							
Planning & Public Works							
1	Y	P&PW Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$10,174	\$1,726	8,897	0	\$102
2	Y	P&PW HVAC Retrofit - replace existing 22 year old 7.5 ton Carrier gas/electric package unit and 23 year old 5 ton RUUD gas/electric split system with equivalently sized, high efficiency equipment.	\$30,408	\$744	2,032	449	\$304
3A	N	North Colusa Solar Array, Option A - Installation of a 63 kW roof mount solar energy generation array that will supply energy to the Planning & Public Works, the Agriculture & Air Pollution, Fleet Services, and Road Department buildings.	\$226,123	\$18,370	87,124	0	\$0
3B	Y	North Colusa Solar Array, Option B - Installation of a 54 kW ground mount solar energy generation array that will supply energy to the Planning & Public Works, the Agriculture & Air Pollution, Fleet Services, and Road Department buildings.	\$220,916	\$18,396	86,707	0	\$0
3C	N	North Colusa Solar Array, Option C - Installation of a 63 kW roof mount solar energy generation array that will supply energy to the Planning & Public Works, the Agriculture & Air Pollution, Fleet Services, and Road Department buildings.	\$236,922	\$18,472	88,119	0	\$0
4	Y	A&AP Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$17,557	\$3,004	15,486	0	\$176
5	Y	A&AP HVAC Retrofit - Replace a 22 year old York 3.5 ton and an equally old Bryant 5 ton gas/electric split system with equivalently sized, high efficiency equipment.	\$29,558	\$448	1,879	107	\$296
6	Y	Fleet Services/Road Department					
7	Y	Fleets/Road Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$34,444	\$3,989	20,562	0	\$344
8	Y	Child Services Interior Lighting Retrofit - lighting upgrade of interior lighting systems.	\$7,833	\$1,746	9,001	0	\$78
9	Y	Child Services HVAC Retrofit - replace three 17 year old 3.5 ton Bryant gas/electric package units with equivalently sized, high efficiency equipment.	\$35,709	\$795	1,721	593	\$357
10	Y	Willows Memorial Hall					
9	Y	Willows Memorial Hall Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$30,858	\$7,734	39,868	0	\$309
10	Y	Willows Memorial Hall HVAC Retrofit - replace three 21 year old 3 ton York gas/electric package units and one 19 year old 3 ton Luxaire gas/electric package unit with equivalent sized, high efficiency equipment.	\$38,322	\$746	3,178	167	\$383
11	Y	Willows Memorial Hall R-22 Replacement - replace one 10 year old 2 ton Bryant gas/electric package unit and one 9 year old 2 ton Goodman gas/electric package unit with equivalently sized, high efficiency, equipment that utilizes the more environmentally friendly R-410A refrigerant.	\$18,855	\$107	453	21	\$189
12	Y	Willows Memorial Hall Solar Array - installation of a 79 kW roof mounted solar energy generation array that will supply energy to the Memorial Hall.	\$257,348	\$26,625	123,496	0	\$0
13	Y	Courthouse Annex					
13	Y	Courthouse Annex Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$17,625	\$2,896	14,927	0	\$176
14A	N	Courthouse Annex HVAC System Retrofit, Option A - replace outdated HVAC system with all new elements; replace heaters with hot water coils and a boiler, replace the ac split system, and upgrade the fan section with ECM and VFD control.	\$205,504	\$4,863	21,953	776	\$2,055
14B	Y	Courthouse Annex HVAC System Retrofit, Option B - replace outdated HVAC system with all new system; eliminate existing heaters and refer coils, replacing with heat pump coils in the place of the heaters. The outdoor ac condenser will be replaced by a like sized VRF heat pump system. This measure will also upgrade the fan section with ECM and VFD control.	\$151,072	\$4,955	10,080	3,852	\$1,511
15	Y	Courthouse Annex Water Heater Retrofit - replace one 19 year old 75 gallon State Industries water heater with an equivalently sized, high efficiency, water heater.	\$6,486	\$25	0	29	\$65
16	Y	District Attorney's Office					
16	Y	DA Office Comprehensive Lighting Retrofit - lighting upgrade includes LED wall packs, squares, T8s, and screw-ins.	\$8,731	\$1,466	7,558	0	\$87
17	Y	DA Office HVAC Retrofit - replace two gas/electric package units, one 16 year old 3 ton Bryant and one 19 year old 4 ton Luxaire, with equivalently sized high efficiency equipment.	\$25,140	\$1,529	7,599	71	\$251
18	Y	Jail Administration					
18	Y	Jail Admin Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$8,765	\$1,351	6,966	0	\$88
19	Y	Jail Admin HVAC Retrofit - replace one 16 year old 7.5 ton Bryant gas/electric package unit with an equivalently sized high efficiency unit.	\$17,128	\$286	1,191	71	\$171
20	Y	Jail Admin Water Heater Retrofit - replace 27 year old 40 gallon State Industries water heater with an equivalently sized high efficiency water heater.	\$4,176	\$36	0	43	\$42
21	Y	Jail Admin Solar Array - installation of multiple roof mounted solar energy generation arrays that have a total production capability of 108 kW. The arrays will be mounted on top the Jail Administration, County Jail, and Sheriff's buildings.	\$328,798	\$20,718	155,566	0	\$0
22	Y	Glenn County Jail					
22	Y	County Jail Comprehensive Lighting Retrofit - lighting upgrade includes LED wall packs, 1 x 1 square fixtures, and other interior lighting.	\$16,243	\$3,675	18,957	0	\$162
23	Y	County Jail HVAC Retrofit - replace two 25 ton gas/electric rooftop package units and one 3.5 ton electric split system with equivalent size high efficiency units. The existing 25 ton Trane units are 20 years old and the Carrier system is 28 years old and all three are using restricted R-22 refrigerant which will be replaced with more environmentally friendly R-410A refrigerant.	\$141,070	\$6,592	32,048	482	\$1,411
24	Y	Facilities Office/Old Jail					
24	Y	Facilities Office Comprehensive Lighting Retrofit - lighting upgrade includes LED T8s, screw-ins, exit signs for the interior and wall packs for the exterior.	\$15,815	\$2,646	13,668	0	\$158
25	Y	Facilities Office HVAC Retrofit - replace a 31 year old 4 ton York electric split system (outdoor condenser and indoor air handler) with equivalently sized high efficiency equipment.	\$11,792	\$309	1,606	0	\$118
26	Y	Facilities Office R-22 Replacement - replace 12 year old 3 ton Bryant gas/electric package unit with equivalently sized high efficiency unit that utilizes the more environmentally friendly R-410A refrigerant.	\$12,210	\$55	209	18	\$122
27	Y	Sheriff's Office					
27	Y	Sheriff's Office Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$27,369	\$4,627	23,851	0	\$274
28	Y	Sheriff's Office HVAC Retrofit - replace one 16 year old 2 ton Bryant gas/electric package unit and one 15 year old 4 ton Bryant gas/electric package unit with equivalently sized high efficiency equipment.	\$19,387	\$251	986	77	\$194
29	Y	Sheriff's Office R-22 Replacement - replace 9 year old 4 ton Day & Night gas/electric package unit with an equivalently sized high efficiency unit that uses R-410A refrigerant as it's working fluid.	\$17,816	\$119	435	41	\$178
30	N	Juvenile Hall					
30	N	Juvenile Hall Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$27,150	\$6,164	31,775	0	\$272
31	N	Juvenile Hall HVAC Retrofit - replace three 14 year old 7.5 ton York gas/electric package units with equivalently sized high efficiency equipment.	\$45,734	\$917	3,967	190	\$457
32	Y	Health Services Building					
32	Y	Health Services Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$23,872	\$4,420	22,786	0	\$239
33A	N	Health Services Solar Array, Option A - installation of a ground mount solar energy generation array with a total production capacity of 139 kW. This array has been sized to supply energy to both the Health Services building and Juvenile Hall.	\$443,350	\$43,320	207,126	0	\$0
33B	Y	Health Services Solar Array, Option B - installation of a ground mount solar energy generation array with a total production capacity of 69.6 kW. This array has been sized to supply energy to the Health Services building.	\$264,096	\$22,793	102,850	0	\$0
34	Y	WDVS					
34	Y	WDVS Wall Mounted Unit Replacement - replace one 39 year old Carrier 21,000 btuh wall mounted AC unit with a 2 ton ductless split system.	\$7,855	\$254	1,311	0	\$79
Orland							
35	Y	Community Recovery & Wellness Center					
35	Y	CRWC Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$22,118	\$3,241	16,707	0	\$221

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36	Y	CRWC HVAC Retrofit - replace three Bryant gas/electric split systems (one 16 year old 4 ton, one 16 year old 5 ton, and one 14 year old 3 ton) with equivalently sized high efficiency equipment.	\$33,267	\$1,856	2,296	549	\$333
37	Y	CRWC R-22 Replacement - replace three 11 year old 3 ton Bryant gas/electric split systems (cooling only) with equivalently sized high efficiency equipment that utilizes the more environmentally friendly R-410A refrigerant.	\$22,911	\$78	400	0	\$229
38	Y	CRWC Solar Array - installation of a 30 kW roof mounted solar energy generation array that will supply energy to the Community Recovery & Wellness Center. Orland Memorial Hall	\$114,154	\$12,620	43,320	0	\$0
39	Y	Orland Memorial Hall Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$23,965	\$1,034	5,330	0	\$240
40	Y	Orland Memorial Hall HVAC Retrofit - replace three 15 year old Bryant gas/electric package units (one 3.5 ton, two 4 ton, and one 7.5 ton) with equivalently sized high efficiency units. North County Administration Center	\$57,930	\$135	554	36	\$579
41	Y	North County Admin Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$18,653	\$2,892	14,905	0	\$187
42	Y	North County Admin HVAC Retrofit - replace four gas/electric package units (one 23 year old 7.5 ton York, one 15 year old 5 ton Trane, one 15 year old 7.5 ton Trane, and one 16 year old 7.5 ton Bryant) and one 15 year old 2 ton Bryant electric package unit with equivalently sized high efficiency equipment.	\$83,476	\$1,639	6,219	556	\$835
43	Y	North County Admin Water Heater Retrofit - replace one 19 year old 40 gallon State Industries electric water heater with an equivalently sized high efficiency electric water heater. Harmony House	\$3,144	\$47	241	0	\$31
44	Y	Harmony House HVAC Retrofit - replace one 18 year old 4 ton York gas/electric split system with equivalently sized high efficiency equipment. Transition Age Youth Center	\$11,369	\$361	1,486	94	\$114
45	Y	TAY Center HVAC R-22 Replacement - replace one 9 year old 5 ton Payne gas/electric package unit with an equivalently sized high efficiency unit that uses the more environmentally friendly R-410A refrigerant.	\$12,920	\$91	403	16	\$129
Hamilton County							
46	Y	Community Center/Library Comprehensive Lighting Retrofit - lighting upgrade includes LED lights for poles, decorative lighting, and restrooms with occupancy sensors where needed.	\$13,493	\$1,056	5,444	0	\$135
47	Y	Community Center Furnace Retrofit - replace two 48 year old 150k btuh Day & Night furnaces with like sized high efficiency condensing furnaces.	\$10,226	\$169	0	217	\$102
48	Y	Community Center AC Replacement - replace three Kenmore wall mounted AC units with like sized ductless split systems.	\$20,554	\$95	490	0	\$206
49	Y	Library Package Unit Replacement - replacement of a 17 year old 5 ton Bryant gas/electric package unit with an equivalently sized high efficiency unit. County Wide	\$11,527	\$188	819	37	\$115
50	Y	Lighting System Occupancy Sensors - installation of wall or ceiling mounted occupancy sensors for the different locations around the county that are receiving lighting upgrades in this project.	\$24,938	\$2,415	12,449	0	\$249
Total Cost of all Measures			\$2,342,073	\$172,984	846,937	7,527	\$11,568
			Energy Audit	\$5,200			
			Engineering / Project Management	\$115,810			
			Energy Efficiency Bonding	\$20,822			
			PROJECT TOTALS	\$2,483,905	\$172,984	846,937	\$11,568
			Parameters:				
			1.0-kWh =	0.00072	Metric Tons GHG Emissions*	Annual greenhouse gas emissions reduction (tons):	651.4
			Electricity Cost =	0.00053	Metric Tons GHG Emissions*	Equivalent Number Passenger Vehicles per year:	110.7
			Natural Gas Cost =	\$0.194	per kWh	Equivalent reduction in gallons of gas consumed per year:	67,096
			CRWC Propane=	\$2.57	per Therm	Equivalent reduction of barrels of oil consumed per year:	1,368
					per Gallon	Equivalent ton of carbon sequestered annually by:	136.8

*Energy Savings safety factor: 15% for mechanical, 10% for lighting