



## 2022 Clear Creek County Revisited Solar Photovoltaic - Budgetary Proposal

Submitted By:

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**Project:**  
Clear Creek County Solar PV  
2022 Solar Photovoltaic Projects

## Budgetary Proposal

### **Attn:**

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### Project Overview:

In order to facilitate energy sustainability and minimize costs of operations, Iconergy, Ltd. has provided this budget proposal for adding photovoltaic solar arrays including power grid tie in at Station 1A, Road and Bridge Dumont, Clear Creek County Courthouse, and the Jordan House.

The proposed facilities were reviewed in the Clear Creek County Technical Energy Audit (TEA) Report provided to Clear Creek County by Iconergy in 2016. Several market fluctuations have occurred since the TEA report was drafted. In addition, technologies have continued to develop. The following information has provided current historical costs of system installations and adjusted energy production values.

### Detailed Base Scope of Service:

Iconergy shall provide the following services as part of the scope for providing photovoltaic systems at the following facilities:

Clear Creek County Courthouse  
405 Argentine St.  
Georgetown, CO 80444

Station 1A  
3400 Stanley Rd  
Dumont, CO 80436

Clear Creek County Animal Shelter  
500 W Dumont Rd  
Dumont, CO 80436

Dumont- Road and Bridge  
3549 Stanley Rd.  
Dumont CO 80436

- Photovoltaic roof mount arrays in sizes indicated. Animal Shelter is Ground Mount per the 2016 TEA although Iconergy would suggest a roof-mounted system should be investigated as it may provide a better overall economic value.
- Grid tie components.
- Onsite Supervision: Onsite supervision over the duration of the project while contractors are onsite. Supervisor shall oversee all operations and ensure contractors are performing the work in a safe and professional fashion.

- Provide all insurance requirements in accordance with Clear Creek County standards
- Provide a payment and performance bond
- Include an Owner’s reserve and contingency to adjust for budgetary costs and unforeseen conditions.
- Secure all permitting for the completion of the project
- Commissioning, training, and warranty administration (for one year) of all new equipment and systems

**Exclusions:**

- All sanitary and temporary facilities are assumed to be provided by CCC per past CCC direction on other retrofit projects
- Dumpsters
- Modification to building for structural support. It is assumed all buildings current configuration will support noted size of array. This will be verified during the design phase of the design-build project.
- Array obstructions need to be confirmed. Iconergy’s 2016 analysis was to have included obstructions but Iconergy has since developed reason to want to redo the obstruction analysis.
- Excessive snow loads. The estimates have been derived to include historical snow loads (2017-2020) but those may not reflect heavier years of snowfall.
- Three years of measurement and verification (M&V).
  - This can be added if desired per Iconergy’s past work with CCC on solar arrays.

**Energy Production:**

Actual Data from installed systems in the County have been collected for the DA’s Office and the Sheriff’s Maintenance Garage for 2018, 2019, and 2020. This data has been compared against original projected energy production from the installer. A multiplier has been used to adjust from originally projected energy production below to adjust for actual production.

Building	Array Size (kW)	Expected Actual Production (kWh)/yr	Compared To Actual Data From:
County Courthouse	69.26	88,539	DA's Office
Station 1A	19.95	28,549	Sheriff's Maintenance Garage
Animal Shelter	31.92	47,572	Sheriff's Maintenance Garage
Dumont Road and Bridge	57.00	68,635	Sheriff's Maintenance Garage
Jordan House	13.40	15,489	NA. Calculated using PVWatts

**Cost and Savings – Conventional Financing (CCC-owned system):**

Incentives: Tax incentives are not applicable.

Solar Renewable Energy Credit (SREC) good until 2025:

REC Price Medium: \$0.0375/kWh (Provided from XCEL Solar Rewards Medium and Program)

REC Price Small: \$0.005/kWh (Provided from XCEL Solar Rewards Small and Program)

Building	Expected Actual Production (kWh/yr)	Array size kW	Total Project Cost \$	Average Cost \$/kWh	Energy Saving \$/yr	REC Total \$/yr	Total Savings \$/yr	Simple Payback (yrs)
County Courthouse	88,539	69.26	\$226,633	\$ 0.047	\$ 4,200	\$ 3,604	\$ 7,805	29.0
Station 1A	28,549	19.95	\$ 94,704	\$ 0.139	\$ 3,972	\$ 140	\$ 4,112	23.0
Animal Shelter	43,943	31.92	\$182,430	\$ 0.047	\$ 2,085	\$ 1,648	\$ 3,733	48.9
Dumont Road and Bridge	68,635	57	\$197,427	\$ 0.047	\$ 3,256	\$ 2,889	\$ 6,145	32.1
Jordan House	15,489	13.4	\$ 59,254	\$ 0.139	\$ 2,155	\$ 77	\$ 2,232	26.5
<b>Totals</b>	<b>245,154</b>	<b>191.53</b>	<b>\$760,448</b>		<b>\$ 15,668</b>	<b>\$ 8,358</b>	<b>\$ 24,026</b>	<b>31.7</b>

\*\*\*Cost provided in this “budgetary proposal” are using historical aggregate costs. Actual competitive market costs along with a site analysis will be provided if the county chooses to move forward on the project.

## Cost and Savings – Production-Based Financing (Energy As a Service):

Importantly, there are more cost-effective ways for CCC to pursue and deploy solar than owning the system outright on Day 1. Using other financing mechanisms that would allow the County to leverage incentives in the marketplace, a better ROI is all but assured for CCC than the aggregate ~30 year payback to the above five buildings.

Iconergy will present these values to CCC in the coming weeks and amend this report accordingly. They would involve CCC making little to no up front investment but, rather, paying a monthly fee via an “energy as a service” model.

## Summary:

We at Iconergy appreciate the opportunity to submit this proposal and look forward to continuing to work with Clear Creek County on this project. As stated above, the pricing included in this proposal is to be considered as budgetary information in order to move forward with the next step of site analysis and market costs. If you have any comments or need clarity about a line item in the attached estimate, please do not hesitate to ask.

Best Regards,

Lee Macke