City of Calistoga Staff Report

TO: Honorable Mayor and City Council

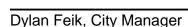
FROM: Dylan Feik, City Manager

DATE: December 6, 2016

SUBJECT: Consideration of Solar Array at Dunaweal Wastewater Treatment

Plant

APPROVAL FOR FORWARDING:



ISSUE: Should the City Council consider pursuing a solar energy project near the Dunaweal Wastewater Treatment Plant and authorize the city manager to enter into a professional services agreement to begin preliminary work related thereto.

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RECOMMENDATION: The Council has several options, including:

 Direct staff to pursue a solar energy project near the Dunaweal Wastewater Treatment Plant and authorize the city manager to enter into a professional services agreement to begin preliminary work related thereto.

2. Direct staff not to pursue a project at this time.3. Direct staff accordingly.

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BACKGROUND: In September 2016, the city manager began researching alternative energy sources which could be used by the City. Specifically, could the City install a solar power system to offset operational energy costs of expensive facilities including the Dunaweal Wastewater Treatment Plant, Kimball

- Water Treatment Plant, Calistoga Community Pool, City Hall, Fire Station and various other facilities. The city manager focused on the following Goals and Objectives set forth by the City Council for Fiscal Year 2016-17 to guide the research
 - 1. **Goal 1, Objective 3**. Increase the Water and Wastewater Fund reserves to a minimum of 20% within two fiscal years and increase the CIP and Equipment Replacement Fund reserves to meet anticipated needs over the next three fiscal years.
 - Goal 1, Objective 4. Provide optimal City services in a sustainable manner
 - Goal 4, Objective 1. Implement "green" environmental sustainability policies and initiatives
 - Goal 4, Priority Project 1. Implement the GHG Emissions Reductions Measures included in the Climate Action Plan
 - Goal 6, Objective 5. Develop a plan to achieve year-round use of the Community Pool

Staff also compiled historical energy data for the previous 5 years to guide decision-makers towards prioritizing the most cost-efficient projects. This data has been provided to many interested parties to determine the feasibility of projects.

DISCUSSION: The City has 31 electricity meters and is a customer to both PG&E and Marin Clean Energy (MCE). The City uses approximately 2,140,753 kilowatt hours (kWh) of electricity each year which costs approx. \$350,567. The Dunaweal Wastewater Treatment Plant is the largest energy consumer of all City accounts and uses approximately 65% of all electricity. The Calistoga Community Pool is the 2nd largest electricity user. It represents 152,164 kWh of usage each year, or approximately 7%.

If the City were to focus efforts on a solar project, the largest user is undoubtedly the Dunaweal Wastewater Treatment Plant.

PRESENTATION AND POTENTIAL COURSES OF ACTION: Using the 5-year historical data, staff requested Gopal Shanker or Recolte Energy to review City data and provide guidance into possible projects/solutions for a project. The presentation provided to Council this evening will go into detail on the analysis, potential savings and energy reduction targets, and possible financing solutions including: a power purchase agreement (P3); direct loans; or financing through cash, grants and loans.

Preliminary findings indicate the City could install one photovoltaic (PV) system, or solar system, to offset the costs of the Dunaweal Wastewater Treatment Plant. Using what is called "net metering," this PV system would also take advantage of "banking" solar-produced energy and using it for other City accounts. The City

could also choose to include battery storage which would allow the City to "sellback" unused electricity to Marin Clean Energy. It is estimated that a PV system would provide, conservatively, approx. \$234,266 annually in costs savings. Without including a rate increase for electricity, this equates to \$4,685,320 in savings over the next 20 years. These findings provide the City with a project that is not only viable, but presents a significant return on investment. The annual savings from the project can be used to fund a project.

Should the Council wish to proceed, staff recommends approving a services and fees agreement with a firm which serves to represent the City as a client. The agreement would include different milestones/tasks which must be completed and would be split into multiple phases so that the City would only be paying for the scope of work as it progresses through the project. The scope of work is outlined below:

	Subtotal	\$20,000
•	Project Prequalification	\$10,000
•	Feasibility Study	\$10,000

Return to City Council for direction

	Subtotal	\$70,000
•	Interconnection	\$10,000
•	Construction	\$20,000
•	PV Vendor Selection	\$20,000
	Qualifications Development	\$20,000
•	Photovoltaic (PV) Request for	

Total \$90,000

A full copy of the agreement is included as an attachment.

pregualification, this item will return to City Council for direction.

Once the City and consultant complete the project feasibility study and project

FISCAL IMPACT: To complete the project feasibility study and prequalification criteria, staff would spend \$20,000; funds to come from General Fund, under Account #01-5546-4901 to prepare the project and present options to City Council for future consideration. Tonight's decision authorizes up to the \$20,000. If Council decides to pursue a project, a contract amendment would be provided to Council that would address future costs for professional services. The maximum contract amount would be \$90,000.

Capital Costs. Final capital project costs are unknown at this time and will vary depending on which option Council will consider. For example, if the Council

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desires to enter into a power purchase agreement, the City may have zero capital costs in the project. However, should the Council desire to fund the entire project through a grant/loan, then the City Council would be obligated to authorize additional funding at a later date.

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ATTACHMENT:

- 1. City of Calistoga 12/06/16 Presentation, Recolte Energy
- 116 2. Cash Flow Analysis
- 3. Services and Fees Agreement Recolte Energy

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