



Agenda Date: 10/7/2020

Agenda Placement: 8A

Napa Sanitation District Board Agenda Letter

TO: Honorable Board of Directors

FROM: Timothy Healy - General Manager
NS-Technical Services/Engineer

REPORT BY: Matthew Lemmon, Senior Civil Engineer - 707-258-6004

SUBJECT: Receive Presentation from Staff and Consultants and Authorize the General Manager to Execute a Letter of Intent with NextEra Energy, Inc.

RECOMMENDATION

Authorize the General Manager to execute a Letter of Intent with NextEra Energy, Inc. to enter into a Power Purchase Agreement (PPA) for a linear generator project.

EXECUTIVE SUMMARY

In April 2014, NapaSan's energy consultant, Récolte Energy, proposed a combination of solar photovoltaic (PV), stationary storage, and fuel cell systems to reduce NapaSan's electricity bills. This recommendation led to the installations, in March 2016, of a 1 MW / 2 MWh Tesla stationary storage system owned and operated by NextEra, and, in March 2017, a 1 MW SunPower PV system. A fuel cell system was supposed to be next, but NapaSan's post-PV load profile combined with Bloom Energy's minimum project size of 500 kW ruled it out.

In early 2019, Récolte initiated discussions with NextEra about a promising new technology called a linear magnetic generator (LMG). It was developed by Mainspring and partially funded by NextEra's venture capitalist arm.

The LMG uses a low temperature combustion process to produce electricity. It is fuel agnostic, produces minimal emissions, and, unlike fuel cells, is load following. LMG units are modular and start at 240 kW. These attributes and NextEra's willingness to provide NapaSan a Power Purchase Agreement (PPA) made the LMG worth evaluating.

Récolte has been working with NextEra, Jim Keller, PG&E, and Hazen and Sawyer – NapaSan's Wastewater Treatment Plant Master Plan consultant – to establish the LMG's technical and economic viability. Its economic viability is enabled by Self-Generation Incentive Program (SGIP) rebates, for which the LMG would be eligible (as a

renewable electricity generator) only if it were fueled exclusively by NapaSan's digester gas. The LMG is expected to qualify for additional SGIP rebates because NapaSan is a critical facility and located in an area that has been subject to multiple Public Safety Power Shutoff events.

NextEra used its estimates of SGIP rebates to provide a few PPA options. Récolte used the \$0.04089 / kWh starting price with no annual escalator, and estimated savings to be \$75K-\$225K per year for 14 years, or \$1M-\$3M cumulatively. The lower amounts assume that NapaSan will be purchasing natural gas to make up for the digester gas diverted from its co-gen system to the LMG, and the higher amounts assume that NapaSan can increase its production of digester gas to meet the needs of both systems.

NextEra has prepared a letter of intent (LOI) for NapaSan. During the 6-month term of the LOI:

- NextEra will submit SGIP and interconnection applications to PG&E and develop a PPA with a finalized price for NapaSan's review and approval.
- Hazen and Sawyer will evaluate the opportunity costs of providing digester gas to the LMG.
- NapaSan is precluded from pursuing any "Competing [electricity generating or gas-to-electricity conversion] Transactions". The LOI does not obligate NapaSan to execute the PPA, but NapaSan should plan to execute it, unless Hazen and Sawyer's detailed energy analysis shows that the digester gas has better alternate uses or the final PPA price results in insufficient savings.

Récolte and Hazen and Sawyer's preliminary analysis of the LMG supports NapaSan signing the LOI. It has been reviewed by NapaSan's counsel.

Staff recommends that the Board authorize the General Manager to execute the LOI with NextEra.

FISCAL & STRATEGIC PLAN IMPACT

Is there a Fiscal Impact? No

ENVIRONMENTAL IMPACT

There is no environmental impact associated with the Letter of Intent.

BACKGROUND AND DISCUSSION

None.

SUPPORTING DOCUMENTS

- A . Letter of Intent
- B . Presentation Slides

Napa Sanitation District: Approve

Reviewed By: Timothy Healy

