



CITY OF CONCORD

Report to Council

FROM: Brian LeBrun – Deputy City Manager Finance

DATE: January 27, 2016

SUBJECT: Solar Photovoltaic (PV) array proposed to be located on City property

Recommendation

Accept this report and approve the Energy and Environment Advisory Committee's recommendation to locate one or two 1.98 million kilowatt hours (each) Solar PV arrays at the Hall Street Wastewater Treatment Plant site and enter into a 20 year fixed rate Solar Power/Net Metering Purchase Agreement with SolarCity Corporation for the purchase of solar powered electricity for a portion of the City's non-G1 electricity accounts.

Background

The Energy and Environment Advisory Committee has been working diligently to find alternate energy sources that will enhance the Concord community's use of renewable energy and provide financial relief to the City from the current high energy costs. Part of this effort was to have the City's consultant, Beacon Integrated Solutions, prepare a preliminary feasibility study and subsequent Request for Proposal (RFP) for a solar photovoltaic net metering project. In December 2014, the City Council approved a supplemental appropriation in the amount of \$34,030 for consulting services for this project.

In September 2015 the City issued a comprehensive Request for Proposal for a solar array project to be located at any or all of the following locations:

- 1) Capped Landfill – Old Turnpike Road
- 2) Wastewater Treatment Facility – 125 Hall Street
- 3) Water Treatment Facility – Hutchins Street
- 4) Wastewater Treatment Facility – 7 Penacook Road, Penacook

The City Received 6 proposals in response to the RFP.

In addition to the RFP, the City also received a subsequent proposal from Ranger Solar. They proposed building a 12-15 megawatt facility on private property located adjacent to West Portsmouth Street and sell the energy to a third party supplier. Their proposal included the City

purchasing all of its electricity requirements, including a portion of the electricity produced from the solar array through a third party electricity supplier.

The only parcel under consideration for the solar arrays is the Hall St. Waste Water Treatment Plant which is currently used by a local farmer. Green Gold Farm produces on approximately 40 acres of agricultural land at 125 Hall Street. The soils at this location are classified by the USDA Natural Resource Conservation Service as prime farmland. The protection of prime agricultural soils and the retention of existing agricultural uses are listed as a priority in Section VII. Conservation and Open Space in the City of Concord Master Plan 2030.

Discussion

The City and the Energy and Environment Advisory Committee worked closely with Beacon Integrated Solutions, the City's energy consultant, to formulate a recommendation for the solar array proposal.

Additionally, City Staff and Beacon Integrated Solutions evaluated the six proposals received through the RFP process and an alternative solution from Ranger Solar.

Of the six proposals received only one, SolarCity, was determined to provide positive economic benefits to the City. They proposed a flat electricity supply rate of \$0.0865 per kWh for the electricity produced at the Hall Street Wastewater Treatment Plant. This rate is compared to non G1 accounts (smaller electricity accounts in the City) of \$0.08983 per kWh for the ten year average competitive supply price and \$0.09755 per kWh for the average Unifil default service price. The proposed rate is slightly higher than the current contracted price of \$0.0778/kWh but it is fixed for a twenty-year term. The savings are conservatively estimated to be \$983,000 per array or \$1.97 million for both, over the next twenty years compared to the group net metering Unifil Default Service price. Additionally, the City would receive a property tax payment on SolarCity's personal property estimated at \$400,000. Installing solar arrays on the closed landfill and site does not make economic sense at this time and the Pennacook Wastewater Treatment Plant site does not work due to flood plain issues.

After careful review by Beacon Integrated Solutions, it was determined that entering into an agreement for the Ranger Solar alternative proposal was not in the best interest of the City at this time, but City Staff will continue to work with them within the confines of City Regulations to locate a solar array off of West Portsmouth Street.

Also attached are the plans for where each solar array would be located on the Hall Street Wastewater Treatment Plant site. The arrays would take up approximately 15 acres of land out of the currently available 39 acres. The Hall Street Site is used by Green Gold Farm for haying and planting purposes. City Staff will reach out to Green Gold Farms to inform them of the solar proposals for the land that they currently lease from the City.

If this recommendation is approved the Hall street solar array will use approximately 28 percent of the land currently used by Green Gold Farm.

In addition to or as an alternative to the Solar arrays, the City has the option of purchasing Renewable Energy Certificates (RECs) sufficient to claim that 100% of the City's electricity is purchased from renewable sources. The cost of the RECs is approximately \$.001 per kWh if

purchased in the competitive market. The full report from Beacon Integrated Solutions is attached to this report, for your review.

cc: Thomas J. Aspell, Jr., City Manager
Robert Werner, Chair Energy and Environment Advisory Committee