



## AMHERST TOWN COUNCIL

RFD#

Date:

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**TO:** Mayor Kogon and Members of Amherst Town Council

**SUBMITTED BY:** Andrew Fisher, Manager of Planning & Strategic Initiatives

**DATE:** May 7, 2019

**SUBJECT:** Capital Budget – Community Energy Strategy

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**ORIGIN:** On April 30, 2018 Council passed the following motion:

*That Council direct staff to connect with the Cumberland Energy Authority to explore the possibility of having **the Town of Amherst be included in their application to the NS Department of Energy's Solar for Community Buildings Program**, and further to this that staff research the PACE Program.*

**LEGISLATIVE AUTHORITY:** Municipal Government Act (MGA), section 65 *The council may expend money required by the municipality for (ac) a system for the supply or distribution of electricity, gas, steam or other source of energy.*

**RECOMMENDATION:** That Council approve alternative procurement and the entering into the attached Solar Photovoltaic (PV) Project Development, Installation, and Commissioning Agreement with Thermo Dynamics Ltd. in the amount of \$256,491, plus applicable taxes, NSPI connection fees of approximately \$3,000, and a structural engineer's fees of approximately \$10,000.

**BACKGROUND:** In August 2018, the Clean Foundation and the NS Department of Energy awarded the Town's bid to install a solar PV system on the Stadium and sell electricity to NSPI through a 20-year Power Purchase Agreement. The Alternative Resource Energy Authority (AREA) in partnership with Thermo Dynamics Ltd. (TDL) developed the bid for the town, as well as, bids submitted by other municipal units including the Cumberland Energy Authority, Municipality of the District of Argyle, the Town of Yarmouth, and others. Under the attached agreement TDL is responsible for the design, installation, and commissioning of the system in conjunction with NSPI. The Town does not pay the full contract price until NSPI confirms that the system has achieved operation under the Power Purchase Agreement.

The total AC power output of the system will be 75 kW, and cover approximately 33% of the roof. The chart below summarizes the attached profit projections, which were developed by AREA to calculate a bid price. These projections take into account operating and maintenance costs, and include an estimated \$3,000 in connection cost, subject to NSPI's requirements that are site specific. \$6,000 is also included for removal of the system.



Staff further revised the profit projections to more accurately reflect the town's borrowing costs, which significantly increased the town's projected net profit from \$118,143 to \$181,553. The profit increase is due to the lower than projected borrowing costs.

Total AC Power output	75 KW
Estimated Annual Output	123,000 kWh
Total Installation Cost	\$256,491 + tax
Bid Price	24.65 cents/kWh
Total 20-yr revenue	\$550,918
Total Operational Costs	\$369,365
Total Net Profit over 20-years	\$181,553
Margin	49%

These projections do not include consideration for a roof structure analysis to be performed by a structural engineer. A conservative estimate to provide the analysis is \$10,000. Should the engineer's report identify significant alterations to the roof structure necessary to support the solar PV system, an estimated cost will be brought to Council for consideration.

This arrangement qualifies for alternative procurement as AREA offered the ability to submit bids at no up-front cost to the Town. Furthermore, AREA completed a RFP process and selected TDL as a solar PV system provider based their experience, expected costs, and ability to carry the risk and cost until the commercial operation is approved for multiple projects simultaneously. The combined purchase volume of multiple projects allows for premium equipment at a lower cost. Staff are not aware of any other entity that provide this type of arrangement.

Regarding warranties, the panels and racking have a 25-year warranty, and installation warranties of 2-years. The warranty period varies amongst different components within the system, but its generally 1-2 years. AREA have advised that typically with solar PV systems, any problems as likely to emerge within the first 2 years.

**FINANCIAL IMPLICATIONS:** Capital costs of \$256,491 (plus applicable tax), and approximately \$10,000 in additional engineering costs to evaluate the stadium roof structure.

**COMMUNITY ENGAGEMENT:** While to-date, no public engagement has been part of this initiative, there may be future educational and promotional opportunities upon installation of the system.

**ENVIRONMENTAL IMPLICATIONS:** Adoption of renewable energy reduces GHG emissions.

**SOCIAL JUSTICE IMPLICATIONS:** The revenue generated by this project offsets the energy costs incurred by the town, which indirectly provides more money to provide services to the public.

**ALTERNATIVES:** 1) Do not participate in the program; 2) Direct staff to select a solar PV system installer through the regular procurement process; and, 3) Direct staff to provide more information.

**ATTACHMENTS:** 1) Profit Projections; and, 2) Solar PV Project Development, Installation, and Commissioning Agreement.

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Report prepared by Andrew Fisher  
Report and Financial approved by: