

Overview of Local Power Generation Project for 2023 Town Meeting Vote (Warrant Article #10)

Background. The Energy and Electric Aggregation Committee conducted an audit of energy use by town facilities for the purpose of determining if and what benefit could be gained by expanding the Town's capacity to generate its own power. With the technical assistance of solar power companies and visits to multiple sites across town, we determined that there would be a benefit to expanding our solar array or building a new one at another site.

The Committee then recommended to the Select Board that installing a new or expanded power-generating system would benefit the town financially (through lower utility costs) and provide clean electric power.

The Board agreed to present a Warrant article for this project without any commitment to a particular site, system, or contractor. If the Warrant article passes, a Request for Proposals (RFP) will allow the Committee and the Select Board to compare and evaluate a broad range of options that would provide Harrisville with optimal production at the best combined cost and set up.

What and why. The Warrant Article proposes a budget of \$160,000. This amount is based on an example option with 100 (400W) panels placed on a building that would cover approximately 75% of the town's electric usage. Determination of the actual project terms, placement, and number of panels will follow review of all responses to the RFP. The actual cost of the project may be less and should not exceed this \$160,000 authorization.

Project process & timeline. Design and pricing would be finalized through the RFP and contracting process. The Town would pay for the installation and own the equipment. An installation, such as one on a building with approximately 100 panels, would be expected to take approximately 12 months to complete.

Expenditure offsets. The Inflation Reduction Act includes a provision that provides non-taxable entities investing in and producing clean energy with a direct payment option. This means that the Town (a non-taxable entity) would be eligible to apply for an Investment Tax Credit (ITC) to support this project. Depending on timing and availability of these funds, the Town may receive back up to 30% of project expenditures through the ITC. There may also be a rebate from the NH Department of Energy of approximately \$6,800. Both amounts would be returned to the Town's general fund.

Example project size and payback.

Size	40kW DC / 34.2kW AC
Components	100 (400W) Panels & 3 SolarEdge Inverters
Annual generation	Determined by final placement and sun exposure. An example scenario would be approximately 46,000 kWh or 75% of Town usage
Cost estimate	\$160,000
ITC & rebates	Approximately \$50,000 (or up to 30% of total cost plus NH rebate)
Financial payback	Determined by final cost and annual generation. An example scenario generating about 75% of town usage with a cost of \$155,000-160,000 could recover net costs after approximately 12 years (with maintenance costs factored in). Estimated long term savings could be \$135,000 over 25 years (warranty period) and \$350,000 over 40 years (commercial lifespan).