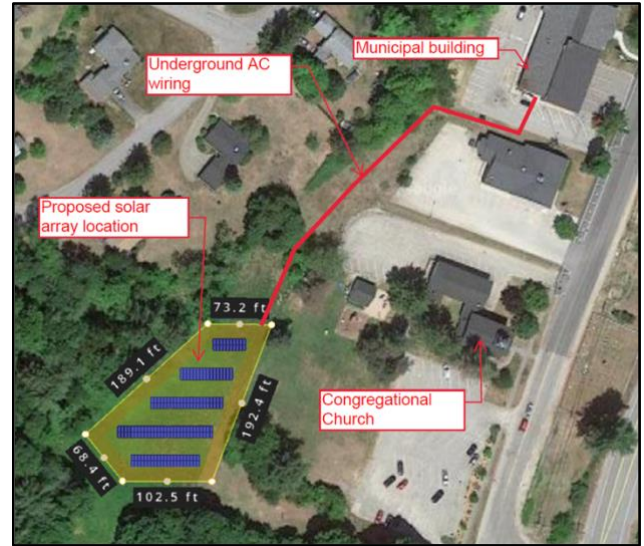


Proposed Solar Photovoltaic Array for Center Harbor Municipal Building

Project Summary:

- Town owned solar photovoltaic (PV) system
- 116-kilowatt ground mounted array (196 panels)
- Located in town owned field behind church parking lot
- Interconnected to Municipal building
- Estimated annual production: 132,000 kWh
 - Offsets use at Municipal Building
 - Excess energy exported, refunded to Town by NHEC
- Basically, same as proposed in 2023 Town Meeting handout



Why Now?

- Town Energy Committee working since 2009 to reduce Town energy costs and already implemented many cost-effective energy efficiency measures
- Solar makes economic sense now
 - Solar costs have dropped while electricity rates continue to increase
 - Federal and State incentives available now - will decrease in coming years (or could be eliminated)
 - Saves the Town on electricity costs
 - Generates the Town money in future years (for 30, 35 or more years)
 - Hedges against significant future energy cost increases
 - Other towns have implemented (Meredith, Plymouth, ...) or planning
- Reduces Town's carbon/environmental footprint

Why this Location & Array Type?

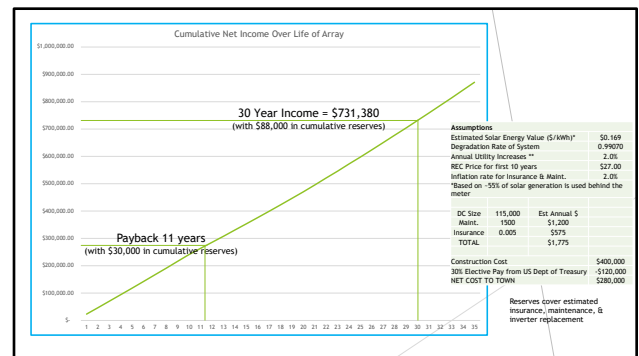
- Maximize return to Town – offset at Import rate
 - Import rate is \$0.21122 vs Export of \$-0.13576 / kWh
 - Municipal Building has highest electricity use by a wide margin
 - Every kWh used directly at building saves Town additional \$0.07544 (~\$3,500 / year)
- Why Ground Mount at Municipal Building?
 - Roof would not accommodate nearly as large an array
 - Roof is half-way through 30-year life, replacing would necessitate removing array and re-installing - which is costly
 - Roof array would have required building structural analysis in older parts
 - Roof array would have altered character of building as portions would be visible
 - Field area is not in use and mostly out of view (shrubs can be added to shield)
- Old dump site uses no power (all export) and service line could not accommodate large array without Town paying to upgrade line
- Other locations also not optimum or possible (i.e., street lighting & fountain)

Meter (Service) Location	Yearly Average kWh (2019-2023)	2023 kWh
Route 25B Hwy Dept	11,806	11,220
Plymouth St - Historical	362	303
Plymouth St	28	0
Main St - Fountain	1,276	1,164
Street Lighting	5,280	5,280
Street Lighting	18,033	18,054
Bath House & Aquatherm	3,152	2,325
Nichols Library	13,395	12,820
Plymouth St - Municipal Building	82,930	73,361
Total Annual Usage	136,261	124,527

From NHEC bills, data collected by Energy Committee

Project Costs, Incentives, and Funding:

- Cost: \$400,000 (\$387,783 as per proposal plus \$12,217 for contingencies)
- Incentives: \$120,000 from US Treasury (30% of project cost per 2021 Inflation Reduction Act)
- Net Cost to Town: \$280,000 (\$400,000 - \$120,000)
- Funding Proposal for \$280,000
 - \$55,000 from Energy Conservation & Improvements Expendable Trust Fund (~\$63K currently in fund)
 - \$100,000 from Land Use Change Tax account (~\$126K currently in account)
 - Leaving \$125,000 to be raised (\$280,000 - \$55,000 - \$100,000)



This is a one-year tax increase of ~\$0.16 per \$1000 valuation. Array will reduce Town's electricity costs in future years.

- Likely additional incentive: \$10,000 from NH Department of Energy

FYI: In 2023, the Town used 124.5 MWh. The array should generate 132.5 MWh and thus offset all of Town's total electricity usage in terms of kWh!