

Town Buildings Committee

Meeting with Nelson Selectboard
September 28, 2022

Library

The Librarian has shared information about needed maintenance at the Library. See examples at the front door and windows:



Should TBC be involved? Typically, we are not involved in building maintenance. We are involved when there are larger projects, such as projects that will be paid for out of Building Capital Reserve funds and that require one or more RFPs. So it's up to you how to proceed. A large project might include:

- Repainting the interior (currently only primed, not painted)
- Replacing wall-to-wall carpets (25 years old)
- Replacing existing windows with energy-efficient versions and casements that do not require painting
- Replacing or repairing the entire front door and frame

Solar Array to Power New Village ASHPs

The TBC recommends a warrant article for the 2023 Town Meeting to purchase an 18kW solar array to be mounted on the roof of the Town Hall.

The BOS asked that the options be presented, specifically with a comparison of costs¹ of an array on Turtle Hill behind the Salt Barn to an array on the Town Hall roof.

Comparing Costs of Equivalent Solar Arrays

	Turtle Hill	Town Hall Roof
Size of array	18kW	18kW
Cost of panels	\$54,000.00	\$54,000.00
Cost of ground mount	\$27,000.00	\$0.00
Cost to connect to grid	\$40,000.00	\$0.00
Total	\$121,000.00	\$54,000.00
Annual Electricity Cost due to usage "after" the meter	\$2,000.00	\$0.00

While Turtle Hill must remain in consideration for a future solar array, it is not the best location for an array to power the new ASHPs that went into operation this year in the Village buildings. As you can see, there are additional costs at Turtle Hill that are not present with the Town Hall roof, and moreover, there will be an additional charge (the Eversource “distribution” charge, currently \$0.10 per kWh) which would cost the town \$2,000 **annually** in real dollars. This annual cost arises when we use the Eversource grid to “distribute” power to the location where it will be used.

We strongly recommend this project for 2023 so that the new ASHP-associated electricity costs can be covered by solar as soon as possible.

You also asked us to look into wind power. It was difficult to get contractors to respond to us but here is a summary of the issues involved with municipal wind power today:

1. No one is interested in a “small” installation. They want to do large projects similar to what we see in Antrim.
2. There is no obvious location on town-owned land that is close enough to any existing Eversource connection point to be economically feasible.
3. Initial conversation with the Conservation Commission indicates that even if point 2 were not an issue, the restrictions on conserved land would prevent wind turbine installation.

¹ These are estimated costs based on research and may be used for comparison but are not a guarantee of what contractors will charge in their proposal.

ASHPs at 50 Old Stoddard Road

The TBC recommends that the BOS move forward this year with ASHPs for the Police Department, Main Fire Station, and the Granite Lake Fire Station. We have an RFP ready to go when you want to review it. Long term, we want to see ASHPs for the Highway Department, too, however, we see the Police and Fire Stations as a higher priority now.

If the Town purchases these ASHPs, then we will recommend a solar project to power them for 2024. Our initial research indicates that the best location for this solar array will be either:

- The east-facing roof of the Town Barn, or
- Ground-mount in the parking area behind the Town Barn

Solar at Turtle Hill

Long-term, we believe that a solar array at Turtle Hill becomes feasible once the Town invests in electric vehicles, such as police cars, pickup trucks, and road maintenance equipment. At that point, the Town can demonstrate an electric load at the Salt Barn, and therefore Eversource is likely to bring in poles and wires at their cost instead of the Town's.

An electric police vehicle is probably the place to start. For information about the experience of police departments in Vermont, see <https://monadnock sustainabilityhub.org/ev-police-cars/>. However, this is, of course, out of scope for the Nelson Town Buildings Committee.

Funding Sources

Preliminary research indicates that the Town would be eligible for low-interest loans from the Community Development Finance Authority. The loan could be used for both ASHP purchases and solar arrays. More information is available at <https://resources.nhcdfa.org/programs/clean-energy-fund/application/>.