

The Nelson Town Buildings Committee is here sharing our response to the Selectboard letter of July 6, 2022, on the topic of solar projects in Nelson. Quotes from the Selectboard letter are in **bold**.

it became apparent that you are looking at the Town Hall for future solar panel installation. We encourage you to look elsewhere.

Solar arrays should be installed as close as possible to the electrical loads that they are intended to power. While there are definitely efficiency reasons for this, it is important to also understand the financial reasons for locating solar arrays near the power consumption.

Our cheapest solar energy is when we use the generated electricity “before the meter” by using it as it is produced during the day. Otherwise, we are selling the power to Eversource at a low price and then buying it back at a higher price because of the way Eversource has been allowed to do this rate setting.

Thus, even though all of the municipal Eversource meters are on the same Town accounts from a billing perspective, the meters are not treated by Eversource as being the same. If we built the next array at the Highway barn for the purpose of powering the new ASHPs at the Village buildings, that would not allow us to use the power “before the meter” and therefore the financial payback for the project would take longer.

The TBC feels strongly that we should bring the most cost-effective projects to the Selectboard for your review and that is why we will bring a Town Hall roof array RFP to you in a few weeks for your consideration.

There have already been problems with the solar panels on the Library as they collect snow in the winter and are not accessible for cleaning it off.

Snow is not an issue. Yes, it collects for a short time and then it melts and falls off. We can see this in the production numbers for the Library solar array. It is an 8 kW array, expected to produce about 10 kWh of electricity per year. As of July 20, 2022, after 6 years of use, it has produced 62.5 kWh, slightly more than the 60 kWh anticipated.

when there is roof repair or replacement necessary these panels will need to be removed

Solar panels actually protect a roof by shading it from sunlight, thus extending the lifetime of the shingles. More importantly, when comparing the costs of roof-mounted solar arrays to ground-mounted solar arrays, it's easy to see that one could pay for the cost to remove and reinstall solar panels several times over before seeing the total project costs be greater than a ground-mount array.

At some point, the Town will want to build additional ground-mount arrays. But again, the TBC will always recommend the most cost-effective project first.

We encourage you to look at the hill behind the safety building where the ball fields exist. This area has large solar potential and would be perfect for future expansion.

The TBC spent many months in love with that location, as you are now. It has the perfect aspect for solar. Over time and through hours of research, we came to understand that it is problematic and

that a solar array there will be expensive with a relatively longer payback period. The main issues are the distance from Eversource interconnect points, and the wetland and stream with their added DES requirements.

I hope that we build an array there someday but the Town Hall roof is the most cost-effective and practical project today.

The cost of running electricity to this area would be two-fold as we are encouraging more community use of the field areas in the future and the ability to have power would enhance the viability of events there.

It's great to hear that increased use of the ball field is anticipated. However, an array on Turtle Hill would probably not be able to directly provide power to the ball field because of the need to bring the solar power to an Eversource interconnect point first and the distances involved. Without the Eversource connection, you wouldn't have electricity at night at the ball field.

We would discourage you from adding onto the existing solar array behind the safety building as your minutes suggest you are considering. Space is limited there and the pine trees across the driveway on the Taylor-Maule property hinder some of the solar potential in this area.

You don't need to worry about the pine trees shading the array. Even if one or two panels are shaded at some point during the day, that doesn't prevent all of the unshaded solar panels from working as designed. Thus, that remains a viable site for the future but the Town Hall is still the most cost-effective location for the next solar project.

we suggested looking at the south-facing slope located at the new cemetery. It has come to our attention, when Edie researched the original deed, that this is actually not possible.

Thank you for clarifying this situation. In addition, the site was too far away from the Village buildings to be usable for municipal solar.

We would appreciate any future considerations be brought before the Select Board before any RFPs or warrant articles are considered.

It disappoints me that you worry that I, as TBC Chair, won't follow Town procedures. I've served on the Buildings Committee for twelve years and fully understand that the Committee's role is **advisory** to the Selectboard. Our job is to save you time and money by doing the research needed to bring you good recommendations. You take it from there.

Respectfully,
Lisa Sieverts, Chair
The Nelson Town Buildings Committee
July 20, 2022