**Memorandum**

January 03, 2019

To: Norwich Selectboard

From: John Langhus, Member

 Mary Layton, Member

Re: EEI Energy Transformation Proposal

Dear Fellow Selectboard Members,

 We have been meeting recently as members of the ad hoc working group (the “Working Group”) appointed by the Selectboard to review and develop a proposal by Energy Efficient Investments, Inc. (“EEI”) for certain renovations to Town facilities in pursuit of energy efficiency improvements, design benefits for Town employees and elimination of significant percentages of Town fossil fuel usage (the “Project”). This memorandum discusses the outcome of those Working Group deliberations and recommends the inclusion of a ballot question on the 2020 Town Meeting warrant for the approval of the proposal being advanced by the Working Group.

 **Background and Process**

 The origin of this proposal and the process by which the Working Group has considered different options for this Project is described in detail in the companion memorandum in this week’s Selectboard meeting packet. The ten-member Working Group was comprised of three members of the Energy Committee, two Members of the Finance Committee, two Members of the Selectboard, two EEI representatives, and the Town Manager. The Working Group met three times and over that time evaluated a series of potential improvements to Tracy Hall, the Apparatus Bay at the Public Safety Building, and the Highway Garage at the Department of Public Works. The complete set of potential renovations we considered totaled nearly $4 million.

 **Components of the Project**

 The final proposed Project is budgeted at $2,054,569.38, inclusive of a 5% contingency. The structure of the proposal is as a “Performance Contract”. Under that structure, the competitive process occurred at the Request for Proposals stage, when several companies were invited to propose a process by which they would undertake a comprehensive energy audit of the Town and then propose work to improve the energy performance of the Town. The original audit and the work that goes into the proposals are uncompensated, but then the ultimate proposal is either approved or not – it is not subject to further bid by other firms. This process is consistent with the Town purchasing policies and is supported by Vermont law which specifically enables and encourages energy Performance Contracts. The logic of these arrangements is that there is relatively little expertise in this type of work, so a Town is unlikely to know what to request bids for like it would for a standard construction contract where it would have considerably more experience. One feature of a Performance Contract is that the energy efficiency gains/energy savings that are estimated by the proposal become guaranteed by the contract or the costs are adjusted retroactively by a mechanism in the contract. In addition, the Project itself is contracted on a fixed price basis, so that no additional costs are permitted that are not specifically requested by the Town or else agreed to by it.

 The Committee ultimately recommended a subset of the total improvements identified by EEI in the audit. The proposed Project includes a total energy and HVAC retrofit of Tracy Hall. One challenge is that Tracy Hall’s ventilation is now out of code, so in making the energy changes, the Working Group felt that it would be best to upgrade the ventilation to provide a healthier, more comfortable building for our employees and those who use the spaces on Tracy Hall. Therefore, the project includes approximately $500,000 for such upgrades that are not actually energy related. Other Project components include a full replacement of our oil-burning heating system with a state-of-the-art ground source (geothermal) heat exchanger, LED lighting upgrades and upgrades to controls infrastructure. These improvements will dramatically improve the health and comfort of our employees’ space and will completely eliminate the use of fossil fuels at Tracy Hall. For the other facilities, the Committee has elected to propose only the LED lighting and controls retrofits. These retrofits result in rapid savings on electricity expenditures and a modest additional reduction in fossil fuel use. In total, the energy improvements are expected to eliminate 100% of the fuel oil use at Tracy Hall (approximately 5,000 gallons of fuel oil per year) and approximately 870 gallons of liquified propane per year and to eliminate 74,819 kWhs of electricity from our current use. This electricity reduction will be offset, however, by increases coming from the improved HVAC system and the inclusion of central cooling to the building. This additional electricity should be able to be provided by increased use of solar energy, which is currently used for most of the Town’s electricity load, so that the added electricity use does not increase our fossil fuel usage. This increase in electrification is, in fact, an expected feature of the transformation of energy systems in response to climate change. If implemented as proposed, we would eliminate roughly 15% of the Town’s fossil fuel use and 25% of its annual CO2 emissions.

 **Financing the Project**

 The Committee has considered different financing options for the Project. Importantly, the LED and controls retrofits easily pay for themselves. The remaining retrofits should have useful lives well beyond 20 years. As such, a financing horizon of 15-20 years appears to be reasonable. The Committee is not at this time recommending a specific financing mechanism, recognizing that the Selectboard, Town Manager and Town Treasurer can best consider different options if the Project is approved at Town Meeting. We do note however, that the estimated financial impact of the Project, assuming 15-year financing, would be an additional 2.5 cents on the tax rate, resulting in an approximately $99 addition on the tax bill of a $400,000 home. We find this cost of less than $0.30 per day for an average Norwich family to be an excellent investment for the positive impacts this Project will have for our Town and our employees who work in Tracy Hall.

**Climate Impact of the Project**

This Project will provide a three-year down payment on the 2019 Town Ballot initiative #36 that directed the Town to seek measures to eliminate at least 5% of the Town’s fossil fuel use each year indefinitely. It is a significant step that is being undertaken at a reasonable cost and that will make a meaningful impact on our collective emissions. We expect to have to do more in the coming years to continue to address the climate crisis, but we believe that this is a responsible and effective next step on this journey. By extrapolation, we would set a pace for completely eliminating Town fossil fuel use in the coming years for less than $2.00 per family per day in Norwich.

**Proposed Town Meeting Article**

With deference to the Town Manager and Town counsel as to drafting, we recommend. Including an article substantially similar to the following be added to the 2020 Norwich Town Meeting ballot:

**Article XX. Shall the voters of the Town of Norwich authorize the borrowing of up to $2,054,569.38, for up to twenty years, to be used for the first phase of the elimination of fossil fuel use in town operations as directed by the voters in Article 36 of the 2019 ballot, through the renovation and upgrading of HVAC, control, and lighting systems in Tracy Hall, and upgrades of the lighting and controls systems in the Public Safety apparatus bay, and the Public Works Garage?**

We ask for your support and look forward to discussing the proposal on January 8.

Best regards,

John Langhus

Mary Layton

cc: Herb Durfee, Town Manager