

Town of Windham

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MEMORANDUM

To : Town Council
Thru : Robert Burns
From : Levi Robinson
Date : February 24, 2026
Re : Creation of a Solar Array Reserve

I. Executive Summary

This memo outlines the proposal for the creation of a Solar Array Reserve. Following the execution of the landfill solar array buyout in January 2026, a decision must be made on how we plan for future costs incurred from ownership of the array. It is important to note that these costs are not unexpected; they were included within the modeled cost savings shown during the original presentation of the solar buyout proposal. There are two ways we can fund these costs; the first method would be to create a Solar Array Reserve, and the second would be to build all future costs (and associated revenues) into the operating and capital budget.

II. Background

The proposed Solar Array Reserve would be funded solely by the sale of Renewable Energy Certificates (RECs); an REC is a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. One REC is generated when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource¹. While RECs serve no purpose for the Town beyond monetization, they are used by other organizations to hit sustainable energy compliance metrics or as proof of corporate commitment to sustainable energy sourcing. To monetize our RECs, we went through the competitive vendor selection process before signing an agreement with Revision Energy where they will aggregate and sell our RECs on the market. Utilizing the inflows from REC sales, the purpose of this reserve would be to pay for all repairs, replacement and maintenance needed to keep the solar array operational. Part of the creation of this reserve should grant the authority to spend reserve funds for this purpose without further Council authorization, unless required to do so by our purchasing policy; this authority should be contingent on the pre-existence of reserve funds needed to cover the purchase.

The alternative funding method would be to build all future costs (and associated revenues) into the main budget. While our operations and maintenance contract expenses are predictable for the length of the contract (5 years), any additional unforeseen repair/replacement costs not covered within the scope of the contract would potentially not be budgeted for prior to occurrence of the problem. There is the possibility that these repair costs could be absorbed within other expense

1. Definition sourced from the Environmental Protection Agency (EPA):
<https://www.epa.gov/green-power-markets/renewable-energy-certificates-recs>

lines, which would avoid a delay in addressing the problem, however it is also possible that we would need to delay addressing the problem due to lack of enough budget funding. The biggest example of this would be the eventual replacement of the seven inverters within the array. Inverters are a critical piece of the array that are primarily responsible for converting energy collected by the panels into usable power. Total inverter replacement costs will likely exceed \$100,000; however, it is difficult to prognosticate exactly when this will fall on the potential timeline of replacement based on their useful life. If this method was selected, we would need to secure funding for this capital item early enough to avoid any delay in responding to damaged or failed inverters; this would avoid significant losses in solar credit generation if the inverters were failing or had failed for an extended period. On the positive side, this method would provide additional revenue to support the general operating budget on an annual basis, however that effect would diminish over time as panel efficiency decreases.

III. Findings

The following table demonstrates the solvency of the proposed reserve over the next 20 years.

Cash Flow of Proposed Reserve					
Fiscal Year (July 1 to June 30)	Renewable Energy Certs (REC) Revenue Estimates	Operations and Maintenance Agreement (Revision)	Inverter Replacement	Net Activity for the Year	Rolling Balance in Reserve
25-26	\$13,294.85	(\$2,271.00)		\$11,023.85	\$11,023.85
26-27	\$26,456.75	(\$2,362.00)		\$24,094.75	\$35,118.60
27-28	\$26,158.90	(\$2,456.00)		\$23,702.90	\$58,821.50
28-29	\$26,028.10	(\$2,554.00)		\$23,474.10	\$82,295.60
29-30	\$23,308.17	(\$2,656.00)		\$20,652.17	\$102,947.77
30-31	\$20,872.46	(\$2,762.24)		\$18,110.22	\$121,057.99
31-32	\$18,691.29	(\$2,872.73)		\$15,818.56	\$136,876.55
32-33	\$16,738.05	(\$2,987.64)		\$13,750.41	\$150,626.96
33-34	\$14,988.93	(\$3,107.14)		\$11,881.79	\$162,508.74
34-35	\$13,422.58	(\$3,231.43)	(\$120,000.00)	(\$109,808.85)	\$52,699.89
35-36	\$12,019.92	(\$3,360.69)		\$8,659.23	\$61,359.12
36-37	\$10,763.84	(\$3,495.11)		\$7,268.73	\$68,627.85
37-38	\$9,639.02	(\$3,634.92)		\$6,004.10	\$74,631.95
38-39	\$8,631.74	(\$3,780.32)		\$4,851.42	\$79,483.37
39-40	\$7,729.72	(\$3,931.53)		\$3,798.19	\$83,281.57
40-41	\$6,921.97	(\$4,088.79)		\$2,833.18	\$86,114.75
41-42	\$6,198.62	(\$4,252.34)		\$1,946.28	\$88,061.02
42-43	\$5,550.87	(\$4,422.44)		\$1,128.43	\$89,189.46
43-44	\$4,970.80	(\$4,599.33)		\$371.47	\$89,560.93
44-45	\$4,451.35	(\$4,783.31)		(\$331.96)	\$89,228.97
45-46	\$3,931.90	(\$4,974.64)		(\$1,042.74)	\$88,186.23
Totals:	\$280,769.83	(\$72,583.59)	(\$120,000.00)		

Note: Reflects only half a year of REC revenue as solar buyout was executed January 2026.

O&M Contract is for 5 years with 4% escalators/year. Estimated continued 4% increase after expiration.

The rolling balance in the reserve would allow us to immediately respond to and absorb any unforeseen repair costs needed to maintain energy production of the array. Any delay in repairs would lead to higher electricity costs from this decreased production

RECOMMENDATIONS:

My recommendation would be to create the proposed Solar Array Reserve as it will reduce the response time for any maintenance needed to keep the array working effectively. This approach will save the Town money by minimizing any solar credit generation downtime, which translates into lower electricity costs for the Town. Looking into the distant future, the panels within the solar array will eventually be considered for replacement and any leftover funds within the Solar Array Reserve could be used by a future Council to offset some of those costs as well.