

AGENDA ITEMS #: 21-137  
COUNCIL MTG OF: November 2, 2021  
FROM: NetZero Task Force  
OFFERED BY: NetZero Task Force  
PREPARED BY: NetZero Task Force  
SUBJECT: Solar Array at Landfill – Group Net Metering RFP Results

**PURPOSE:** To review the recommendation of the Net Zero Task Force to enter final negotiations for a contract for construction of a solar array at the Town owned landfill.

**TOWN ADMINISTRATOR COMMENTS:** The Council is asked to review the relevant information to assist with their decision to proceed with either a direct purchase or PPA agreement.

**BACKGROUND:** The Net Zero Task Force and Department of Public Works issued a Request for Proposal (RFP) to build a solar panel array on top of the Town owned landfill located at Kendall Pond Road. The solicitation asked vendors to provide responses to design, permit and construct a 2.2 MW system to cover the electricity needs of 30 Town buildings.

Proposals were submitted by seven qualified vendors. The RFP was structured to ask vendors to provide two options:

- 1) Direct Purchase – Prices ranged from \$4.7 million to \$7.5 million
- 2) Power Purchase Agreement (PPA) – Prices ranged from 6.8 cents per kWh to 10 cents per kWh

**DISCUSSION:** In previous versions of the landfill proposals, the economics were not as favorable due to the 1MW net metering limit. The State Legislature has since passed expanded net metering limits, which enabled the Derry landfill project to be expanded to 2.2 MW.

The 2.2 MW solar field will generate approximately 3.7 million kWh annually to be distributed to the DPW campus/WWTP along with several other Town facilities. Excess generated electricity will be exported, and net metered according to NHPUC rules.

**FISCAL IMPACT:** The evaluation committee has reviewed the economics of a direct purchase at a cost of \$4.7 million against a 25-year PPA with a fixed electricity cost of 6.8 cents per kWh. The Town of Derry has a third-party electricity supply contract at 6.575 cents per kWh through November 2023. The current energy markets have indicated that retail rates for the Eversource territory are slated to significantly increase in the next 12-24 months.

- 1) Direct Purchase - The lowest qualified bid was \$4.7 million. For the direct purchase option, the Town absorbs the risk of receiving full revenues from the RECs and the cost of Operations & Maintenance. The cumulative net savings would be \$3.5 million after 25 years, with a break-even (payback) at 12.4 years. The Town reaps the benefit of the averted cost from the electricity generation and net metering revenue for excess electricity sold to the grid. The Town of Derry would need to raise funds through a bond offering to sign a contract.
- 2) Power Purchase Agreement (PPA) - Obligates the Town to purchase electricity from the solar field at a combined supply and distribution rate of 6.8 cents per kWh. The current effective rate for all Town purchases is currently 13 cents per kWh. The financial analysis indicates that the Town would reap savings in Year 1 of approximately \$70,000 as compared to the present electricity rates. The PPA rate would be fixed for the 25-year period as compared to projected increases of

2% annually with future market purchases. The projected savings in Year 25 has been modeled to be \$220,000. The cumulative savings has been calculated at \$3.5 million. The PPA contract requires the vendor to maintain the solar equipment in the event of failure or degradation.

Further, the Town may opt out of the PPA after Year 5 to purchase the equipment at Fair Market Value. Internal Revenue Service regulations require an appraisal to determine the value at that time, but it currently estimated at \$1,900,000 for a buyout. The Town would not be obligated to commit to the Year 6 buyout now, but there is potential to reap the benefit of lower electricity rates in the initial years of the PPA and possibly leverage the depreciated asset for total savings estimated at \$5.65 million, with the assumption that Fair Market Value is close to the \$1.9 million estimate and REC values are sustainable in years 6- 25.

**RECOMMENDATION:** The NetZero Task Force endorses the land lease and PPA proposal provided by Encore Renewable Energy of Burlington, Vermont. The Net Zero Task Force further recommends that the Town Council vote to move forward with contract negotiations with Encore. This project will advance the goal of achieving renewable energy production and saving the Town of Derry several million dollars over the course of the next 25 years.

Town Council should be aware that there is a future policy decision which they should make in the coming months regarding the property tax revenues from these structures if a private entity is owning the equipment and leasing property from the Town. The Town Council is encouraged to discuss their policy on a Payment in Lieu of Taxes (PILOT) for the solar array application.

**RECOMMENDED MOTION:** See Resolution Number #2021-069.

# Derry Net Zero Task Force Landfill Solar Project

November 2, 2021

# RFP Scope & Timeline

- ▶ 2.2 Mw system will enable 100% of Town Facilities electricity usage (excluding schools) to be covered by solar landfill production
  - ▶ Group Metering Arrangement - 30 Buildings & Facilities covered
  - ▶ Request for 2 options (direct purchase & lease/purchase)
- ▶ RFP Issued on July 23, 2021
- ▶ Site Visit by Vendors on August 3, 2021
- ▶ HB315 and SB95 expands the net metering limit from 1 Mw to 5 Mw - signed by the Governor on August 26, 2021 at Derry WW.
- ▶ 7 vendors provided bids on September 1, 2021

# RFP Responses - Evaluations

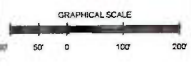
- ▶ 13 Criteria used to rank vendors for Lease Purchase (PPA) and Purchase (Year 1) Options
  - ▶ Financial : Price & O&M Cost
  - ▶ Commercial: Financial Strength, Landfill Experience, Schedule, Local Staff, Commercial Terms, References Request for 2 options (direct purchase & lease/purchase)
  - ▶ Technical: Inverters, Solar Panels, Design, Mounting, & Monitoring
- ▶ Direct Purchase Prices ranged from \$4.3M to \$7.5M
- ▶ Electricity Cost (Lease Option) Prices ranged from 6 cents to 10 cents per kilowatt hour (kwh)
- ▶ Purchase Price after 5 years ranged from \$1.9M to \$5M - not a firm price due to IRS rules requiring asset to be sold at fair market value (FMV)
- ▶ Project would cover 7-8 acres of the landfill (total 10 acres) leaving room for future expansion



**- NOT FOR CONSTRUCTION -**  
FOR REVIEW ONLY



**SANBORN HEAD**




DRAWN BY: E. GALVIN  
 DESIGNED BY: E. GALVIN  
 REVIEWED BY: R. ST. MICHEL  
 PROJECT MGR: R. ST. MICHEL  
 PIC: E. STEINHAUSER  
 DATE: OCTOBER 2021

DERRY LANDFILL SOLAR PROJECT ENCORE RENEWABLE ENERGY DERRY, NEW HAMPSHIRE		PROJECT NUMBER TBD
CONCEPTUAL SITE PLAN		SHEET NUMBER 1 OF 1

## 2.2 MW Solar at Landfill - Lease

▶ System Cost	\$0
▶ Savings/Yr (elec)	\$70,000-220,000
▶ Total Savings (25 yrs)	\$3.5M
▶ Payback	NA

1) Assumes 2% annual increase in electricity costs from Eversource when calculating savings

2) Town would enter into 25 year purchase agreement. Town would purchase electricity produced at 6 cents per kWh - **FIXED PRICE FOR 25 YEARS**

3) **LOW RISK**

# Large Solar at Landfill - Lease/Purchase Option

Lease for 5 Years, Purchase at end of Year 5

▶ Electricity Savings - 1 <sup>st</sup> 5 Yrs*	\$400,000
▶ System Buyout Cost at Year 5**	\$1.9M
▶ Savings/Yr (elec + RECs)*** 6- 25 Yrs	\$370-395k
▶ Savings (25 yrs)- bond costs =	\$5.65M
▶ Payback (after purchase in Year 5)	5.2 yrs

\* Cost = 6 cents/kwh (vs current rate of 13 cents/kwh)

\*\* Vendor takes 26% tax credit and depreciation

\*\*\* Assumes 2% escalator for energy prices in the future

RISK: REC Prices may decline or disappear (\$0.9M of savings)+ extra admin expenses for DPW



# Large Solar at Landfill - Purchase Option

Purchase at Beginning of Year 1 at \$4.7M

- ▶ Savings/Yr (elec + RECs)\*\*\* \$160k
- ▶ Savings (25 yrs) - bond costs = \$3.5M
- ▶ Payback 12.4 yrs

\* Cost = 6 cents/kwh (vs current rate of 13 cents/kwh)

\*\* Vendor takes 26% tax credit and depreciation

\*\*\* Assumes 2% escalator for energy prices in the future

RISK: REC Prices may decline or disappear (\$1.5M of savings) +  
extra admin costs for DPW

## Recommendations

- ▶ Proceed with Vendor that scored the highest for Lease/Purchase: Encore Renewable Energy
- ▶ Encore:
  - ▶ Best scores across all categories (PPA & Direct Purchase)
  - ▶ HQ in VT
  - ▶ Partners for Permitting & Regulatory (Normandeau Associates) out of Manchester and Civil Engineering (Sanborn, Head & Associates) out of Concord - extensive NH landfill experience
- ▶ Next Steps:
  - ▶ Contract Negotiations: 4Q2021
  - ▶ TC Review and Approval: Dec/Jan
  - ▶ Project Implementation: 1Q22 through 3Q23
- ▶ Ability to Review Purchase Option at end of Year 5 to Determine Fair Market Value
- ▶ Meets Town Council Goal for 100% Renewable Energy for Electricity by 2025 (2 years early)!