



Dunbarton Rd Landfill Solar Project



Contractors



- Everett Tatelbaum, Vice President of Development
- Developer, Owner & Operator for the Dunbarton Rd Landfill Project
- Founded 2009 in Boston, MA
- Developed more than \$400 million of solar + energy storage projects including 36 MW of operating projects on landfills and brownfields
- More than 109 MW of projects (on-site or energy contracts) with 65 different public sector partners including municipalities, K-12, universities, & state agencies



- Zack Hallock, Energy Services Advisor
- Consultant to the City of Manchester

RENEWABLES RFP | Timeline & Context



- **Summer 2018** – Manchester participated in CES-run RFI led by City of Boston for large scale renewable projects
- **August 2018** – RFQ released for onsite solar PV
 - 28 respondents, 20 deemed qualified
- **January – March 2019** – RFP issued for onsite solar PV development at 7 locations (below)
 - Site walk completed with City officials
 - 11 respondents with over 350 pricing iterations (ownership options, terms, payment structures)
- **April – May 2019** – Completed review of all proposals and reviewed findings with City stakeholders
- **Summer 2019** – interviewed selected finalists and closely monitored relevant policy developments
- **September 2019** – requested best & final pricing from finalists selected based on final site selection & policy outcomes

System Location	System Type	Eversource Account Address	Eversource Account Number
Capped Landfill	Groundmount	Dunbarton Rd	56599241049
MWW Low Service Tanks Site	Ground + Rooftop	Mammoth Rd	56137657003
Vehicle Storage	Rooftop	540 Hayward St.	80054970167
Manchester Municipal Complex	Rooftop + Carport	475 Valley St	80054970167
School of Technology	Rooftop	530 South Porter St	80000350779
Memorial High	Rooftop	1 Crusader Way	80000350357
Central Fire Station	Rooftop	100 Merrimack Street	80000330136

Project Development & Benefits

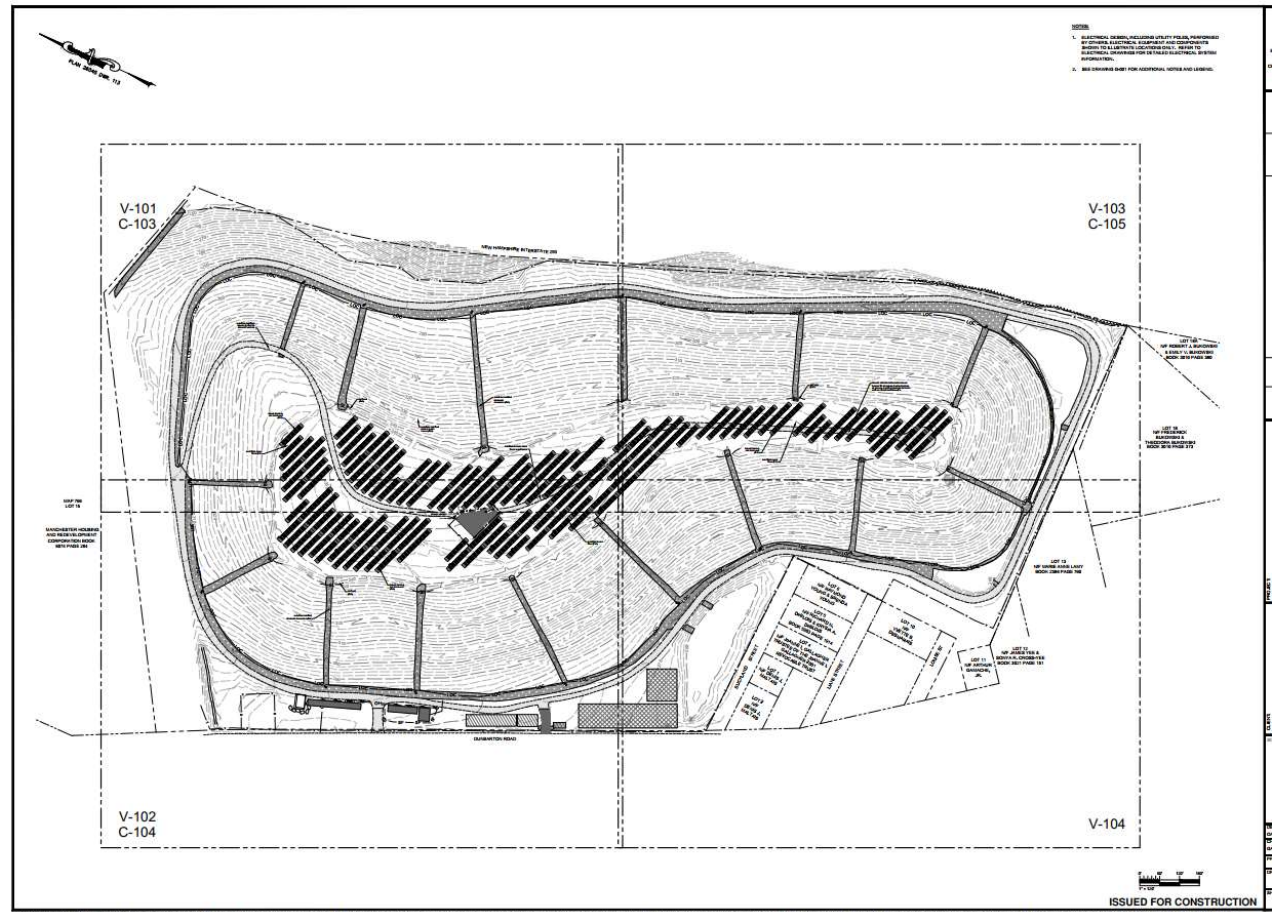
- 2020 Eversource Interconnection Study & Failed attempt for NH Legislature to expand net metering program
- Fall 2020 / Spring 2021 – Complete design and start permitting two-phase project assuming no NM expansion
- April 2021 Lease & Net Metering Credit Sales Agreement Signed
- Summer 2021 – NM bill passes, Permitting & Procurement completed
- September 2021 – Construction began
- December 2021 – Construction is completed and the panels are able to produce energy
- Key Benefits to the City at NO COST to the City:
 - More than \$20-25k per year for 20 years totaling estimated \$500,000+ across energy savings and tax payments >> up from \$8-10k per year with original smaller size
 - Significant green energy benefits powering approximately 500 avg homes' annual usage
 - Offset: 2,700 metric tons of CO2 – equivalent to burning of 3 million lbs. of coal annually

Equivalency Results

- Greenhouse Gas Emissions
 - 6,768,025 – Miles driven by an average passenger vehicle
- CO2 Emissions
 - 303,026 – Gallons of gasoline consumed
 - 35.7 – Tanker trucks' worth of gasoline
- Greenhouse Gas Emissions Avoided
 - 916 – Tons of waste recycled instead of landfilled
 - 114,585 – Trash bags of waste recycled instead of landfilled

Project Metrics

- 3.3 MW DC / 2.5 MW AC array
- No penetration of landfill cap & all monitoring and infrastructure remains
- Approx. 12 acres of solar out of total area of ~85 acres (limited by slopes)
- 8,000+ modules
- ~15 IBEW Local 490 electrician jobs



Thank You

Chaz Newton

Solid Waste & Environmental Programs Manager

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- Site Tour
 - Wednesday 9AM at Manchester Landfill