



CITY OF PORTSMOUTH NH
Portsmouth Energy Advisory Committee
Wednesday, December 4, 2024 at 6:30 pm

Meeting recording: <https://youtu.be/QCWaYTYChcA>

Attending: Councilor John Tabor, Councilor Cook, Kevin Charette, Herb Lloyd, Peter Somssich. Via Zoom: Betsy Blaisdell. Excused: Tom Rooney, Tracey Cameron, Ben D'Antonio. Staff: Jillian Harris, Christine Sproviero, Stephanie Seacord (recording secretary). Guests: David Sharples, Planning Director, Town of Exeter and resident John Ragonese (Great River Hydro).

Roll call – Chair Tabor called the meeting to order at 6:35 pm.

Minutes (November 6, 2024) – approved unanimously on a motion by Peter Somssich seconded by Herb Lloyd.

Chairman's remarks – At their December 2, 2024 meeting the City Council unanimously approved the idea of exploring the feasibility of placing a solar array on the Jones Avenue landfill. Following the will of the Council, PEAC should move forward to determine the regulatory, engineering (ideally of an array serving Portsmouth High School and the Indoor Pool “behind the meter”) and financial (developer-funded with a power purchase agreement to discount municipal electricity costs or City-bonded and owned).

Introduced guest: David Sharples, Planning Director, Town of Exeter to review a comparable experience.

The Town of Exeter has just constructed a 1.77 megawatt solar array on its 6.8 acre Cross Hill brownfield landfill that was capped in 1984. They chose the option of bond-to-own construction for its much larger financial benefit: between \$2 and \$6 million in 40-year array lifespan (subject to the future value of Renewal Energy Credits/RECs) and pay for itself in the first year thanks to the IRA tax credit. Both a lease/power purchase agreement option and the build-to-own would produce electricity sufficient to cover 92% of the Town of Exeter’s municipal demand. ReVision was the contractor who provided the expertise and experience (9 municipal solar arrays including municipal landfill sites in NH) for the project.

Exeter Project cost: \$5.2 million. Original estimate approved at Town Meeting \$3.6 million but actual increased by 30% due to supply chain and inflation in the gap between Nov and March. Because the Investment Recovery Act offers a 30% Investment Tax Credit, a subsequent Town Meeting approved the \$1.6 million increase.

Expenses beyond the array included a required Interconnection Study (approximately \$31,000) and the Interconnection 3-phase wire and installation of \$338,000. Exeter also hired a consultant, CES, to vet the proforma supplied by the developer ReVision and subsequent project details.

Sharples explained the process followed in Exeter:

1. Define the project – based on his prior solar array experience in another town – and wrote an RFP based on maxing out use of the 6.8 acres and comparing estimated 1.77 megawatt output to the municipal demand (Unitil bills to the town). Demand must meet supply, though Unitil was prepared to cut a check for net metering credit overages.
2. Put out the RFP and collect responses – received 2. (November 2022)
3. Review the responses with consultant CES and create pro forma.
4. Secure approval from Board of Selectmen.
5. Secure approval from Town Meeting (March 2023). Approved but timing gap between receiving estimates and the vote resulted in a 30% increase in cost.
6. Second approval for additional \$1.6 million from Town Meeting.
7. Permitting process with NH Department of Environmental Services (DES). Found to be “very accommodating” as the array “floats” on the capped landfill using ballasts of rocks in chicken wire. Exeter budgets \$100,000/yr for ongoing monitoring of the landfill, fence, filling any subsidence, etc. Relied on ReVision experience with DES. (Recommended working with Governor’s Office on Energy which seeks these projects.)
8. Conduct Interconnection Study with Unitil (electricity utility in Exeter. Portsmouth’s is Eversource). ReVision invested the \$31,000 cost upfront with payback by Town. 6 month exercise. Original estimate was \$650k but Unitil helped working cost down to \$383k.
9. Ordered equipment – no purchases until funding approved; but experiencing an 18 month delay in the receiving the final meter to activate the array. If ordered today, the wait time is 2-3 years. Unitil was unwilling to have Exeter order the equipment ‘on spec.’ Purchase = ownership with no sell back option.
10. Built the array over May-July 2024. Awaiting October 2025 delivery of final components.

Exeter is also a member of the Community Power Coalition of NH and has an Energy Committee, but they were not involved in the solar array project. Decided not to factor community use of the generated solar power or pitching a favorable vote from Town Meeting so as not to confuse residents while explaining Community Power and opt-up choices.

Key benefits cited in bringing proposal to Town Meeting in Exeter:

- Turns an unused liability into an asset that financially benefits the Town.
- Lean in on projects that pay for themselves.
- A more resilient and local power supply – not dependent on international fluctuations in natural gas generation of electricity.
- Local control
- Green power to help move away from fossil fuels

Discussion and parallels to Jones Ave landfill site in Portsmouth.

1. Need to review the 1990 DES Closure Agreement details and ask if this use would require site to meet current closure-and-cap standards (Exeter’s did not – but recreational use still disallowed and site fenced off).
 - Monitoring requirements
 - Loads – recreational use not permitted due to compaction cautions
2. Other funding for the studies required to prepare an RFQ/RFP and the Interconnection?
 - How long does Eversource take? (Ben D’Antonio)
 - Estimate cost (Katrin)
 - UNH Peter Paul Business School grant from DOE to work with businesses on energy projects

- Another NREL assignment to improve Seacoast resiliency
3. Review site suitability for solar
 - Cannot be used for another purpose
 - Would not interfere with existing trails
 - No trees and limited shade effect from surroundings
 - Consider options for keeping it mowed – Exeter invested in electric mowing robots for parks. TBD if suitable for solar site.
 4. Role of CPCNH?
 - Advise them of project.
 - Inquire about assistance and/or involvement from Project Manager Mark Bolinger
 - Project supports CPCNH docket with PUC to demonstrate future of net metering
 5. RFP v RFQ v RFI
 - Staff assignment to create and managed RFP and future project management (DPW?)
 - Bring in outside specific solar energy expertise from a consultant/CPCNH?
 - Ask ‘what are the City’s solar options in this space?’ rather than limited to a design/build specific
 - Solicit ideas from multiple firms, not just 1 or 2 and lay out the evaluation criteria.
 - Purchasing process: can’t issue RFP without funding unless not a City expense (e.g. privately-funded sports complex).
 - Necessary to take the intermediate step of RFI or just go to RFP?
 6. Process
 - Discuss next steps with City Manager, Deputy City Manager and DPW (Director should incorporate expectations before negotiating next municipal power supply contract.)
 - Planning to complement CIP and budget cycle
 - Outreach to build public confidence – public hearings would be included if part of CIP

NREL update – Herb reported that NREL requested some additional information on the annual power expense for the WWTF and pumping stations. Also discussed windspeed data from the NOAA collection points at Pease, Peirce Island and Durham. Because the collection at Peirce island is only 10-meters high, the City Engineer suggested putting a temporary monitor on top of one of the City’s water tanks to get data equating to the height of a wind turbine. Have asked when they expect to wrap up.

Green Energy Challenge update – 4 opt-up customers have received their yard windmill “thank you” gifts. Two more months to go on the Challenge and reminders included in City Newsletter and social media.

Other member items –

- Peter Somssich reported that he has finally received an Eversource bill reflecting his conversion to Portsmouth Community Power with his net metering credits. Anyone with a solar array installed before 2017 (1.0) can join Portsmouth Community Power and receive the credits. Arrays installed after 2017 are not yet eligible. CPCNH has clarified this with their customer service, so anyone who is 1.0 eligible can call Portsmouth Community Power and make that switch.

- Betsy Blaisdell reported that she will not be able to participate in PEAC meetings in Jan, Feb or Mar as she will be living in France where the time difference means meetings start at 11:30 pm. But she intends to remain informed and engaged.

Public comment – none attending.

Meeting adjourned at 8:30 pm.

DRAFT