U.S. Department of Energy (DOE) Clean Energy to Communities (C2C) Program
Expert Match Program
Scope of Technical Assistance to the City of Portsmouth, NH
September 30, 2024

Objective
This scope outlines specific areas of technical assistance (TA) support to be provided to the City of Portsmouth, NH under the U.S. Department of Energy (DOE) Clean Energy to Communities (C2C) Expert Match Program.

Background
The City of Portsmouth, NH has a Climate Action Plan with goals to reduce Greenhous Gas (GHG) emissions and improve resiliency. The City is seeking assistance on possible options for renewable energy projects that can be incorporated into their multi-year planning and support their Climate Action Plan goals.

DOE C2C Program
The C2C program is a DOE-funded effort designed to provide technical support to communities transitioning to clean energy and more sustainable energy economies. C2C includes the "Expert Match" TA offering, through which DOE national laboratories and other partners provide tailored technical support to communities. A typical request will include 40–60 hours of technical support on a topic where expert assistance is critical to the community making an informed clean energy decision.

The City of Portsmouth, NH has been selected as a participant in the C2C Expert Match program because of their goals to plan for renewable energy projects. The period of performance is tentatively planned for September through December.

Proposed Technical Assistance
The C2C Expert Match team held a call with Herb Lloyd (Energy Advisory Committee) and other representatives of the City of Portsmouth, NH on July 25th, August 12th, and September 26th 2024 to gauge their interest in C2C and further scope this opportunity. The discussion highlighted areas where NREL can provide technical assistance in support of their current clean energy priorities and needs.

Work Area 1. Modeling and analysis of distributed wind energy generation options
NREL experts will provide REopt-based modeling and analysis of possible distributed wind energy generation projects at three sites (Pierce Island, Pease Wastewater, Madbury Water Treatment), to evaluate wind generation potential, options for the number and size of turbines, and estimated costs. This analysis will include options for battery storage, as well as limited information on possible visibility impacts (based on similar projects).
Deliverable: 1) In a PPT slide deck, information on the modeling and analysis of distributed wind energy generation options and considerations.

Table 1. Summary of proposed work areas and deliverables

Work Area	Description	Deliverables	Task Members	Date
1	Modeling and analysis of distributed wind energy generation options	PPT slide format	Tucker Oddleifson Brent Summerville	Dec

Meetings	Scoping and bi-weekly calls	NA	Community lead contact, Expert Match team	Oct - Dec
Internal Review	Internal review	NA	TBD	TBD (2-4 weeks in total)
Final Debrief	Final debrief on lessons learned after the conclusion of technical assistance	1-hour virtual meeting of all relevant participants.	All team members, Sharon Smolinski to organize the meeting	TBD (est. Jan 2025)

Points of Contact
City of Portsmouth, NH
- Herb Lloyd – Energy Advisory Committee, City of Portsmouth, NH

C2C Expert Team
- Sharon Smolinski - NREL, C2C Expert Match Community Lead
- Tucker Oddleifson – NREL, REopt Lead and Expert
- Brent Summerville – NREL, Wind Expert