

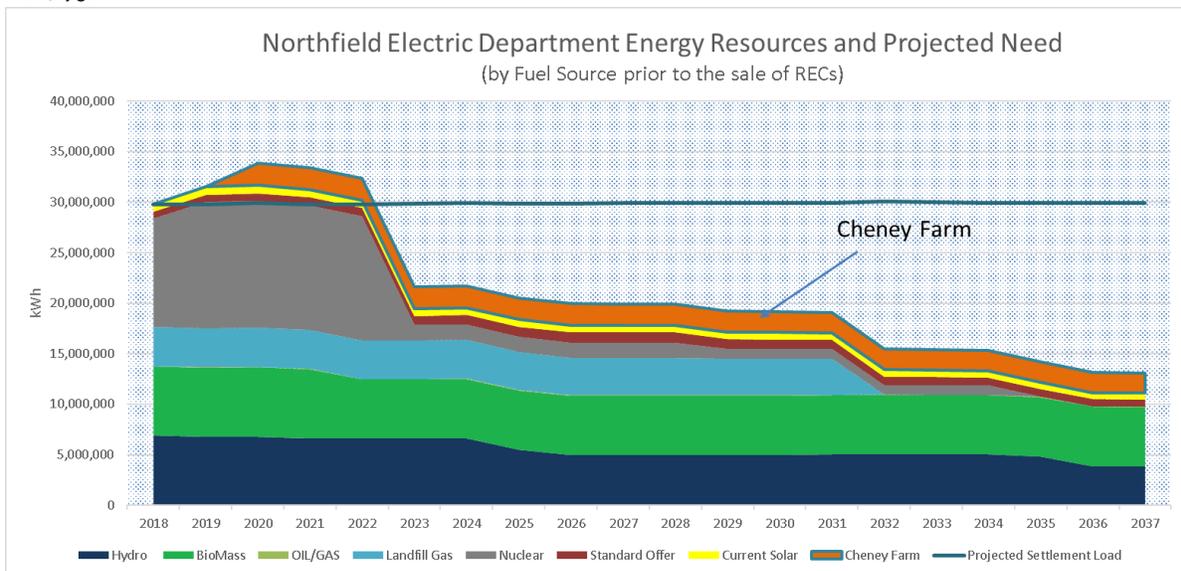
NORTHFIELD ELECTRIC DEPARTMENT SOLAR PROJECT: PROJECT OVERVIEW

In 2017, Vermont Public Power Supply Authority (“VPPSA”), acting on behalf and with support of its Member municipal utilities including Northfield Electric Department (“NED”), issued a Request for Proposals soliciting proposals for solar PV in Member Service territories. NED identified Cheney Farm as having several desirable features for a potential project as described below. After two rounds of bidding, Encore Renewable Energy (“Encore”) was selected as having the best combination of local experience and qualifications, responsiveness to identified issues, and competitive pricing. The project is currently in the preliminary stages of development.

Why Solar:

Northfield Electric Department continually evaluates long-term resource needs and opportunities with the goals of delivering sustainable, reliable, low-cost electricity to customers, in a manner that helps protect and enhance the community. The potential Cheney Farm Solar project:

- Fills a long-term need for energy resources with power from local resources that diversifies current fuel mix. Cheney Farm Solar would produce approximately 2,100MWh per year meeting approximately 7% of NED’s annual energy needs. More locally, **Cheney Farm solar would increase the amount of renewable generation within Northfield’s borders by approximately 70%.**



- Fills NED’s annual need at prices that are in line with long-term forecasted prices that NED would otherwise need to pay for energy, capacity, renewable energy credits, transmission, and other products. The potential project would stabilize a portion of NED’s portfolio with known prices that avoid market risk.
- Meets Northfield Electric Department’s Renewable Energy Standard (RES) obligations, which alleviates price risk from otherwise having to purchase Renewable Energy Credits or pay an expensive Alternative Compliance Payment at costs of \$50-100,000 annually.
- Secures energy from a local source within the NED grid that can reduce vulnerability from more distal generators, especially with incorporation of a battery storage component.

Why Cheney Farm:

NED has for several years considered locations in Northfield's territory to host solar energy production, with no combination of location and economics previously been worth pursuing. Northfield's complex topography makes siting any substantially sized solar difficult. While Cheney Farm presents some challenges, it offers benefits including:

- Municipally owned land, within a close proximity to electric infrastructure and downtown,
- The potential to pair the facility with storage and a microgrid to improve resiliency of critical emergency services in town,
- Relatively little tree clearing necessary,
- Generally hidden from nearby streets and homes

Project Description:

The proposed 1.2MW (AC) array would be installed on either ballasted or post driven racking, encompassing roughly 5 acres of land in the vacant meadow. Each row of the array will be oriented with a 25 to 30-degree tilt, standing approximately 8-9 feet tall. The array will be surrounded by a 7- 8 feet agricultural style fence. Views from the top of the meadow to the horizon will remain unobstructed due to sloping topography.

Below is a preliminary layout for the array. The final design is subject to change, based on detailed site surveys, technical constraints and public outreach. NED will be working actively with the community and other stakeholders to ensure visual and environmental impacts are minimized. The permitting process will ensure environmental issues associated with erosion control and any rare, endangered, or threatened species will be fully addressed. Access to hiking and skiing trails, as well as access for any potential timber management, will remain available.



Alternatives Considered:

- Northfield Town Well Fields (off of Rte. 12A) has been considered a possibility for solar for some time. However, the Electric Department prefers not to use the field for solar because it is a high quality coarse sand aquifer, and development risks contaminating the aquifer. While potential protections to reduce risk may be possible, NED believes that any risk to the town's drinking water supply from solar development is not acceptable. Additionally, the well field site is further from the Common, minimizing the resiliency benefits of a potential microgrid.
- Rooftop and smaller sized solar. Northfield Electric Department and the municipality have supported net metering within the service territory despite its significant cost to the utility. The municipality has signed an agreement to participate in the Bull Run 500 kW facility, which is expected to begin operation this summer. However, there are no other proposals for larger net metered facilities within the Electric Department's territory, and these and smaller net metering options are costlier than the potential Cheney Farm solar. Moreover, the Bull Run and other potential larger projects are not close to downtown, foreclosing some potential resiliency benefits. Building on municipal rooftops is also expensive and doesn't meet as much of the NED's resource portfolio need.

Economic Benefits:

As noted above, the potential Cheney Farm project is in-line with base forecast projections of costs for Northfield Electric Department to meet customer demand. In addition,

- Water Utility customer rates will receive downward pressure from land lease revenue from the project delivered to the Water Department.
- Municipal taxes assessed on the project will put downward pressure on municipal tax rates. The project is subject to annual municipal tax: estimated to be in the range of \$9,500 to \$10,000 per year, depending on final project size.
- The expected costs of the potential Cheney Farm project are lower than the energy and capacity portion of costs that are embedded in approved rates. This means that with all else equal the project will not cause electric rate pressure, while avoiding risk of market rate pressure that would otherwise be present.

Next Steps:

Northfield Electric Department and the Select Board will be hosting the first of two informative Town Hall Meetings at the Community Room in Brown Public Library on **Monday, June 25th, 2018 at 7PM**. All members of the community are welcome to attend to voice their opinions on the Cheney Farm project and ask questions to each member of the project team.

Development and design activities are expected to ramp up and continue through 2018, including application for a Certificate of Public Good with the Public Utilities Commission for construction in summer/fall of 2019.

If you have any questions about the Cheney Farm project ahead of the meeting, or are unable to attend, we welcome you to contact all of us at any of the below contacts.

Thank you all and we look forward to developing a project that is in line with the values of the Northfield community!

Northfield Electric

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