

Stafford Hill Solar Farm and Microgrid

📍 RUTLAND, VT | GREEN MOUNTAIN POWER CORPORATION (GMP)



Sanborn Head provided engineering and geotechnical services for the design, permitting, and construction of a 2.3 megawatt (MW) solar project for Green Mountain Power Corporation on a closed landfill in Rutland, Vermont. The project included the installation of battery storage on the closed landfill and was configured as a microgrid.

Key Components:

- First Solar Project at a Landfill in Vermont
- Renewable Energy Project at Closed Landfill
- Brownfield Solar Array and Microgrid
- 2015 Project of Distinction Award

A central component of the project was to supply backup power to the adjacent Rutland High School so that it can be used as a public emergency shelter.

Some of the many challenges that Sanborn Head had to consider as part of the project design included: designing an appropriate support system for the arrays to not adversely affect the landfill cap system; establishing a limit of 10% slope in the array area for stability purposes; designing stormwater management systems to be installed on top of the existing landfill cap system; designing around the existing gas collection system infrastructure; and helping to design pads to distribute the weight of the battery storage equipment such that differential settlement of the underlying waste mass was limited to the extent possible.

The project was constructed in 2015, and the microgrid helped Green Mountain Power achieve its solar and capacity goals and contributed to the State of Vermont's goal to be 90% renewable by 2050. The project had many "firsts", including the first landfill solar project in the State of Vermont; the first solar-powered microgrid to provide backup power to a public emergency shelter; the first microgrid developed on a brownfield site; and the first large-scale project in the New England region to demonstrate how utilities can use storage batteries to significantly cut their costs. The project inspired the development of other projects in the region and led to numerous other teaming opportunities and work on solar projects for Sanborn Head.

Related People

Tim Petit, PE
Senior Project Manager

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