



71G1 Norwich Turnpike Solar LLC 150 kW Solar Project

Connected to the GMP 71G1 Circuit at Tag 72938
645 Turnpike Rd, Norwich, VT

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May 28, 2020

Document Revision No.	Date	Author	Comments
0	May 28, 2020	Yale Young	Creation of the document

This document provides Green Mountain Power's results of its Fast Track analysis for the proposed Project. This Fast Track analysis complies with the Vermont Public Service Board Rule 5.505 (B) Fast Track Screening Criteria. If the proposed Project failed any criteria, further study will be required.

Project name	Norwich Turnpike Solar LLC
Project size and generation type	150 kW photovoltaic system
Approximate Point of Interconnection	White River Junction District 71G1, Tag 72938
Maximum net load on circuit	approximately 5,100 kW
Maximum net load on substation	approximately 10,570 kW
Aggregate generation on circuit	approximately 2,412 kW (including this project)
Aggregate generation on substation	approximately 3,230 kW (including this project)

Rule 5.505 (B) Criteria and Fast Track Review

Criteria that are not passed will be colored in red.

- 1) The Interconnection Requester's proposed Generation Resource meets the applicable codes and standards of Section 5.510 of Vermont Public Service Board Rule 5.500 or is certified equipment package under Section 5.511.**

The inverters proposed for the Project are twelve (12) Fronius Primo 12.5-1 units. This inverter is compliant with UL1741-SA and IEEE1547.

If another type of inverter is substituted, GMP shall be made aware of this proposed change. Derating of inverters is not considered in the analysis.

- 2) The proposed interconnection point is not at transmission voltage (i.e. not over 23 kV line to line or 11.38 line to neutral).**

The Project proposes to interconnect to GMP's distribution circuit which has a voltage level of 7.2/12.47 kV and a four-wire, grounded-wye line configuration. This distribution circuit is not a transmission line.

- 3) For interconnection to a Radial Feeder, the aggregated generation, including the proposed Generation Resource, on the circuit will not exceed 15% of the line section annual peak load as most recently measured at the substation. A line section is that portion of a distribution system connected to a customer bounded by Automatic Disconnect Devices or the end of the distribution line.**

The 71G1 circuit peak demand is approximately 5,100 kW. Including the proposed Project, there would be approximately 2,412 kW of existing and proposed DG on this circuit.

$2412 / 5100 = 47.3\%$

The Project fails this criterion.

- 4) The aggregated generation, including the proposed Generation Resource, on a distribution circuit will not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed interconnection point.**

To be determined in the Feasibility Study

- 5) The aggregated generation, including the proposed Generation Resources, on a distribution circuit will not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or customer equipment on the system to exceed 85% of the short-circuit interrupting capability; nor is the Generation Resource proposed for a circuit that already exceeds 85% of the short-circuit interrupting capability.**

To be determined in the Feasibility Study

- 6) For interconnection of a proposed single-phase or effectively-grounded three-phase Generation Resource where the primary distribution System is three-phase, four-wire, the Generation Resource will be connected line-to-neutral. For interconnection of a proposed single-phase or three-phase Generation Resource where the primary distribution system is three-phase, three-wire, the Generation Resource will be connected line-to-line.**

To be determined in the Feasibility Study

- 7) Voltage drop due to starting the proposed generator is within acceptable limits, meaning that inrush current, due to starting the proposed Generation Resource up to once per hour, is not greater than 3% of the available fault current. Voltage drop due to starting the proposed Generation Resource more than once per hour meets a tighter inrush-current tolerance, to be determined by the Interconnecting Utility.**

To be determined in the Feasibility Study

- 8) For any single Generation Resource, the available utility short circuit current at the Point of Interconnection divided by the rated output current of the Generation Resource is no less than:**
- a) 50 for Generation Resource of less than 100 kW;**
 - b) 40 for Generation Resources from 100 kW to less than 500 kW; and**
 - c) 20 for Generation Resources equal to or greater than 500 kW.**

To be determined in the Feasibility Study

- 9) Aggregate generation, including the Generation Resource, on a circuit will not exceed 2 MVA in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g. three or four busses from the point of interconnection).**

To be determined in the Feasibility Study

- 10) No System Upgrades, in excess of limited preparation that do not necessitate a Facilities Study, are required to facilitate the interconnection of the Generation Resource.**

To be determined in the Feasibility Study

- 11) For interconnection of the proposed Generation Resource to the load side of spot network protectors, the proposed Generation Resource utilizes inverter-based equipment and aggregate generation, including proposed Generation Resource, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW. Synchronous generators cannot be connected to a secondary network.**

To be determined in the Feasibility Study

- 12) If the Generation Resource is to be connected on a shared, single-phase secondary, aggregate generation capacity on the shared secondary, including the proposed generation, will not exceed 20 kVA.**

To be determined in the Feasibility Study

- 13) If the Generation Resource is single-phased and is to be interconnected on a center tap neutral of a 240 volts service, its addition will not create an imbalance between the two side of the 240 volt service of more than 20% of the service transformer nameplate.**

To be determined in the Feasibility Study

Due to the failure of one or more Fast Track Screening Criteria above, a Feasibility Study of the failed criteria and remaining criteria must be completed to determine whether or not the project may proceed.