Massaro, Luly (PUC)

From: Doug Sabetti <doug@newportsolarri.com>
Sent: Tuesday, January 26, 2021 3:51 PM
To: Massaro, Luly (PUC)
Subject: [EXTERNAL] : Comment on small PV interconnection application problem

Hi Luly,

I am reaching out to you to submit a comment to the Division, and the Commission if possible (if that goes to someone else please forgive me). I have brought this problem up at DG Board meetings for a few years now and Ian Springsteel said NGrid was looking into it, but then lost the employee who was working on it and the work stopped, instead of another employee continuing the work. I thought that would be the proper place to voice this concern, however the DG Board only consults on the REG program, where this is a small PV system sizing problem for all small scale interconnections. I am now not sure who the appropriate party(ies) is/are to communicate this NGrid process change request is. I'm hoping the Division or Commission could look at this and address it appropriately.
my comment and concern is as follows:

Comment on small PV system sizing for interconnection in RI:

Early last year (2017), we, Newport Solar, brought up the fact that the sizing methodology used by National Grid for small scale solar projects was creating challenges for us when explaining to potential clients that they would not be allowed to offset 100% of their electric bill, even though the statute allows for this and there was ample room for more panels.

Currently for REF (net metered) system sizing, a .161 capacity factor is used based on AC system size. For REG, a .14 capacity factor based on DC system size is used. This method calculates system output as if all roofs in RI have exactly the same orientation, pitch and shading; a one-size-fits-all equation. The result is roofs that are more efficient than the capacity factor are allowed to produce more than 100% of their usage and roofs that are less efficient than the capacity factor are not allowed to produce 100% of their usage. The statute says *all* ratepayers are allowed to produce 100% of their usage.

When we propose a PV system to a client (ratepayer) and the allowed system size still leaves them with an electric bill, they typically decline to hire us to install a PV system, usually out of frustration.

In 2018 and into 2019 when this discussion was happening between the DG Board, OER and National Grid, Newport Solar suggested an alternative sizing methodology using the NREL PV production calculator PV Watts, the industry standard. There was concern from Ian Springsteel that PV Watts overestimated production and that it would be too complicated for NGrid staff to use efficiently. I contacted the scientist at NREL that oversees the PV Watts calculator and he assured us the results were indeed accurate. This, however, does not address the question of difficulty for NGrid staff using the calculator.

We propose a new method without using PV Watts that will give much more accurate results than an overall capacity factor; the creation and use of a capacity factor table. Array tilt in increments of five or ten degrees would be one axis, and azimuth, also in increments of five or ten would be the other axis. Where they intersect would give the appropriate capacity factor. An appropriate shading factor would be the only fixed input.

Implementation of a more accurate system sizing methodology for any given house or building will prevent those with more efficient roofs from taking advantage of payments in the REG program and will allow those with less efficient roofs to also offset 100% of their usage.

Thank you for your consideration of this problem.

Thank you,

Doug

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