# **Distributed Generation**

<u>(/s/)</u>

Switch to Electric Connections (/electric/s/)
Switch to Electric Vehicle (/EV/s/)

APPLICATIONS (/S/CASE/CASE/DEFAULT) MY FORMS (/S/FORM/FORM\_C/DEFAULT) MY MILESTONES (/S/MILESTONE/MILESTONE\_C/DEFAULT) Case + Follow 00305873 Sub-Step Application Information Status Step Group Study Execute ISAs Pending Customer Decision Guilio Fusaro 161 Armsby Road, Sutton Massachusetts Preapplication Conditional A... Completion D... Application Screening Supplemental... Study Meter installa... Connected KEY FIELDS THIS STACE **GUIDANCE FOR THIS STAGE** Status Step Forms will take some time to fully create and update after finalizing, please only press "Finalize" once. Please make sure to refresh your page to see the most updated information. All Milestones Active Milestones **Forms** SIGNATURE **STATUS FORM NAME** REQUIRED PREP EDIT UPLOAD **STATUS** Draft No Signature Needed Interconnection Service Agreement 仚 仚 Draft No Signature Needed Impact Study Report APPLICATION ACTIONS Withdraw Application Change Application Request Extension Update Finalize (/FinalizeFormSubmission? Options  $\blacktriangledown$ (/UserApplicationAccess? SubmissionscontrolCaching=1&id=5000W00001f3qGPQAY) **Application** case=5000W00001f3qGPQAY) Roles DETAILS (?TABSET-9A2A6=1) RELATED (?TABSET-9A2A6=2) FEED (?TABSET-9A2A6=3) Poll Post Share an update... Share Most Recent Activity ▼ Q Search this feed... G Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) • October 27, 2022 at 4:54 PM (/s/feed/0D56T00008kJOg8SAG)

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, the ISA is available for you on the Interconnection Service Agreement form. Please note that the Exhibit I is part of the ISA and will need to be returned signed with the rest of the ISA. Please review and let me know when you've provided signed ISA. Thanks!

2 comments 3 views

Like

Comment

More comments 1of 2



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

3 days ag

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, we have identified that the Interconnecting Customer Responsibility Civil Work section had some

misleading info & have uploaded a revised ISA to the Interconnection Service Agreement form with revised language. Please be using this document instead for customer signature. Thanks!

Like



Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)
August 30, 2022 at 4:41 PM (/s/feed/0D56T00008W43Y0SAJ)



<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, please disregard that notification. Looks like there's a bug in the portal where that notification is going out a day early.

For the group consented extension request, looks like the template I had pointed you towards actually was a pdf version for the group agreement rather than the editable word doc template. Here attached is the corrected version. Can you please update the yellow fields to indicate that the extension is to address the document revisions identified in the study & get it signed by the group members? Sorry for the rework and confusion here. And to answer your question, the tariff does not give us any method to suspend the timeline for questions being asked/answered, hence the timeline was continuing to tick away as we were working to address your questions & why getting an extension would be helpful to make sure you had gotten the answers you Expand Post



22 comments 32 views



Comment

More comments 21 of 22



Mike Morrison (/s/profile/0050W00006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Do you have any information on the existing pole numbers and which poles serve the adjacent building? Thanks

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 months ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, it appears that P87-1 through P87-11 serve 223 Worcester-Providence Turnpike.

Like



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Do you have a map showing what the pole numbers are and where they are located?

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, could you please clarify what's the necessity of knowing the location of all the poles? From a google map search & street view, looks like poles 87 and 87-1 (which are the poles relevant to the PCC configuration) are located as shown on the attached image





Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

•

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) updated drawings have been uploaded. Thanks ...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

month ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, it looks like we're missing the updated ESS Questionnaire with the ESS narrative reflecting updates such as the ramp rate. Can you please provide this?



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

•

a month ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) I have requested this from the storage manufacturers. They were all out in CA last week attending RE+ so their response time is bad. I'll keep pressuring them.



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) a month ago

•

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Mike, okay. Please note that we'd need need the doc revisions addressed by 10/6/22, including the time it takes to review the docs and address any further comments (if necessary). So please continue to push to get this turned around as soon as possible. Thanks!

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

a month ag

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, engineering has reviewed your oneline and site plan and the following items still remain for your oneline revisions:

- 1. The transformer labelled "TX-1" is analyzed with a zig zag transformer with an equivalent impedance of 0.144 Ohms. -- The one-line shows impedance = 0.144 Ohms +/- 10%, but must show a specific value.
- 2. The transformer labelled "TX-2" is analyzed with a zig zag transformer with an equivalent impedance of 0.184 Ohms. -- The one-line shows impedance = 0.184 Ohms +/- 10%, but must show a specific value.

### **Expand Post**

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a month ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I noticed that you uploaded an updated ESS Data collection excel doc. Could you please update the interactive ESS Questionnaire form (by editing it) to ensure that all information you provided on that excel doc is reflected on this form instead? We have moved away from using the excel doc and the portal form has replaced it.

Also how are you doing with providing the updated oneline and site plan addressing the identified items above?



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

winke Morrison (/s/prome/003044000000usi)QAA) (Custome

•

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) It wont let me edit the inputs. Should I just click "Add another response" and enter there?

Like



 $\underline{Jennifer\ Kim}\ (/s/profile/0050W000006tKGKQA2)\ \underline{(National\ Grid)}$ 

•

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Mike, if you're needing to update the asset information, you'll need to do that through the equipment selector (the wrench next to the application form)



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

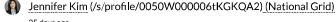
a month ag

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) the information that needs to change is not on the equipment selector..its only on the interactive ess questionnaire such as "energy storage dc kwh..etc

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) just wanted to follow up on this



@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Do you have a screenshot of what you're referring to? It sounds to me that those should be fields that you would need to change on your assets via the equipment selector - the ESS questionnaire pulls in your asset information.

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, also, it looks like you provided new files to the Line Diagram & Site Plan forms, but those are appearing to be cropped & not the full file. Could you please reupload your most recent docs there? Thanks!

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

Screenshot attached. These fields are not in the equipment selector



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Mike, those should be getting pulled from your storage information on the Sungrow ESS Inverter inverter. It should update on the Questionnaire when you update the Storage Capacity fields on the Sungrow asset.



41KB Like

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, just checking in here. Have you been able to update the documents here?

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) should be all set

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Mike, thanks for letting me know. I'm asking engineering to review the updated docs & will let you know if we're needing further revisions here.

Like

Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) August 31, 2022 at 11:04 AM (/s/feed/0D56T00008W4YboSAF)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) We have received your group consented extension request. We have granted a 15BD extension, and your updated due date is now 9/21/22. We have received your intent to proceed. Please work to address all identified customer doc revisions stated in your impact study by 9/21/22 COB.



2 comments 4 views

Like

Comment



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Is there cost sharing involved with this project?



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 months ag

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, the site specific work costs will not be shared & the common work costs would be allocated as per the group study provision - see section 3.4.1.h in the tariff <a href="https://ngus.force.com/servlet/servlet.FileDownload?file=0156T00000FLc7M">https://ngus.force.com/servlet/servlet.FileDownload?file=0156T00000FLc7M</a> (https://ngus.force.com/servlet/servlet.FileDownload?file=0156T00000FLc7M)

Like



Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) August 17. 2022 at 5:09 PM (/s/feed/0D56T00008Tot0TSAR)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I just wanted to make sure it was clear here. We need for you to address all identified customer doc revisions stated in your impact study & indicate your intent to proceed via the Group Study Notice Period Response form (latter completed) by 8/30/22 COB. A friendly reminder to make sure you are clouding all your changes on the oneline & site plan to clearly indicate what has changed from the last submission.

14 comments 29 views

i Like

Comment



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Do you have anymore information regarding the curtailment letter and why it was not sufficient? I haven't seen anything specific regarding this.

Like

IVIII

Mike Morrison (/s/profile/0050W00006usfjQAA) (Customer) 2 months ago

<u>@Jennifer Kim</u> (/s/profile/0050W000006tKGKQA2) (National Grid) Would we also be able to set up a call with our electrical engineer to discuss some of your technical comments?

Like

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 months ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, let me check with engineering for further clarification about the derating letter.

Do you have specific questions you had wanted answered? This is to ensure that I loop in the correct people. Also, given the volume of group studies, it may take time to have our engineers be able to get on a call & so communicating over chatters would result in a faster turnaround in a response here.

Like



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Here are the list of questions:

1. Page 17 of the report states that a manhole is needed for the recloser, but elsewhere in the document it is stated multiple times that the recloser will be pole mounted. Figure B-2 on page 44 does not show a recloser pole. Figure B-1 states pole mounted recloser. Please

Case: 00305873 11/4/22, 12:40 PM

confirm the recloser is in fact pole mounted.

1. If the recloser is pole mounted, will that pole be located directly adjacent to the NGrid owned GOAB pole?

#### **Expand Post**

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) And here are the questions regarding the ESS.

- 1. The ESS will need to follow a season and time-based schedule for charging and discharging. The requested functionality will be met by Stem Athena Power Controller.
- 2. There is also a max ramp rate of charge/discharge they need to follow. The ramp rate is changeable, we just need to provide Sungrow with the ramp rate limit. Can you verify the ramp rate limit the utility is looking for?

#### Expand Post



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I heard back from engineering regarding the curtailment letter and they have confirmed that the derating letter for this site is acceptable, so please disregard that requirement. I've also relayed your questions 1-14 to them.

With the newer 4 questions, it looks like some of those responses are directed towards you. Could you please take a look and clearly present the questions and comments that are towards Ngrid?

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) It looks like this is the only question directed towards National Grid.

1. There is also a max ramp rate of charge/discharge they need to follow. The ramp rate is changeable, we just need to provide Sungrow with the ramp rate limit. Can you verify the ramp rate limit the utility is looking for?

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, for the ramp rate question, looks like the impact study report already addresses that: "During normal operation, the maximum allowable ramp rate of charge/discharge for aggregate BESS inverter shall be limited to 2.6%/second (26 kW/second) by means for factory software rate lock."



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Hi Jennifer, Any updates on those questions we asked? As it sits, it will be tough to get you updated drawings before the 30th without those answers. Thanks



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I've just checked in with our engineers here again as I had not heard back from them yet. I'll let you know ASAP when I receive responses from them.

I wonder if the group would be interested in requesting for a 15BD extension here - if the group desires, you can submit a group consented extension request (ref slides 12-13 on https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000FqoQP (https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000FqoQP))



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Can you send me the group contact information. I don't know who is still part of this. Thanks



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

Edited August 29, 2022 at 5:01 PM

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Hey Mike, the other two members of the Millbury-Grafton 001 group are: Ameresco: Silas Bauer - <u>dginterconnection@ameresco.com</u> (<u>mailto:dginterconnection@ameresco.com</u>)

Zero Point: Pete Forte -  $\underline{\text{pforte@zpeenergy.com}}$  & Greg Hunt -  $\underline{\text{ghunt@zpeenergy.com}}$  & Greg Hunt -  $\underline{\text{ghunt@zpeenergy.com}}$  ( $\underline{\text{mailto:ghunt@zpeenergy.com}}$ )

waiting on answers from National Grid, if it was the other way around I understand but its not. Thanks

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) I noticed this morning we were removed from the queue. I did send out an extension request from the 3 other participants last night, just waiting to hear back. I am curious though as to why we need to fill this out? We are

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 months ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) I emailed you the signed extension forms by all parties. Thanks

Write a comment...

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) posted a file.

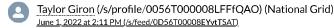
August 10, 2022 at 11:07 AM (/s/feed/0D56T00008SRMKCSA5)



Write a comment...

1 view





@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hello Mike,

The WCMA DER Cluster-3 PSCAD study performed by Electranix has identified two issues with the inverter models.

- 1. Project 305873 (PV+AC BESS; 2.750 MW) Chint inverter undergoing momentary cessation for voltages between 0.88 and 0.5 pu and exhibit an extended momentary cessation behavior. Please provide an explanation or updated model.
- 2. Delta PV M125HV inverter (SunPin Solar) producing distortion in current during the low power operation. Please provide an explanation or updated model.

# **Expand Post**

6 comments 10 views

Like Comment

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) I will reach out for item 1. For Item #2 I think that is for someone else. We aren't using delta inverters on this.

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) 5 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) My apologies Mike, disregard item #2 and refer only to item #1.

▼

lacksquare

11/4/22, 12:40 PM Case: 00305873 Best, **Taylor** Like Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) @Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) Taylor..updated information attached to the Data Requirements for National Grid Group/ASO Study section. Thanks Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) 4 months ago @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Thank you Mike, I have sent this over to our engineering team for review. Best, **Taylor** Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) 3 months ago @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, Below you can find comments made from Engineering: 1. The model require a minimum time step of 1 microsecond to run. We are using an average model instead of the detailed IGBT model. This doesn't meet the PSCAD model requirements submitted previously. **Expand Post** 305873 PSCAD 14KB Like Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) 00305873 PSCAD 14KB Like Write a comment... Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) ▼ November 2, 2021 at 12:44 PM (/s/feed/0D56T00007fM4dhSAC) @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, engineering has reviewed your documents and we still need a project level PV+BESS PSCAD model. Please submit a combined level model in the "Data Requirements for National Grid Group/ASO Study" form and let me know when completed. Thanks! -Taylor 23 comments 43 views i Like Comment 21 of 23 More comments

Mike Morrison (/s/profile/0050W00006usfjQAA) (Customer)

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

<u>@Taylor Giron</u> (/s/profile/0056T000008LFFfQAO) (National Grid) Is there a time deadline for this? I only ask because these PSCAD models take quite a bit of time.

Lik

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, if you could try to get them in as soon as possible that would be great.

-Taylor

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

In months ago

<u>@Taylor Giron</u> (/s/profile/0056T000008LFFfQAO) (National Grid) Good Afternoon. PSCAD Model has been uploaded. Thanks Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

10 months ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, thank you for letting me know, I have sent this over to engineering for review.

Best,

**Taylor** 

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

10 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, it looks like you have provided the documentation for the combined model but we require a PSCAD model for testing, please provide this documentation.

-Taylor

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

10 months ago

<u>@Taylor Giron</u> (/s/profile/0056T000008LFFfQAO) (National Grid) I have a whole zip file of documents & data but I cannot upload them to the portal. How can I send them to you?

Like

(/s/profile/0056T000008LFFfQAO) (National Grid)

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) You can possibly try emailing them to me at <u>taylor.giron@nationalgrid.com</u> (<u>mailto:taylor.giron@nationalgrid.com</u>). Hopefully that will work.

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

10 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, engineering has reviewed the submitted models and is requesting the update the models to meet the National Grid SRD criteria. The voltage and frequency protection setting don't meet the SRD requirements. Also please make sure that inverters undergo momentary cessation for voltages mentioned in the SRD document.



Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

10 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

10 months ago

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) I've uploaded new information into the shared google drive folder labeled 1-18 PSCAD. Let me know if you are able to access it.

**Thanks** 

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Thank you Mike, I was able to access the documents. I will let you know if any further revisions are needed.

-Taylor

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, the protection settings still don't comply with the National Grid SRD. Please provide an updated model. I have attached the snapshot of SRD below.

-Taylor



Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

9 months ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, I have uploaded a testing report to the "Data Requirements for National Grid Group/ASO Study". Please make these changes to the models and reupload.

-Taylor

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) Our engineers are requesting simulation test files. Are you able to send these over?

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, I have attached the simulation test files to the "Data Requirements for National Grid Group/ASO Study" form.

-Taylor

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) I sent you an email on 1/28 stating that I uploaded new files into our shared folder. They are labeled "1/28 PSCAD Model" Thanks

Like

Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hi Mike, I have uploaded a testing report to the form. The PSCAD model now complies with the National Gris SRD requirements. There are no further revisions necessary at this time.

Please do note that no Power Plant Controller (PPC) model has been submitted at this time. It was determined that the ASO cluster study will be performed without a PPC model. However, we still require the developers to eventually submit a PPC model that may be used for future studies.

**Expand Post** 

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) Can you let me know what the next steps are on this? Timelines etc? I need to set realistic expectations for this project. Thanks

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Taylor Giron (/s/profile/0056T000008LFFfQAO) (National Grid) @Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Good Afternoon. Just checking in on this expected timeline. Thanks

7 months ago

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, we are still progressing the ASO study here. We are targeting to complete the ASO analysis to submit for ISO approval by May-June of this year. Please note that the balance of the distribution study would remain upon completion of the transmission/ASO study. More details can be found on the Group Study Outreach slide deck from December 14, 2021 on https://ngus.force.com/s/article/MA-DG-Stakeholder-Meeting-Information (https://ngus.force.com/s/article/MA-DG-Stakeholder-Meeting-Information)

Like

Write a comment...



Jennifer Chalifoux (/s/profile/0050W00000706nhQAA) (National Grid) January 27, 2022 at 11:22 AM (/s/feed/0D56T00007rRPD9SAO)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

# DPU 20-75 ASO PSCAD Study Notice

The Company's transmission provider and operator, New England Power Company (NEP), has advised that the transmission ASO study in Central/Western MA will be initiating the PSCAD study component on Tuesday, February 1st, 2022.

While most of the PSCAD issues have been resolved through ongoing interactions with the ASO study participants since June 2021, you are receiving this **Expand Post** 

1 view

Like

Comment



Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) September 13, 2021 at 5:00 PM (/s/feed/0D56T00007WkgAkSAJ)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, engineering has reviewed your revised documents and have identified the following necessary revisions:

- 1. Update one line to clearly indicate the derating of the updated ESS inverter assuming it's being derated
- 2. Submit a derating letter from the ESS inverter manufacturer to the Tech Sheet form
- 3. The ESS questionnaire excel doc has conflicting information to how ESS should be charging only from the co-located PV facility at all times. The customer can either update the excel doc so that all information matches or just opt to remove that excel attachment - as all the pertinent information on the excel doc should actually be getting captured in the interactive portal form instead. - assuming ESS would be charging only from the co-located PV facility at all times

Please let me know when the revisions have been provided & if you have any questions.

5 comments 10 views

Like Comment



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) a year ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) For item #1 that is already shown on the drawings

•



Like

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Mike, thanks for that clarification! Please let me know when you've provided the other two items. Thank you!

Liko

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

a vear ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Excel file updated and uploaded. I am expecting the derate letter on tuesday.

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

a year ag

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Derate letter uploaded to tech sheet.

LIKE

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Hey Mike, thanks for the updates. I've relayed these to engineering & will let you know if there are further comments

Like

Mrite a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)
August 27, 2021 at 12:59 PM (/s/feed/0D56T00007UAR1c5AH)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) We received unanimous consent for a change request from case 00305873 per the Group Study Order 3.4.1 Section J, and the Millbury-Grafton 001 Group (including this project) is on hold pending engineering determination of the impact of this change.

1 comment 1 view

ı**≟** Like

Comment



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Upon engineering review, we have determined the proposed change request would not impact the remaining group study timeline and cost. We have lifted the hold for the Millbury-Grafton 001 Group study to progress.

Like



Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) June 28, 2021 at 2:43 PM (/s/feed/0D56T00007KlOUhSAN)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, hope you're doing well. Our engineering team has identified that there are necessary significant system modification of reconductoring ~8,400 circuit feet for the facility to charge from the grid/company EPS. This work can be avoided if the customer changes their ESS to charge only from the co-located PV and not the company EPS.

Would the customer like to change the operation so it charges only from the co-located PV to avoid this work? If so, please let me know so I can open back up the ESS Questionnaire for you to adjust the documentation.

If we do not hear from you, we will continue the study with the assumption that there are no changes & the customer will continue to be charging from the company EPS. Please let me know, thanks!

20 comments 41 views

▾

•

Like

Comment



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

year ag

<u>@Jennifer Kim</u> (/s/profile/0050W000006tKGKQA2) (National Grid) Do you happen to know what the cost would be for the reconductoring? This would steer us in the direction we would like to go. If we went with the other option does that mean we are able to change our design set up without group consent? I'm a little confused here as I thought we couldn't change the design this late in the game.

Thanks

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I'm not sure if we'd have estimates at this time since we're still ways out from the group study being complete, but let me ask if we have high level (non-biding) numbers to better understand the financial impacts. I'll let you know what I hear back.

So the customer is allowed to make changes per the group study policy. The difference is that we are allowing changes that National Grid is identifying and requesting to not need group consent vs design made by the customer on their own accord (e.g. design change to modify the kWh of ESS) would need to get group consent.

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, using a rough \$/ft rule of thumb (non-binding, and may vary case-by-case), the reconductoring work would be ~\$1.6 million. Please let me know of a decision as soon as possible to avoid the need for any rework here. Thanks!

Like



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

a year ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Good Afternoon. We would like to change the design. Unfortunately that cost is something we cannot have for this project. Let me know what next steps need to be taken. Thank you



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike good afternoon! Okay - please upload the revised narrative to the ESS Questionnaire form, clearly stating that the site will not be charging from the grid. Please let me know when you've provided the requested revisions so I can let our engineers know of the update to see if it's acceptable or if you have any questions!



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

a vear ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Uploaded

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, please make any edits you made to the excel doc to the interactive ESS Questionnaire form (we've moved away from the excel doc - with one of the reasons being to drive for consistency with customer responses).

Also, please delete that excel file b/c there's conflicting info that says "In most cases the storage system will be charged by the PV". Please let me know when has been updated appropriately. Thanks!

Like



Mike Morrison (/s/profile/0050W00006usfjQAA) (Customer)

a year ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) It wont let me edit items 3 & 4 in the interactive ESS questionnaire.



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Hey Mike, that is b/c you need to edit the equipment (editing for which has been locked & I would not expect you to need to do since all we're trying to do here is change the operation to no longer charge from the grid). Are you

Case: 00305873 11/4/22, 12:40 PM

trying to change your equipment? What are you trying to change? That may need to have group consent as per the group study policies for us to allow.

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

a vear ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Sungrow changed their large AC coupled E4 products to LFP chemistry. With that there were a number of changes. I provided the following links to the updated product folder and data sheet for this product back in July. The power should still be the same to the utility since we are derating it to 1000 kW. Attached is the ess that shows what specifically is different.



120KB

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, would you be able to make the edits to your assets? I can run it by our engineering team to see if this is something we can address with the equipment exception policy in the group study provisions. Have your onelines been updated to address this change as well? If not, please provide the revised oneline. Thanks!

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Hi Jennifer. Assets and one line have been updated & uploaded.

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, upon review it looks like you've increased the kWh of your ESS. As mentioned previously, this would not fall under the equipment exception of the group study provision. And thus we'd need for you to provide the group consent document (template available on slide 10 of https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000FqoQP (https://ngus.force.com/servlet/servlet.FileDownload?file=0150W00000FqoQP)) Please fill this out and obtain signatures from the other members of the group as soon as possible so we can review the impacts.



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Sungrow no longer makes that ESS system so there is not much I can do. Wouldn't that fall under the equipment exception since its no longer available?



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, to fall under the equipment exception, it was an in-kind change as per tariff. One of the criteria to be an in-kind change is the same kW and kWh. As mentioned previously on a chatter from me back in May 24, 2021,, "Increasing the kWh capacity is still not considered as an in-kind change." I recall we had been expecting to receive the group consent doc from you back then, which never came through. Please let me know if you have any further questions or when that group consent doc is available. Thanks!

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Do you have the contacts and emails with everyone left in the study so I can reach out. Thanks



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

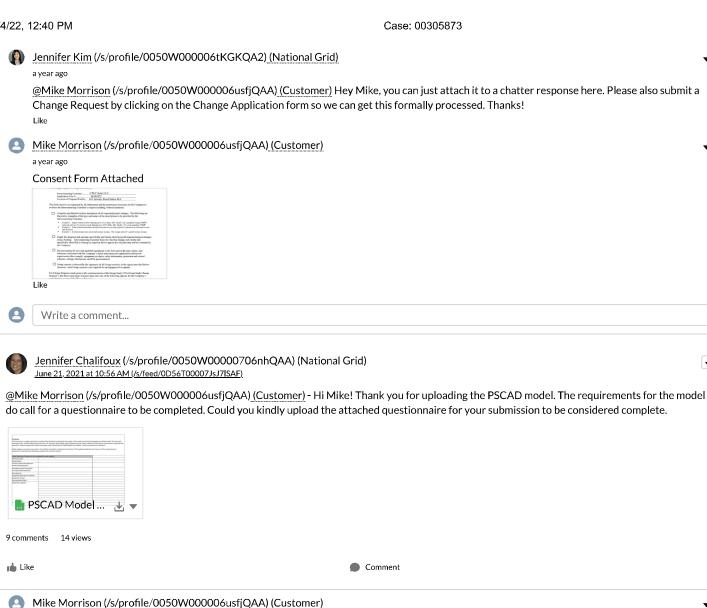
a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, I saw that you had found the contact list already and sent that request out. I also added Julia Wang as it appears she's taken over as the main point of contact for Ameresco for that project. Please upload the approved group consent to the portal when that's been provided by the group members. Thanks! Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Now that I have all the signatures on the consent form. Where should I upload it? Thanks

11/4/22, 12:40 PM



@Jennifer Chalifoux (/s/profile/0050W00000706nhQAA) (National Grid) Questionnaire uploaded. Thanks

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, please upload the file to the "Data Requirements for National Grid

Group/ASO Study" form rather than the ESS Questionnaire form for proper documentation!

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, could you please address the issues identified in the attached document? Thank you!



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Would I need to provide this based on the new BESS? If that is the case, we don't have that information yet. I only told them yesterday that things were changing. Thanks

a year ago

▼

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) By "new BESS" I'm assuming you're referencing the decision to change it to be no longer charging from the grid. I believe the PSCAD model shouldn't be different based on this change of operation, but I would let your inverter manufacturer provide that clarification here.

Please do note that we do need from you the updated ESS Questionnaire & Narrative to reflect this change in operation. Thanks, and hope you have a fantastic weekend!



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) the Chint inverters are not able to be DC coupled so we would need to change the inverters around resulting in a new PSCAD





Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, we aren't asking you to change to a DC-coupled ESS here. You should maintain the project to have the AC-coupled ESS. Customers typically limit the charging of AC-coupled ESS to be only when the PV is generating through relay elements (such as the SEL and 32 element). So we don't expect there to be inverter changes nor PSCAD changes needed here. Please let me know if you have further questions.



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, checking in here. Could you please provide the updated ESS Questionnaire and narrative response to the portal form to reflect the change in operation to no longer charge from the grid? This was our assumption progressing the study, but we'll need the documentation updated to match. Please let me know if you're running into any issues updating the portal. Thanks!



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Thank you. I will request this from the battery consultant.



Write a comment...



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) May 12, 2021 at 10:50 AM (/s/feed/0D56T00007DiFyNSAV)



@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, there are still some outstanding items we'd need for you to address

- 1. Customer to show the core structure of the interface transformers on the oneline. Assuming the transformers are 5-legged.
- 2. Customer to clearly indicate the total system size of the facility on the oneline Assuming 1750 kW PV & 1000 kW ESS for total of 2,750 kW
- 3. Customer to provide LROV letter for the ESS inverter
- 4. Customer to provide Anti-Islanding letter for ESS inverter. Anti-Islanding guidelines on Section 1 of "Supporting Documentation DER Islanding and Fault Data Request (DOC)" available at https://ngus.force.com/s/article/MA-Interconnection-Documents (https://ngus.force.com/s/article/MA-Interconnection-Documents) - Assuming the Customer proposed inverters will comply to Anti-Islanding

requirements according to NGRID standards.

Please let me know when you've provided the requested revisions on the oneline & the requested tech sheets. Thanks!

P.S. our engineering team is still determining if the increase to the kWh is something we'd allow here. I'll keep you posted on our determination.

And note, the customer proposed ESS Narrative shows the following:

- 1. During the first five years of operation, the ESS will not charge from the distribution system due to ITC compliance requirements.
- 2. After the first five years of operation, the ESS will charge from the distribution system during only the lowest priced wholesale market intervals.
- 3. During the first five years of operation, the ESS will only participate in frequency regulation service during hours of solar production.
- 4. After the first five years of operation, the ESS will participate in frequency regulation service during any interval ISO-NE requires.
- 5. In this case we will assume that the ESS will be charging from the Grid and will be participating the wholesale market as that will be the worst case situation for this ESS application.

19 comments 37 views





More comments 1 of 19



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) If that's the case, it might be cleaner to get the request in sooner than later to avoid having to do any rework (if applicable). Given where we currently are in the study, I don't expect us to require rework for the change & should be minimal (and possibly no) impact, but rework may be necessary if we try to update this towards the end of the study.

Lik



Write a comment...



<u>Jennifer Kim</u> (/s/profile/0050W000006tKGKQA2) (National Grid) <u>April 15, 2021 at 3:22 PM (/s/feed/0D50W000079OLcdSAG)</u>



<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, our engineering team has conducted the initial document review have identified the following necessary revisions. Also noted are some of the assumptions (italicized) we are making in order to progress the study. Please work on addressing these as soon as possible to avoid the need for rework and impacts to the group study timeline:

### One-line (Dated 10/20/20)

- 1. The Customer does not show the core structure of the interface transformers. Assuming the transformers are 5-legged.
- 2. The Customer has proposed interface transformer of 1000 kVA 13.80KV wye-grounded 480V wye-grounded in series with another 1000kVA 480V wye-grounded 540V delta secondary transformer for BESS and also shows a 115 kVA grounding transformer. Assume the BESS transformer is wye-ground wye-ground.

#### **Expand Post**

15 comments 27 views



Comment



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 years ago

<u>@Jennifer Kim</u> (/s/profile/0050W000006tKGKQA2) (National Grid) We actually uploaded a new site plan and electrical schematic last week with changes. I believe the storage capacity was the only item that increased. Would you like us to make these changes on this most recent design?

Like



Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

2 years ago

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Hey Mike, we'll need to run this by engineering to determine if that would be an acceptable "in-kind" change or would require the unanimous group approval. Could you please provide an updated oneline with clear revision clouds indicating what has changed (including text changes) from the last submission on 10/20/20?

Also, just an FYI, please note that just uploading a document is not an acceptable means to submit changes. Please always make sure to leave a chatter so that we can appropriately review and address the submission.

# Expand Post

Like



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 years ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) I have our engineer marking up the new drawings for what has changed from the October 2020 design. Can you help with these questions?

The Customer is proposing the Utility owned poles on Public road. They need to show the utility poles along the access road. The Customer proposed POI location is on a private property and if the Customer intends to move forward with the proposed POI then they will need to provide easements for that parcel. NEED TO KNOW HOW FAR FROM THE PUBLIC ROAD WE NEED TO KEEP THE POLES IN ORDER TO UPDATE THE Expand Post



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 years ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Good Morning Jennifer. Just checking in on this.

# Thanks

2 years ago

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

▼

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Just following up on this. Thanks

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

•

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Good Morning. Just checking in on this. Thank you

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) a year ago •

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mark, sorry for my delayed response here. I haven't heard back from our engineering team regarding your questions, and I've followed up with them. My understanding is that you'd need to have an access road for your POI/PCC poles rather than using the public road, but I'm wanting this verified from the engineering team. I'll keep you posted when I hear back.

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

•

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Was this ever discussed? "Hey Mike, we'll need to run this by engineering to determine if that would be an acceptable "in-kind" change or would require the unanimous group approval."

#### **Thanks**

Like

ير 👔

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, we were waiting on you there to provide a revised oneline with clear revision clouds indicating what has changed (including text changes) from the last submission on 10/20/20. Please let me know when that's been provided so I can relay the document to our engineering team for their decision. Thanks!

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

•

a year ago

@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) Bubbled versions of the electrical and site plan diagram have been uploaded.

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (<u>Customer</u>) Hey Mike, thanks for the revised oneline & site plan. I've relayed these to engineering and will let you know what their comments are regarding the updates that have been made.

From my quick scan, it looks like you still have not addressed providing the LROV and anti-islanding letter for the ESS inverters & updating your assets. Please make sure you address these items as well. Thanks!

Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

a year ago

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, just as an FYI, the customer proposed POI (the existing pole on Fayette Rd) is on a private property that is owned by a different owner, as the existing pole line is on the parcel of land outside of the facility property boundary. Please note that the customer will be responsible for obtaining all 3rd party easements to allow the Company 24/7 unencumbered direct access to its equipment. The customer will be responsible to obtain all required permitting, environmental assessments, and remediation on private property.

Please let me know when you've provided the other requested items. Thanks!

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

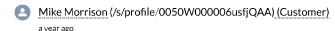
•

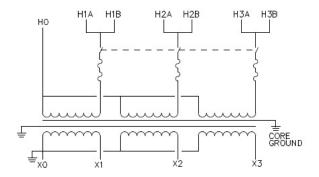
Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid)

•

<u>@Mike Morrison</u> (/s/profile/0050W000006usfjQAA) (Customer) Hey Mike, that's great if you already got that sorted. No need to provide those now - our message was intended to just give you a heads up. When the project progresses into design after all the necessary study & ISA steps are completed, our easements/permitting folks would be reaching out to you for that document later.

Like





@Jennifer Kim (/s/profile/0050W000006tKGKQA2) (National Grid) 1 - Are they looking for something like this?

2 - We call out the PV and ESS sizes all over the plans - specifically cover sheet and title block of every drawing. Are they just looking for us to put "Total 2,750 kW" in those locations?

Like

Write a comment...

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) May 5, 2021 at 11:35 AM (/s/feed/0D56T00007ClAAHSA3)

@Jennifer Chalifoux (/s/profile/0050W00000706nhQAA) (National Grid) Good Morning. I am trying to upload the PSCAD info however I don't see the form "Data Requirements for National Grid Group/ASO Study" Thanks

NATIONAL GRID GROUP ASO (/S/TOPIC/0TO6T000001W0TPWAQ/) (/S/TOPIC/0TO0W000001JJY8WA0

1 view

**ı** Like

Comment



Write a comment...



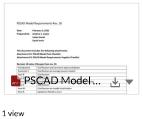
Jennifer Chalifoux (/s/profile/0050W0000706nhQAA) (National Grid) May 3, 2021 at 12:50 PM (/s/feed/0D56T00007CjgFhSAJ)

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

Projects in the Group over 1MW require ISO-NE approval of a generator notification form / proposed plan application (as applicable), which is required to be supported by an Affected System Operator (ASO) Transmission study.

The ASO Study will be performed by the transmission system owner New England Power Company (NEP), with input from other applicable ASOs (if any). The ASO Study is necessary to determine whether the interconnection of the Group, or any projects within the Group, impacts the ASO's electric power system (such as, the transmission system and neighboring distribution systems).

### **Expand Post**



i Like Comment ▼

▼

11/4/22, 12:40 PM Case: 00305873 Write a comment... Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) updated this record. ▼ April 2, 2021 at 1:33 PM (/s/feed/0D50W000078OhjQSAS) Case Owner Dave Moyer to Jennifer Kim Like Comment Write a comment... Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) lacksquareMarch 9, 2021 at 12:31 PM (/s/feed/0D50W000073FR31SAG) @Jennifer Chalifoux (/s/profile/0050W00000706nhQAA) (National Grid) Does the battery duration from a 4hr to 2hr result in a product change that would need unanimous approval from everyone in the group study? **BATTERY DURATION GROUP STUDY** (/S/TOPIC/0TO0W000001VH6ZWAC/) (/S/TOPIC/0TO0W000001E5PSWA0/) 6 comments 9 views **i** Like Comment Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) @Jennifer Chalifoux (/s/profile/0050W00000706nhQAA) (National Grid) Let me rephrase, we will not be changing the product just the duration hours Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) 2 years ago @Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) @Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) Does the battery duration from a 4hr to 2hr result in a product change that would need unanimous approval from everyone in the group study? Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) 2 years ago @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) I spoke with Jen Chalifoux and we're of the opinion this wouldn't be a substantial change that requires approval. We'll double check for clarity, but please go ahead and update your storage questionnaire with your intended duration change Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) @Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) Would the following require group consent?

October 2020 Questionnarie 136KB

1301/1

Like

Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

2 years ago

<u>@Dave Moyer</u> (/s/profile/0050W000007Cf2HQAS) (National Grid) It is my understanding that the ESS inverter is staying the same (SC12000UD), the only thing changing is the that it would have larger storage. Basically going from an STP2120kwh-1000UD ESS to a STP4292kwh-1000UD ESS. Like



Write a comment...



<u>Jennifer Chalifoux</u> (/s/profile/0050W00000706nhQAA) (National Grid) <u>March 5, 2021 at 8:36 AM (/s/feed/0D50W000073DHt9SAG)</u> lacksquare

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

Please see the attached communication relating to payment timeline extension requests for this group. A copy of this communication was also sent via email.



1 view



Comment



Write a comment...



Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)
March 4: 2021 at 4:00 PM (/s/feed/0D50W000073DLOHSA4)

lacksquare

@Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid) Can you confirm that Nat Grid has received our group study payment? We mailed a check weeks ago to the NY PO Box. Thanks

NY PO BOX

**GROUP STUDY PAYMENT** 

(/S/TOPIC/0TO0W000001E6LPWAS/)

(/S/TOPIC/0TO0W000001VGWPWAC/

1 comment 2 views

Like

Comment



Dave Moyer (/s/profile/0050W000007Cf2HQAS) (National Grid)

2 years ag

Hi @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

Yes, I can confirm that we received a study payment of \$26,812.50 on 2/10/2021.

Like

(

Write a comment...



Jamie Tobin (/s/profile/0050W00007CKTMQA4) (National Grid) February 4, 2021 at 5:19 PM (/s/feed/0D50W00006yU28tSAC)

lacksquare

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

You have indicated that you intend to participate in the Millbury - Grafton area study. Please note that your Group Study agreement has been uploaded and can be found under the form named the same. The study payment amount has been updated in the associated study payment form. Please also take note that the costs associated with the Distribution Study do not include potential costs for an ASO study which will be required for this study area. The scope of the ASO study is to be determined.



Comment



Write a comment...



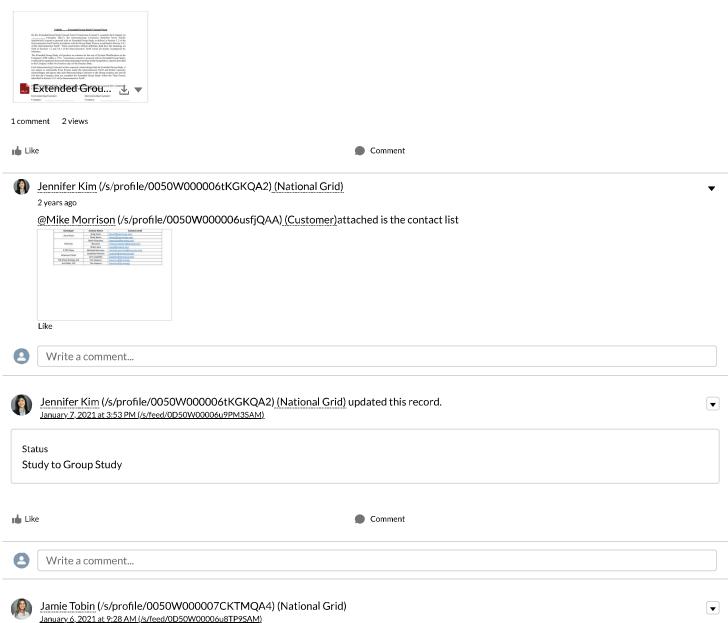
<u>Jennifer Kim</u> (/s/profile/0050W000006tKGKQA2) (National Grid) <u>January 7. 2021 at 4:00 PM (/s/feed/0D50W00006u9OxfSAE)</u>

▼

@Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer) Dear Group Member,

You have indicated your intent to proceed with a Group Study. The Group Study is a single study that produces an estimate for the cost of System Modifications to the Company's EPS within +/- 25%, however, the Group may request an Extended Group Study which would produce an estimate for the cost of System Modifications to the Company's EPS within +/- 15%. An Extended Group Study will only be performed to the extent that a Group requests such a study by unanimous consent using the Extended Group Study Consent Form (Exhibit J). The Group Members are responsible for obtaining unanimous consent amongst all Group members (the Company will review for completeness). The time allowed to perform an Extended Group Study may exceed the standard Time Frames provided in the Group Study provision.

Pursuant to Section 3.4.1. c of the Group Study provisions, the Company is notifying you that the Group has 5 business days to unanimously opt into an Extended Group Study and provide the Company with the fully executed Extended Group Study Consent Form (Exhibit J)



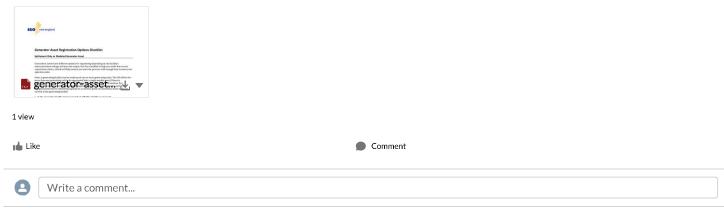
Greetings @Mike Morrison (/s/profile/0050W000006usfjQAA) (Customer)

This is a general information notice informing you that if you intend to participate in the wholesale market or any type of demand response, you are encouraged to initiate the MOG process through ISO NE. Please reference the attached document for further information.

If you intend to proceed into the ISO-NE MOG registration process, either voluntarily or due to ISO requirement, it is your responsibility as the Interconnecting Customer to notify your EDC project manager.

Thank You,

**Expand Post** 



View More