DG Collaborative Working Group – Plenary Meeting #3 (6/28/12)

Location: MTC, Westborough, MA

Facilitator: Dr. Jonathan Raab, Raab Associates, Ltd.

**DRAFT Meeting Summary**

Thirty people attended the third plenary meeting (attendee list can be found in Appendix 2). Following is a high-level meeting summary. The more detailed running meeting notes are available in Appendix 1. See all the documents from Plenary #3 on the website at: <http://massdg.raabassociates.org/events.asp?type=dte>

1. **Review Goals and Agenda for Day—Jonathan Raab**

Dr. Raab began the meeting by discussing the priorities for the day: to review and complete the options matrix, including adding and removing options as appropriate and beginning to discuss the pros and cons of each option. Between plenary #3 and plenary #4, the group will need to consider:

* Preferred options
* Options that are potentially acceptable
* Options that are likely unacceptable

Another priority for plenary #3 is to figure out when and how to address issues that have not yet been discussed at subcommittee or plenary meetings. The group will do this during the working session in the afternoon (see below).

At the next plenary the group will also review what other states are doing and further prioritize options in the matrix. The goal for plenary #5 will be to develop package solution options (to begin the negotiation/consensus seeking process).

1. **DOER Analysis of Expedited/Standard Data—Gerry Bingham**

Note: the presentation is available on the DG Working Group website.

Lack of uniform and more detailed reporting makes it difficult to analyze the monthly reporting data to understand where and why delay is caused between the time when an application is deemed complete and the signing of an interconnection agreement. In the absence of an online process/tracking system, DOER recommends closer tracking as the existing projects continue to move through the process.

Dr. Raab acknowledged the need for better tracking going forward, but asked what the available data tell us now to help guide the negotiations. What do we know now that is new since last plenary?

The data demonstrates a larger lump of projects (over 300) in the impact study phase that seem to be stuck (although some haven’t passed the tariff timeline yet), although we can’t tell from the available data the percentage of applications awaiting utility vs. customer action.

Recognizing the limitations of the available data, the group posed the following question: When developers are doing what they are supposed to be doing (i.e., complying with data requests in a timely fashion), can the utilities meet the existing timelines, or is there a problem outside of customer delays (i.e. does the tariff need to be revised/updated or is this really on the side of the applicants)?

Although there was no clear answer to the question, utilities shared the following insights:

* Incomplete or difficult projects can bog down the process and delay good projects that come in behind them.
* It is not just a DG issue because DG has to fit into broader utility planning, including long term construction planning. Utilities now have to fit immediate DG interconnection needs into construction schedules that are made a year or more out, and the different DG application tracks have to fit with each other.
* One utility gave an example of an applicant that hired technical consultants that really had no idea how to do the interconnection and needed a lot of hand holding from the utility, which is very time consuming.
* Some of the activities and decisions related to detailed studies are things utilities haven’t had to do before, and it takes time to do some of these new things (e.g. associated with large, multi-MW projects). Utilities need to understand how large projects will impact the electric system, and this work is not necessarily possible to do in the timeframe provided by the tariff.
1. **Developing Potential Solution Options**

The working group moved on to discussing the options matrix developed at the two subcommittee meetings. Dr. Raab first solicited additional options and then opened discussion of the options by the working group. The following section summarizes new option additions and important points of discussion around the options.

3A) **Pre-Application/Application Process**

This discussion focused on the need for pre-application information sharing, the potential for training applicants, the usefulness and basic requirements of an online application process, and the potential to add fees for simplified applications.

Pre-Application Information

Partipants were interested in exploring ways to provide applicants with information that would discourage speculative applications. This could include 1) maps of DG installations by town, sub-station, or feeder; 2) an online system for applicants to enter an address and view utility infrastructure in that area; and/or 3) a fee-for-service report/email to applicant based on their proposed point of coupling and DG (size, technology, configuration) In general the working group agreed it would be good to standardize what information is available to applicants to help them make siting decisions, so they know what information they will get back and by when (e.g. stiffness factor, distance to 3-phase, etc).

**Training**

The group suggested changing the monthly “briefing” into more of a “training” that may or may not include some form of applicant certification. The trainings would provide an opportunity for applicants and utilities to interact, and could be a mandatory part of the application process. This could also link into an online application process that requires applicants to take and pass a “how to apply for interconnection” test before submitting the online application.

**Online Application Process**

An online application could assure applications are complete before the utility reviews them, and reduce the back-and-forth process between the utilities and applicants. It could also facilitate the ability for better information sharing and serve as the foundation for automatically tracking an application throughout the interconnection process. An online system could also be administered by a third party, and set up as a single, state-wide system. This would allow utilities to share the resources associated with an online system, and free up utility resources for moving the applications through the interconnection approval process.

**Fees**

Should consider adding an application fee for the Simplified track now that there is a huge volume of applications not anticipated a decade ago. Any such fees should also cover any process changes to the Simplified track that result in additional work for the utilities.

There didn’t seem to be any interest among the participants allowing applicants to pay additional fees for accelerated treatment. There are fairness issues, but this may also be illegal for utilities to do. There is also concern about whether paying a fee would actually accelerate the application, given limited utility resources. There was, however, discussion about the possibility of allowing accelerated treatment for applicants who are more shovel-ready (site control, permits, financing).

**3B) Queue Management (Change to “Stale Project” Management)**

T interconnection process does not involve a formal “queue” and this issue is really intended to address potential options for managing projects that don’t appear to be progressing especially if they are holding up other projects. The discussion focused on how to determine whether projects are “stale” and whether it is in any party’s interest to cancel stale applications or provide a means by which they can “idle” in the process without holding up other projects.

**Canceling Projects**

Stale projects at the interconnection agreement/construction phase can really impact the project behind them. The plenary participants felt that just changing “may” to “will” to allow utilities to cancel stale projects that missed their deadlines was too draconian for a variety for reasons, and could also impose additional administrative burdens on the utilities. However, participants might be more willing to strengthen the language if applicants were given a chance to correct within a certain timeframe, and were then subordinated in any queue rather than kicked out altoghether.

The group also discussed subordinating projects rather than cancelling them in some detail. It is time consuming and takes resources to cancel a project, so some utilities would prefer to keep the project in the queue but let others move past it (maybe by creating a standby queue, and different standby queues for each circuit). However this presents the issue of which projects have been studied and whether or not to account for that project in the next study (e.g. if it’s on standby, you assume it isn’t in, and if it gets back in the study may have to be redone).

**Financing as a Screening Mechanism**

Financing is important and projects that don’t have financing “aren’t real.” There was a suggestion to tie this to the idea for making common upgrade costs available to applicants so they have a better sense for their complete project budget needs earlier on and requiring a deposit for some of that amount. But it would be hard to use financing as a screening mechanism because financing is increasingly being tied to the interconnection agreement (i.e. some demonstration of a real project for potential financers); the chicken and egg dilemma. To get financing, projects need to know they can get interconnected and have a customer for the electricity, and those things have to all arrive around the same time

3C **Standard Track and Large Projects**

This discussion highlighted the need to better understand the ISO-NE requirements and when they apply, as well as whether FERC jurisdiction may require upgrade costs to be socialized in certain cases. In addition this discussion began to overlap with the Track Segmentation issue, specifically regarding whether there is a need for a different track for large projects.

**ISO-NE and FERC Considerations**

There was some confusion about actual ISO-NE requirements: project over 5 MW are required to go before ISO’s Reliability Committee, but some have heard that anything over 1MW requires an I-3-9 form and must also go thru the Reliability Committee. The group agreed clarification from ISO-NE was needed. The group also agreed that issues that require ISO-NE approval stop the clock of the DG interconnection tariff, which is already part of the tariff.

There is also a need to clarify whether there may be an issue of upgrades happening to FERC jurisdictional lines, in which case the upgrade costs may need to be socialized among NE ratepayers rather than covered by the DG customer.

**Track Segmentation (as a standard and large projects issue)**

The group discussed whether large project size or a significant amount of power being exported warranted the creation of a different application track. The original tariff didn’t anticipate these large exporting projects, so there may be a need for a fourth track with appropriate timelines that help manage customer expectations and allows them to better plan their development. Another alternative is to have a sub-track within the Standard track process for large, exporting projects (e.g., more time for the Detailed Study phase for DG over 1 MW that is almost entirely exported.)

There was also suggestion that the DG experience in MA seems to be unique, in that utilities are being asked to interconnect relatively large projects on relatively light load distribution lines, which means most projects require significant distribution upgrades.

**3D) Multiple Projects on a Single Feeder**

This topic included significant discussion of project clustering. In general the group seemed to think clustering could be good, but that it needed careful consideration to ensure it did not lead to additional problems.

* NSTAR is doing a cluster with 4 projects, but it’s complicated to study all four and coordinate activities with 4 projects
* There are two clustering option proposals pending in CA (PG&E/SCE): a fixed window during which projects are accepted and clustered, and an option where if a project is waiting due to other project studies, projects coming after can wait with them and become a cluster
* There is a need for a sucession plan process to deal with canceled projects, which would be very important when dealing with clusters since stale or canceled projects would directly impact the other projects in the cluster
* Geographic distribution may impact the ability to cluster projects, so there is a need for criteria to determine which projects can be clustered with others
* There may be a need to distinguish between commercial generation and residential projects because we would not necessarily want to capture by default some of the smaller residential projects into clusters with commercial projects

**3E) Track Segmentation**

The discussion focused on the need to be careful about creating new tracks or changing the criteria for existing tracks. The group acknowledged that the point of any changes would be to make all tracks run more efficiently. Suggestions included:

* A different track for large, primarily exporting projects
* Potentially modifying existing simplified track criteria to increase 7.5% ciruit annual peak limit to 15% line segment limit
* Adding an option to either meet the (potential) 15% line segment requirement OR 100% of the minimum annual daily load (if load data is available) for PV
* For the expedited track, the group will need to look at existing screens 6-10 to see if they need review or if they are OK as they are
1. **Work Planning Session**

The participants discussed the issues in the issues list, potentially not covered in the discussion of the issues in the options matrix. Many of those issues are actually now being addressed as part of the discussions on the five major issues in the options matrix (discussed above). However there are still issues in the longer list that need to be addressed. Some of the remaining issues are probably better handled later in the process, once the other changes are worked out (e.g., ADR process) while others may be dealt with relatively quickly if the group cannot agree on a course of action (e.g., penalties).

The group did discuss a few remaining issues, including:

* This process should at least get an update and discuss issues around microgrids and area networks. NREL may be able to present on area network report; also need to understand IEEE 1547; maybe NSTAR could report on its local pilot
* The tariff can link to outside documents that get updated rather than copying the language in the tariff (e.g., technical standards), so that if the other document gets updated the tariff will “automatically” get updated to reflect that change
* DOER has worked on a draft ADR replacement that probably works well as a straw proposal that can be presented to the group at the appropriate time during this working group process
* There may be a need soon to create a subcommittee on fees and costs

**5). Next Steps**

The group agreed that there would be one subcommittee meeting on July 3rd to continue working on the 5 big issues, but that the July 5th subcommittee meeting will be canceled (due to July 4th holiday). Subcommittee meeting will be at CLF from 9-3.

Dr. Raab will work with IREC on their presentation on CA and other state best practices for the July 12th Roundtable, as well as talk w/ISO-NE on making a presentation on interrelationship between MA and ISO interconnection processes.

**Reading Material for Next Plenary**

The following materials are available on the DG Working Group website: <http://massdg.raabassociates.org/events.asp?type=eid&event=62>

1. CA Settlement
2. NREL Screens Report
3. PG&E/SCE Clustering Proposals
4. SEIA FERC Filing
5. Freeing Grid and KEMA Report (Prior HW assignment)

**Review Options Matrix for Next Plenary**

1. Preferred options
2. Options that are potentially acceptable
3. Options that are likely unacceptable

**Appendix 1: Running Meeting Notes**

**Review Goals and Agenda for Day—Jonathan Raab, Raab Associates**

Inner circle now includes a 3rd CHP rep, no more customers but using CVEC and Harvard to fill that role, and MassCEC to rep for wind if no wind rep present

Priority for today is to review and complete the options matrix. Next plenary we will review what other states are doing and prioritize options in the matrix. Goal is to develop package solution options that can be reviewed at plenary #5 on August 1st (begin negotiation/consensus process)

Need additional reading materials (KEMA report and Feeding the Grid already assigned)

Need to consider preferred options, options that are potentially acceptable, and options that are likely unacceptable (for plenary #4, based on results of options matrix review today)

Where in the process do we get more granular, e.g. specifics about staffing needs for specific aspects of the interconnection process? Part of the review of the options matrix.

Increasing staffing needs a long lead time, so this specific issue needs to be figured out in time to allow utilities to make changes. But we don’t necessarily know that lack of staffing is a problem that this process needs to address (making assumption about need for more staff, and want to make sure this issue is figured out in time to implement appropriate changes)

When does the group discuss the pros and cons of the options in the matrix? We’ve been putting ideas into a table, but these are just words in a box and haven’t been vetted. Want to begin to discuss the options today, and will also figure out when and how to address issues that have not yet been discussed at subcommittee meetings.

**Digging Deeper on Delay Data and Root Causes: DOER Analysis of Expedited/Standard Data—Gerry Bingham**

Note: the presentation is available on the DG Working Group website.

Preliminary review of the data

Looked at where projects are in process, and complete notes fields, NSTAR filled in more notes, NGRID indicated blanks meant projects still being screened

What does notes field tell us about status of projects, required conversations will all utilities to understand meaning of the language in notes field

Significant number stuck at impact stage

Of 598, 590 projects categorized

97 NGRID projects stuck in screening process, 26 NSTAR, maybe 3 for WMECO but sounds like there may be more based on the way WMECO runs the process (categorizes things differently)

Recognize notes field wasn’t intended to track project status

Majority being asked for more info are in impact study phase

In the absence of an online process/tracking system, recommend closer tracking as the existing projects continue to move through the process

Lack of uniform reporting makes it difficult to analyze data (no uniform fields and no uniform way to use notes field)

Human error in tracking also contributes to difficulty in tracking

Need better tracking going forward, but what does data tell us? What do we know now that is new since last plenary? Data won’t tell us what is causing the delay (in addition to where the delays are, which we seem to know)

Larger lump of projects in impact study phase, that seem to be stuck in that phase (some haven’t passed the timeline yet) some are with the utility, some are with the customer, but unclear which side is holding up the process

Utilities not following up on applications when utility requests info and does not hear back from applicant (too many other applications to deal with)

Closing out or removing an applicant requires administrative effort, so less work to let the applicant remain in the queue, and no problem with that as long as the project isn’t holding up other projects

Would be good to report which circuit each project is on (add that to current tracking )

Data seems to tell different story than previous conversations (i.e. lots stuck in impact and fewer in detailed study); many projects potentially deciding whether to enter into detailed study (so “stuck” before the detailed study)

Comment was closer to: detailed study timeframe is not appropriate for larger projects that utilities are seeing now, and if more projects get to that point the detailed study process will get more backed up

NGRID says many applicants don’t want to do detailed study, NSTAR says most (80%) want to do it

No one doubts there are instances where delays are caused by the developer, so issue is, when the developer is doing what they are supposed to, where are the delays still happening?

Data hasn’t told us with much detail where delays are happening, or on which side, so how do we proceed? Dig deeper into data, try to get more data from utilities? Or do we just proceed assuming there are issues on both utilities and applicants.

Why is screen so complicated/time consuming?

When developers are doing what they are supposed to be doing, can the utilities meet the timelines, or is there a problem outside of customer delays (i.e. does the tariff need to be revised/updated or is this really on the side of the applicants)?

Incomplete or difficult projects can bog down the process and delay good projects that come in behind them

Not just DG issue, but DG has to fit into larger utiliy process, including long term construction planning (so suddenly having to fit immediate DG interconnection needs into construction schedules that are made a year out) and different DG tracks have to fit with each other (WMECO)

NSTAR gave example of applicant that hired technical consultants that really had no idea how to do the interconnection and needed a lot of hand holding from the utility (very time consuming)

Should we ask utilities to get more detailed data, or do we want to move on with the data we have?

Some activities/decisions related to detailed studies are things utilities haven’t had to do before, and it takes time to do some of these new things (e.g. associated with large, multi-MW projects) Need to understand how large projects will impact the electric system, and haven’t had to do this before, and not necessarily possible to do in the timeframe provided by the tariff.

Not hard to estimate costs based on upgrade needs unless substation work involved, then have to involve substation group, and that work is based on 5-year timelines (bigger upgrades include substations, transformers, reclosers)

**Developing Potential Solution Options (report from subcommittees and further discussions)**

Pre-Application/Application Process

Ombudsperson to provide additional education and potentially provide administration of applications (e.g. run the online process) Larger role than just pre-application

General questions clearinghouse and requirement to have read to interconnection tariff (e.g. online “test” to demonstrate understanding)

Change “briefing” into more of a “training” (with or without certification); maybe day-long, opportunity for applicant and utility to interact

Mandate training, and potentially stop educating applicants (i.e. it’s not the utility’s job to teach people how to interconnect, it is the utility’s job to help people navigate the interconnection process) How to stop dealing with ill-prepared customers without compromising customer service

Potentially require a protection person on the project team (need a PE stamp, but need stamp from protection person) Fix ADR process for when applicants run into aspects they don’t expect, e.g. needing a PE stamp

NSTAR could do saturation map by town

Registered/approved, potentially log into a site that allows applicant to enter an address and view utility infrastructure in that area (does this make more sense than having utility staff that can respond to requests for this type of info? Matter of resources, it is more resource intensive to keep a map or database updated, or to respond to requests)

Providing this type of information can be complicated based on a lot of variables, which make it potentially less useful to provide “snapshot” info that is intended to allow applicants to make siting decisions

Also depends on what utilities are capable of tracking and reporting on; so maybe require when a line reaches a certain saturation, install meter to monitor load and provide that information to future applicants (would require someone to cover the cost of installing the meter)

Need to standardize what information is available to applicants so know what info will get back and when (e.g. stiffness factor, distance to 3-phase, etc)

Potentially part of increased monthly reporting by utilities to DOER, at which point data is at DOER and DOER can be first point of contact

But online application could alleviate need for this better information sharing since all the data would be automatically tracked, but may not include sufficient data unless the info goes back through the entire existence of the system (not just the recent DG interconnections)

Back to what is CEII or not, and can and should be made available at the request of the applicants, and the need to standardize this to manage expectations and allow for “organized prospecting” (standard and efficient)

Potentially do this via a third party administrator to not use too many utility resources

Concern with online is the submission of incorrect information, so no opportunity to verify before the application is submitted as “complete”

Link mandatory training to online application process, so help ensure good information is provided via the online application

Online application could have pop-up help windows, but a hard copy application could have an accompanying instruction sheet, e.g. IRS tax forms

Maybe have state interconnection online application, that sends the info to the appropriate utility but allows for standardization and shared IT resources; how much are utilities comfortable outsourcing so they can focus on interconnection process things

Probably don’t want to allow fees to accelerate application (fairness issue, and maybe not even allowed); also concern about whether paying a fee would actually accelerate the application (given limited resources, could utilities deliver on this anyway)

If process changes to add more work to simplified process, will need to add a fee to help cover additional work associated with simplified applications (e.g. reporting); fee would encourage applicants to pay more attention to filling out the application (i.e. improve application quality)

A lot more simplified applications and more work involved with processing them

Simplified is simpler, but costs to process are being covered by ratepayers rather than the applicants

Need to determine appropriate cost for properly run process

Queue Management (Change to “Stale Project” Management)

Issue of when clock starts (when complete application is received?) Issue with wording of when clock starts, when it’s in the queue (when an application is received it is put in the system, even if incomplete, but clock doesn’t start until application is complete) (NGRID and NSTAR, sort of also Unitil ) Confusion, see below…

Tariff timeline starts clock with application is received, whether or not it is complete, but the project does not get into a “project queue” until the application is complete (there isn’t an actual “queue” in the interconnection process) (WMECO)

Different utilities have different process, regarding when a project gets into line to get interconnected to a specific circuit

Supplemental review time based on 10 hours of engineering ($1250 limit) but there is a lot of administration time associated with the supplemental review

Want people to understand how long the process really takes, but developers need help to understand what it really takes, need explanation of what it really takes; and utility needs info from developers on the actual needs of developers, so utilities understand the development process

Change “may” to “will” to allow utility to boot stale projects: too draconian, developers have to rely on other companies as well, but good starting point for cleaning up stale (developers need some bounds on timing on their side, just like utilities have bounds from the tariff)

Maybe not dropped, but subordinated

Maybe not change to “will” but definitely need language stronger than “may”

Impact study agreements that aren’t signed and interconnection agreements that aren’t signed (another issue)

But time consuming and takes resources to drop a project from the queue (it takes resources to cancel a project), so prefer to keep the project in the queue but let others move past it (maybe standby queue, and different standby queue for each circuit) issue around which projects have been studied and whether or not to account for that project in the next study (if it’s on standby, you assume it isn’t in, and if it gets back in it may have to redo the study)

“circuit/feeder queue” should not become a term, there are other issues, including substations

Financing should be a screening mechanism at some point in the process (e.g. could be used to drop projects if they don’t have financing)

At interconnection agreement/construction phase, this is where stale projects can really impact the project behind them

Financing is key, and projects that don’t have financing “aren’t real”; maybe tie this to idea for listing common upgrade costs upfront and requiring a deposit for some of that amount. Financing is increasingly being tied to interconnection agreement (i.e. some demonstration of a real project for potential financers)

Customer time limit? (Point made that DG is not just solar, but includes e.g. wind and AD, which may have different simultaneous development requirements)

Put projects on construction schedule, and construction estimate is good for a certain period of time, and have to estimate when projects will happen to give construction team heads up and allow for planning (so need customer timeline, so customer can be responsive to utility planning) contractual language about estimates good for 90 days, then have to be re-estimated

Net metering and other incentives create rush to apply for interconnection, which is causing some of the problems (i.e. project want to get in an application before they know whether they are real themselves)

To get financing, projects need to know they can get interconnected and have a customer for the electricity, and those things have to all arrive around the same time

Also driven by others in the process who are keeping a close eye on utilities and requesting stale projects gets kicked out (so pressure to put timeframe on developers)

Standard Track and Large Projects

Greater than 5MW triggers ISO-NE process, but any project that impacts the transmission will trigger ISO, have to take to Reliability Committee for “approval” (transmission owner (utility) has to demonstrate it has mitigated the impact) Slows down the delivery of the impact study (confusion: some have heard that anything over 1MW requires I39 form and get on agenda for Reliability Committee, and at 5MW may be stability issues that require study) Ask Dave Forest at ISO-NE

Issues that require ISO-NE approval stop the clock of the DG interconnection tariff

Outside of the large projects that go to ISO (which are dealt with by the current tariff), are there size-related issues that this process should address?

Need to clarify whether there may be an issue of upgrades happening to FERC jurisdictional lines, in which case the upgrade costs may need to be socialized among NE ratepayers rather than covered by the DG customer

Suggestion that process should favor customers over export-only projects (not an issue of size, issue of onside load)

Increasing timelines to accommodate large projects hurt the smaller projects that don’t need a longer timeline

Original tariff didn’t anticipate these large projects, so need a fourth track with appropriate timelines that help manage customer expectations and allows them to better plan their development

Experience in MA seems to be unique, in that being asked to interconnect relatively large projects on relatively light load distribution lines, which means most projects require significant upgrades, and developers need accurate estimates of upgrade costs

Potential criteria for fourth track is 100% export of energy (need to carefully define export); utility caucus needs to discuss potential timeline (probably needs more time) mainly due to need for additional detailed analysis (would this make other timelines more achievable; i.e. free up other tracks)

Net export or new construction with new meter are both more complicated projects (additional engineering review) still mostly in the detailed study stage

[Issue around when to provide interconnection agreement and when to do detailed study? Provide ISA to applicant before doing detailed study, because ISA allows developers to get financing or net metering, and can then wait for the longer time needed for the detailed study??]

More things are under control of utility in study phase, and less control during construction phase

Issue around construction costs being a “black box” and there should be a way to provide developers with some more information closer to the beginning of the process

Multiple Projects on a Single Feeder

Splitting upgrade costs tricky; NSTAR doing a cluster with 4 projects, projects agree to share costs, but it’s complicated to study all four and work with 4 projects (opt in voluntary clustering)

Two options pending in CA (both proposals) fixed window, and if someone is waiting other projects can wait with them and become a cluster

Want option for developer to come to agreement with utility on which equipment to use; but maybe not as simple as “Lexus vs. Toyota” option, there is a “utility solution” that may have to be THE option

Bounds on clustering, because want to avoid issues where there are e.g. 4 projects and one goes away (impact on remaining 3), need process for cancelling projects (very important when dealing with clusters since stale projects directly impact other projects)

Seems like a real opportunity to cluster projects, and should be carefully considered

Geographic distribution may impact ability to cluster projects, so need criteria to determine when/which projects can be clustered with others

Maybe distinguish between commercial generation and residential projects (don’t necessarily want to capture by default some of the smaller residential projects)

Track Segmentation

Issue with simplified process projects becoming larger and not as simple to process, so increasing size screen could further bog down process; also projects that export are more complicated (raising thresholds would further complicate process)

But small ratio of onsite load to capacity should allow for simplified (i.e. no possibility of export)

For zero net energy house, need something like a solar system with 7x capacity of building load, to get to zero net energy over course of the year (i.e. net zero is average achieved by days of significant export)

Maybe comfort on moving 7.5% up to 15% (and need to be clear on how we define 15%)

15% or100% of minimum annual daily load if data is available (need to further discuss)

Look at screens 6-10 to see if they need review (Expedited)

Utilities impose maintenance fee on equipment that is specific to specific DG projects, e.g. reclosers

**Work Planning Session**

Identification and strategy for tackling additional issues (from “Potential Issues List” spreadsheet)

A lot of the highlighted issues have been linked into the 5 major issues, so probably no longer need to be highlighted (review to see which are now included already in the option matrix)

Some still need to be discussed, but may be quick conversations

Tariff can link to outside documents that get updated rather than using the language in the tariff, so that if the other document gets updated the tariff will “automatically” get updated to reflect that change

Have opportunity to address issues around microgrids and area networks and should take advantage of this opportunity

NREL may be able to present on area network report; also need to understand IEEE 1547; maybe also NSTAR on local pilot (think about how/when to do this in this process)

DOER worked on draft ADR replacement, and probably works well as a straw proposal, which can be presented to the group at the appropriate time during this working group process

Subcommittee on fees and costs? Have so far only discussed fees in regards to simplified track; when to take up issues that haven’t yet been addressed but have always been part of the original 29 issues (probably soon, and issues are still on the radar)

**Appendix #2: Attendee List**

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| **Attendance: MA DG Collaborative Working Group Plenaries** | **Plenary #1****5.31.12** | **Plenary #2****6.13.12** | **Plenary****#3****6.28.12** |
|  **Representatives and Alternates** |  |
| **Abe** | **Jonathan** | **Nexamp (alt.)** | **DG Solar** |  |  |  |
| **Berwick** | **Dan** | **Borrego Solar** | **DG Solar** |  | **X** | **X** |
| **Bingham** | **Gerry** | **MA DOER** | **State Agency** | **X** | **X** | **X** |
| **Bolgen** | **Nils** | **MA CEC** | **State Agency** | **X** | **X** | **X** |
| **Bonazoli** | **John** | **Unitil (alt.)** | **Utilities** | **X** |  | **X** |
| **Breger** | **Dwayne**  | **MA DOER (alt.)** | **State Agency** | **X** | **X** | **X** |
| **Brigandi** | **Michael** | **NSTAR (alt.)** | **Utilities** | **X** | **X** | **X** |
| **Broad** | **Martha** | **MA CEC (alt.)** | **State Agency** |  |  |  |
| **Brown** | **Ruben** | **E Cubed LLC (alt.)** | **DG-CHP** |  |  |  |
| **Burrowbridge** | **Ryan** | **Borrego Solar (alt.)** | **DG-Solar** | **X** | **X** |  |
| **Cummings** | **Fran** | **SEBANE/SEIA** | **DG-Solar** | **X** | **X** | **X** |
| **Edwards**  | **Scott**  | **Exelon/Constellation Energy** | **DG-Solar** | **X** | **X** | **X** |
| **Flottemesch**  | **Robert**  | **Exelon/Constellation (alt.)** | **DG-Solar** | **X** |  | **X** |
| **Hoagland** | **Erik**  | **Spire Solar Systems (alt)** | **DG-Solar** | **X** | **X** | **X** |
| **Janke** | **Cynthia** | **WMECO** | **Utilities** |  | **X** | **X** |
| **Kelly** | **Kevin** | **NGRID (alt.)** | **Utilities** | **X** | **X** | **X** |
| **McLaren** | **Robert**  | **NuGen Capital Management (alt.)** | **DG-Solar** | **X** |  |  |
| **Miller** | **Gary** | **Unitil** | **Utility** |  | **X** |  |
| **Moskos** | **George** | **NSTAR**  | **Utilities** | **X** | **X** | **X** |
| **Pentland** | **Bill** | **ClearEdge Power, Inc** | **DG-CHP** |  |  | **X** |
| **Plitch** | **Larry** | **Source One/Veolia Energy (alt.)** | **DG-CHP/Other** | **X** |  | **X** |
| **Roughan**  | **Tim** | **NGRID** | **Utilities** | **X** | **X** | **X** |
| **Ruiz** | **Kially** | **Aquinergy** | **DG-Wind** | **X** |  |  |
| **Schmidt** | **Douglas** | **Harvard** | **DG-CHP/Other** |  | **X** | **X** |
| **Smith** | **Mary** | **Harvard (alt.)** |  |  |  |  |
| **Soares** | **Joe** | **CLC/CVEC** | **Customers/Cities** | **X** |  | **X** |
| **Sprite** | **Reid** | **Source One/Veolia Energy**  | **DG-CHP** |  | **X** | **X** |
| **Stone** | **Michael** | **My Generation Energy, Inc.** | **DG-Solar** | **X** | **X** | **X** |
| **Tosches** | **Jamie** | **MA AGO** | **State Agency** | **X** | **X** |  |
| **Walker** | **Jim** | **Solar PV Grid Tie Ameresco**  | **DG-Solar** | **X** |  |  |
| **Walsh** | **Kevin** | **MA AGO** | **State Agency** |  | **X** | **X** |
| **Wells** | **Donald** | **NU (alt.)** | **Utilities** | **X** |  |  |
| **Zachas**  | **Rebecca**  | **BCK Law P.C.** | **Customers/Cities** | **X** | **X** |  |
|  |  |  |  |  |  |  |
| **Other Working Group Participants** |  |
| **Ahirrao** | **Vishal** | **NGRID** | **Utilities** | **X** |  |  |
| **Argo** | **Liz** | **Argo Consulting** | **Other/Cons** | **X** | **X** |  |
| **Bachman** | **Roberto** | **SolarFlair Energy**  | **DG-Solar** | **X** |  |  |
| **Baker** | **Ed** | **UTC Power** | **DG-CHP/Other** | **X** |  |  |
| **Bhumgara** | **Rayo**  | **Sustainable Strategies 2050** | **DG-Solar** | **X** |  |  |
| **Boecke** | **Donald**  | **NSTAR** | **Utilities** | **X** |  |  |
| **Brazo** | **Shawn** | **Prime Solutions** | **DG-Solar** |  |  | **X** |
| **Busch** | **Joe** | **Borrego Solar** | **DG-Solar** |  | **X** |  |
| **Cox** | **Roger** | **NGRID** | **Utilities** | **X** |  |  |
| **DaSilva** | **John** | **Aegis Energy Services** | **DG-CHP/Other** | **X** |  |  |
| **De Veer**  | **Henrietta** | **Prime Solutions** | **DG-Solar** |  | **X** | **X** |
| **DeVillars** | **John** | **BlueWave Capital**  | **DG-Solar** | **X** |  |  |
| **DiNapoli** | **John** | **Unitil** | **Utilities** | **X** |  |  |
| **Enayati** | **Babak** | **NGRID** | **Utilities** | **X** |  | **X** |
| **Feeley Karp** | **Courtney** | **DOER** | **State Agency** | **X** | **X** |  |
| **Feraci** | **Joseph** | **NSTAR** | **Utilities** |  | **X** | **X** |
| **Fitzpatrick** | **Joseph** | **DG Clean Power** | **DG-CHP/Other** | **X** |  |  |
| **Foster** | **John** | **Advanced Energy** | **DG-Solar** | **X** |  |  |
| **Fuller** | **Peter** | **NRG Energy** | **DG-Solar** | **X** |  |  |
| **Grace** | **Bob** | **Sustainable Energy Advantage**  | **Other/Cons** |  | **X** |  |
| **Greenblatt** | **Beth**  | **Beacon Integrated Solutions** | **Other/Cons** | **X** |  |  |
| **Greenwood** | **Daniel**  | **SolarFlair Energy, Inc.** | **DG-Solar** | **X** |  |  |
| **Gudell** | **Jan** | **NSTAR** | **Utilities** | **X** |  |  |
| **Habib** | **Jack** | **Keegan Werlin for NSTAR** | **Other/Law** |  | **X** | **X** |
| **Hawes** | **Peter** | **Borrego Solar** | **DG-Solar** | **X** |  |  |
| **Jones** | **Keith** | **NSTAR** | **Utilities** |  | **X** |  |
| **Keeffe** | **Andrea** | **NGRID** | **Utilities** |  | **X** | **X** |
| **Kelley** | **Paul** | **NSTAR** | **Utilities** | **X** |  |  |
| **Krathwohl** | **Eric** | **Rich May** | **Other/Law** |  |  | **X** |
| **Krich** | **Abigail**  | **Boreas Renewables**  | **DG-Wind** | **X** |  |  |
| **Kuriakose** | **Alex** | **NGRID** | **Utilities** | **X** |  |  |
| **LaBrake** | **Neil** | **NGRID** | **Utilities** | **X** | **X** |  |
| **Ledgerwood**  | **Bruce** | **LEAN** | **Customers/Cities** | **X** |  |  |
| **Medeiros**  | **Ron**  | **NorthEast Clean Energy Corp.** | **DG-Solar** | **X** |  |  |
| **Melnick** | **Leah** | **Sustainable Energy Advantage**  | **Other/Cons** | **X** | **X** |  |
| **Newman** | **Joe** | **NGRID** | **Utilities** | **X** |  |  |
| **O’Dougherty**  | **Mike**  | **Spire Solar Systems** | **DG-Solar** | **X** |  |  |
| **Phelps**  | **Nathan** | **DPU** | **State Agency** | **X** |  |  |
| **Plett** | **Frederick** | **MA AGO** | **State Agency** | **X** |  |  |
| **Rabadjija**  | **Neven** | **NSTAR** | **Utilities** | **X** | **X** |  |
| **Ritter** | **Jason** | **Borrego Solar** | **DG-Solar** | **X** |  |  |
| **Schroeder** | **Erica** | **IREC** | **Other/Unknown** | **X** |  | **X** |
| **Sins**  | **Jack**  | **Unison Energy**  | **DG-CHP/Other** | **X** |  |  |
| **Skulley** | **Brooke** | **NGRID** | **Utilities** | **X** |  |  |
| **Smith** | **Daniel** | **Siemens** | **DG-Solar** | **X** |  |  |
| **Sterritt** | **Justin** | **MA EOHED** | **State Agency** | **X** |  |  |
| **Wallerstein** | **Mike** | **MA DPU** | **State Agency** | **X** |  |  |
| **Wheeler** | **Lorraine** | **Redstoke, LLC** | **Other/Cons** | **X** | **X** | **X** |