Massachusetts TSRG Meeting Notes

Date:	March 29, 2023		Meeting held as part of the Massachusetts Technical Standards Review Group (TSRG) for discussion of industry topics and collaboration amongst utilities and the DG community. Meeting minutes are outlined below. If there are any corrections, additions, or omissions please notify the preparer.
Prepared by:	Mrinmayee Kale mkale@newleafenergy.com		

Participants:

Ali Syed	Gerry Bingham
Brandon Zhonghi	Brian Lydic
Carlos Sabillon	John Cerulli
Chris Lee	Courtney Feeley Karp
Doug Pope	Dylan Lucas
Thomas Ferguson	Greg Hunt
Ishaan Jena	Brett Jacobson
Jeremy Kites	Nancy Israel
Chris Lee	Jorge Jorge
Journel Pierre	Kavita Ravi
Muhammad Khan	Kyle Clancy
David LaPlante	Dean Latulipe
Jeff Long	Ariel Maiorano
Devon Marcaurele	Nigam Trivedi
Fritz Octave	Matthew Parlon
Paul Krell	Philipp Valeriia
Michael Porcaro	Prasanth Gopalkrishnan
Ryan Rainville	Abhinav Rawat
Tara Reisner	Brian Ritzinger
Russ Aney	Mohamed Shamog
Raman Somayajulu	Tony Morreale
John Tortorella	Nathan Walsh
Justin Woodard	Xinghao Fang
Brad Marszalkowski	Daniel Dabkowski
Tyler Thibault	Mina Moawad
Nachum Sadan	Gerhard Walker
Samer Arafa	Lisa Boba
Liana Moore	Katherine Roberge

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ESS subgroup update:

- National Grid has a proposed schedule. ESS will have the options to be scheduled or unscheduled. Preliminary results will provide the upgrades related to each option.
- ARI – System automation will monitor real time grid characteristics and send curtailment signals to projects. This would enable a third option for ESS.
- Based on feedback from the DPU on ESIRG topic #1, there is an option to petition formally to the DPU if we want to get a change to the ESS schedules approach

IEEE 1547-2018 update:

- Only two inverter manufacturers have UL certification for over 250kW.
- Still deliberating on the topic of Volt-VAR and Volt-Watt implementation.
- Brian Lydic IREC – In March significant uptake on certification. Projecting 45% of inverters are now certified. Still does not show the uptake on the greater than 250kW inverters.
- Russ Aney – Communication requirements – Curtailment and volt-VAR to be rolled out to large facilities first or all projects? This has not been decided yet.
  Will you be incorporating a communication the open automated demand response 2.0 B? No clear direction on this.
  Most inverter manufacturers are not capable of using this communication protocol. They are unable to participate in the connected solutions program.
- Anything 500kW or larger submitted Jan 1st 2023 needs certification before you interconnect.
- Ryan Rainville National Grid – Studies being commissioned to determine Volt-VAR settings. Discussions with Eversource. National Grid would like to study how would Volt-VAR affect series regulators and capacitors already on the grid. Provide results in Sept 2023. Volt-VAR will be enabled on the 500kW and larger projects. Would you allow VAR headroom? It's not relevant to the study being conducted. That detail can be resolved at a later point. Eversource have not chosen the specific conditions they want to study.

Area Networks subgroup:

- Not much of an update. The subgroup has been on hold since Fall of last year. April 19th is the next meeting.
- Outstanding request on the number of interconnections in the area networks
- Request a report out on the meeting with ConEd. The meeting did not include the industry representatives. There has not been an update on what was learned and what progress was made on the topic by each EDC.
- Do the EDCs have any AC size restrictions on the DER that can be interconnected to the area network? Can these be re-evaluated given the availability of PCS with smart inverters?
- HI and CA are actively using the PCS technology.

Expedited process subgroup:

- Group is not kicked off.

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New subgroup suggestions:

Kavita Ravi – Propose to have a subgroup to discuss how to compress the study process and restudy.

Mike Porcaro and MK to set up a follow up meeting to discuss next steps. Doug Pope is interested in participating.

Russ Aney – subgroup that discusses how queue information and upgrades are communicated to developers.

Gerhard Walker - Eversource grid mod filing on improving hosting capacity map. They will be reaching out to developers. Eversource will push for a faster timeframe than a subgroup.

Eversource Grid Mod filing info:

https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/15824167

National Grid Group study updates:

Group Study Update – National Grid

Disclaimer: Information provided solely intended as an aid to discussions at the TSRG and should not be used for any other purposes and is subject to change. Nothing contained in this presentation shall constitute legal or business advice or counsel.

Territory	Group Study ID	Qty of Applications	MW	Status
West	Webster-Southbridge-Chrlton 001	12	75.46	GS complete, ISAs delivered
West	Millbury-Grafton 001	2	10.99	GS complete, ISAs delivered
West	Ayer-Clinton 001	3	22.94	GS complete, ISAs delivered
West	Barre-Athol 001	10	40.98	CIP, DPU docket 23-09
West	Gardner-Winchendon 001	8	46.36	CIP, DPU docket 23-06
West	MPL-East 001	9	34.79	CIP, DPU docket 22-170
West	Shutesbury 001	5	19.99	CIP, DPU docket 22-61
West	Spencer-Rutland 001	12	61.71	CIP, DPU docket 23-12
Central	Worcester South & North 001	6	15.79	GS start 8/3/2022; ASO expected, start TBD
Merrimack Valley	Billerica 001	3	14.10	GS start 7/25/2022 ; ASO expected, start TBD
Merrimack Valley	Chelmsford/Westford 001	3	16.90	GS start 8/1/2022; ASO expected, start TBD
Merrimack Valley	Methuen/Haverhill 001	6	25.50	GS start 8/31/2022; ASO expected, start TBD
Merrimack Valley	North Andover 001	3	15.00	GS start 7/19/2022; ASO expected, start TBD
Merrimack Valley	Tewksbury 001	2	16.99	GS start 7/26/2022; ASO expected, start TBD
North Shore	Beverly 001	2	10.00	GS start 8/29/2022; ASO expected, start TBD
North Shore	Cape Ann 001	3	15.00	GS start 7/26/2022; ASO expected, start TBD
South	Attleboro 001	3	7.26	GS start 11/2/2022; ASO expected, start TBD
South	Hanover 001	7	30.00	GS start 8/1/2022; ASO expected, start TBD
South	Hopedale-East 001	11	40.78	GS start 6/27/2022; ASO expected, start TBD
South Shore	Bridgewater 001	2	9.90	GS start 8/1/2022; ASO expected, start TBD
South Shore	Brockton-North 001	2	11.14	GS start 6/14/2021; ASO start January 2023
South Shore	Brockton-South 001	6	25.34	GS start 10/24/2022; ASO expected, start TBD
South Shore	Scituate 001	2	10.00	G ASO expected, start TBD
Southeast	Fall RIver-North 001	3	10.48	G ASO expected, start TBD
Southeast	Fall River-South 001	5	11.70	G ASO expected, start TBD
West	Ayer-Clinton 002	10	31.40	GS window open, close date 3/23/2023
West	MPL-N			expected, start TBD
West	Webst			Finalizing group membership
West	Millbury-			Finalizing group membership
South	Hopedale-West 001	9	28.36	GS start 8/24/2021; ASO start July 2022

Russ Aney 57:35

- Considering group studies started a while ago, how do we know if ASO will be conducted in parallel with the group study? If you are thinking about applying in one of these areas, it is helpful to know when a group study has been completed. That helps to know when the next study will start.
- ASO study will take 9-12 months and 90 days of group study after that.
- What more information can the EDCs provide to developers regarding the study timelines? National Grid will improve this table to provide more detail.
- What would a study look like for the standard projects when proposed in a CIP area? With the CIP is place, a certain amount of DER hosting capacity is available. It should reduce the study time due to a solution already available.
- Would the ASO studies be conducted faster for areas with approved CIPs?
- More substantive discussion to occur at the next meeting.

Eversource wants to discuss RTAC installation to separate the load and generation for BTM projects. Please include this on the next meeting agenda.

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EDC technical standards update:

EDC Technical Standards

- As needed, EDC technical standards may be updated
- Below is general discussion for awareness of major elements that may have been changed/amended/added within the last 12 months

Eversource (January 21, 2020)
- No Update

National Grid (January 1, 2023)
- Section 4.0: UL1741SB requirements
- Section 7.3.2.1: Projects with SB inverters may have option of avoiding supplemental grounding with a wye-wye interface transformer

Unitil (May 1, 2000)
- No Update

- Jonathan Demay – Appreciate the update on the grounding transformer requirements with the SB inverters.

Eversource: energy storage technical standards:

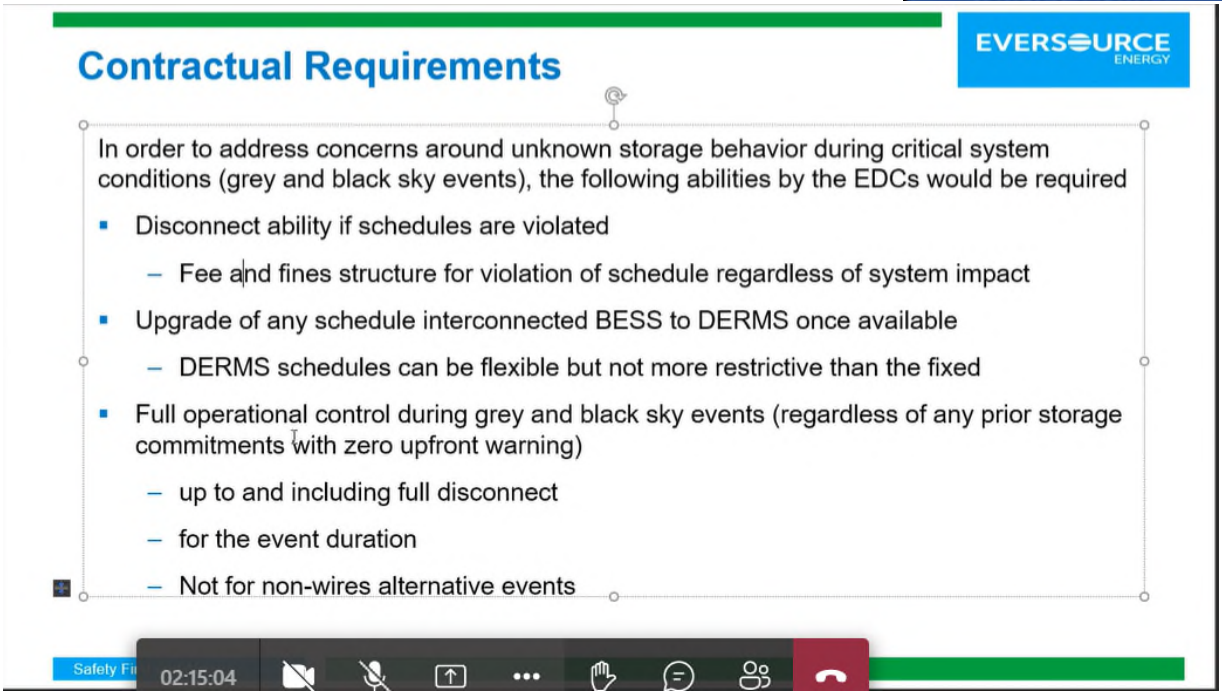
- ESS schedules:

Sample Study Results

EVERSOURCE ENERGY

Discharge Limiting Schedule	08:00 – 10:00	10:00 – 16:00	16:00 – 18:00	18:00 – 08:00
Spring (April)	75%	75%	100%	75%
Summer (June)	100%	100%	100%	75%
Fall (Sep, Oct, Nov)	Follow Spring Schedule	Follow Spring Schedule	Follow Spring Schedule	Follow Spring Schedule
Winter (Jan)	Follow Summer Schedule	Follow Summer Schedule	Follow Summer Schedule	Follow Summer Schedule
Charge Limiting Schedule	**00:00 – 09:00**	**09:00 – 12:00**	**12:00 – 18:00**	**18:00 – 00:00**
Spring (May)	100%	100%	50%	50%
Summer (July)	25%	50%	25%	0%
Fall (Sep, Oct, Nov)	Follow Spring Schedule	Follow Spring Schedule	Follow Spring Schedule	Follow Spring Schedule
Winter (Feb)	50 %	75%	50%	50%

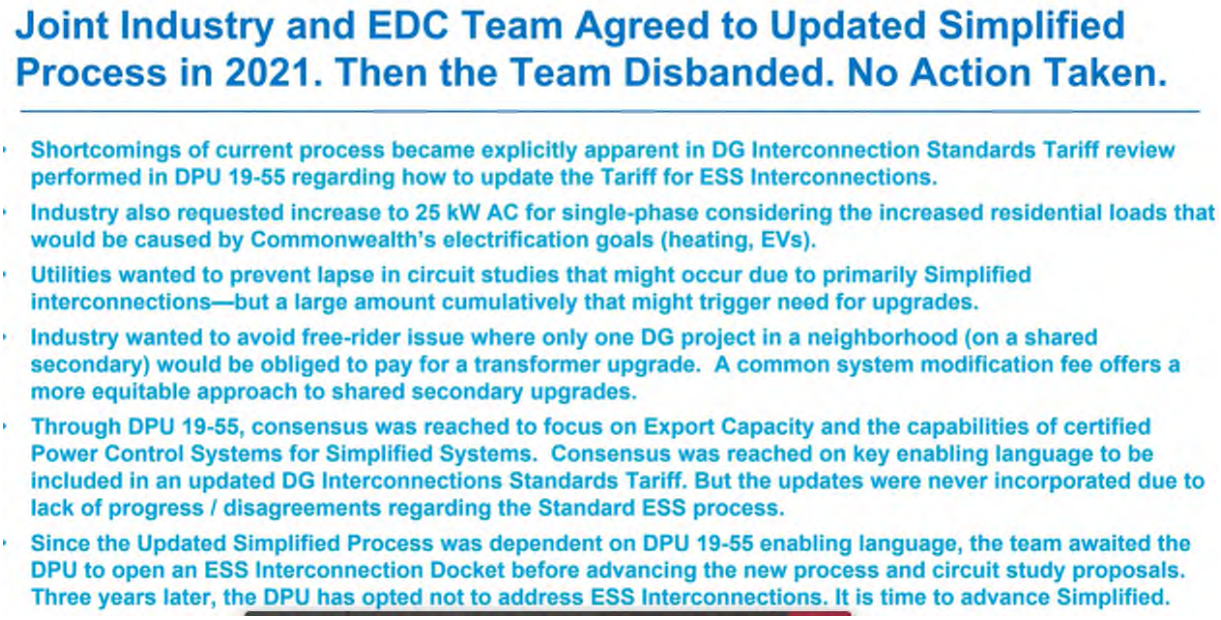
- Optimization using 4 time windows and increments of 25% capacity changes.
- The windows are up for negotiation.
- ISO NE FCA QC hours for the winter period happen from 17 to 19pm.
- How long would this solution be in place before DERMS is deployed? This schedule will be in place in the ISA and the project will be able to get more capacity in real time. It will never fall below the given schedule.



- Eversource to collect comments at the next ESS subgroup.

Simplified process discussion:

- May 2021 NGrid team presented an update to the intx process for simplified projects.



- It would be helpful to align 25kW limit for both intx study process as it is the new threshold for Net Metering.

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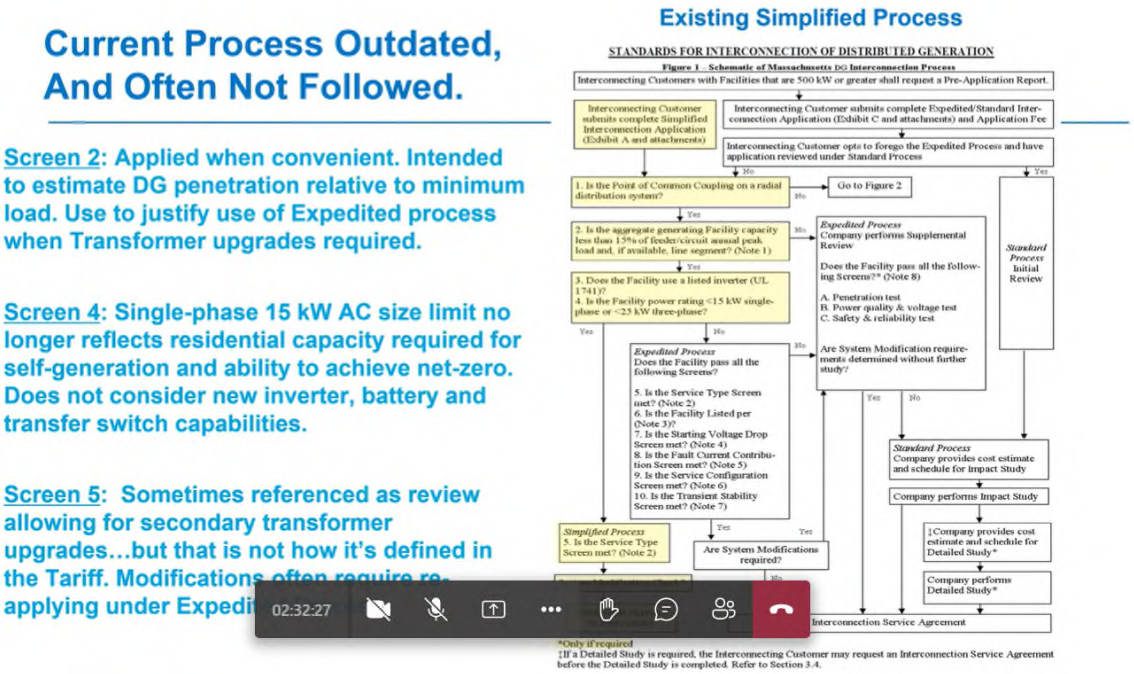
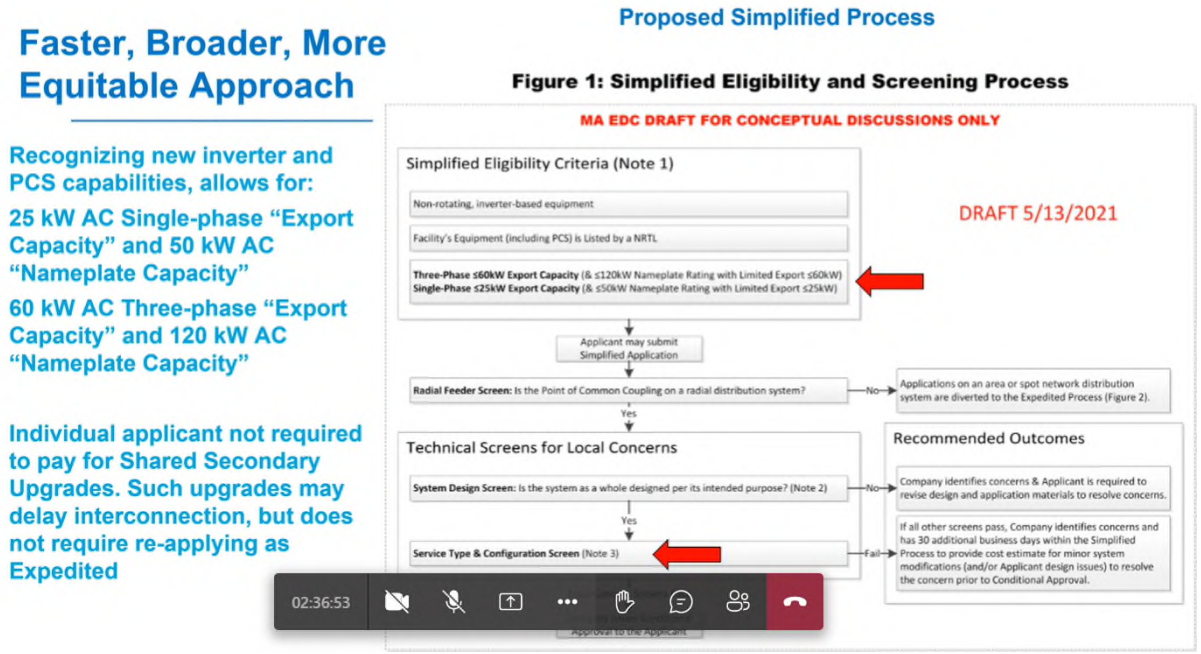


- Changing the 15kW AC will be changed from nameplate to export capacity.



Paul Krell: I'm troubled by the proposed increases in both nameplate rating and export capacity concept. Unless it has already been vetted by the EDCs, I feel it is ignoring the underlying technical reasons for the levels originally set, which are not based on net-metering tariff considerations.

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Industry Agrees with the EDCs that a Circuit Planning Solution Is Also Required to Prevent Circuits Saturated by Simplified ISAs

DER Planning Analysis Screens

(Aggregate DER on Circuit/Substation)