# Grid Modernization Advisory Council (GMAC)

# **MEETING MINUTES**

Thursday, August 10, 2023 Virtual Zoom Meeting

**Councilors Present:** Liz Anderson, Sarah Bresolin Silver, Marybeth Campbell (virtual),

Larry Chretien (virtual), Kathryn Cox-Arslan, Jeremy Koo (designee for Julie Curti; virtual), Elizabeth Mahony, Kyle Murray, Galen Nelson (virtual; joined at 12:40 PM), Jonathan Stout, Andy Sun

(virtual), Alex Worsley (virtual), Kathryn Wright

Non-Voting Councilors: Carol Sedewitz, Digaunto Chatterjee, Kevin Sprague (virtual)

**Councilors Absent:** Amy McGuire, JS Rancourt

**DOER Staff Present:** Aurora Edington, Julia Fox, Sarah McDaniel (virtual), Joanna Troy

(virtual), Austin Dawson, Lou Sahlu

Other Attendees: Nancy Israel (National Grid), Mike Porcaro (National Grid), Ian

Springsteel (National Grid), Jen Schilling (Eversource), John Bonazoli

(Until; virtual), Lisa Schwartz (LBNL; virtual), David Shepheard

(Baringa; virtual), Ron Nelson (Strategen; virtual)

#### 1. Call to Order

Commissioner Mahony, as Chair, called the meeting to order at 12:05 PM.

### 2. Welcome, Roll Call, Agenda

Commissioner Mahony, Commissioner Department of Energy Resources (DOER):

Commissioner Mahony welcomed all participants to the GMAC meeting. The Commissioner took roll call for voting and non-voting members. The Commissioner asked if anyone wanted to add agenda items. The Commissioner walked through the agenda (slide 2).

#### 3. Public Comment

Commissioner Mahony opened the meeting to public comments. There were no registered speakers for the first public comment period of the GMAC meeting. The floor was opened to the public and interested speakers were asked to raise their virtual hand. No public comments were delivered during this time. The meeting carried on following the business laid out in the agenda.

# 4. Meeting Minutes Review and Voting

Commissioner Mahony asked for any changes to the July GMAC and GMAC Executive Committee (ExCom) meeting minutes that were sent out.

#### Council Discussion and Vote:

*Liz Anderson, Massachusetts Office of the Attorney General:* Anderson requested that the July GMAC and July ExCom minutes were amended to properly display Sarah Bresolin Silver's company. The proposed change was to delete "ENEL North America" and replace with "ENGIE North America" where Sarah Bresolin Silver is referenced in the minutes.

# July 13, 2023 GMAC Meeting Minutes

Commissioner Mahony asked if there were any motions on the floor. A motion to approve the amended minutes from the GMAC meeting on July 13, 2023, was called by Councilor Kyle Murray. Councilor Sarah Bresolin Silver seconded the motion. A roll call vote was taken. Twelve councilors voted in favor, zero councilors opposed, and one councilor abstained. The meeting minutes from the GMAC meeting on July 13, 2023, were approved by the Council.

#### July 28, 2023 Executive Committee (ExCom) Meeting Minutes

Commissioner Mahony asked if there were any motions on the floor. A motion to have the Executive Committee approve the amended minutes from the GMAC ExCom meeting on July 28, 2023, was called by Councilor Kyle Murray. Councilor Sarah Bresolin Silver seconded the motion. A roll call vote was taken. All Executive Committee members present voted in favor, with none opposed or abstaining. The meeting minutes from the GMAC ExCom meeting on July 28, 2023, were approved by the Executive Committee.

#### 5. Executive Committee Meeting Updates

Commissioner Mahony shared slide 5 of the presentation and noted that the Executive Committee had discussed the procurement of the GMAC consultant and a plan for reviewing the ESMP drafts at the last ExCom meeting on July 28, 2023.

#### 6. GMAC ESMP Review Plan

The Commissioner shared slides 6-12 of the presentation to discuss a plan for reviewing the ESMPs during September through November. These included expectations of GMAC members, a schedule of proposed additional GMAC meetings, guiding questions for reviewing each ESMP section, and open questions for the Council.

#### Discussion:

**Digaunto Chatterjee, Representing Eversource:** Chatterjee suggested that section 11 be moved to where section 8 and 9 are scheduled to be reviewed at the October 12<sup>th</sup> meeting because the first meeting will be covering a substantial amount of content. There were no objections to this change.

Kathryn Cox-Arslan, New Leaf Energy, Representing the distributed generation renewable energy industry: Cox-Arslan inquired about public comments and public engagement.

**Commissioner Mahony:** Due to timing constraints we proposed the listening sessions in lieu of public comments at every meeting. We might have to adjust this. We might have an interim draft available for public comments to respond to in time for these listening sessions. This will be a job for the consultant.

*Carol Sedewitz, Representing National Grid:* Sedewitz concurred with Chatterjee on moving section 11 in the review process, but also suggested moving section 5 up. Section 12, the section on workforce should also be moved to the last topic of September 28<sup>th</sup>. Section 10 can also be moved up.

Sarah Bresolin Silver, ENGIE North America, Representing the energy storage industry: Bresolin Silver asked Sedewitz if it is best to have section 12 reviewed at the end. Sedewitz responded that section 12 would make most sense to be reviewed after hearing about all future investments. The following ESMP review schedule changes were agreed upon:

- 9/14: Chapters 3, 4, 5
- 9/28: Chapters 6, 10, 12
- 10/12: Chapters 8, 9, 11
- 10/26: Chapters 1, 2, 7, 13

# *Kathryn Wright, Barr Foundation, Representing the environmental justice community:* Wright asked about when a draft list of GMAC recommendations would be for public comments, given the timing of the proposed October 31<sup>st</sup> listening session. Having interim comments would make the listening session productive.

**Commissioner Mahony:** We will be asking the consultant to give summary recommendations along the way. This question speaks to necessary onboarding with the consultant to make sure they are producing documents we can use for listening sessions. We will be utilizing consultant information from summaries. We might have an interim draft available for public comments to respond to in time for these listening sessions.

Larry Chretien, Green Energy Consumers Alliance, Representing low- and middle-income residential consumers: Chretien commented on the draft guiding questions for the ESMP review. He noted that while they are excellent questions, questions 2, 3, and 4 do not mathematically jive. The questions should be prioritized in our mind, but there may be complimentary policies that we need to recommend that do not satisfy and/or take away from on question while supporting another question. We need to think of all those things, and it is our job

as a Council to provide weights to the questions and create a formula that makes the best overall program for the Commonwealth.

**Commissioner Mahony:** Commissioner Mahony asked a clarifying question to see if ahead of time the Council should create a weighting factor, or if it is something that can be accomplished while reviewing the ESMP sections. Chretien responded that it would be difficult to do this ahead of time. The Council should indicate what it values because of the circumstances while completing the review.

*Kyle Murray*, *Acadia Center*, *Representing the environmental advocacy community:* Murray suggested that the second guiding question be separated into two questions: one pertaining to least cost investments and one on facilitating decarbonization. Chatterjee agreed with Murray.

**Commissioner Mahony:** The Commissioner reiterated that guiding question #2 can be reframed into two to separate cost investments and decarbonization goals. She emphasized that we need to also be thinking of GHG limits. "How does this section facilitate statewide GHG reductions?" and "how does it encourage least cost investments?"

*Liz Anderson:* Anderson agreed. A lot of what we are doing is talking about investments that will facilitate GHG reductions. The objective is how to do it in the least cost way and maintain affordable energy bills for ratepayers. I understand the intent of separating the topics, but if we don't think about the cost - I do not like where we will end up.

*Carol Sedewitz:* Sedewitz agreed with Anderson. Asking these questions will help us with plans put forward for achieving the policy goals. Then when we look at the plans, maybe there is prioritization or movement based on what will be overall affordable. We must look at the whole plan holistically and not get narrowly focused on one section.

Andy Sun, Massachusetts Institute of Technology, Representing engineering expertise in interconnecting clean energy: This is a large plan. If we can make it more quantitative with different kinds of investments and costs laid out and key decisions over years, we could identify how they impact objectives here. GHG limits could be a constraint. Could we put this planning problem put in an integrated framework to look at the possible results, like solving an optimization problem?

*Kathryn Wright:* Wright commented on the third guiding question. The examples around maximum consumer benefits are focused on decarbonization, but should also include reliability and resilience, as they are equally important to consider. I suggest that the question is modified to include those as a customer benefits. Commissioner Mahony agreed.

**Commissioner Mahony:** Commissioner Mahony commented that with the competing nature of guiding questions 2, 3, and 4, there is a need to look at the plans holistically. How do we weigh the issues?

*Liz Anderson:* There is a tension between all these things. The sections should be evaluated on a case-by-case basis as we talk through objectives.

*Kyle Murray:* DPU has mandates that are sometimes in conflict. We can't say one objective is more important than another. We should ask questions along the lines of: "does this meet as much as possible?" We must also fulfill the statutory requirement of the GMAC.

**Andy Sun:** When we look at least cost investments and various objectives, is there a way we can see a holistic view on these investments? Can we do a simulation of different investment options, so we are somewhat confident that these are achieving a least-cost minimization outcome? How do we look at or verify this complicated problem?

**Commissioner Mahony:** The Commissioner posed a question to the EDC representatives. How are the plans presented to us? Do the plans show choices, or modeling like Andy Sun's question? Is there a way to show what he is getting after?

**Digaunto Chatterjee:** There are some areas where modeling is present. With the resiliency/reliability chapter, it can all be measured in terms of SAIDI. Certain investments equal a certain amount of resiliency improvement. In other areas of the ESMP, the bulk of investments are major substation projects. There are measurements of enabled reliability, customer enablement of EV, electrification, etc. We have quantified the amount of electrification benefits from substation and GHG emissions reductions. For least cost investments in that context, are you maximizing the sizing of substation to maximize the benefit?

*Carol Sedewitz:* This is good feedback. Not every decision that we make can be made with numbers. There are a portion of benefits that are easy to quantify, but others where they are less defined and harder to put into numbers. We understand where you are coming from, not sure we can get there with every project and benefit associated with it.

*Kathryn Cox-Arslan:* Cox-Arslan mentioned the relationship between the ESMPs and integrated resource plans. The statute language mentioned scenarios. To what extent are there scenarios presented in the plans? I am thinking of tradeoffs. What meeting would they be shared, what section?

*Digaunto Chatterjee:* Section 8 includes scenarios on how different COPs of air source heat pumps affect MW amounts. It will also show the impact of shifting between different technologies on electrification and associated costs. To translate those findings, it can show the need for "x substation(s)". Extensive scenario planning – electrification scenarios around EV and heating. This will not be in section 5. Section 5 was separated from section 8 because there is a 10-year plan driven by eminent need.

*Digaunto Chatterjee:* The goal of the ESMP is to electrify the grid to achieve the Commonwealth's plans. Does it accomplish this? This should be the fundamental gating question. Does it achieve the Commonwealth Clean Energy and Climate Plan? Chatterjee suggested that it stands as its own question.

**Commissioner Mahony:** These questions are to help us along the way during our review. We can craft them in a way that is helpful to use in terms of our end product. Is the plan in general meeting the goals of the Commonwealth? There is language we can pull from the statute to hit that. The Commissioner noted that recommendations by chapter would be helpful. The EDC representatives agreed.

*Sarah Bresolin Silver:* Bresolin Silver noted that it would be helpful to vote by chapter so people can have a sense of different opinions instead of holding out voting until the end of the review.

**Commissioner Mahony:** There is value in developing recommendations without voting on them.

*Larry Chretien:* Chretien suggested holding a nonbinding vote or "feeler" on how we feel about each sections' recommendations. A new chapter could shift previous thoughts and ideas.

**Commissioner Mahony:** What you are suggesting is that a poll happens after a meeting? Do we vote then or at the start of the next meeting? Chretien responded that it would be a poll after seeing a chapter.

Jonathan Stout, Dana-Farber Cancer Institute, Representing large commercial and industrial end-use customers: Stout seconded Chretien's idea. It would identify nonstarter issues before getting to the end of the review. We should not be waiting until the end to workshop and fix something.

*Kyle Murray:* Murray asked clarifying questions around the process of the review and the nonbinding poll. There was some concern overreaching a consensus and having a final vote. Chretien and the Commissioner noted that the goal of the nonbinding poll was to give indications about the directionality of the plans. The Council would come back to the next meeting to review the previous feeling of the group and raise those red flags and see if we need to vote at that time.

**Digaunto Chatterjee:** Chatterjee noted that Murray's comment was appropriate. The council can indicate how people feel without a vote. The worst outcome for all of us collectively is if there is a vote in November that the GMAC disapproves of the ESMP. Chatterjee said that he would support whatever it takes to not have that.

*Kyle Murray:* Murray inquired about strong minority support for issues that do not make it into the recommendations but could be noted in the final document.

**Commissioner Mahony:** Commissioner Mahony responded that it could be a column for disagreement in the spreadsheet. The goal is to build consensus. There is room for that unless anyone objects.

*Commissioner Mahony:* The Commissioner brought up the topic of subcommittees. At this point, it is unclear if we have time in the schedule. It would require us following Massachusetts Open Meeting Law. If folks think the need is there, please discuss.

*Liz Anderson:* Anderson suggested targeted subcommittees. For example, the directive for the GMAC in the statute is to reduce impacts to low-income rate payers. Subcommittee could be useful to drill down recommendations or feedback to the EDCs and what that looks like in policy recommendations.

*Kyle Murray:* Murray echoed his support for Anderson's idea. He noted that this could be in the form of an equity working group like the EEAC. Murray suggested forming an equity working group for the GMAC.

**Commissioner Mahony:** Commissioner Mahony suggested that if the Council would like to have an Equity Working Group that meetings could take place on Mondays. DOER can send an email to see who wants to volunteer and set that up.

# 7. Topic 1: DER Integration

Commissioner Mahony introduced the series of presentations (slide 13).

# a. Current plans and activities of the Distribution Companies (10 minutes)

Mike Porcaro (National Grid), Jennifer Schilling (Eversource), and Kevin Sprague (Until) delivered a presentation beginning on slide 14 in the meeting presentation slides.

# b. Lisa Schwartz, Lawrence Berkeley National Laboratory (10 minutes)

Lisa Schwartz delivered a presentation beginning on slide 20 in the meeting presentation slides.

# c. Baringa, Value of DER Study (10 minutes)

David Shepheard delivered a presentation beginning on slide 29 in the meeting presentation slides.

#### Discussion:

*Kathryn Cox-Arslan:* When we talk about Order 2222 requirements for enabling technology, are those investments in the proceeding for grid modernization? Are they approved?

*Digaunto Chatterjee:* Whether it is approved or not approved will be in the ESMP. Different colors are used in the chart to let the reader know what is approved versus what is not approved.

**Jennifer Schilling, Eversource:** ISO-NE is finalizing their policies and procedures. We want to be ready, as a grid operator facilitating this. The proposed investments in ESMP are to build out Eversource tools and processes to integrate DER on Day 1 to make them not a barrier to the process.

**Commissioner Mahony:** A part of the question was covered in the June meeting. Investments are under review – timeline for those GMAC investments are over several years and are different for National Grid. The Eversource rate case is finalized, and the larger GMAC proceeding was across all EDCs.

*Kyle Murray:* There are barriers to DER integration we can and can't address in this Council. What are the biggest barriers that we can address and what should be the top priority of those barriers?

**Digaunto Chatterjee:** The biggest barrier is interconnection cost and associated cost allocation. The focus of GMAC should be on addressing not just the top barrier, but some that will soon become critical if we don't have DERMs to actively utilize DERs. The near-term barrier – interconnection and paying, and longer-term barrier – grid services development, both need to be addressed.

*Kathryn Cox-Arslan:* Cox-Arslan agreed with Chatterjee. After listening to Lisa Schwartz's presentation, it reminded me about the exciting opportunity to have all grid needs together. This

includes how to be interconnecting fairly. If the ESMPs don't address that clearly, we are in the same place we were four years ago.

*Jennifer Schilling:* We appreciate GMAC feedback to address the biggest and other issues. The ESMPs are comprehensive.

Carol Sedewitz: Sedewitz spoke on the barriers to be addressed in the ESMPs: DERMs, interconnection costs, also need to think about what is interconnecting and what is there. Solar and storage have different characteristics. Need to also look at the characteristics of the grid itself. Where do we want to be in the long-term future, investments in the grid. These barriers cannot be assessed narrowly, but holistically. With the amount of load coming on the grid, we need the council to support making infrastructure and DERMs investments in an affordable way.

Sarah Bresolin Silver: Bresolin Silver commented on the Baringa presentation. The comment on value stack is true. There should be focus on the benefits and not just the concerns. Focus more on the benefits of DERs on the system. Concerns can be mitigated through less expensive interconnection costs and operations. Bresolin Silver also asked a question to Lisa Schwartz. Given your experience, have you come across other jurisdictions where electric sector modernization plans exist? This is Massachusetts' first time going through the ESMP process. We have previously focused on grid modernization. Have you seen both? What is the major benefit of ESMP?

*Lisa Schwartz:* In an ideal world, instead of grid planning, there is a much broader integrated system planning. Grid modernization is in there, electrification in there, but the two must feed into distribution plans. There are links in the presentation slides where the legislature or utility commission has required these things to be brought together. For example, Minnesota passed a grid mod law that made their EDCs create grid mod plans. Their regulatory commission also started a proceeding on distribution system planning. The plans were created side by side —they wanted the grid plan in the integrated distribution plan. There are several examples of this planning consolidation.

*David Shepheard, Baringa:* Shepheard noted that this is not just a regulatory trend, but also utility trend. More appetite for utility organizations to think this way.

*Jennifer Schilling:* I am a veteran of the grid mod process in Massachusetts. This ESMP process has enabled me to work with colleagues across departments in the utility and think bigger picture. First go around of taking something siloed and integrating it to something comprehensive.

**Commissioner Mahony:** The Commissioner closed this section of the agenda by noting that this process gives us opportunity to come together and think about the grid holistically. The number one barrier to development is interconnection, so we can remove the barrier and serve the ratepayers first.

Break from 2:30 PM to 2:45 PM.

#### 8. Topic 2: Cost Allocation

Commissioner Mahony introduced the series of presentations (slide 35).

# a. Distribution Companies (10 minutes)

Digaunto Chatterjee and Ian Springsteel delivered a presentation beginning on slide 35 of the presentation slides.

#### b. Ron Nelson, Strategen (10 minutes)

Ron Nelson from Strategen delivered a presentation beginning on slide 50 of the presentation slides.

#### Discussion:

**Commissioner Mahony:** The Commissioner opened the discussion by expressing that there is an opportunity here with these plans to make some changes. My personal opinion is the that CIPs were provisional, and not necessarily what we are moving towards. We need to be thinking of outside the group studies and think holistically. These plans look beyond the CIP concept.

Kathryn Cox-Arslan: Cox-Arslan inquired about how to scale the model Nelson presented on. She also expressed her agreement with the Commissioner's opinion on the CIPs. I am concerned that the EDCs have 30 ongoing group studies and pushing off resolution to what happens to some future proceedings. I respect what the utilities are doing, however I am hoping that the ESMPs are a way to be proactive and move beyond the CIPs. The DER industry is not expecting to be free riders, but if we don't think about cost allocation, that can happen. Provisional program 2.0. some have been in queue for years. We risk not meeting climate goals. For consideration, this could be a topic for another working group. I'm hearing that the EDCs need help thinking through some of the mechanics.

*Sarah Bresolin Silver:* Bresolin Silver asked a clarifying question to Ian Springsteel. Ian, you had mentioned stable and predictable capacity prices – are you referring to ISO New England capacity prices?

*Ian Springsteel, National Grid:* Springsteel responded that it was the hosting capacity to interconnect.

*Digaunto Chatterjee:* To Kat's question, there was a bifurcation in 20-75-C to have ESMPs look at proactive DER growth. National Grid territory lends itself to more DERs, so that is why they have 30 and Eversource has 2. We are proposing new CIPs in based on our territory. There is reassurance that we are not missing out in areas. Second thing, in our chapter, we will show select substations deemed developable for DERs and take hosting capacity and show how it compares to where the Commonwealth needs to go. We can divvy up a portion of that goal and compare against where we are with the CIPs approved. We have a long way to go. Two CIPs is not going to help it, but for us to develop new CIPs proposals, we would need a signal more DER growth is happening.

Treat CIPs as a reliability need and not have punitive penalties on DERs that are exporting. DERs growing in many areas. Adapt to where the solar community is going a build the infrastructure. Cannot restrict export on the grid. Fundamental principles should not be sidelined.

*Commissioner Mahony:* The Commissioner referenced the recently published DOER Technical Potential of Solar Study. We need to develop where you are not thinking about CIPs. This

includes putting solar on rooftops. This is our opportunity to do that. CIPs are reactive. Think about forward thinking planning. Can't be driven by where developers think it's cheaper to build.

*Carol Sedewitz:* Sedewitz replied to the Commissioner's comment. There are 30 ongoing CIPs, and we have to keep those going because of the agreements we have with those entities. We can identify where they are, but we will not be able to communicate a ton about those projects as of yet. Some are in their early stages. We have to balance ESMPs with ongoing work that we must do for the industry.

**Digaunto Chatterjee:** Chatterjee agreed that there should be incentive to develop solar in many places. It is just the time. Maybe recommend that a comprehensive study is done. It takes 6-7 months to use the GridTwin tool to assess where land uses are most optimally suited to building solar and then submit proposals.

#### 9. Public Comment

Commissioner Mahony introduced the attendees who registered to provide public comment.

Heather Deese, Senior Director of Policy & Regulatory Affairs for Dandelion Energy: Dandelion Energy is the nation's leading installer of geothermal home cooling and heating. Ground source heat pumps have great benefits for electrifying the building sector and are two times more efficient than an air source heat pump. We hope to work with the EDCs to use them in 5–10-year forecasts. (For full written comments, please see them <a href="here">here</a> or on the GMAC website.)

Undersecretary Maria Belen Power, Undersecretary of Equity and Environmental Justice: I am commenting on environmental justice and equity. These pertain to the process by which we engage communities and residents and a set of best practices to share. It is important to ensure that the folks most impacted by the climate crisis are at the table. Impacts in terms of energy burden and ratio of what certain residents pay for their utility bills. Nationwide, the average income ratio is 3%, and in MA, it is 10% energy burden on folks. In some communities, it is 30%. Affordability is critical.

Secondly, we need to engage folks in a meaningful way. Host meetings at different times of day and have translations available. There are logistical aspects of making a community meeting accessible. We should not be making people pay to participate in a public meeting and share their lived experience. The process is important, but the outcome also matters. Communities on the ground do not want 10 additional night meetings. The process shapes and affects the outcome. Feedback shaping the results is critical. We need to focus on what is meaningful to EJ communities and not make additional burdens. Community benefit agreements are a good way to get to communities on the ground. Also, cumulative impact analysis: we need to make sure we are not overburdening communities. Workforce development – EJ populations are at the center of these conversations, and we need a pipeline for EJ communities to participate in this industry and benefit from a just transition.

# 10. Additional Agenda Items (Added During Meeting)

The Commissioner raised the topic of an Equity Working Group, which was brought up previously by GMAC members as part of the ESMP review plan. A vote would need to take place during this meeting to expedite the process of getting the committee up and running, noting

that this agenda item had not been noticed beforehand. The Commissioner asked if there were any motions on the floor.

Councilor Kyle Murray motioned to create a subgroup of the GMAC for equity, designated as the Equity Working Group. Councilor Liz Anderson seconded the motion. A roll call vote was taken. All present voting members voted in favor of the motion. The motion was passed. The next steps for the Equity Working Group will be discussed at the August Executive Committee meeting.

#### 11. Close

Commissioner Mahony, as Chair, adjourned the meeting at 4:01 PM.

#### **Meeting Materials:**

- Meeting agenda
- Meeting presentation slides
- Preread: National Grid's Non-Wire Alternative Criteria (NWA)
- Preread: Eversource NWA Framework Release 2023
- Preread: Unitil Distribution Planning Guide
- Preread: Facilitating Power Grid Decarbonization with Distributed Energy Resources: Lessons from the United States, Annual Review of Environment and Resources (2021)
- Preread: Distribution Systems in a High Distributed Energy Resources Future: Planning, Market Design, Operation and Oversight, CalTech, CAISO, LBNL, 2016
- Preread: Distribution and Grid Modernization Planning to Accelerate Deployment of Distributed Energy Resources, Lisa Schwartz (LBNL) presentation to NASEO-NARUC DER Integration and Compensation Initiative (2023)
- Preread: FERC Transmission Reform Paves Way for Adding New Energy Resources to Grid
- Preread: Principles of Access for Flexible Interconnection: Cost Allocation Mechanisms and Financial Risk Management (EPRI 2020)
- Preread: Electric Cost Allocation for a New Era: A Manual, Regulatory Assistance Project (2020)
- Prior Minutes for Approval