Creating A Clean, Affordable, Equitable and Resilient Energy Future For the Commonwealth

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES

Grid Modernization Advisory Council

December 14, 2023

DOER
Massachusetts Department of Energy Resources

Agenda

Item	Time
Welcome, Agenda, Roll Call	1:00 – 1:05
Meeting Minutes Review and Voting	1:05 – 1:10
Equity Working Group Charter Extension	1:10 – 1:20
Review of EDC Technical Sessions	1:20 – 1:35
Review of 2023 GMAC Process	1:35 – 2:05
2024 ESMP Docket Process	2:05 – 2:30
10-minute Break	*2:30 – 2:40*
Future ESMP Process Recommendations	2:40 – 3:20
Discussion on Best Practices Moving Forward	3:20 – 3:55
Close	3:55 – 4:00

Meeting Minutes

- Calling for vote to finalize:
  - November 9th GMAC minutes
  - November 16th GMAC minutes
  - November 17th Executive Committee minutes

- *Motion to approve the November 9th **and** November 16th minutes [as distributed/as corrected]?*
- *Motion to approve the November 17th ExCom minutes [as distributed/as corrected]?*

Equity Working Group Charter Extension

- The EWG Charter set a 4-month subcommittee term (Sept. 2023- Dec. 2023). To continue the EWG beyond December 2023, the Charter would need to be amended. The Executive Committee discussed and agreed that it would be beneficial to have the EWG continue meeting.

- Current EWG members were contacted about continued membership. All members were willing to extend their appointment.

- <u>DOER drafted an amended charter with the following updates:</u>
  - EWG is constituted as an **on-going subcommittee** of the GMAC and may be amended or terminated by the GMAC in the future.
  - Amended responsibility to "Provide input and feedback to the GMAC on how to consider equity through its review of the ESMPs **and their implementation.**"
  - Additional responsibility to **"Solicit meaningful engagement from stakeholders representing underserved populations."**
  - EWG member and chair term length was defined to be **two years.**
  - Insertion of **seat vacancy clause** that mirrors the GMAC bylaws.

Equity Working Group Charter Vote

- Calling for vote to approve the amended EWG Charter:

- *Motion to approve the amended Equity Working Group Charter [as distributed/as corrected]?*

Review of EDC Technical Sessions

- Brief presentation by Erin Engstrom, Eversource

ESMP Stakeholder and Technical Workshops

December 14, 2023

EVERSOURCE nationalgrid Unitil

Overview of Requirements

An Act Driving Clean Energy and Offshore Wind

In developing a plan pursuant to subsection (a), an electric company shall: solicit input, such as planning scenarios and modeling, from the Grid Modernization Advisory Council established in section 92C, respond to information and document requests from said Council and ***conduct technical conferences and a minimum of 2 stakeholder meetings to inform the public, appropriate state and federal agencies, and companies engaged in the development and installation of distributed generation, energy storage, vehicle electrification systems and building electrification systems.***

PURPOSE/GOALS

- Those potentially impacted by this transition deserve to play a role in energy discussions that affect their lives or businesses.
- Everyone should receive fair and equitable access to the benefits of this clean energy transition
- Engaging stakeholders early and often is necessary to maximum participation and meaningful collaboration.
- Educate and familiarize as many on our ESMPs to ensure transparency

PARTICIPANTS

- Community based groups such as Equity and EJC advocates & organizations
- State agencies
- Companies engaged in the development & installation of:
  - DG, energy storage, EV systems, and building electrification systems

DATES

- **November 15**
  (9AM - 1PM)
- **November 28**
  (1PM - 5PM)
- **December 7**
  (1PM - 4PM)

Stakeholder Workshop Overview

- **Panelists**: Identified, with input from the GMAC and EWG, key groups and organizations to serve as workshop panelists.
  - **35 panelists** representing a variety of sectors across the state, offering a broad range of perspectives
- **Format**:
  - **Professionally designed and facilitated** by Janet Gail Besser & Dr. Jonathan Raab
  - **Two** separate **4-hour sessions** that build off one another, **hosted on ZOOM**
  - Clear agendas with **targeted presentations** on key ESMP topics, followed by Q&A and **structured breakout sessions** to gain maximum feedback
- **Attendees**:
  - November 15: **102** Unique Attendees
  - November 28: **98** Unique Attendees

November 15 Agenda

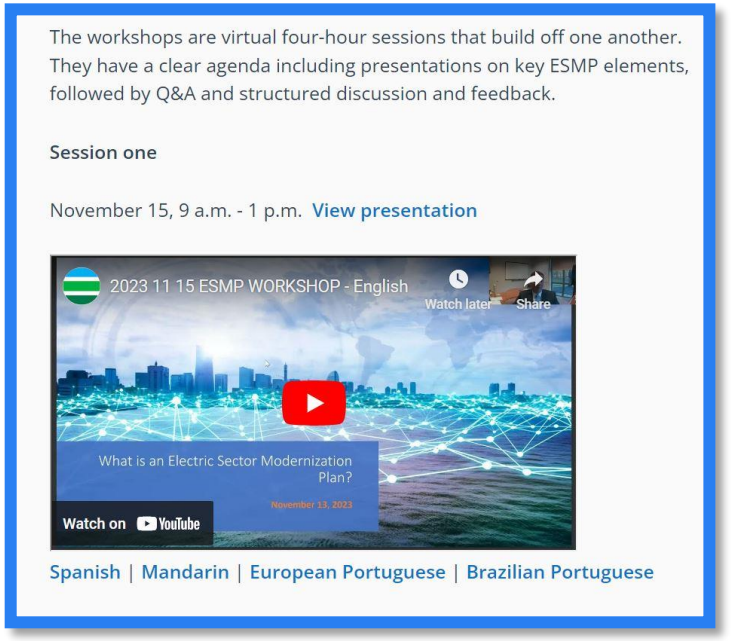
Time	Topic & Description	Lead/ Presenter
9:00	**Welcome, Overview, and Introductions** • Agenda; Approach & Ground Rules	• Facilitators
9:15	**ESMP Overview**	• Unitil
9:30	**Demand Forecasts** • Overview Presentation (9 minutes) • Individual Utility Presentations (21 minutes) • Break-Out Groups to Develop Questions (20 min) • Utility Responses to Questions (20 min) • Initial Stakeholder Feedback on Demand Forecasts (20 min)	• Eversource • National Grid, Unitil, Eversource • Stakeholder Groups • National Grid, Unitil, Eversource • Individual Participants
11:00	**Break**	
11:15	**Implications for Grid Infrastructure Needs** • Overview Presentation (9 minutes) • Individual Utility Presentations (21 minutes) • Break-Out Groups to Develop Questions (20 min) • Utility Responses to Questions (20 min) • Initial Feedback on Grid Infrastructure (25 min)	• National Grid • Unitil, Eversource, National Grid • Stakeholder Groups • National Grid, Unitil, Eversource • Individual Participants
12:50	**Next Steps** • Recap of the day / Feedback • Plans for 2nd Workshop on November 28, 1:00-5:00 pm	• Facilitators
1:00	**Adjourn**	

November 28 Agenda

Time	Topic & Description	
1:00	**Welcome, Overview, and Introductions** • Agenda; Approach & Ground Rules	
1:10	**Ensuring an Equitable Transformation** (including electrification/DER benefits, jobs & affordability) • Utility Equitable Transformation Visions (20 min) • Initial Questions for Utilities & Responses (15 min) • Break-Out Groups: Discuss Opportunities & Priorities (30 min) • Break-Out Report Back & Discussion (25 min)	• Eversource (Lavelle Freeman), National Grid (Meghan McGuinness), Unitil (Kevin Sprague) • Individual Participants • Mixed Stakeholder Groups
2:40	**Break**	
2:55	**Stakeholder/Community Engagement Plans** • Joint Utility Presentation (20 min) • Questions for Utilities & Responses (30 min) • Discussion and Feedback (30 min)	• Eversource (Erin Engstrom) • Individual Participants • Individual Participants
4:15	• **Demand Forecasts & Grid Infrastructure Needs** • Demand Forecasts: Additional Feedback (15 min) • Grid Infrastructure Needs: Additional Feedback (20 min)	• Individual Participants • Individual Participants
4:50	**Next Steps** • Recap of the day/Feedback • Plans/Schedule ESMP Finalization & Filing & Review Process	• Facilitators • Unitil (Kevin Sprague)
5:00	**Adjourn**	

Transparency & Inclusiveness

- **Workshop Accessibility**:
  - Stakeholder workshop information and meeting materials **posted on company webpages** and GMAC webpage
  - **Simultaneous Language Interpretation** services made available **in multiple languages**
  - Both sessions **held on Zoom on different days and at different times of day** for maximum participation.
  - Both **sessions recorded and workshop materials posted** to ESMP dedicated webpages



- **Feedback**:
  - Panelists, members of the public, and additional stakeholders who attended or watched the workshops can **provide written feedback for consideration into January plans** thru 12/10/23.
  - **All feedback** from workshops, or written feedback submitted will be **tracked and a formalized feedback loop will be developed** for increased transparency
  - All EDCs have a **dedicated ESMP email address** where additional feedback can always be sent.

MAGridMod@eversource.com

Future.Grid@nationalgrid.com

ESMP-Feedback@unitil.com

Additional Technical Workshop

- **Overview & Format**:
  - **Technical focused workshop** held at the request of GMAC members and other stakeholders
  - Hosted as part of the December **Technical Standards Review Group** meeting.
  - 3-hour session **held on ZOOM, professionally facilitated** by West Monroe
  - Clear agenda with **deep dive presentations and discussions on technical aspects** of ESMP topics, followed by Q&A

Massachusetts Technical Standards Review Group (TSRG)

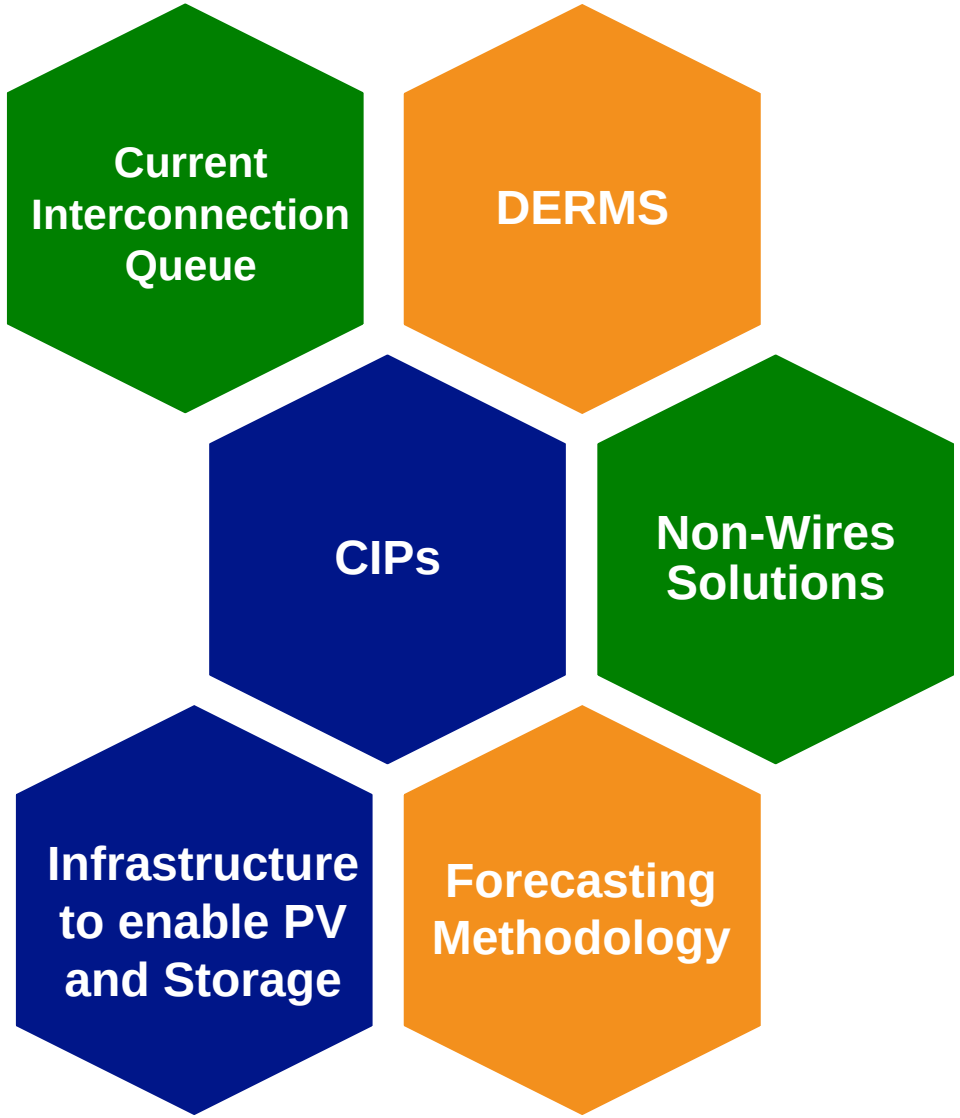
Date/Time: December 7, 2023
Duration: 3 hours

AGENDA

I. **Session Objectives and Introductions – West Monroe Partners (5 minutes)**
   a. Introductions
   b. Review Scope and Objectives
   c. Forum protocol

II. **ESMP Overview - EDCs (30 minutes presentation | 30 minutes Q&A)**
   a. Utility Overview (territory, customer base, assets/infrastructure)
   b. Clean Energy Targets and Objectives
   c. Forecasting Methodology
   d. EDC Forecast Assumptions
   e. ESMP Summary (5-year, 10-year, 2035-2050)

III. **Technical Discussion – Facilitated by West Monroe Partners (40 minutes presentation | 45 minutes Q&A)**
   a. Current State of Distribution Interconnection of PV and Storage
   b. Infrastructure plans to enable PV, storage, and beneficial electrification
   c. DERMS Platform Implementation
      i. Solution Overview
      ii. Pilots (Flexible Interconnection)
   d. Non-Wires Alternatives
      i. Framework & locations where opportunities for NWA are noted in ESMPs
      ii. Proposed Grid Services Compensation Fund and studies



Continued Engagement & Next Steps

Continue to **incorporate feedback from our stakeholder outreach and technical sessions** into our final proposed plans.

We will **remain engaged** with our customers and stakeholders throughout this process and **beyond our filing in January**..

Tailored outreach about our Clean Energy transition plans

Further engagement with **Community Based Organizations** around the co-development of the **CESAG**, working together towards an early 2024 launch.

Questions?

EVERSOURCE nationalgrid Unitil

Appendix

EVERSOURCE nationalgrid Unitil

ESMP Chapter 3 Outline Structure

September Filing

3.0	Subsections
3.1	Customer Outreach
3.2	Municipal Outreach
3.3	EJC Outreach
3.4	Stakeholder meetings and information exchange
3.5	Stakeholder input and tracking
3.6	Key takeaways from stakeholder engagement
3.7	Future Stakeholder/Community engagement process
3.8	Ongoing and new proposed stakeholder working groups

January Filing

3.0	Subsections	Includes
3.1	Clean Energy Transition: A Shared Responsibility	• Overview/introduction • Core positions on stakeholder engagement
3.2	Applying an Equity Lens	Common EDC definitions to be included
3.3	Engaging our Customers and Clean Energy Partners	• Outreach with: Customers, DG/EV/DR developers, real estate developers, builders, unions, state agencies, etc. • Can include stakeholder meetings and information exchange
3.4	Community Engagement and Transparency	• Muni outreach • EJCs outreach- include our maps • Can include stakeholder meetings and information exchange
3.5	Continuing Collaborative Engagement and Outreach	Forward looking/future commitments

Review of the 2023 GMAC Process

- GMAC member survey results presented by Jen Haugh, GMAC Consultant – GreenerU

ESMP Review Process Lookback: Introduction

Discussion goals:

- To reflect on the past nine months and evaluate elements of the ESMP review process
- To provide an opportunity for GMAC members to weigh in on this process before commencing discussion on future ESMP reviews

Discussion preview:

- A Dec 5–8, 2023, survey asked for feedback about:
  - Pre-ESMP stages
  - ESMP review meetings
  - Consultants' contributions
  - The joint CETWG meeting
  - The Equity Working Group
  - Collecting recommendations
  - Evaluating recommendations
- There were 10 survey respondents.
- For each topic, we will share survey results and comments, and ask GMAC members for any additional thoughts.

Feedback on Process: Pre-ESMP Meetings

Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

Other thoughts or comments on this topic?

1. The pre-ESMP preparatory GMAC meetings (March to August) were helpful and productive.

+ Helpful background and context √
+ GMAC members' self-education
+ Helpful perspectives from the field

Δ Time could have been better used to establish alignment on specific elements of ESMPs / methodology and approach
Δ More discussion on forecasting, scenarios/targets, cost allocation approaches, etc.
Δ More early work on discussing assumptions

3. The outline the EDCs used to develop their ESMPs was the best way to organize plan details.

+ EDCs used same outline

Δ Plan did not feel like it flowed from start to finish / sequencing
Δ More substance and clarity on what the DPU would require to review the ESMPs
Δ Plans still read differently despite outline
Δ Outlines could direct EDCs to provide more or less information on a specific topic

Feedback on Process: ESMP Review Meetings

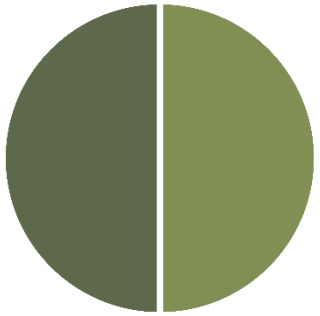
Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

Other thoughts or comments on this topic?

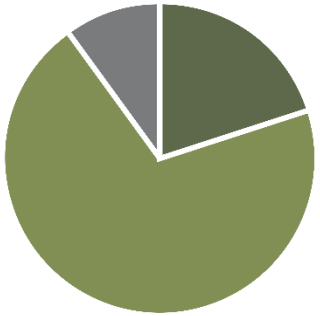
2. The ESMP review meetings of the GMAC were productive.



+ Consultant breakdown of each chapter
+ Opportunity to provide initial feedback
+ Hybrid sessions
+ Staying on schedule throughout all meetings
+ Productive, especially given time crunch and workload

Δ Utilities' plans have different formats, definitions, methodologies, and assumptions
Δ Plans are voluminous without providing information we need
Δ Not enough time

14. Meetings were the right length and frequency for the given workload and timeframe.



+ Meetings were run very efficiently
+ Assignments were clear
+ GMAC members really showed up
+ Organizing team did a great job keeping things on track √

Δ Very intense time commitment / heavy lift
Δ Time commitment wasn't clear at outset
Δ Statute didn't provide enough time

Feedback on Process: Other Meetings

Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

6. The joint meeting with the CETWG offered valuable insights.

\+ CETWG is incorporating feedback from meeting into their report

Δ Single meeting and time allocated were insufficient to collaborate or have meaningful dialogue / felt rushed √√√

Δ Bulk of utility transmission cost data wasn't available yet

Other thoughts or comments on this topic?

Feedback on Process: Consultants

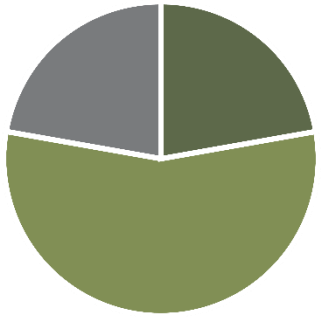
Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

Other thoughts or comments on this topic?

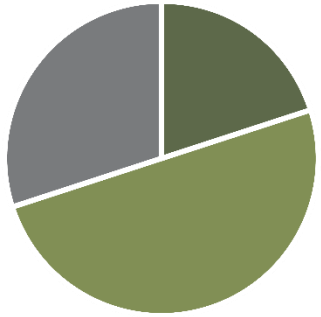
4. Consultant presentations were useful to my understanding of the ESMPs' contents.



+ Good job with time available
+ Excellent way to digest and organize section reviews √
+ Good straw responses/proposals to elicit GMAC feedback
+ More helpful after allowing EDCs to respond and clarify

Δ Editorial feedback was insightful but did not lead GMAC to clear conclusions

5. The consultants provided helpful support to the GMAC.



+ Good job with time available
+ Crucial element to keep GMAC organized and take weight off DOER staff
+ Good facilitators
+ Good job summarizing ESMPs

Δ Needed more technical analysis especially on what alternatives could mean in the context of ESMPs (e.g., calculations on forecasting and peak loads)
Δ Assessments could have been more neutral
Δ Engage consultants earlier

13. Meeting summaries and takeaways were accurate and usefu

+ DOER did a nice job of keeping the group informed throughout the process
+ DOER scribes are amazing

Δ Sometimes too succinct
Δ Summaries and takeaways felt too broad compared to discussions and recommendations

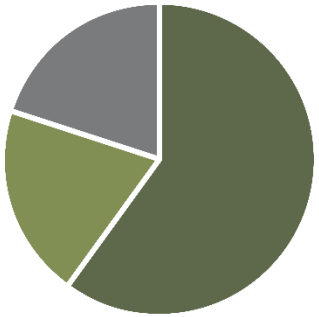
Feedback on Process: Equity Working Group

Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

7. Equity Working Group meetings were productive.



+ We did the best we could with limited time and information
+ Helpful meetings as equity is developing for all EDCs

Δ Public, not EDCs, should be driving discussion on equity
Δ Behind-the-scenes pivoting on agenda-planning
Δ Could have skipped last meeting, but it was necessary to vote

8. It was valuable to have the EWG focus on the specific topic of equity and contributed to the full set of GMAC recommendations.

Δ More detailed subgroup recommendations for major topics is a worthwhile exercise (not just exclusively for equity; also for cost allocation)

Other thoughts or comments on this topic?

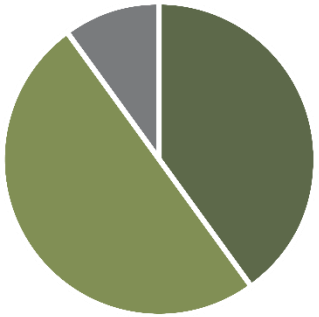
Feedback on Process: Collecting Recommendations

Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

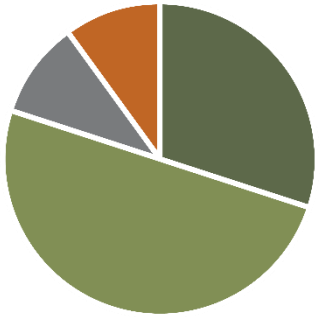
√ Similar comment

9. Development of the GMAC recommendations and review process was productive.



+ Kudos to DOER team / fantastic job providing right level of time and structure to be as effective as possible for complex and fast process
+ Recommendations were informative

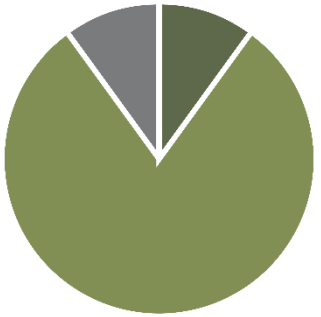
10. The process of collecting GMAC member feedback on ESMP chapters via Excel spreadsheets was useful.



+ Process worked well; probably best way to collect and share information √√
+ Timing of feedback worked well

Δ Process was a grind
Δ Burden for DOER to build master spreadsheet
Δ Not enough time to review others' inputs
Δ Felt like I was making the same comments before EDCs had a chance to share how they intended to respond √
Δ Many comments were duplicative
Δ Voting agreement not effective

12. The Excel spreadsheet process to develop recommendations alongside ESMP section review was useful.



+ Liked nudge to consolidate and process own thoughts and feedback
+ Saved time
+ Organized

Δ Many duplicative comments

Other thoughts or comments on this topic?

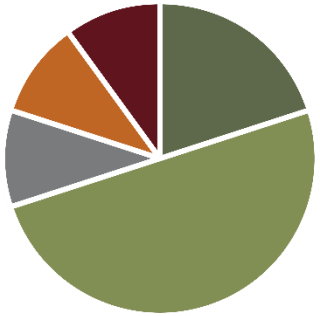
Feedback on Process: Finalizing Recommendations

Key

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

√ Similar comment

11. The "scale of agreement" for ESMP observations and recommendations was useful.



\+ Forced me to review every piece of feedback from other GMAC members
\+ Saved us a lot of time

Δ Not enough bandwidth to complete this and read through others' responses
Δ Comments were not directly tied to recommendations to discuss during GMAC meeting
Δ Quantity of recommendations and ranking exercise made it difficult for EDCs to know which to prioritize

Other thoughts or comments on this topic?

Feedback on Process

What additional questions do you have?

What other strengths or improvables do you have?

What did we forget to ask?

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Looking ahead to the ESMP Dockets

- The procedural schedule for the ESMP dockets (24-10, 24-11, 24-12) was released on November 14th, 2023.
- Intervening GMAC members are in the General track
- The EDCs submit their ESMPs to the DPU on January 29, 2024.
- By August 29, 2024, the Department must approve, approve with modification, or reject the ESMP filings.

DATE	ACTION
Monday, January 29, 2024	ESMP filings submitted to Department
Tuesday, January 30, 2024	Petitions to intervene (General Track) due Discovery (General Track) commences[4]
Thursday, February 1, 2024	Responses to (General Track) petitions to intervene due
Wednesday, February 14, 2024	Petitions to intervene (Alternate Track) due
Friday, February 16, 2024	Responses to (Alternate Track) petitions to intervene due
Upon Department ruling on petition to intervene	Discovery (Alternate Track) commences
Tuesday, February 20, 2024	Pre-hearing statements[5] (General Track) due
Friday, March 1, 2024	EDCs' first discovery logs due
Tuesday, March 5, 2024	Intervenor testimony (General Track) due Pre-hearing statements (Alternate Track) due
Thursday, March 7, 2024, at 7:00 p.m., and Tuesday, March 12, 2024, at 2:00 p.m.	Virtual Public Hearings[6]
Wednesday, March 13, 2024	Intervenor Testimony (Alternate Track) due
Monday, March 25, 2024	Deadline to issue discovery
Monday, April 1, 2024	Final discovery responses due EDCs' updated discovery logs due
Wednesday, April 3, 2024	Deadline for EDCs to submit exhibit lists
Monday, April 8, 2024, through Friday, April 26, 2024	Evidentiary hearings[7]
To Be Determined	Briefing

2024 GMAC Consultant Role

- Many GMAC members will be intervening in the ESMP docket. The GMAC will provide public-facing informational sessions on the ESMP process.
- In 2024, the GMAC consultants are available to support the GMAC in strategic planning, ESMP docket review, potential new GMAC working groups, and more.
- Propose that the GMAC consultants provide ESMP analysis to the GMAC, including:
  - Reviewing how GMAC recommendations were integrated into the final ESMPs,
  - Summarizing investment proposals and associated cost-recovery mechanisms,
  - Reviewing cost benefit analysis,
  - Reviewing ratepayer impacts analysis, and
  - Other areas that may be beneficial to the GMAC and the public.

Proposed 2024 GMAC Meeting Schedule

Proposed GMAC Meeting Schedule

- **Mid-February 2024**
  - Consultant summary presentation on ESMP filings
- **June/July 2024**
  - Consultant presentation providing an overview of the ESMP docket process
- **September 2024**
  - GMAC meeting after DPU releases ESMP Order
  - Discuss next steps for GMAC

- Planning to hold these meetings on **Thursday afternoons (1 - 4 PM)**
- Propose the Executive Committee meets about a month ahead of each GMAC meeting.
- Equity Working Group can meet on an as-needed basis.

Questions

- What do GMAC members think of the suggested meeting cadence and topics?
- How else can the GMAC consultants support the GMAC throughout the docket?
- How can the GMAC support broader stakeholder engagement?

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Break

Please be ready to start again in ~10 minutes

Summary of Similar Grid Mod Processes in Other States

Presented by GMAC Consultants

California

CA Distribution Resource Planning Process

CPUC opened Rulemaking 14-08-013 in 2014 to establish procedures IOU Distribution Resource Plan (DRP) Proposals

Commission divided proceeding into three tracks. Track 3, Integrating DER Adoption Forecasts into System Planning and Investment, was divided into three sub-tracks:

- Sub-track 1: DER Adoption and Distribution Load Forecasting
- Sub-track 2: Grid Modernization Investments
- Sub-track 3: Integration of DRP into Planning and Cost Recovery Processes

In 2018, the CPUC issued Decision on Sub-track 2 (Grid Modernization) D.18-03-023 and adopted a framework for evaluating grid modernization investments.

- CPUC determined Grid Modernization Plan (GMP) would be submitted and reviewed as part of General Rate Case (GRC) filings

Stakeholder Engagement: Working Groups

CPUC established several working groups as part of the Distribution Resource Plan rulemaking

- DER Scenarios and Distribution Load Forecasting Working Group
  - Purpose is to provide an opportunity for interested stakeholders and IOUs to discuss approaches to load and DER forecasting for distribution planning to inform Distribution Resource Plan process.
- Locational Net Benefit Analysis (LBNA) working group
  - LNBA= method to evaluate DER benefits as specific locations
- Integration Capacity Analysis (ICA) working group
  - ICA = Tool to support determination of optimal locations for deployment of DERs

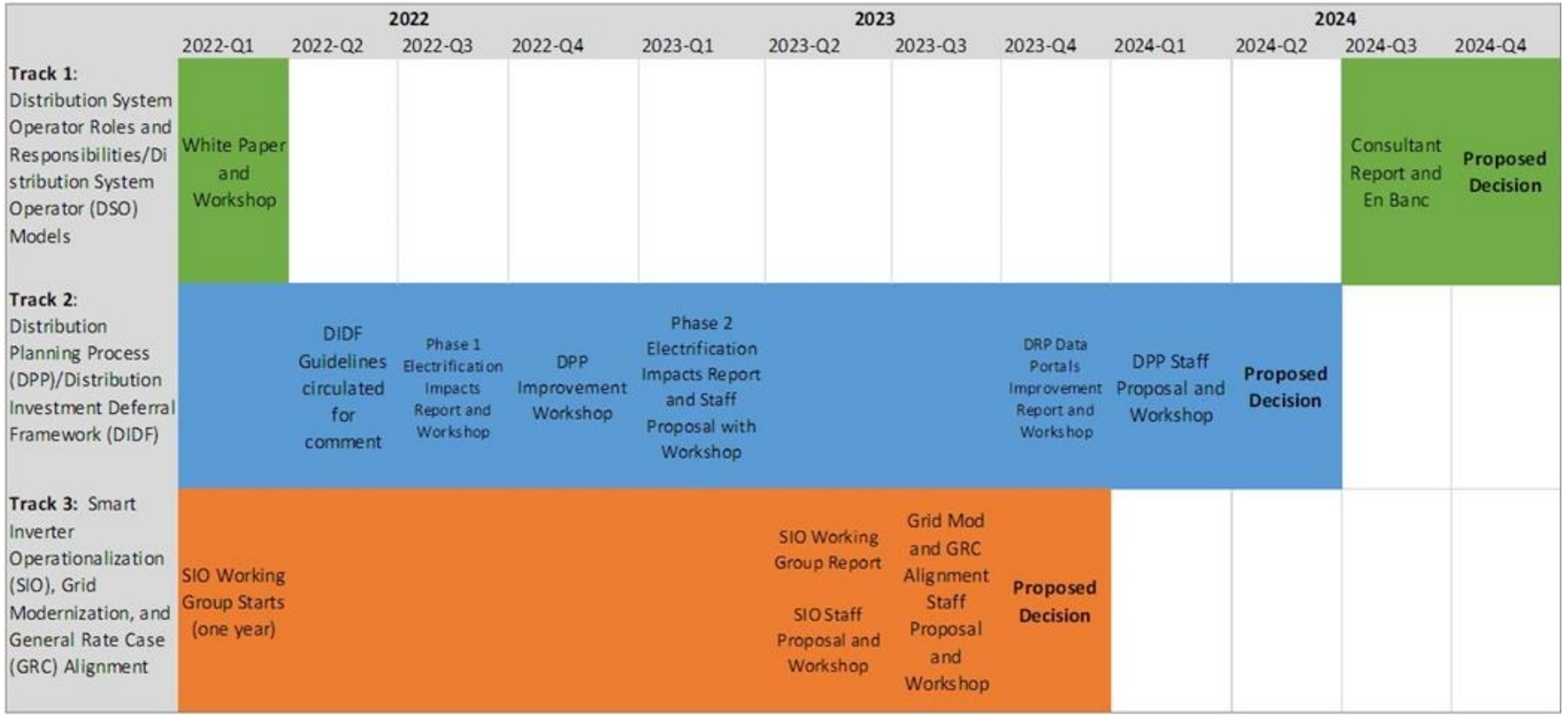
Members included IOUs, government representatives, DER developers, nonprofits, and independent advocates and consultants

Working groups published final reports with findings, lessons learned, and recommendations.

High DER Proceeding (R.21-06-017)

CPUC opened Rulemaking 21-06-17 (the "High DER proceeding") in 2021 as a successor to the Distribution Resource Plan (R.14-08-013)and Integrated Distributed Energy Resources (R.14-10-003) proceedings.

Commission hosted a workshop to discuss scope and schedule of proceeding. Following workshop, Commission determined issues would be sorted into three tracks with multiple phases.



R.21-06-017 Scope and Schedule

High DER Proceeding: Tracks

1

Distribution Planning Process and Data Improvements

- Phase 1: Near-Term Actions
- Phase 2: Distribution Planning Process Improvements
- Topics:
  - IOU Distribution Planning Processes
  - Electrification Impacts and Potential Mitigation
  - Data Portals
  - **Distribution Planning Community Engagement Needs Assessment**

2

Distribution System Operator (DSO) Roles and Responsibilities

- Long-term grid vision(s) and associated policy issues
- Investigation of grid operations models
- **Future Grid Study development and public outreach**
- Future actions identified that could lead to a successor proceeding

3

Smart Inverter Operationalization and Grid Modernization Planning

- Phase 1: Smart Inverter Operationalization
- Phase 2: Grid Modernization Planning and Cost Recovery
- Topics:
  - Business Use Cases for Smart Inverters
  - DER Dispatchability
  - Smart Grid Investment Planning

Source: CPUC. www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/distributed-energy-resources-action-plan/combined-presentations-wkshp_12132022.pdf

High DER Proceeding: Stakeholder Engagement

IOUs required to maintain data portals about the distribution grid to support DER siting	CPUC held a Data Portal Improvement Workshop (July 2022) to inform participants about utility data portals and solicit feedback from attendees about improvements.
Electric Grid Education and Outreach Workshop	CEC hosted an Electric Grid Education and Outreach Workshop to provide a foundation to stakeholders and the public to better understand distribution planning and present community engagement plans. (Aug 2022)
Informal Community Outreach Meetings	CPUC held 20 informal outreach meetings in with tribes, local governments, community organizations and community choice aggregators (Oct/Nov 2022)
Distribution Planning Community Engagement Needs Assessment Workshop	Workshop aimed to present information received through informal outreach, discuss draft scope of work for community engagement needs assessment, and provide context about existing planning and outreach processes. (Dec. 2022)
Community Engagement Needs Assessment	External consultant to conduct a Distribution Planning Community Engagement Needs Assessment (2023-2024)

Illinois

IL Multi-Year Integrated Grid Plan Process

Section 16-105.17 of Public Act 102-0662, enacted in 2021, establishes:

- Illinois policy goals around distribution system planning
- Requirements for utility Multi-Year Integrated Grid Plans
- Stakeholder engagement process to inform the plans.

Additionally, the Act:

- Highlights the need for inclusive distribution planning and specifies that the process should maximize information sharing and minimize overlap with existing filing requirements to ensure robust stakeholder participation.
- Specifies that plan will ensure opportunities for public participation and provide for the analysis of cost-effectiveness of proposed investments.
- Directs the Commission to convene a workshop process facilitated by a third-party

Following stakeholder process, Commission will specify filing requirements and order utilities to file plans

Commission reviews plans and considers whether plans meets the objectives listed, then may approve, modify, or reject the plans.

Stakeholder Engagement

Public Act 102-0662 directs the Commission to convene a workshop process (minimum of 6 workshops)

- Workshops designed to solicit input from diverse stakeholders and educate and equip stakeholders so they can effectively provide feedback to the utility.
- Workshop objectives include a review utilities' planned capital investments and supporting data and how these investments will need the system's projected needs, and a review of utility system and location data on reliability, resiliency, DER, and service quality

Utilities must provide Commission and stakeholders with information on preliminary proposals and investments prior to workshops, and stakeholders can submit data requests to utility prior to each workshop.

Following workshop process, Commission opens a comment period, and third-party facilitator prepares a report with a summary and recommendations for the Commission, which stakeholders can also comment on.

Utilities must incorporate stakeholder input when filing plans. Where specific input has not been incorporated, utilities must explain why input was not incorporated.

https://icc.illinois.gov/informal-processes/multi-year-integrated-grid-plan-workshops

Hawaii

Integrated Grid Planning Process Overview

Source:

Hawaiian Electric 2023 Integrated Grid Plan.

Integrated Planning Stakeholder Engagement

Hawaiian Electric engaged four main stakeholder groups: Stakeholder Council, working groups, technical advisory council, the public

Working groups: Forecast assumptions, Resilience, Distribution planning and Grid Services, Market, Standardized Contract, Grid Services, Solution Evaluation and Optimization, Competitive Procurement, Stakeholder Technical

Public engagement tools

- Integrated grid planning website with technical analysis, reports filed to PUC, copies of stakeholder and community presentations and meeting notes
- Public open houses – connect with public, provide overview of integrated grid planning and gather input on what to consider in planning process.
- Public participation website with overview of integrated grid planning, inputs and assumptions data dashboard educational resources, opportunities for providing feedback via surveys and forms, monthly newsletters.
- Renewable Energy Zones Analysis maps to gather public input; participants could comment and view others' comments

Inputs and Assumptions Data Dashboard

Source: https://hawaiipowered.com/iadashboard/

New York

NY Grid Planning

Influential Mandates:

- 2019 Climate Leadership and Community Protection Act (CLCPA)
  - 70 percent of electricity from renewable energy by 2030
  - 100 percent of electricity from renewable energy by 2040
- 2020 Accelerated Renewable Energy Growth and Community Benefit Act
  - Requires Commission to develop plans for timely development of local transmission and distribution upgrades

Current Grid Planning Proceedings

- Coordinated Grid Planning Process
  - Overseen by Stakeholder-led Energy Policy Planning Advisory Council
- Distribution System Implementation Plan (DSIP)
- Advanced Technologies Working Group

Coordinated Grid Planning Process (CGPP) and Energy Policy Planning Advisory Council (EPPAC)

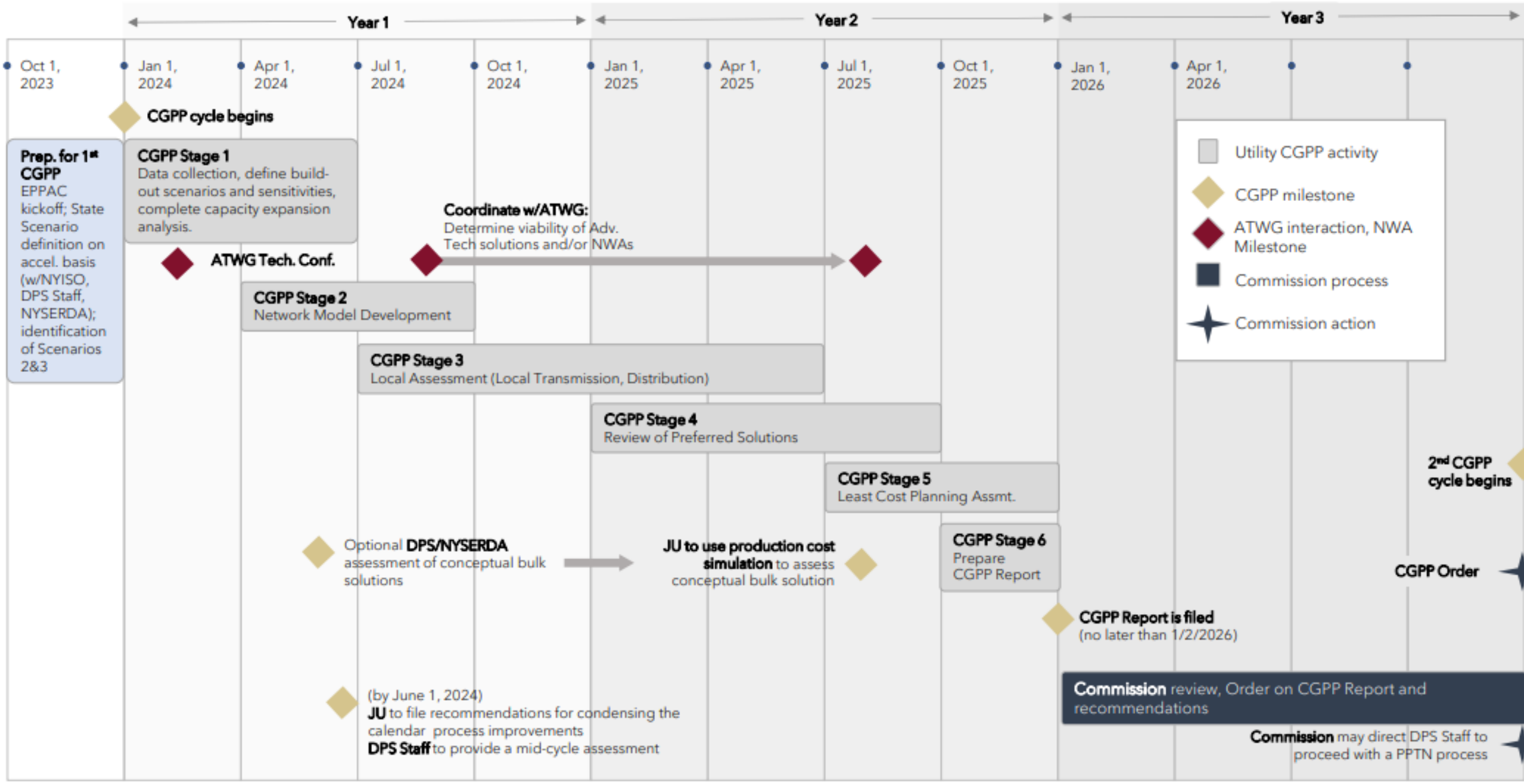
CGPP and stakeholder oversight group recently established (Case 20-E-0197, Order Issued Aug. 17, 2023)

- Long-Term planning horizon, integrates transmission and distribution planning
- CGPP Working Group was involved in evaluating the Joint IOUs proposal, including 10 technical conferences
- EPPAC includes representatives of Utilities, NYISO, NYSERDA, Staff, Gen and Storage Associations, Environmental Justice Organizations, Office of Renewable Siting among others

CGPP has six stages:

1. Data collection and determination of scenarios
2. Network Model Development
3. Local Assessments
    1. Focuses on local transmission and distribution upgrades and integration of DERs, NWAs, advanced technologies
4. Review of Preferred Solutions
5. Least Cost Planning Assessment
6. Least Cost Plan Report
    1. "Significant public comment" after release
    2. Differentiate previously fund and proposed funding

CGPP Timeline (per Aug. 17, 2023 Order)



Distribution System Implementation Plan

NY Joint Utilities provide information to stakeholders on shared website, hold biannual webinars, and release quarterly newsletter updates

Provide detailed plans for various topics, such as energy storage, electric vehicles, clean heat etc. This is an example timeline from National Grid's 2023 DSIP

Figure 2.4.1 Energy Storage Integration Integrated Implementation Timeline

Minnesota

Planning Process

In 2016 report on Grid Modernization, Commission staff proposed three-phase process for consideration of grid modernization strategies:

- Phase 1: adopt definition, principles, and objectives for grid modernization
- Phase 2: prioritize potential action items
- Phase 3: adopt long-term vision for grid modernization (no immediate action)

Xcel Energy Annual Distribution Planning Process

Source: Xcel Energy 2023 Integrated Distribution Plan

Filing Requirements

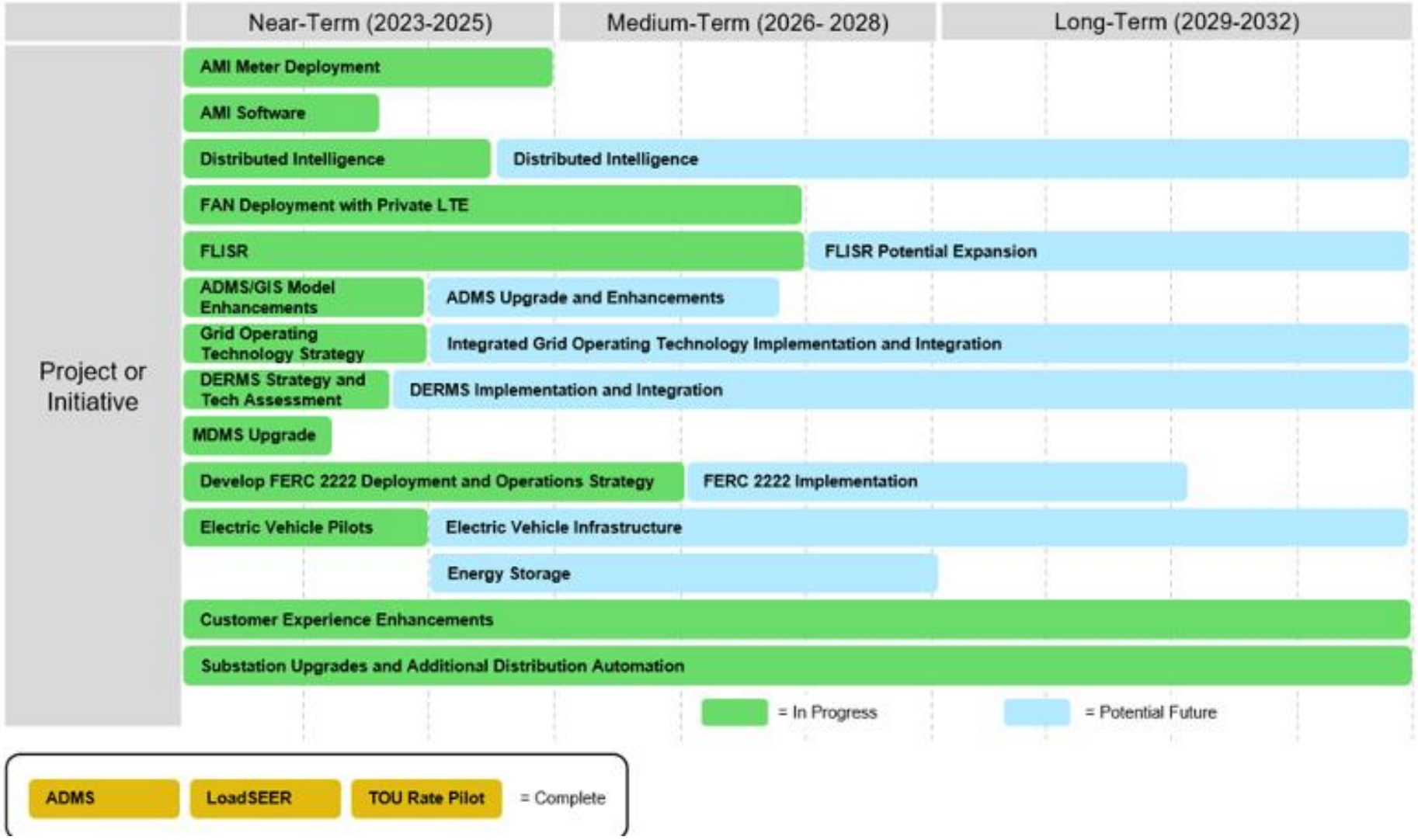
Commission established detailed integrated distribution plan filing requirements, including:

- Baseline data on:
  - Distribution system
  - Distribution budget and spending
  - Distributed Energy Resources (DER)
- Hosting capacity and interconnection
- DER futures analysis (scenario planning)
- Long-term distribution system investment plan (5 & 10 year)
- Non-wires Alternatives analysis
- Transportation Electrification Plan (IOUs only)

Source: https://mn.gov/puc/activities/economic-analysis/planning/idp/

Xcel Grid Modernization Roadmap

Figure B1 - 2: Illustrative Long-Term Grid Modernization Plan

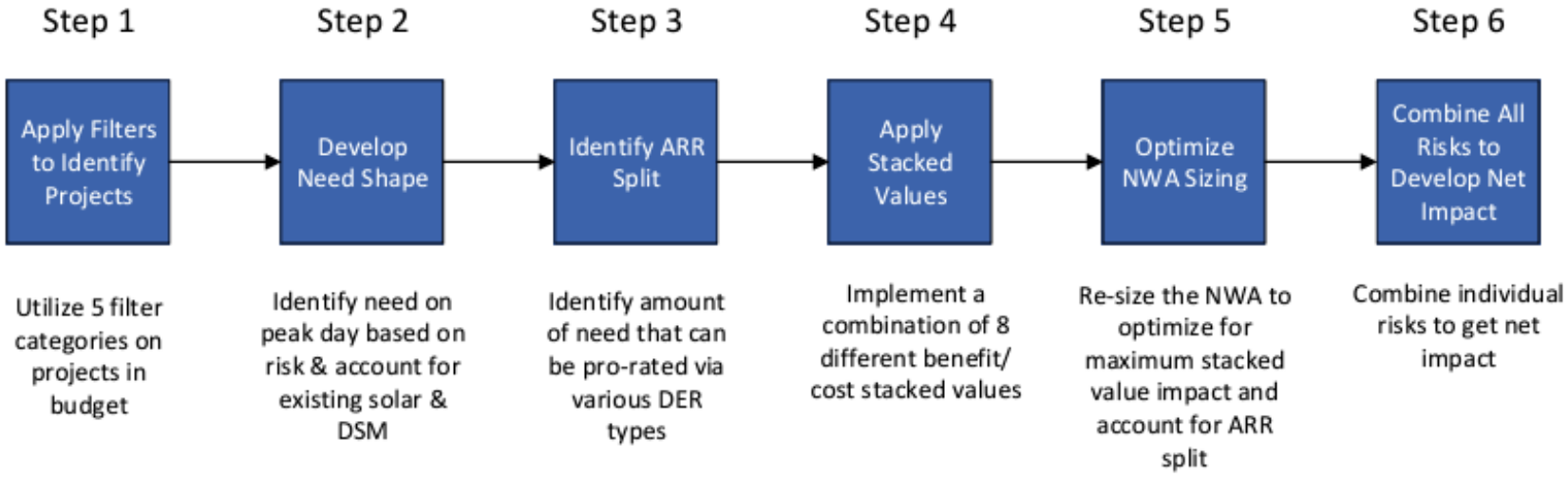


Source: Xcel Energy 2023 Integrated Distribution Plan

Non-Wire Alternatives Net Benefit Analysis

Commission requires Xcel to analyze how non-wire alternatives (NWA) compare to proposed distribution system projects in terms of "viability, price, and long-term value"

Figure F - 2: The Six Steps of the Initial NWA Screen



Example Project Cost and Benefit Calculations

Cost and Benefits Summary	
Energy Generation	$1,544,526
Generation Capacity + MISO Reserves	$473,600
Transmission Capacity	$20,332
Deferral Benefit	$800,717
GHG Emissions + Other Environmental	$2,112,750
Solar Cost	$(2,177,637)
Battery Cost	$(438,363)
Interconnection Fees	$(204,000)
Total Benefit	**$4,951,924**
Total Cost	**$(2,819,999)**
Net Impact	**$2,131,925**

Source: Xcel Energy 2023 Integrated Distribution Plan

Stakeholder Engagement Through Workshops

Six stakeholder workshops

Topics included, among others:

- Integrated Distribution Planning 101
- Discussion of public policy goals
- Energy efficiency, demand response, and other DER
- Load forecasting

Source: Xcel Energy 2023 Integrated Distribution Plan

Overview of State Practices

Example state practices (2)

- Determine whether any current filings can be integrated/consolidated in DSP filings
  - Oregon PUC suspended smart grid filings (e.g., order on PGE's DSP)
  - Minnesota PUC integrated grid modernization plans and transportation electrification plans into DSP
- Prepare a white paper to lay out a vision for DSP processes and provide guidance for utility filings
  - Minnesota – Defined grid modernization for Minnesota, proposed a phased approach, and identified principles to guide it
  - New York – Proposed changes in filing requirements for effective interaction with the PSC's Coordinated Grid Planning proceeding to achieve the state's climate goals
  - Oregon – Outlined rationale and key drivers for opening a DSP investigation, desired outcomes and future planning process, near-term scope and schedule for investigation, and planning considerations

Staff Whitepaper: A Proposal for Electric Distribution System Planning

Oregon Public Utility Commission

Introduction

Expectations for Oregon's electrical grids are changing. Technological advancements in grid infrastructure and distributed energy resources, combined with declining costs, evolving policies, and changing consumer interests are driving greater consideration for investments on the distribution system. These distribution-level investments create opportunities for Oregon's investor-owned utilities to optimize system operations and maximize value for customers. Currently, the Oregon Public Utility Commission (OPUC or Commission) and stakeholders lack the visibility and planning structure to ensure utilities are best positioned to capture these benefits.

The purpose of this white paper is to outline OPUC Staff's (Staff) proposal to develop a holistic, robust planning structure through an investigation into distribution system planning (DSP). Staff's proposal includes:

1) Proposed drivers, outcomes, and considerations for the investigation; and
2) A draft scope for the investigation.

Staff's proposal is intended to serve as the starting point of an inclusive public process. In its proposal, Staff outlines some of the central drivers and outcomes identified for the investigation. However, Staff recognizes that there is a wide range of significant, interconnected DSP elements for which the appropriate place in the investigation framework will become clearer through continued discussion with utilities and stakeholders. Staff's proposal outlines a number of these considerations, in addition to the stated drivers and outcomes.

Following the release of this whitepaper, Staff will hold a workshop with utilities and other interested parties to receive feedback on the proposed drivers, outcomes, considerations, and scope. Staff will incorporate this feedback into a request to the Commission to open a new investigation into DSP. Working with stakeholders, Staff expects to continue to explore and refine the elements of the investigation presented in this whitepaper.

Key Terms

For the purposes of this whitepaper, Staff adopts the following definitions from the U.S. Department of Energy (USDOE), but recognizes that additional refinement will occur in the proposed investigation.

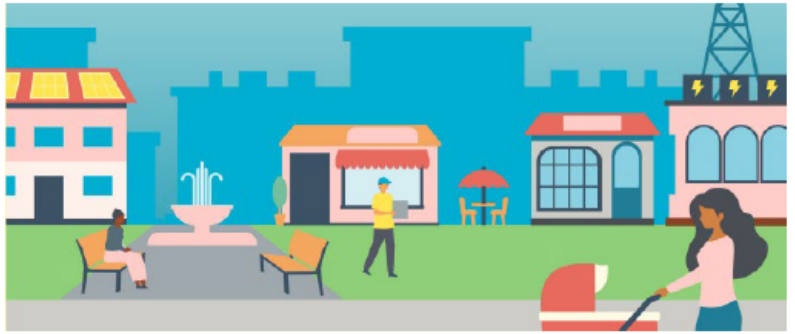
Distribution system: *The portion of the electric system that is composed of medium voltage (69 kV to 4 kV) sub-transmission lines, substations, feeders, and related equipment that transport the electricity commodity to and from customer homes and businesses and that link customers to the high-voltage transmission system.*

Distributed Energy Resource: *Distributed generation resources, distributed energy storage, demand response, energy efficiency, and electric vehicles that are connected to the electric distribution power grid.*

Source: See page 7 of Modern Distribution Grid: Volume I https://gridarchitecture.pnnl.gov/media/Modern-Distribution-Grid_Volume-I_v1_1.pdf.

Source: Schwartz and Mims Frick (2023)

Example state practices (1)



Source: Portland General Electric

- Establish planning goals, objectives, and priorities with stakeholder engagement
- Build on work by other states, tailored to your state's interests
  - Forthcoming Berkeley Lab/PNNL report and catalog of state distribution planning requirements
- Host presentations to increase stakeholders' understanding
  - Colorado, Illinois, Maine, Massachusetts, Michigan, New Mexico, Oregon
- Engage stakeholders and communities in the planning process
  - Joint Utilities of NY stakeholder plan and timeline
  - Oregon's community engagement plans – see Portland General Electric distribution plan
- Ask utilities to respond to a questionnaire to gather baseline information on their distribution system and planning practices
  - Minnesota utilities; Oregon utilities and third-party energy efficiency administrator and stakeholders; New Jersey

Source: Schwartz and Mims Frick (2023)

Example state practices (3)

- Host work groups to help develop and refine requirements — and address emerging planning issues
  - Hawaii – Stakeholder council, technical advisory panel, and working groups
  - Maine – Working groups on forecasting, solutions evaluation criteria, and data availability/collection
  - Oregon – DSP Work Group serves as a forum to identify, articulate, discuss and, when possible, resolve technical and other questions that arise. The primary objective is finding solutions to barriers that would otherwise inhibit completion of the utilities' plans.
  - New Jersey – Third-party facilitated working groups with electric distribution companies and stakeholders will make recommendations for integrated DER planning — *forthcoming*
- Consider pilots for new processes and technologies
  - Non-wires alternatives (Oregon)
  - Resilience — Resilient Minneapolis project (Minnesota)
  - Hosting capacity analysis — start with solar PV, expand to other DERs, and specify use cases*
  - Time-based rates — for general service rates and managed electric vehicle charging (e.g., Oregon, Minnesota, Hawaii, New York)

*See Minnesota PUC orders in Docket Nos. 15-962, 18-684, 19-666, and 21-694

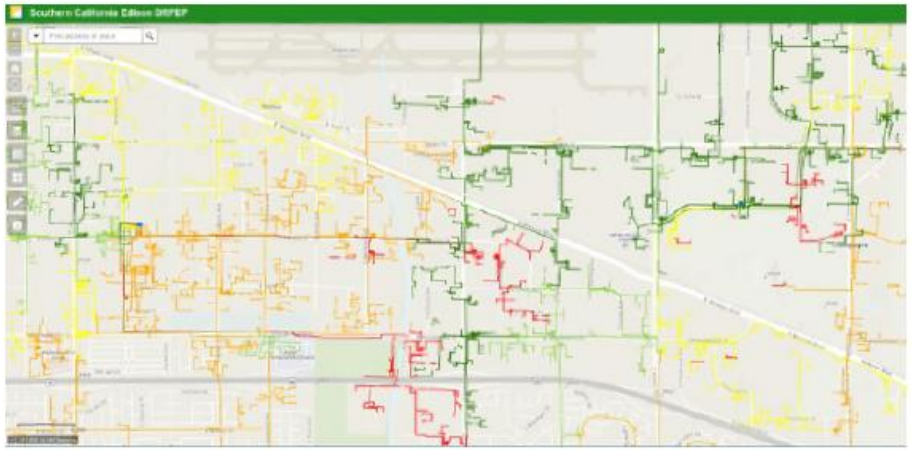


Figure source: Southern California Edison

Source: Schwartz and Mims Frick (2023)

Questions to ask

- Have clear state objectives been established for distribution system planning?
- Are other types of planning (e.g., resource planning, transmission, energy efficiency, grid modernization, electrification, carbon, resilience) coordinated with distribution planning?
- Are there opportunities to improve diversity of participating stakeholders, data access, and consideration of stakeholder and community feedback?
- How are DERs considered — e.g., in grid modernization strategy, technology roadmap, as non-wires alternatives?
- How is electrification of transportation and buildings considered in distribution planning?
- How are utilities incorporating BIL and IRA impacts into distribution planning assumptions?
- Are State Energy Offices, PUCs and utilities working together to maximize federal dollars for distribution system improvements?

Source: Schwartz and Mims Frick (2023)

Summary of Key Practices

Establish goals, objectives, and priorities with community and stakeholder engagement

- Consider state-wide climate and energy policy goals

Establish clear Grid Mod Plan filing requirements

- Should be defined before plans are developed
- Engage stakeholders in determining requirements
- Example of detailed requirements: Minnesota

Establish data sharing and availability requirements

- Hawaii data portal for load and DER forecasting
- Illinois pre-filing workshop to review planned capital investments and supporting data, including utility system and location data
- Costs and benefits of proposed investments versus alternatives

Summary of Key Practices, continued

Engage stakeholders and public throughout

- California Electric Grid Education and Outreach Workshop
- California Community Engagement Needs Assessment
- Illinois requirements for stakeholder engagement process

Consider integration and relationship with other planning processes

- Connect grid mod planning with other distribution planning
- Transmission planning
- Gas planning

Summary of Key Practices, Working Groups

California

- DER Scenarios and Distribution Load Forecasting Working Group
- Locational Net Benefit Analysis Working Group
- Integration Capacity Analysis Working Group

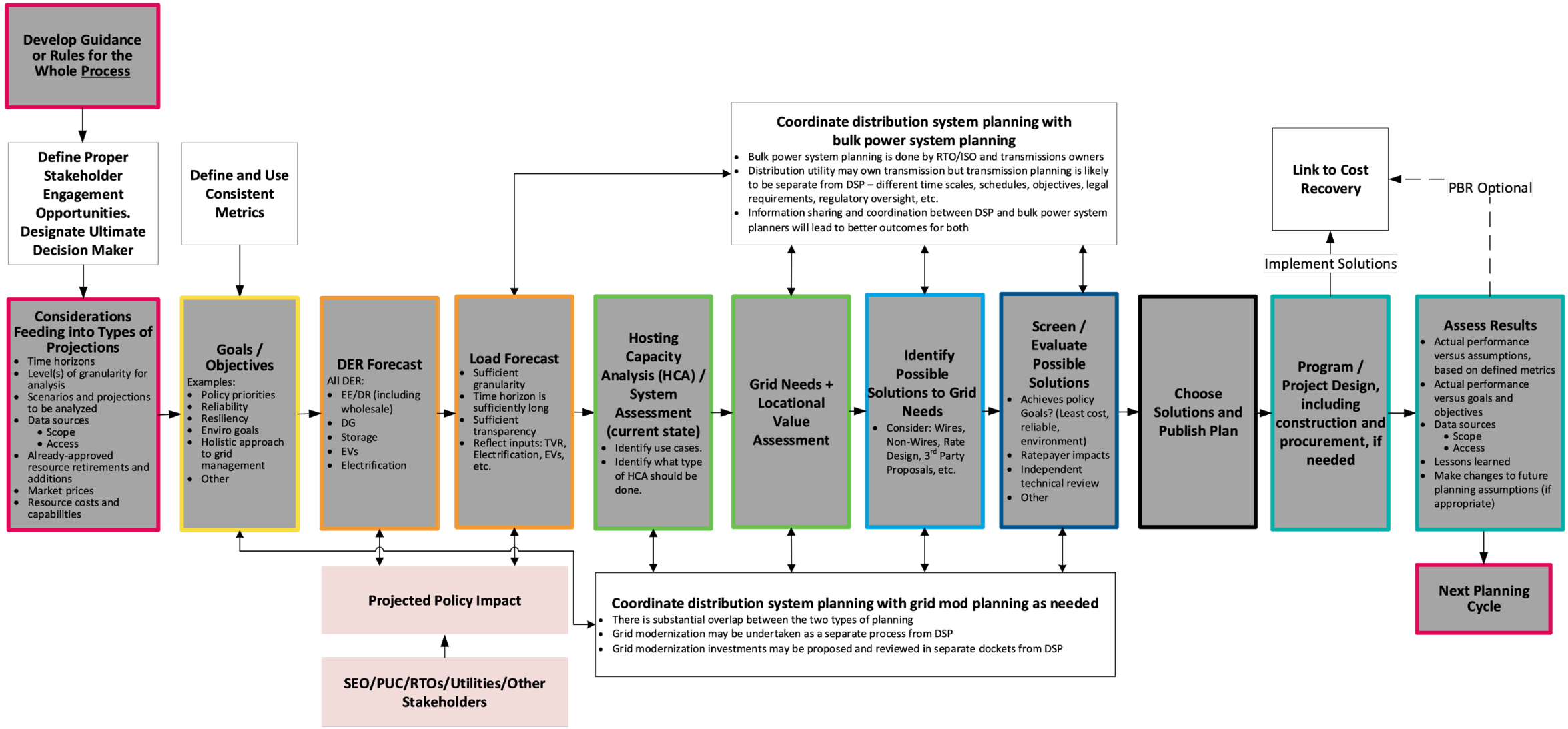
Hawaii

- Forecast assumptions, Resilience, Distribution planning and Grid Services, Market, Standardized Contract, Grid Services, Solution Evaluation and Optimization, Competitive Procurement, Stakeholder Technical

New York

- Coordinated Planning Processes Working Group
- Advanced Technologies Working Group

NARUC-NASEO Idealized Distribution Planning Process (Jade Cohort)



Source: NARUC-NASEO Task Force on Comprehensive Electricity Planning

Questions or Comments on Activities in Other States?

Straw Proposal for Future GMAC Process

Presented by GMAC Consultants

Key Steps in GMAC Review of Next ESMPs

1. Establish ESMP goals
   - Some goals already established by Climate Act
   - GMAC could establish additional goals
   - GMAC could establish scope of ESMP review, including coordination with transmission planning, gas planning, and decarbonization planning
2. Establish ESMP filing requirements
   - To ensure that ESMPs include all relevant data in first draft
   - Address substance, consistency, and format
3. Review EDC assessment of current state of distribution system
   - Including assessment of grid needs
   - Including hosting capacity analysis
   - Including locational value assessment
4. Review EDC forecasts
   - Load, DER, and other forecasts (e.g., CECP)
   - Ensure consistency with other MA planning activities (including EE, distributed generation, storage, CECP, gas)
5. Review EDC solutions to meet grid needs
   - Including detailed information on alternatives
6. Review EDC screening of solutions
   - Benefit cost analysis of options
   - Rate impact analysis of options
7. Review EDC selection of solutions
8. Review of impacts of proposed plan
   - Proposal for cost recovery
   - Net benefits and rate impacts
   - Reliability & resilience
   - Equity, carbon emissions, health, workforce
9. Review ESMPs filed with the GMAC
   - Submit comments in November

Working Groups

Related Massachusetts Councils and Working Groups:

- Community Engagement Stakeholder Advisory Group (CESAG)
- Equity Working Group (EWG)
- Clean Energy Transmission Working Group (CETWG)
- Energy Efficiency Advisory Council (EEAC)
- Electric Vehicle Infrastructure Coordinating Council (EVICC)

Guiding Questions for GMAC Working Groups:

1. How many GMAC members would be on each GMAC working group?
2. What should be the frequency of Working Group meetings compared with frequency of GMAC meetings?
3. How would a GMAC working group discussion differ from GMAC discussion on the same topic?
4. Who would manage and facilitate the working groups?
5. What would be the role of the GMAC consultants in the working groups?
6. What would be the role of the EDCs in the working groups?

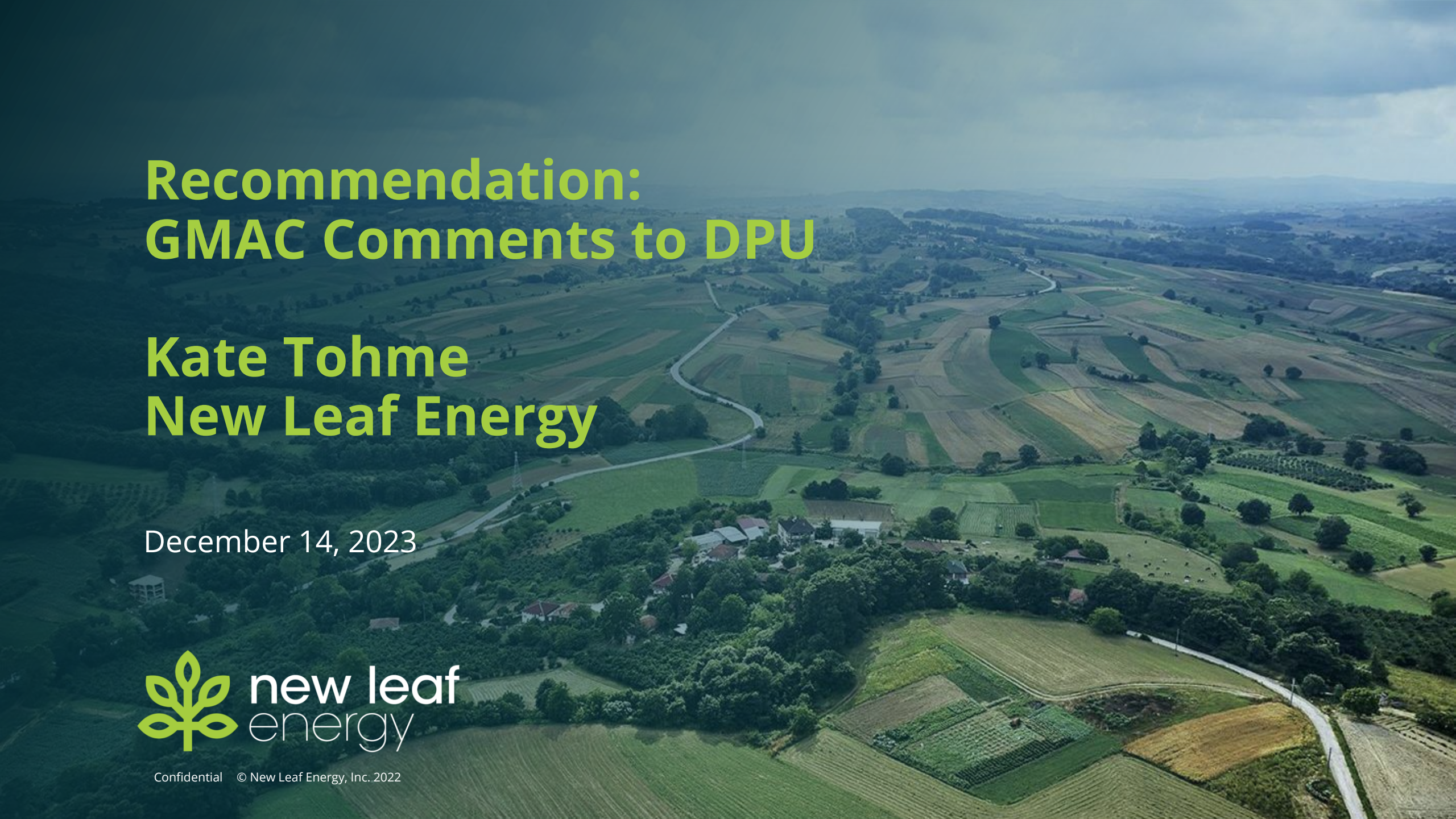
Illustrative timeline for GMAC process

Illustrative Timeline is based on number of GMAC meetings, assuming GMAC meets once per month.
The timeline should factor in the role of GMAC working groups.

Key Steps in GMAC Review	Illustrative Timeframe	Dates
1. Establish ESMP goals	2 months	
2. Establish ESMP filing requirements	2 months	
3. Review EDC assessment of current state of distribution system	3 months	
4. Review EDC forecasts	4 months	
5. Review EDC solutions to meet grid needs	4 months	
6. Review EDC screening of solutions	6 months	
7. Review EDC selection of solutions	6 months	
8. Review of impacts of proposed plan	3 months	Jun – Sep 2028
9. Review ESMPs filed with the GMAC	3 months	Sep - Nov 2028

Future ESMP Process Recommendations

- Presented by Kate Tohme, New Leaf Energy (10 min)



Recommendation: GMAC Comments to DPU

Kate Tohme
New Leaf Energy

December 14, 2023

new leaf energy

Process

RECOMMENDATION: The GMAC should prepare comments with procedural recommendations for the DPU to be submitted as public comments in D.P.U. 24-10/D.P.U. 24-11/D.P.U. 24-12. Alternatively, the GMAC should contact the DPU and request guidance on the DPU's preference for how GMAC comments should be submitted directly to DPU.

- The DPU opened dockets D.P.U. 24-10/D.P.U. 24-11/D.P.U. 24-12 for the Electric Sector Grid Modernization Plan (ESMP) filings
- Once the ESMPs are filed, the DPU will likely offer an opportunity for public comment
- Through preparation and review of the draft ESMPs, the GMAC has gained specialized knowledge
- As this is the first iteration of a novel process, the DPU is likely to set procedural guidelines through these adjudicatory proceedings for future iterations of the ESMP process
- The GMAC is uniquely suited to provide procedural recommendations to the DPU
- Certain recommendations considered at the GMAC would provide value if submitted directly to the DPU

Procedural Recommendations to the DPU: Intro

- The ESMP process is novel in its conception through law and we must evolve the process to learn from its execution and accommodate the realities of implementing such a comprehensive and voluminous undertaking.
- Both the GMAC and the EDCs face unforeseen challenges with the timing for this unprecedented process.
- It is imperative that the DPU investigate and implement rules and procedures for future ESMP iterations to efficiently evolve the ESMP process to best meet its intended purpose under law and the Commonwealth's clean energy policies and objectives.
- As such, the GMAC should propose rules and procedures to the DPU based on this first ESMP experience, to include at a minimum as follows:

Procedural Recommendations to the DPU

- The EDCs should engage with the GMAC and stakeholders at least 18 months in advance of providing a draft ESMP to the GMAC for review;
- The EDCs should work together to provide a uniform method of analysis, forecasting, and scenarios for comment and discussion with the GMAC and stakeholders prior to commencing analysis for the 2028 ESMP process ("ESMP 2028");
- The DPU should assign staff to participate in engagement with the EDCs during the analysis process for ESMP 2028 or set a separate process providing for opportunities for EDCs and stakeholders to engage with DPU staff during the year leading up to the draft ESMP 2028;
- The DPU should identify how the ESMP process does or does not supersede parallel proceedings related to electric vehicles, grid modernization, energy efficiency, and DG interconnection;
- The DPU should clarify how separate related stakeholder groups should work with the GMAC and the EDCs to participate in the analysis and review process for ESMP 2028;

Procedural Recommendations to the DPU

- The DPU should set minimum engagement requirements for the EDCs starting at one year prior to submittal of the draft ESMP to the GMAC;
- The process for GMAC draft ESMP review and EDC incorporation of GMAC recommendations should be extended by a minimum of 3 months;
- The DPU should set requirements for uniform filing formats and minimum filing requirements for ESMP 2028 based on GMAC, EDC and stakeholder input and experience in the adjudicatory proceedings;
- The DPU should direct the EDCs to clearly identify the topics and areas of analysis that were not possible to conduct or include in this first ESMP process due to time constraints and indicate their intention to include specific additional items and information in ESMP 2028;
- The DPU should direct the EDCs to provide proposals for additional processes needed for any topics identified in the ESMP analysis that would benefit from investigation or stakeholder collaboration in the interim between this ESMP process and ESMP 2028 or that cannot be fully adjudicated in this ESMP process due to time constraints.

Next Steps

- The GMAC should prepare draft comments for submittal in all three ESMP dockets
- DOER should reach out to DPU and inquire its preferred method for submittal of the GMAC comments
- DOER should inquire with the DPU if there is a process through which DPU staff could meet with the GMAC and have a discussion about procedural recommendations

Thank You

new leaf energy

Discussion on Future GMAC Process - Open Discussion

What are the **short-term actions** for the GMAC? Some ideas include:

- Monitor and contribute to DPU ESMP Dockets
- Establish GMAC process for 2024 and 2025
  - Scope, timing, working groups
- Promote coordinated planning across EDCs

What are the **long-term actions** for the GMAC? Some ideas include:

- Investigate coordination with other planning initiatives
  - Gas planning, Clean Energy and Climate Plan, transmission, energy efficiency
- Establish ESMP goals
- Establish ESMP filing requirements

Close and Next Steps

- **Consultant Budget Update:** The DPU approved the Grid Modernization Advisory Council Budget for 2023-2024 (D.P.U. 23-98) on December 11, 2023.

- **Future Meetings:** The 2024 GMAC meetings will be scheduled in January 2024.
  - **Please stay tuned for calendar holds.**

- Thank you for your incredible work throughout 2023. Happy Holidays and Happy New Year!