

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES

Grid Modernization Advisory Council Equity Working Group

June 26, 2024

Agenda

Item	Time
Welcome, Agenda, Roll Call Meeting Minutes Review and Voting	11:00 – 11:05
Presentation and Discussion: DPU Order 24-15	11:05 – 11:15
Consultant Presentation: Accounting for Equity in Future Massachusetts Electric Sector Modernization Plans	11:15 – 11:40
GMAC Stakeholder Engagement Materials	11:40 – 11:55
Close	11:55 – 12:00

Roll Call

Equity Working Group Voting Councilors

Larry Chretien

Green Energy Consumers Alliance

Julia Fox

Department of Energy Resources

Chris Modlish

Attorney General's Office

Kyle Murray

Acadia Center

Vernon Walker

Clean Water Action

Mary Wambui

Planning Office for Urban Affairs

Kathryn Wright, Chair

Barr Foundation

Non-Voting Councilor

Erin Engstrom (non-voting)

Eversource

Consultants

Jennifer Haugh

GreenerU

Chelsea Mattioda

Synapse

Tim Woolf

Synapse

Meeting Minutes

- Calling for vote to finalize:
 - March 5, 2024, Equity Working Group minutes
- *Motion to approve the March 5th minutes [as distributed/as corrected]?*

Energy Affordability and DPU 24-15

- DPU filed this Notice of Inquiry (NOI) on January 4, 2024.
- The purpose is to design or improve utility programming to help reduce energy burdens, specifically for LMI customers.
- DPU has received public comments on a series of questions and recently held a stakeholder session. Major topics include:
 - Discussion of energy burden in Massachusetts
 - Low-income discount rates
 - Arrearage management programs (bill forgiveness)
 - Disconnection protections
 - Policy alternatives such as Percentage-of-income payment plans (PIPPs) and Tiered Discounts
 - Options to manage costs of programming

Connections to Grid Planning – Themes from Comments

- Bill discounts, disconnection protections and other programs are part of broader strategy for maintaining service quality and affordability during energy transition.
- Discussion of affordability programs should occur within the broader context of energy efficiency, rate reform, and transmission and distribution spending

DPU Technical Session June 24th

- Technical Session with stakeholders was held from 10:00-5:00 p.m. on June 24th.
 - Materials available [here](#).
- Discussion: Are there any reflections from yesterday's technical session or the public comments that are relevant for the Grid Modernization Advisory Council process?
- Longer-term question: How do we preserve affordability and ensure the benefits and burdens of the energy transition are managed equitably?
(Discussion will continue under distributional equity analysis section of meeting.)

Accounting for Equity in Future Massachusetts Electric Sector Modernization Plans

Presentation to the GMAC Equity Working Group

GMAC Consultants

Synapse Energy Economics

June 26, 2024

Outline

1. Role of customer protection and equity in the 2024 ESMPs
2. Distributional Equity Analysis – summary of new DOE Guide
3. Accounting for equity in the 2028 ESMPs

Role of Equity and Customer Protection in 2024 ESMPs

The ESMPs said very little about promoting equity, except for proposals for EDCs to collaborate on equity issues in the CESAG and with local leaders through Community Benefits Agreements.

Customer protection issues are inextricably linked with equity issues.

- When costs and rates are kept low, all customers benefit – including LMI customers.

The ESMPs did not demonstrate that the proposed plans will maintain low costs and rates.

- Both the benefit-cost analysis (BCA) and the bill impact analysis were inadequate.
 - Only a small portion of ESMP investments were analyzed – understating the bill impacts
 - Many alternative investments were not considered
 - Investments and costs were not optimized
- Other aspects of the ESMPs (e.g., load forecasts) indicate that the proposed investments are unduly expensive.

There was no time in the 2024 ESMP process to propose a direct, quantitative equity analysis.

- The GMAC consultants focused on the excessive costs that would be imposed on all customers.
- A distributional equity analysis needs a reasonable BCA as a starting point.

Distributional Equity Analysis (DEA) Guide: Background

Funded by

- US DOE, through Lawrence Berkeley National Lab (LBNL) and E4TheFuture

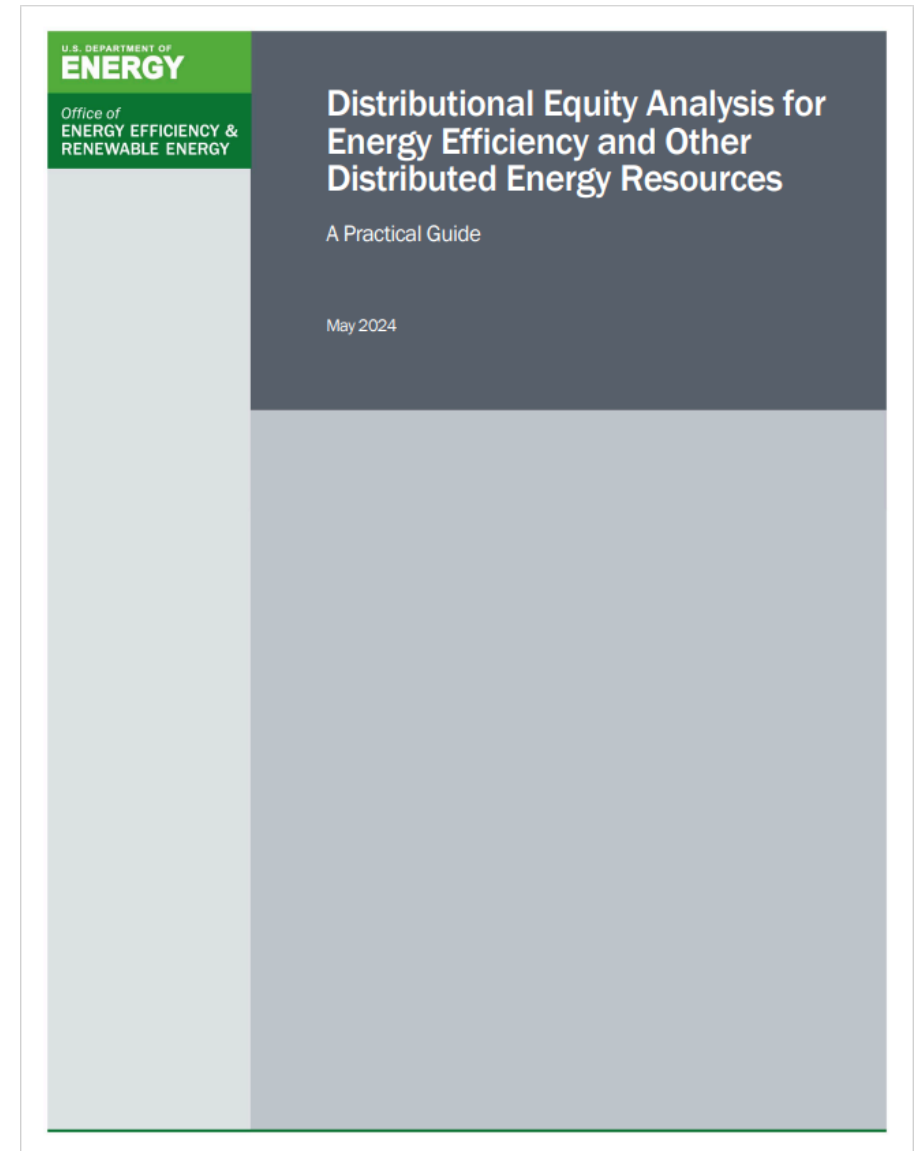
Prepared by

- Synapse Energy Economics
- LBNL
- E4TheFuture

Overseen by an Advisory Committee made up of experts in energy equity and in energy planning.

Additional information and report available here:

- <https://emp.lbl.gov/publications/distributional-equity-analysis>



DEA Guide: Purpose and Context

There is increasing interest in both energy equity and benefit-cost analysis (BCA) of distributed energy resources (DERs).

BCA is not designed to address equity issues because it assesses costs and benefits of customers on average.

DEA is analytical framework that can be used to answer one key question:

- ***What are the distributional equity impacts of utility resource investments in the context of cost-effectiveness evaluations?***

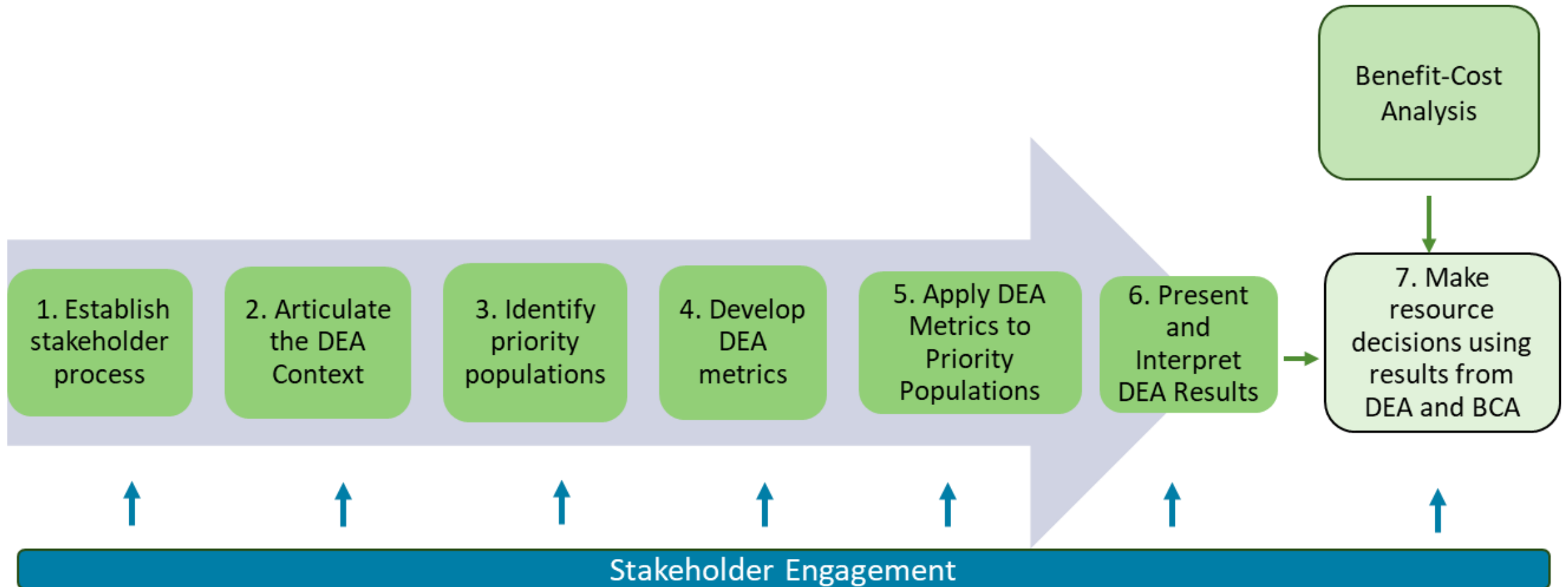
DEA is a nascent, emerging concept in the realm of utility regulation

- The DEA Guide should be viewed as early, evolving guidance for advancing this topic
- Additional experience, analysis, and information will be needed to build on the DEA Guide

Summary of Differences Between BCA and DEA

	Benefit-Cost Analyses	Distributional Equity Analyses
Purpose	To identify which DER programs utilities should invest in	a) To identify how DER programs impact priority populations b) To identify which DER programs utilities should invest in
Costs and Benefits	Costs and benefits across all customers on average	a) Costs and benefits for priority populations b) Costs and benefits for other customers
Impacts Analyzed	<ul style="list-style-type: none"> • Utility system impacts • Participant impacts • Societal impacts 	Depends on choice of DEA metrics
Metrics	<ul style="list-style-type: none"> • Costs (PV\$) • Benefits (PV\$) • Net present value (NPV) • Benefit-cost ratio (BCR) 	Examples: <ul style="list-style-type: none"> • Rates (\$/kWh) • Bills (\$/month) • Participation rates (% of eligible customers) • Energy burden (% of income spent on energy bills) • Service shutoffs (% change) • Environmental impacts (change in PM 2.5 emissions)

Distributional Equity Analysis: An Overview



Stage 1. Establish Community & Stakeholder Process

A robust stakeholder process is critical to support DEA.

Stakeholder and community process should include representatives from a diverse cross-section of customers that represent the priority population.

- These representatives often face barriers to participation in PUC processes
- The barriers should be recognized and addressed in designing the stakeholder process

Robust stakeholder and community input should be utilized in all stages of the DEA.

Equity-oriented community and stakeholder processes are markedly different from utility decision-making processes used today.

LBNL has a forthcoming companion document, *Engagement Guide for Distributional Equity Analysis*, available at: <https://emp.lbl.gov/energy-equity>.

Stage 2. Articulate the DEA Context

The DEA should have the same context as the BCA.

Context includes:

- DEA application:
 - Single DER, a DER portfolio, multiple DERs, or multiple DER portfolios.
- Timeframe:
 - Prospective
 - Retrospective

The DEA Guide discusses only DERs, but the same concepts and principles can be applied to other utility investments – including grid mod.

Stage 3. Identify Priority Population

- The DEA Guide uses the term “priority populations” to indicate those customers and communities that will be evaluated separately to assess equity impacts.
- Priority populations should be identified using each state’s equity policy goals along with stakeholder input.
- A variety of indicators can be used to determine which customers and communities should be included in a priority population. These fall into several categories:
 - Income, population health, poor environmental conditions, access to services, existing inequities

Other terms for priority populations

- Disadvantaged
- Overburdened
- Marginalized
- Underserved
- Vulnerable
- Environmental justice communities
- Frontline communities
- Highly impacted communities
- Target populations

Stage 4. Develop DEA Metrics

- Metrics are an essential element of DEA because they determine which aspects of equity will be evaluated.
- DEA metrics should be identified using each jurisdiction's equity policy goals along with stakeholder input.
- There are many metrics that can be used for systemwide equity assessments.
 - These are used to address the full range of equity issues facing customers: recognition, procedural, distributional, restorative.
- But these need to be downselected for distributional equity analysis.
- Guidelines for developing DEA metrics include:
 - Distributional - Focus on distributional equity as opposed to other dimensions of equity
 - Discrete - Avoid using metrics that overlap with each other or overlap with results of the BCA to avoid double counting.
 - Tied to the equity goals – Metrics should capture the equity costs and benefits relevant to a jurisdiction's policy goals.
 - Associated with the DER impact - Some metrics might not be affected by the DER investment under consideration.

Stage 5. Apply DEA Metrics to Priority Population

- DEA requires a lot of data; some publicly available, some not. Examples of data requirements include:

Demographic and Socio-Economic Data

Often can be obtained from nationally available public data, e.g., the US Census Bureau. Can also be collected through community surveys, opt-in participation questions, or other state and local data collection.

Utility Data

Includes billing data, customer account data and addresses, rate information, bill information, participation in DER programs, geographic data, and more. Can often be obtained from utilities, but there are significant data privacy and security challenges.

Energy Impacts

Some utility impacts can be captured using publicly available data, such as government-collected health or environmental data.

Stage 6. Present and Interpret DEA Results

Three Options for Presenting Results

Simple results: Includes unadjusted results for each DEA metric separately for priority population and other customers.

Benchmarked results: Includes simple results for each metric alongside metric-specific benchmarks.

Weighted DEA scores: Applies multi-attribute analysis (MAA) to benchmarked metrics to calculate DEA scores. Weighted scores for each DEA metric can be aggregated to present net scores for priority population and other customers.

Benchmarks:

A set of standards or goals by which success can be measured and can be used to draw more informed conclusions.

Examples:

- Targets for participation
- Targets for reducing energy burden
- Caps for reasonable rate impacts

Example: Benchmarked Results

Simple Results

Metric	Priority Population	Other Customers	Priority Population Benchmarks
Participation Rate (% of eligible population)	11%	22%	20%
Long-Term Average Rates (% change)	0.9%	0.9%	1.5%
Participant Bills (% change)	-4.6%	-2.5%	-3%
Number of shutoffs avoided	20	1	8
Customer reliability (% change in CEMI)	-2%	-2%	-1%

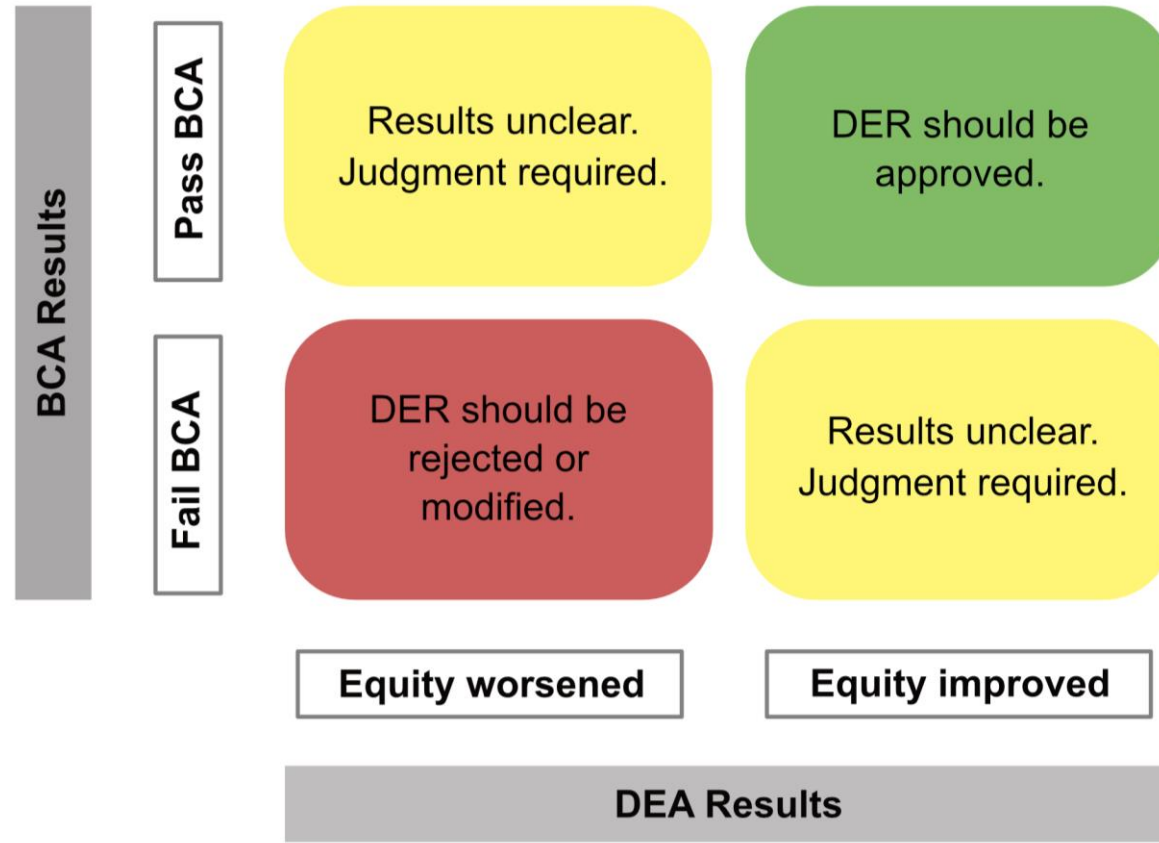
Conclusions:

- Priority customers' participation rate is below the benchmark. (-)
- Long-term average rates are within the rate increase cap. (+)
- Priority customer participant bill reductions exceed the target. (+)
- Priority customer reduced shutoffs exceed the target. (+)
- Reliability benefits exceed the target.(+)

Bottom Line:

DER program would improve equity across all the benchmarks if it were redesigned to increase priority population participation.

Stage 7. Make Resource Decisions Using Both BCA and DEA



Streamlined DEA

DEA is a complex process that is likely to be time and resource intensive.

Streamlined practices can be used if time and resources are limited

- The stakeholder process should never be streamlined.
- Start with a relatively narrow DEA application, such as assessing a well-established energy efficiency portfolio.
- Use existing definitions of priority populations in the jurisdiction.
- Use existing equity metrics or those used in other jurisdictions.
- Use mapping and modeling tools that have already been established in the jurisdiction.
- Focus on the simple and benchmarked results. Skip the DEA scoring techniques.
- Establish clearly defined pass/fail criteria early in the DEA process.

Accounting for Equity the 2028 ESMPs

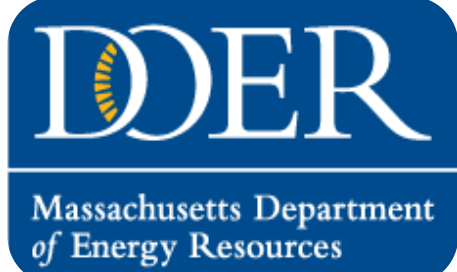
The EDCs and the GMAC will need to spend a lot of time developing ESMPs that protect all customers, including LMI customers, by

- Optimizing resources to minimize costs
- Developing a meaningful BCA
- Developing a meaningful bill impact analysis

A robust DEA of grid mod plans is a complex, resource-intensive process.

The 2028 ESMPs could include a streamlined DEA:

1. Stakeholder process: build off current EWG process
2. Context: already defined by the BCA in the ESMPs
3. Priority populations: build off existing definitions in MA
4. DEA metrics: focus on a small number, e.g., participation and bill impacts
5. Apply metrics to populations: build off existing tools in MA
6. Present results: use simple results
7. Use results of both BCA and DEA: discuss with the EWG and the GMAC



Grid Modernization Advisory Council Stakeholder Engagement Materials

Goals & Scope of Materials

GMAC materials need to be tied to the 2022 Climate Law enabling statute.

“The council shall seek to ... *increase transparency and stakeholder engagement in the grid planning process.*”

GOALS:

1. Create public awareness of the ESMPs and the GMAC process

2. Offer clear and succinct context for the ESMPs, the GMAC, and their role in the clean energy transition

3. Encourage sign-ups for a GMAC listserv

4. Encourage participation in GMAC-related activities

In Scope

- The importance of grid planning for stakeholders in the Commonwealth
- What are the ESMPs and GMAC and why stakeholders should care
- What is grid modernization and how does it relate to Massachusetts' climate targets
- How to stay engaged with future GMAC and ESMP activities
- Links to related content

Out of Scope

- How to learn about and access clean-energy-related incentives
 - *The EDCs, MassCEC and Green Energy Consumers Alliance provide resources we can link to instead.*
- Updates on Energy Facilities Siting Board (EFSB) proceedings for specific projects
- Activities related to other state-level advisory groups (EEAC, EVICC, CEISP, etc.)

Proposed Structure of Engagement Materials

1. New Page on GMAC Website:

➤ Introductory Information

- Concise summary of ESMPs and outcomes of the Order
- Role of the GMAC and why it is important for the clean energy transition
- Roles of different grid planning entities (ex. DOER, DPU, EDCs, CESAG)

➤ Supplementary Linked Information

- GMAC pages, relevant DPU orders, utilities' ESMP pages, [MassCEC "Clean Energy Lives Here"](#), EFSB, DOER Office of Community Engagement
- Resources: incentives, bill assistance, contact information

2. ~3 "Grid Impacts" Factsheets: These will be digital and live on a separate GMAC web page dedicated to the ESMPs.

- Primarily fact sheets, incorporating both plain-spoken written language and graphics/images.
- Could include first person narratives and story-telling elements.
- Translated into the top 5 spoken languages in the Commonwealth.

Factsheet Design

Looking to create a product that bridges visual components (ex. CECP graphic) and written components (ex. NYSERDA). The factsheets should be visually engaging, yet informative.

See yourself in 2050

The transition to Net Zero has benefits across all aspects of society.

- Indoor and outdoor air is clean and healthy for residents across the Commonwealth.
- Offshore wind plays a vital role in the clean energy transition.
- Technological innovations help unlock novel decarbonization solutions.
- Urban areas and river corridors are cool with additional trees.
- Most homes are electric and efficient, using heat pumps for heating and cooling.
- Clean and quiet electric vehicles reduce air and noise pollution, especially in urban corridors.
- Clean energy investments create job opportunities, especially in solar, offshore wind, and clean buildings.

Example: Massachusetts Clean Energy and Climate Plan for 2050

New York State Offshore Wind

Over 10,000 Jobs for New Yorkers

Offshore wind is key to achieving New York State's nation-leading clean energy goals of 70% renewable energy by 2030 and 100% clean electricity by 2040

New York's Growing Offshore Wind Industry

New York State is committed to developing at least 9,000 megawatts of offshore wind power by 2035, enough to power up to 6 million homes. Many offshore wind projects will contribute to this target, with the first phase of projects anticipated to be operational by the mid-2020s. With its clean energy leadership, highly-skilled workforce, and new offshore wind training investments, New York State is poised to become the hub for the United States' emerging multi-billion-dollar offshore wind industry.

Quality Jobs for New Yorkers

As offshore wind projects are advanced, this new industry has the potential to provide more than 10,000 high-quality and well-paying jobs in manufacturing, construction, installation, research and development, operations and maintenance, and other fields. New York State is working with project developers to promote and fund the first generation of major offshore wind port and supply chain infrastructure, as well as workforce development programs to educate, train, and employ New Yorkers. These initiatives will help anchor the industry's long-term home in New York State.

SUPPLY CHAIN INVESTMENTS

The State has committed up to \$700 million in port infrastructure and manufacturing facilities to attract private-sector capital and capture long-term economic benefits for New Yorkers.

GROWING A SKILLED WORKFORCE

Skilled workers and assemblers will comprise an estimated 85% of direct jobs with average salaries of around \$100,000.

OFFSHORE WIND JOB GROWTH

Building 9,000 megawatts of offshore wind power by 2035 will create more than 10,000 new jobs.

NEW YORK STATE Offshore Wind

Example: NYSERDA Factsheet on Offshore Wind Jobs

EXAMPLE JOB FUNCTIONS BY PROJECT DEVELOPMENT STAGE

Planning and Development	Manufacturing and Assembly	Construction and Installation	Operations and Maintenance
Attorneys Engineers Financial analysts Permitting specialists Scientists	Assemblers Control systems specialists Engineers Port operators Technicians Welders Administrative staff	Crane operators Dock workers Electricians Iron workers Line workers Painters Pile drivers Plumbers Welders	Administrative staff Engineers Plant managers Support vessel crew Wind turbine technicians

Preparing to join the workforce

Established and developing programs offer multiple paths for workers to prepare for careers in the offshore wind industry.

TRAINING OPPORTUNITIES

- UNION TRAINING
- ACADEMIC STUDY TRACKS
- APPRENTICESHIPS
- CONTINUING EDUCATION COURSES
- INDUSTRY INTERNSHIPS

New resources for job seekers

Offshore Wind Training Institute (OWTI)

A collaboration of industry, universities, nonprofits, and organized labor, this \$20 million initiative will offer workers across New York pathways to qualify careers within the clean energy sector through new job training programs, tailored college curricula, and enhanced academic research opportunities.

\$5 Million Ecosystem Fund

The Ecosystem Fund is a collaboration between Equinor and the New York City Economic Development Corporation (NYCEDC) to foster the offshore wind industry in New York City. The Ecosystem Fund will contribute \$5 million towards the following objectives:

- Scaling the talent pipeline in offshore wind-related careers
- Supporting low-income New Yorkers and New York City Housing Authority residents in the green energy transition
- Growing the green energy innovation ecosystem in New York City

National Offshore Wind Training Center (NOWTC)

The developers of New York's Sunrise Wind project have invested \$10 million in a National Offshore Wind Training Center (NOWTC) in Brentwood on Long Island. The NOWTC is expected to train and certify hundreds of workers under Global Wind Organization (GWO) training standards for offshore wind and offer curriculum and support services for entryways into pre-apprenticeship training for the construction industry as well as manufacturing certifications that will benefit regional employment.

Learn more about job and training opportunities:

NYSERDA Offshore Wind Workforce Page nyserda.ny.gov/offshorewind-workforce

NEW website empowers New Yorkers to become a part of the renewable energy workforce

Go to OffshoreWindTraining.ny.gov for valuable tools in furthering your career.

Learn more about offshore wind in New York State.

nyserda.ny.gov/offshorewind

NEW YORK STATE NYSERDA

LSR-OSW-jobopp-11-17-22

Factsheet Options: Audience & Messages

2 Factsheets Answering 1 Question at 2 different levels

Question example: What is happening with the grid and why should I care about the GMAC/ESMP process?

Factsheet 1
101 Level

Audiences:

- Ratepayers
- Low-moderate income (LMI) ratepayers

Key Messages:

- Overview of MA Climate goals + relation to grid
- Role of GMAC/ESMP
- Ways for audiences to engage with GMAC/ grid planning

Factsheet 2
201 Level

Audiences:

- Municipal leaders
- Communities hosting infrastructure

Key Messages:

- How do these processes of updating the grid help MA meet climate goals?
- Ways for audiences to engage with GMAC/grid planning

1 Factsheet Answering 1 Question with information at 101, 201, and 301 levels.

Question example: How can I participate?

Factsheet 3
101, 202, 301 Levels

Question: How can I participate?

101 Level

- Ratepayers
- LMI ratepayers

201 Level

- Municipal leaders
- Communities hosting infrastructure

301 Level

- Developers

Timeline

- DOER staff and GMAC consultants will continue with visioning, drafting, and scoping of factsheets during the **summer**.
 - GMAC/EWG member feedback is welcome
 - *GMAC members Kathryn Wright and Marybeth Campbell have offered resources to gather a focus group for the factsheet messages.
- The website will be developed over the summer.
- Plan to **release factsheets post-DPU Order**.
- Push communications through distribution channels:
 - State-level email distribution lists (GMAC listserv, EEA's EJ Office)
 - GMAC member organizations and distribution lists

Discussion Questions

- Do EWG members have any example materials they can share as models/inspiration?
- Are any EWG members interested in greater involvement in material development (any staff with experience to support, limited meetings to review materials)?
- Could EWG members help with dissemination?
- What other complementary activities should be on our radar as we get closer to the release of an Order?

Materials Proposal Summary

1. Goal	<ul style="list-style-type: none">• Create a <i>first round</i> of stakeholder engagement materials to provide awareness and education on the importance of grid planning in the Commonwealth• Specific emphasis on the contributions of the GMAC and ESMP processes.
2. Scope	<ul style="list-style-type: none">• Increasing transparency of the grid planning process and the path forward to achieving climate targets
3. Structure	<ul style="list-style-type: none">• A newly designed GMAC <i>website landing page</i>• 1-3 distinct <i>factsheets</i> that cater to energy consumers' concerns related to grid planning.
4. Audience	<ul style="list-style-type: none">• Residential customers, LMI customers, Communities hosting infrastructure, Municipal leaders, Developers
5. Messages	<ul style="list-style-type: none">• GMAC/ESMP processes• Environment/decarbonization• Interconnection
6. Timeline	<ul style="list-style-type: none">• Visioning, drafting, and scoping over the next 3 months. The website will be developed over the summer. Plan to release factsheets post-DPU Order.• <i>Implementation Team</i>: DOER staff, GMAC consultant, GMAC members

Close

- The next Equity Working Group meeting is **September 25, 2024 from 12 – 1 PM.**
- Upcoming GMAC/ESMP activities:

Date	Category	Event
August 9 th	Executive Committee Meeting	GMAC strategic planning
August 29 th	ESMP Docket	Order on ESMPs
September 10 th	GMAC Meeting	Discuss next steps for GMAC post ESMP Order
September 25 th	EWG Meeting	Review outreach materials and plans. Discuss next steps.
September 27 th	Executive Committee Meeting	Review 2025 GMAC Budget Request to DPU

Appendix

**Summary of EDC and Intervenor Initial Briefs
in DPU Dockets 24-10/11/12**

Distributive Equity - Intervenors

Issue	DOER	AGO	Acadia	CLF	CLC	GECA	NRG
Ratepayer burden: there is an overall lack of specificity, transparency, consistency, and comprehensive approach to demonstrating a minimization or mitigation of impacts on ratepayers.	✓			✓		✓	✓
CBAs: ESMPs should offer more specificity on how CBAs are developed, how EJ populations will benefit, and how they are funded.			✓	✓			
Benefit-cost analyses: ESMPs should offer more specificity, accuracy, qualitative and quantitative analysis, granularity, and scenarios.	✓	✓	✓				
Access to solar: Eversource's ASAP is duplicative of Solar For All and should not play a gatekeeping role for a program intended to help LMI customers.	✓				✓	✓	
EVs / EV charging: existing off-peak charging rebate is too small and residential demand charges are regressive; EDCs should offer robust managed charging programs, both active and passive (such as TVRs).						✓	
Gas/electric: gas is not a back-up for heat pumps; we should work to avoid EJ/LMI communities bearing the burden of gas pipeline upkeep by helping these communities make the transition to clean heat.				✓			

Procedural Equity - Intervenors

Issue	DOER	AGO	Acadia	CLF	CLC	GECA	NRG
Overall: standardization of the ESMPs and better communications efforts will help make the topic of grid modernization more accessible.	✓			✓		✓	
CESAG: the body should be co-led by a non-utility entity.	✓		✓	✓	✓		
CESAG: CBOs do not have the resources that GMAC has.			✓				
CESAG: participants should be adequately compensated.			✓				
CESAG: the body should be nested within an existing framework (e.g., the GMAC) to avoid working group fatigue.	✓		✓	✓			
CESAG: the body should be co-led by GMAC, specifically the EWG.	✓						

Structural/Recognition Equity - Intervenors

Issue	DOER	AGO	Acadia	CLF	CLC	GECA	NRG
Centering equity: equity should be standardized and operationalized within the utilities.	✓						
Centering equity: equity should be incorporated into a standard of review within ESMP filings.				✓			

Equity and Stakeholder Engagement - EDCs

- “The EDCs plan to undertake deliberate steps to increase engagement and communication with communities and identify and balance the specific benefits and burdens that a project may have on a host community” (p. 63)
- The EDCs envision the CESAG as a partnership between community-based organizations and EDCs
 - CESAG will provide an opportunity to create a framework to guide EDCs on how to engage communities about proposed clean infrastructure project and best practices for soliciting feedback (p. 63)
 - EDCs will engage a broad spectrum of experts to join the CESAG (p. 63)