

Distributional Equity Analysis Guidance Document Advisory Committee Kick-off Meeting

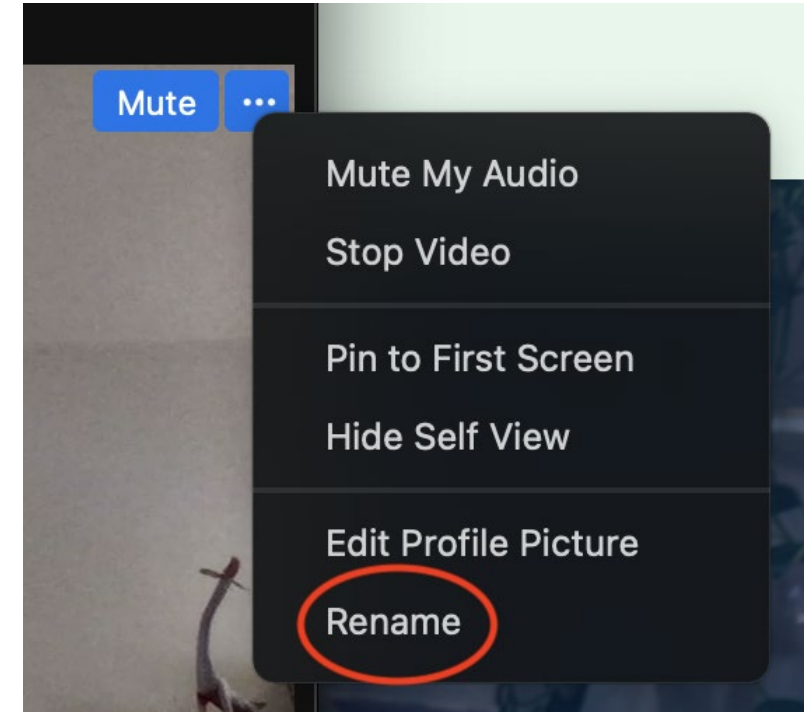
November 30, 2022

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Office under Contract No. DE-AC02-05CH11231 and E4TheFuture.*



Housekeeping

- Add your affiliations and pronouns to your Zoom name – let's get to know each other!
- Please mute yourself when you are not speaking.
- If you have a comment or question, please raise your hand or use the chat.
- We will be recording the session to share with advisory committee members that could not attend this call.



Agenda

- Introductions and Advisory Committee role
- What is distributional equity analysis (DEA), and how does it apply to programs for energy efficiency and other distributed energy resources (DERs)?
- DEA guidance – high-level outline and research plan
- Project schedule
- Next steps



Project Team

Berkeley Lab

- Project manager
- Contributor to guidance document



Natalie Mims Frick
Program Manager



Lisa Schwartz
Program
Manager/
Strategic Advisor

E4TheFuture

- Lead for Advisory Committee
- Contributor to guidance document



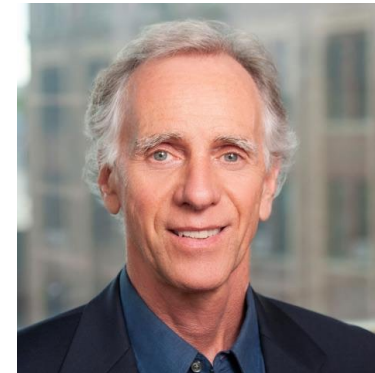
Julie Michals
Director



Natalie Fortman
Project Manager

Synapse

- Lead developer of guidance document



Tim Woolf
Senior VP



Alice Napoleon
Principal



Advisory Committee – Thank you for participating!

Name	Affiliation	Name	Affiliation
Adam Zoet	Minnesota Department of Commerce	Jen Yoshimora	Pacific Northwest National Laboratory
Amanda Best	Maryland Public Service Commission	Jennifer Snyder	Washington Utilities and Transportation Commission
Amanda Dewey	American Council for an Energy-Efficient Economy	Jeremy Peterson	Excel Energy
Bethel Tarekegne	Pacific Northwest National Laboratory	John Howat	National Consumer Law Center
Brad Banks	Michigan Public Service Commission	Justin Schott	Energy Equity Project
Brian Tyson	Puget Sound Energy	Kate Strickland	Smart Electric Power Alliance
Briana Parker	Elevate Energy	Kelly Crandall	Colorado Public Utilities Commission
Burcin Unel	Institute for Policy Integrity	Kelsey Jones	National Association of State Energy Officials
Cassandra Kubes	US Environmental Protection Agency	Logan Atkinson Burke	Alliance for Affordable Energy
Chandra Farley	City of Atlanta	Liz Doris	US Dept of Energy, Office of Economic Impact and Diversity
Chris Coll	NY State Energy Research and Development Authority	Marguerite Behringer	Landis & Gyr
Danielle Sass-Byrnett	National Association of Regulatory Utility Commissioners	Mohit Chhabra	Natural Resources Defense Council
Danilo Morales	Massachusetts Department of Energy Resources	Natalia Cardona Sanchez	Vote Solar
Debra Gore-Mann	Greenlining Institute	Nancy Seidman	Regulatory Assistance Project
Invited	Illume Advising	Patrick Cicero	Pennsylvania Attorney General
Divesh Gupta	Baltimore Gas and Electric	Sarah Moskovitz	Illinois Citizen's Utility Board
Dylan Voorhees	Vermont Energy Investment Corporation	Sonja Berdahl	National Renewable Energy Laboratory
Elaine Prause	Regulatory Assistance Project	Invited	California Public Utilities Commission
Erin Cosgrove	Northeast Energy Efficiency Partnership	Subin DeVar	Initiative for Energy Justice
Ezell Watson	Oregon Public Utility Commission	Theresa Schmidt	Consumers Energy
Gregory Ehrendreich	Midwest Energy Efficiency Alliance	Wally Nixon	Arkansas Public Service Commission
Jean Su	Center for Biological Diversity	Will Bryan	Southeast Energy Efficiency Alliance



Poll #1

Why are you interested in working on energy equity issues?

- ▣ Inform decision making in utility investments
- ▣ Improve DER program design and delivery
- ▣ Strengthen community engagement
- ▣ Enhance consumer protection
- ▣ Support environmental justice
- ▣ Other (enter in chat)



Advisory Committee Role

- Provide input on the DEA guidance outline and review draft guidance materials
- Meet 2-3 times over the course of the year to review draft and final materials
 - Subgroups will be formed to focus on review of selected chapters/sections
- Help spread word/disseminate final guidance document (Fall 2023)



What is Distributional Equity Analysis?



Background

- As National Energy Screening Project (NESP) works with states to apply the National Standard Practice Manual to update benefit-cost analysis (BCA) practices to ensure alignment with state policies, a key question being asked is ***how can BCA address energy equity?***
- NESP convened small advisory group in early 2022 to inform a conceptual DEA framework, including:
 - ACEEE
 - [Leading with Equity Initiative](#)
 - Energy Equity Project
 - [EEP Report](#)
 - Illume Advising
 - [Energy Equity Playbook](#)
 - NYU Institute for Policy Integrity
 - [Making Regulations Fair](#)
 - [Distributional Consequences and Regulatory Analysis](#)
 - National Consumer Law Center and Re-Solve
 - [Advancing Equity in Utility Regulation](#)
 - PNNL
 - [Review of Energy Equity Metrics](#)
 - Regulatory Assistance Project
 - [Smart Rate Design for DERs](#)
 - VEIC
 - [The State of Equity Measurement](#) (which informed EEP Report)

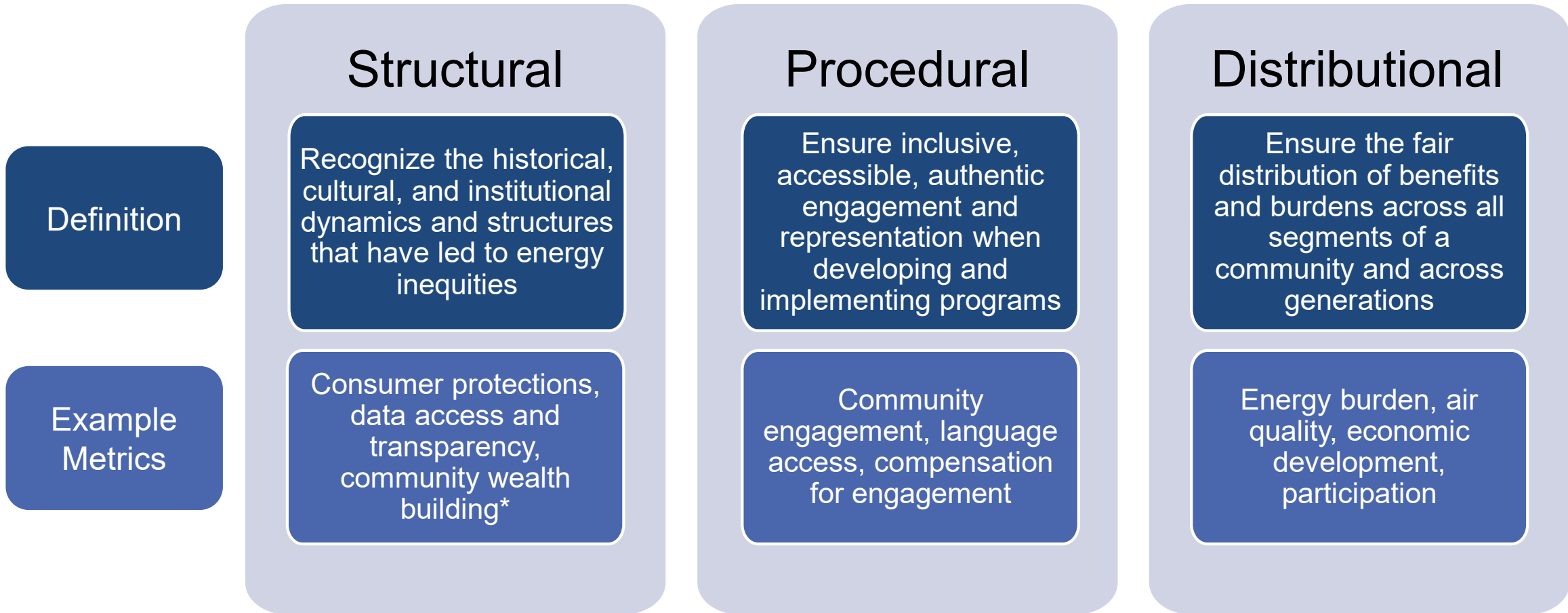


Energy Equity

An equitable energy system is one where the economic, health, and social benefits of participation extend to all levels of society, regardless of ability, race, or socioeconomic status. ***Achieving energy equity requires intentionally designing systems, technology, procedures, and policies that lead to the fair and just distribution of benefits in the energy system.***

PNNL 2021- <https://www.pnnl.gov/projects/energy-equity>





- Many structural/recognition metrics, like building community wealth, don't necessarily intersect with a regulatory process.

Adapted from ACEEE's [Leading with Equity White Paper](#)



Comprehensive Decision-Making Framework for DER Investments =

Benefit-Cost Analysis

Compares costs and benefits to all customers on average

Typical Metrics:

- Costs
- Benefits
- Net benefits
- Benefit-cost ratio

+

Distributional Equity Analysis

Compares impacts on target populations relative to other customers

Typical Metrics:

- Rate impacts
- Bill impacts
- Participation rates
- Energy burden
- Reliability
- Resilience
- Public health
- Other



BCA is not designed to address equity impacts

- Does not directly address structural or procedural equity
- Is not designed to address distributional equity, because it measures impacts on average across the utility system
 - Costs – typically recovered across all customers
 - Benefits – typically a blend of avoided costs experienced by all customers
- Cannot distinguish impacts on target populations
 - Except for programs that are designed to serve only target populations (e.g., low-income programs)
- Focuses mostly on monetary results
 - But many equity metrics cannot be put into monetary terms
- Does not and should not account for rate, bill, or participation impacts
 - The Rate Impact Measure (RIM) Test combines BCA results with rate impact results
 - Making it difficult to understand either result
 - Instead, rate, bill, and participation impacts should be analyzed separately from BCAs
 - Traditional rate, bill, and participation analyses do not address target populations



BCA and DEA Comparison

	Benefit-Cost Analyses	Distributional Equity Analyses
Purpose	To identify which DER programs utilities should invest in or support	To identify how DER programs impact target populations relative to other customers
Questions Answered	What are the costs and benefits of a DER program across all customers or broad customer categories?	How will DER impacts accrue to target populations compared to other customers?
Impacts Analyzed	<ul style="list-style-type: none"> • Utility system impacts • Participant impacts • Societal impacts 	<ul style="list-style-type: none"> • Participant and societal impacts • Rate, bill, and participation impacts • Distributional equity metrics
Example Metrics	<ul style="list-style-type: none"> • Costs (PV\$) • Benefits (PV\$) • Net present value (NPV) • Benefit-cost ratio (BCR) 	Disaggregated for target populations and other customers: <ul style="list-style-type: none"> • Rates (\$/kWh) • Bills (\$/month) • Participation rates (% of eligible customers) • Energy burden (% of income spent on energy bills) Additional examples: health (ER visits), environmental impacts (PM 2.5), economic development (# of jobs)
Scope	A single BCA to assess absolute DER program impacts	One analysis for target population and another for other customers to compare impacts across groups



Questions/comments on DEA?



DEA Guidance – Draft High-Level Outline

Overview

Executive Summary

1. Introduction
2. Role of BCAs and DEAs
3. Target Populations
4. Distributional Equity Metrics
5. How to Conduct DEAs
6. Using BCAs and DEAs for Decision-Making
7. Case Study

Overview:

- A practical how-to guide on conducting DEAs, applicable to any jurisdiction.
- Target audience includes a variety of practitioners including utilities, public utility commissions, state energy offices, utility consumer advocates, equity advocates, consultants, and more.
- Will build on existing equity initiatives and research.
- Will focus on BCAs and decision-making for utility investments.



DEA Guidance – Draft High-Level Outline (2)

1. Introduction
2. Target populations
 - Including discussion of tools for mapping target populations
3. Equity metrics
 - Focus on distributional equity metrics relevant to BCAs and DEAs
4. The role of BCAs and DEAs
 - BCAs are not designed to address distributional equity issues
 - DEAs can be conducted in parallel with BCAs to provide equity info
5. How to conduct DEAs
 - Apply each of the equity metrics to the target populations
 - Compare impacts on target populations with other customers
6. Using BCAs and DEAs for decision-making
 - Guidance on how to use monetary and non-monetary results
7. Case study
 - Using an actual state that has equity requirements and policies
8. Data collection
 - Guidance on data needs and data collection

Questions:

Are we covering right topics?

What key questions should we address?

Does order of chapters/topics make sense?

Share feedback in chat box



DEA Guidance – Research Plan

- Research: conduct literature search and survey of key stakeholders
 - Distributional equity
 - How is distributional equity typically defined? What policy goals drive these definitions?
 - Target populations
 - How are target populations typically defined? What policy goals drive these definitions?
 - What mapping tools are available for analyzing impacts on target populations?
 - Distributional equity metrics.
 - How are equity metrics typically defined? What policy goals drive these metrics?
 - State, utility, and governmental organization experience with addressing equity in the context of benefit-cost analysis.
- Develop guidance based on research
 - Develop guidance on what tools to use for mapping and analyzing target populations.
 - For each relevant equity metric identified above, develop guidance on how to collect and analyze the data.
 - Develop guidance on decision-making using both BCA results and DEA metrics.
- Case study
 - The case study will be conducted in parallel with the development of the Guidance Document.
 - Except that the research will begin first, to provide a solid foundation for the case study.
 - The case study will reveal real-world questions and issues that will inform the research and the guidance.
 - The case study will apply the guidance as a test case, to provide a feedback loop on the guidance.



Questions/comments on DEA guidance outline and research plan?



Poll #2

Based on the proposed outline, what area(s) of the DEA guidance are you most interested in reviewing/informing?

- ▣ Defining target populations
- ▣ Defining equity metrics
- ▣ Data collection
- ▣ The role of BCAs and DEAs
- ▣ How to conduct DEAs
- ▣ Using BCAs and DEAs for decision-making
- ▣ Case study



Schedule and Next Steps

Key Steps	Dates
Provide detailed outline of DEA guidance to Advisory Committee	January 3
Advisory Committee Review – written comments	Comments due January 19, 2023
Project team conducts DEA research	December 2022 -February 2023
Present initial research findings to Advisory Committee (Meeting #2)	Early March 2023
Convene AC subgroups to review draft chapters	April 2023
Develop draft DEA guidance, circulate for Advisory Committee comment	Late May 2023
Convene AC to discuss draft DEA guidance (Meeting #3)	June 2023
Issue final DEA Guidance	July/August 2023*
Presentations and outreach – Advisory Committee suggest opportunities	August - December 2023*

* Subject to DOE approval of report



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For more information (Berkeley Lab and NESP)

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DEA Project Team - Berkeley Lab

- Berkeley Lab's Electricity Markets and Policy Department is managing this project. We inform public and private decision making within the U.S. electricity sector through independent, interdisciplinary analysis of critical electricity policy and market issues. We envision a clean, efficient, reliable, and affordable electricity system that meets the United States' diverse and growing energy needs. This project builds on a strong analytical foundation on [energy efficiency and DERs](#).
- Relevant equity work includes:
 - [Advancing Equity in Utility Regulation](#)
 - [Characterizing local rooftop solar adoption inequity in the US](#)
 - [National Community Solar Partnership](#)
 - [An Assessment of Evaluation Practices of Low- And Moderate-Income Solar Programs](#)
 - [Energy Efficiency Financing for Low- and Moderate-Income Households](#)
 - [Customer outcomes in Pay-As-You-Save programs](#)
 - [Who is participating in residential energy efficiency programs?](#)
 - [Deferred Payment Loans for Energy Efficiency](#)



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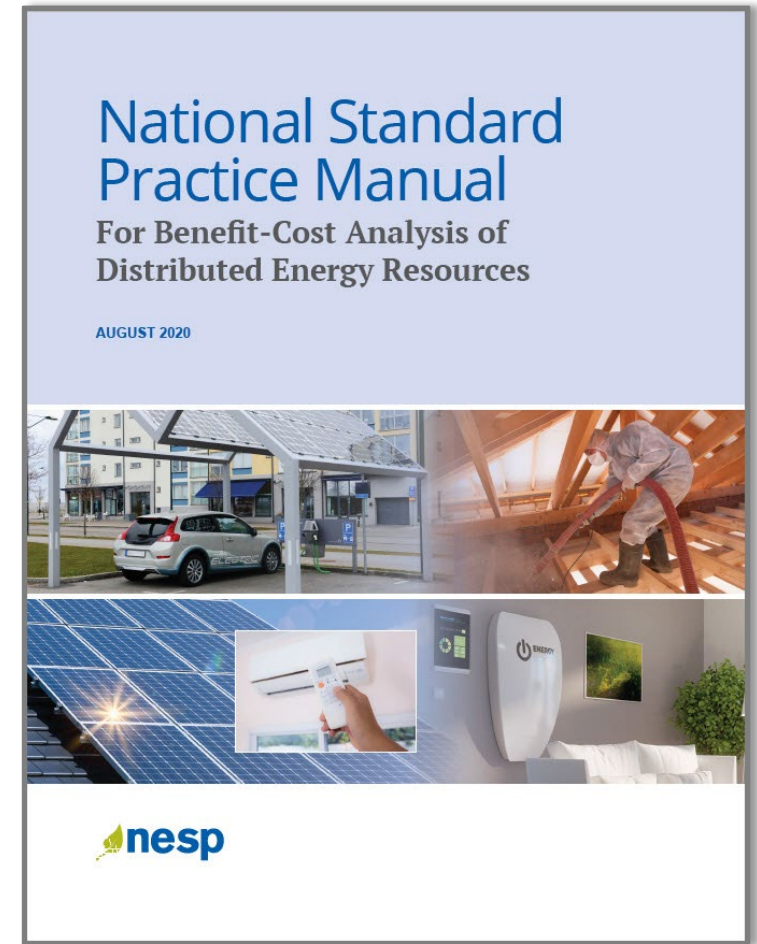
- E4TheFuture – manages and coordinates the National Energy Screening Project, a stakeholder organization that works to improve cost-effectiveness screening practices for distributed energy resources (DERs).
- Key products to date:
 - [National Standard Practice Manual for DERs](#)
 - [Methods, Tools and Resources Handbook for Quantifying DER Impacts for Benefit-Cost Analysis](#)
 - [Database of Screening Practices](#)



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Natalie Fortman
Project Manager

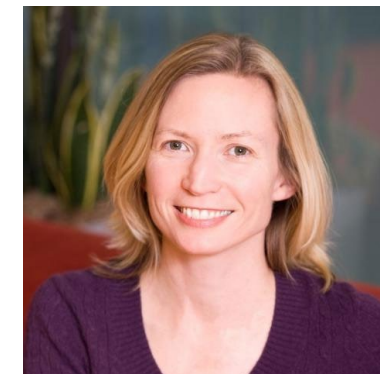


DEA Project Team – Synapse Energy Economics

- Synapse Energy Economics
 - ▣ Founded in 1996 by CEO Bruce Biewald
 - ▣ Leader for public interest and government clients in providing rigorous analysis of the electric power and natural gas sectors
 - ▣ Staff of 40+ includes experts in energy, economic, and environmental topics
- Tim Woolf
 - ▣ Senior Vice President, Synapse Energy Economics
 - ▣ Lead author of National Screening Practice Manual and companion documents
- Alice Napoleon
 - ▣ Principal, Synapse Energy Economics
 - ▣ In charge of Synapse equity initiatives
- Synapse is committed to providing meaningful data and analysis to support important dialogue and efforts towards an equitable distribution of energy system benefits and burdens.



Tim Woolf
Senior VP



Alice Napoleon
Principal

