



Distributional Equity Analysis



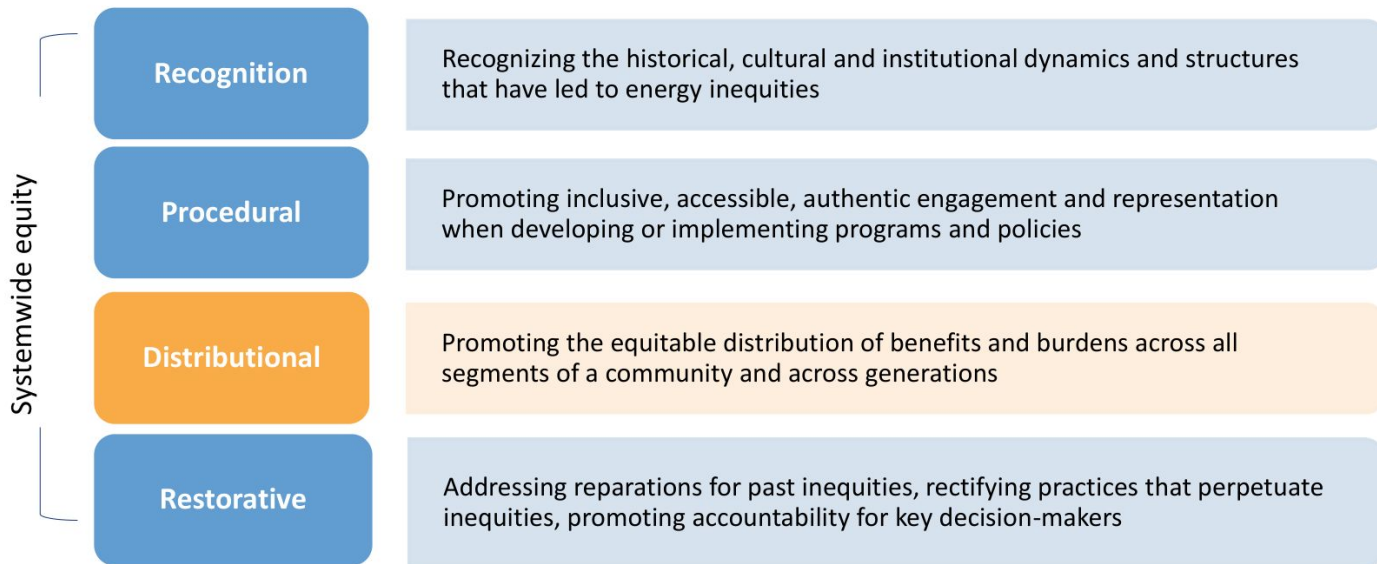
2026 Midwest Energy Solutions Conference

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What is Distributional Equity?



Energy Equity Dimensions



Adapted from University of Michigan Energy Equity Project Framework Report, v1.0

What is **Distributional Equity Analysis (DEA)**?

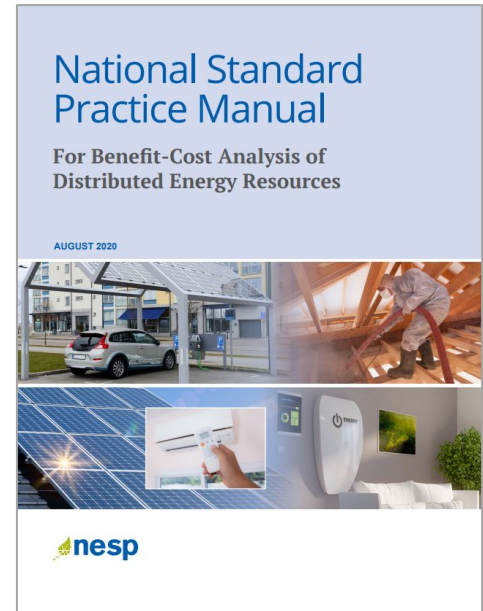
DEFENITION: an analytical framework that can be used to evaluate the distributional impacts of investment decisions on energy resources on different customer groups, particularly equity priority populations.

METHODS: DEA involves analyzing the **costs, benefits, and burdens** of these decisions across different customer groups to identify any disparities or inequities in program outcomes.

Why did we need a framework for DEA?

National Standard Practice Manual (NSPM) for DERs

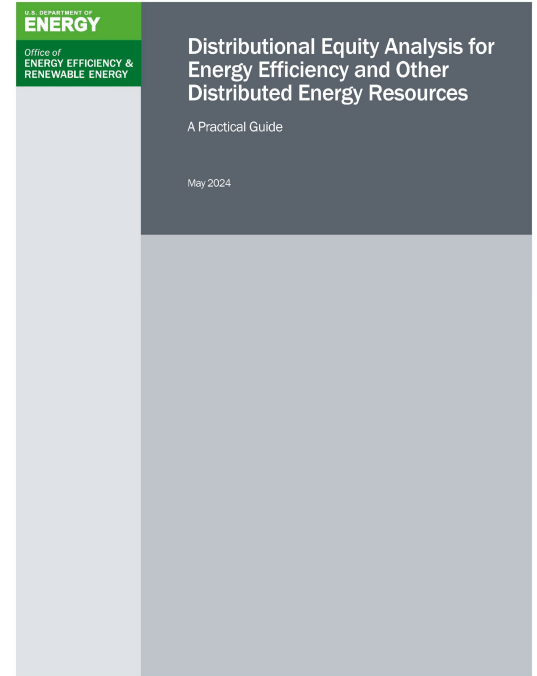
- Foundational text on modernizing and reforming Benefit Cost Analysis (BCA)
- As states and stakeholders have increased focus on energy equity, questions kept coming up about **how BCA can address equity (or not...)**



Needed a better way to answer equity questions

DEA: A Practical Guide

- *2024 Berkeley Labs publication, including:*
 - DEA Guide & executive summary
 - Advisory Committee meeting notes
 - Stakeholder engagement guidance
 - Delivered presentations
- *Written by*
 - Synapse Energy Economics
 - Contributing authors: Berkeley Labs, E4TheFuture
- *Funded by*
 - US DOE Office of Energy Efficiency and Renewable Energy (RIP)
 - US DOE Building Technologies Office
 - E4TheFuture
- *Advisory Committee & reviewers*
 - 54 experts from organizations across the country (including MEEA)



BCA is *NOT* an equity test



BCA vs DEA Comparison

	Benefit Cost Analyses (BCA)	Distributional Equity Analyses (DEA)
Purpose	To identify which DER programs utilities should invest in or support	To identify how DER programs impact priority populations relative to other customers
Questions Answered	What are the costs and benefits of a DER program across all customers?	How will DER impacts accrue to priority 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\$)• NPV• BCR	Disaggregated for priority populations and other customers: <ul style="list-style-type: none">• Rates (\$/kWh)• Bills (\$/month)• Participation rates (% of eligible)• Energy burden (% of income on energy bills) Additional metrics of health (ER visits), environmental impacts (PM 2.5), economic development (# of jobs), etc.
Scope	A single BCA to assess absolute DER program impacts	One analysis for priority population and another for other customers to compare impacts across groups

Stages in conducting a DEA

Seven stages, with stakeholder engagement throughout

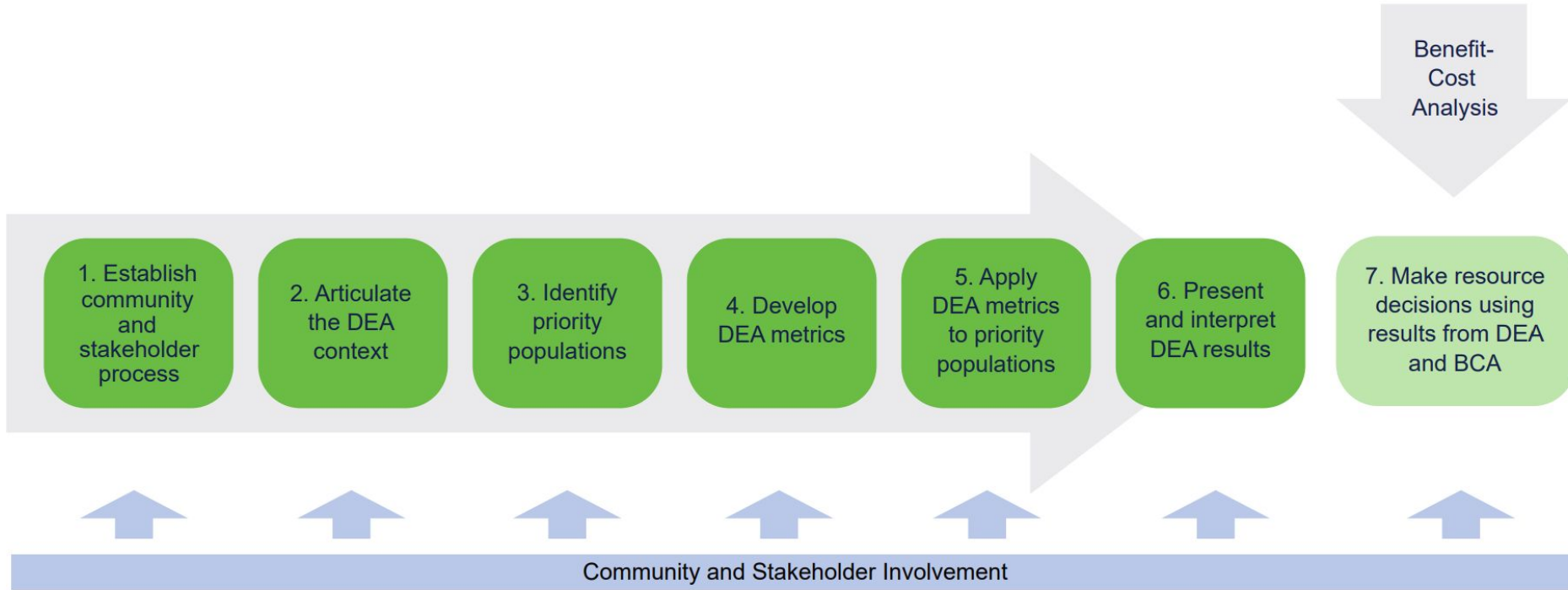


Image credit: NESF

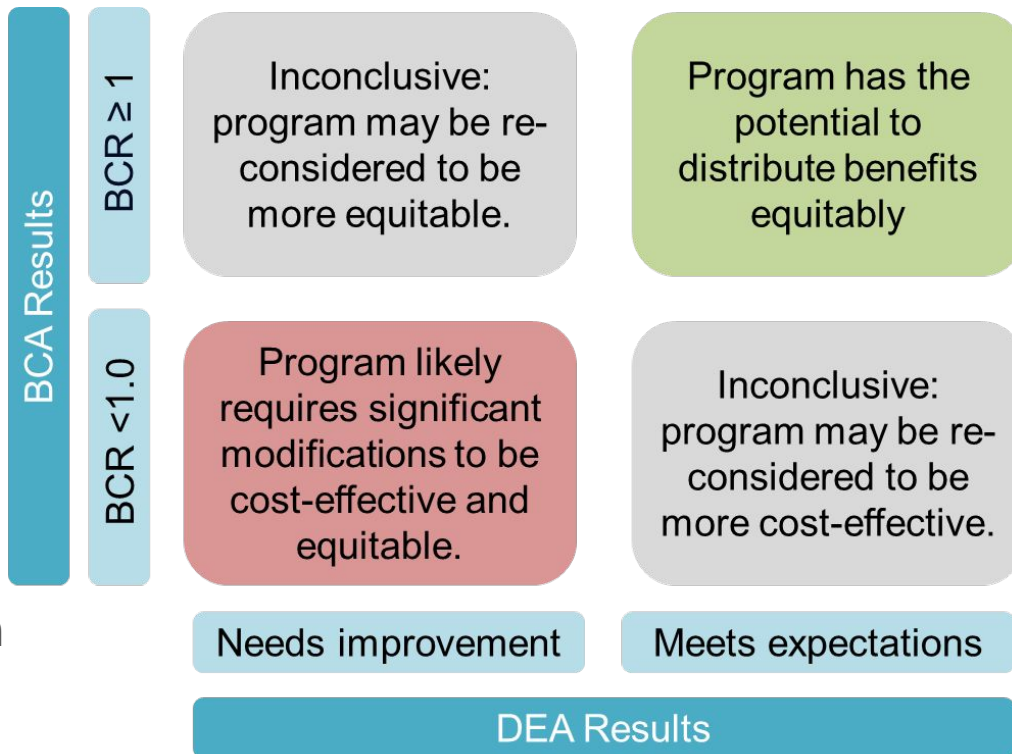
DEA Decision Making

Matrix comparison with BCA results.

Green: Pass BCA & Equity is improved: Approve

Red: Fail BCA & Equity worsened: Reject or make major modifications

“Grey areas” where it passes one and fails the other: Use judgement to determine how to make program more equitable or cost-effective



Illinois DEA Case Studies

Testing the DEA framework for the first time

- **Project Lead: E4TheFuture**
- **Analytics: Synapse**
- **Stakeholder process: MEEA**

- Funded by Joyce Foundation & E4TheFuture
- Studied 2 beneficial electrification programs from Ameren Illinois and the residential EE programs from ComEd
- 16-month project, with 8 stakeholder meetings
- 45 stakeholders including ICC, utilities & other energy and community stakeholders with an interest in the project

Assessing the Distribution of Costs and Benefits of Energy Efficiency and Electric Vehicle Programs to Different Customers in Illinois

Case Studies of Commonwealth Edison's Energy Efficiency and Ameren Illinois' Beneficial Electrification Programs
July 2025



Synapse
Energy Economics, Inc.



Lessons learned for future DEAs in Illinois

DEA Stage	Issue/Lesson	Recommendation
DEA Metrics	Lack of publicly reported census-tract specific data for public health modeling	Continue studying how EE and BE programs can improve public health for priority populations and the best ways to measure this impact for priority populations
	Jobs & employment programs are ramping up and lack publicly available data	Continue to explore how to track local jobs impacts ; continue to focus workforce development programs in EIEC/LI and IE communities
	Community priorities need to inform metric development	Stronger up-front stakeholder involvement to ensure metrics incorporate community perspectives
Data access	Long and involved process to share data between Project Team and utilities	Develop utility partnerships and share NDAs as early as possible
	Accessing data stored in utility databases was challenging for the Project Team	Collaborate with utility to establish a list of data available in the utility database and streamline data requests to the utility
	Strong community interest in metrics that weren't tracked by utilities or had insufficient granularity	Track and report available data on a census-tract level in a publicly accessible dashboard
Stakeholder Engagement	Ongoing work groups, processes, and meetings in Illinois presented scheduling challenges	Consider ongoing processes and coordinate with existing meeting schedules that may impede utility or stakeholder participation
	Limited CBO participation	Better advertisement of the participation stipend and conducting specific outreach to CBOs

Additional Resources

- [Illinois DEA Case Study | Midwest Energy Efficiency Alliance](#)
 - Case study working process – presentations, notes and recordings from stakeholder meetings
- [Assessing the Distribution of DER Impacts to Different Customers – NESP](#)
 - DEA Guide
 - Case Study Final Report

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