

# Distributional Equity Analysis for Energy Efficiency and Other Distributed Energy Resource Programs: A Practical Guide

## Distributional equity analysis

Distributional equity analysis promotes the equitable distribution of benefits and burdens across all segments of a community and across generations. It is one of several dimensions of equity.\*

Berkeley Lab, Synapse Energy Economics and E4TheFuture are developing guidance on how to evaluate and measure progress toward a fair *distribution* of benefits and costs across all customers when making decisions about utility investments in distributed energy resources (DERs).

The guidance will explain how to perform a distributional equity analysis that aligns with a jurisdiction’s policy goals and objectives, based on input from key stakeholders including priority population representatives, and as reflected in regulations and legislation.



Chandra Farley, leading the Just Energy Academy operated by Partnership for Southern Equity

## Project Stakeholder Advisory Group

To ensure broad stakeholder acceptance of the distributional equity guidance, E4TheFuture, Berkeley Lab and Synapse Energy Economics recruited advisory group members from over 40 organizations.

The stakeholder advisory group guides the project and will provide feedback on the final report.

- The advisory group is comprised of representatives from:
- Public utility commissions
  - Consumer advocates
  - Utilities
  - Energy equity and environmental justice organizations
  - Local government
  - DER program implementors
  - Regional energy efficiency organizations
  - National labs
  - Department of Energy

## Contact Info

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## Benefit-cost analysis complements distributional equity analysis

### 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 priority populations relative to other customers

- Metrics for named communities are compared with those for other customers

Typical Metrics:

- Rate impacts
- Bill impacts
- Participation rates
- Energy burden
- Reliability
- Public health
- Others

The guidance document will provide **information needed to successfully define, track, and report on equity and affordability metrics** and improve performance over time and **qualitatively and quantitatively describe program outcomes** (e.g., amount and percent reduction of energy burden by program participants).

	Benefit Cost Analyses	Distributional Equity Analyses
Purpose	To identify which DER programs utilities should invest in or support	To identify how DER programs impact named communities 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 named communities compared to other customers?
Impacts Analyzed	<ul style="list-style-type: none"><li>•Utility system impacts</li><li>•Participant impacts</li><li>•Societal impacts</li></ul>	<ul style="list-style-type: none"><li>•Participant and societal impacts</li><li>•Rate, bill, and participation impacts</li><li>•Distributional equity metrics</li></ul>
Example Metrics	<ul style="list-style-type: none"><li>•Costs (PV\$)</li><li>•Benefits (PV\$)</li><li>•NPV</li><li>•BCR</li></ul>	Disaggregated for named communities and other customers: <ul style="list-style-type: none"><li>•Rates (\$/kWh)</li><li>•Bills (\$/month)</li><li>•Participation rates (% of eligible)</li><li>•Energy burden (% of income on energy bills)</li></ul> Additional metrics of health (emergency room visits), environmental impacts (PM 2.5), economic development (# of jobs)
Scope	A single BCA to assess absolute DER program impacts	One analysis for named community and another for other customers to compare impacts across groups

## Key Steps in Distributional Equity Analysis

