Does energy equity fit into benefit-cost analyses?

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As utilities begin reexamining benefit-cost analysis (BCA) processes in relation to electrification and distributed energy resources (DERs), there's an opportunity to pair well-designed BCAs with other analyses that better assess equity efforts.

According to the Pacific Northwest National Laboratory (PNNL) Vision Statement for Equity in the Power Grid:

> Energy equity recognizes that disadvantaged communities have been historically marginalized and overburdened by pollution, underinvestment in clean energy infrastructure, and lack of access to energy-efficient housing and transportation. 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.

Start weaving equity into your processes

Fill out this short form to start a conversation about your needs and how we can help.

Equity doesn't fit squarely into the traditional framework. Utilities and regulators need to think critically about BCAs and ask what they're really measuring.

What are target populations and how can utilities serve them?

Regulators and utilities have long been concerned with equity, but the historical focus has often been on equity between customer classes (for example, between residential and commercial). Increasingly,

utilities and their regulators are trying to focus on target populations that often span customer classes. Examples of target populations from the PNNL Review of Energy Equity Metrics (PDF) include:

- *Underserved populations:* Those with limited access to energy system services
- *Marginalized populations:* Poeple who are excluded from decision-making processes and lack access to economic, political, cultural, and social activities
- *Vulnerable populations:* Those who are economically disadvantaged, racial and ethnic minorities, elderly, rural residents, linguistically isolated, or facing other socioeconomic challenges
- *Disadvantaged populations:* People who most suffer from economic, health, and environmental challenges
- *Low- and moderate-income populations:* Those who make less than a certain income threshold for a particular jurisdiction

To serve target populations, you must assess the difference in impacts between target populations and other customers. BCAs, in contrast, measure the costs and benefits on average across the utility system, broad customer categories, host customers, or society.

How to get the most out of a BCA

The August 2020 National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources (PDF), published by the National Energy Screening Project (NESP), provides guidance for performing more-nuanced BCAs. A key strategy in this framework is pairing BCAs with secondary analyses—called rate impact analyses—to get at two separate questions (highlighted in Appendix A):

- BCAs answer the question: “Which utility DER investments are expected to have benefits that exceed costs?”
- Rate impact analyses answer the question: “How much will utility DER investments impact rates for one group of customers compared to another?”

Working together for an equitable energy future

During a recent workshop, we discussed the value of integrating equity into the regulatory process.

Watch the recorded sessions from Working Together for an Equitable Energy Future to learn more about weaving energy equity into utility programs.

Both questions provide valuable insights for utilities and regulators. The NESP page Energy Equity and BCA explains a conceptual framework that shows how rate impact analyses can be expanded into distributional equity analyses (DEAs) to include long-term impacts on bills, participation, energy burden, and other equity metrics. Importantly, DEAs can assess impacts in target populations that are relevant to each jurisdiction.

Striking a balance between cost-effectiveness and equity issues

Cost-effectiveness frameworks are often rigid and inflexible, but utilities and regulators should be open to all information that will help paint a clearer picture of how electrification and DERs affect target populations. Empowered with this information, utilities and their regulators can choose to adjust

proposed resources to strike a balance between cost-effectiveness and equity issues where needed.

As we outline in the E Source white paper The energy equity framework that benefits customers, utilities, and underserved communities, utilities must evaluate and iterate on energy equity programs. But to truly understand the impact of energy equity programs, make sure the analysis is asking the right questions.

The aforementioned National Standard Practice Manual is a robust resource that can help utilities and regulators develop cost-effectiveness frameworks that are jurisdiction specific and equitable. We also recommend reviewing Advancing Equity in Utility Regulation, a report from the Future Electric Utility Regulation Advisory Group, for more information on how states can recognize equity as a goal of utility regulation.

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