



New Mexico Public Regulation Commission's Grid Modernization Webinar Series
June 2, 2022 Webinar #8
Evaluation Methods for Grid Investments and DERs

Meeting Objectives

- Present range of methods to evaluate utility investments for grid modernizations and Distributed Energy Resources (DER)
- Gather stakeholder input and opinion on different methodologies and their inclusion in a Grid Modernization NOPR

In attendance:

- 39 individuals
- 24 distinct participating organizations represented

Meeting Agenda is available [here](#)

A presentation on Evaluation Methods for Grid Investments and DERs by:

- John Shenot, Senior Advisor, Regulatory Assistance Project [here](#)

Stakeholder Facilitated Discussion (Grounding; Reflection; Interpretation; Decisional)

Considerations for Grid Mod Notice of Proposed Rulemaking (NOPR):

- Historically utility benefit/cost analyses in New Mexico have relied upon the Utility Cost Test. (This is the second most common type of BC testing across the states, behind the Total Resource Cost Test.)
- Determining whether to use Benefit-Cost Analysis (BCA) depends on the goal. If the goal is to maximize net benefits, then BCA testing is preferable. If the goal is to minimize costs, then Least Cost/Best Fit (LCBF) testing is preferable.
 - LCBF presumes that investment is needed, while BCA can determine if an investment will be beneficial.
 - It is important to include “best fit” along with the analysis of least cost.
 - BCA allows for inclusion of societal factors (such as emissions) and a more forward-looking approach to investment decision making, while also being more challenging to definitively quantify benefits and costs.
- Lessons to be learned from other states' experiences:



GRIDWORKS

- When using BCA, strive to capture all relevant costs and benefits. Preliminary engagement (utility, regulators and possibly others) may be necessary to identify the costs and benefits to be included in BCA's included in utility filings.
- Isolating certain (less quantifiable) costs and benefits in analyses, and presenting results with and without, can be helpful to regulatory review and decision making.
 - Isolating more speculative benefits can determine criticality of the need to include such in order to achieve cost-effectiveness
- Consider applying the same test across all programs reviewed by the regulatory, for a consistent understanding of costs and benefits. This also applies to consistency regarding inputs and assumptions used in the analyses.
 - Note: it is not always feasible to use the same test across various proposed investments/expenses. If it is not a decision of "should the investment be made," but rather minimizing the cost, then LCBF is preferred. Alternatively, if the investments are discretionary, yet, will yield benefits (to system, customer or other), then BCA is preferred.
- Consider applying tests to program components (when able to be isolated) as well as in aggregate.
- Consider the role of the applicant and other parties in conducting and presenting benefit cost analyses in proceedings. (Is it the applicant's sole responsibility? Should intervening parties/stakeholders be able to access input data and conduct independent analyses?)
- Consider the use of scenarios and sensitivities within cost-benefit analyses. Scenarios can represent the inclusion of various cost tests, each representing cost/benefit from different perspectives (ratepayer; participant; utility; society). Sensitivities can isolate a particular variable and analyze the impact of inclusion, exclusion and modification of that variable on cost-effectiveness.
- Applying cost-effectiveness testing to non-wires alternatives (NWAs) can be particularly challenging, particularly when comparing NWAs to capital investments. One possible approach is to develop and incorporate NWA screening criteria into utility (grid mod and distribution system) planning processes. Such criteria would: identify system needs suitable for considering an NWA solution; establish performance criteria applicable to NWAs; and assess NWA options prior to proceeding with traditional (asset-based) solutions.
- Make use of recognized and accessible resources, such as those linked below. They reflect the rigor of being reviewed (tested/validated):



GRIDWORKS

- The National Standard Practice Manual (NSPM)
 - <https://www.nationalenergyscreeningproject.org/national-standard-practice-manual>In particular, note the guidance regarding creation of a jurisdiction-specific test. Consider developing a NM-specific test, via stakeholder engagement, including the identification of costs and benefits to be included/excluded.
- U.S. Department of Energy, Modern Distribution Grid: Strategy and Implementation Planning Guidebook (Volume IV)
 - https://gridarchitecture.pnnl.gov/media/Modern-Distribution-Grid_Volume_IV_v1_0_draft.pdf

Regarding PRC regulatory and utility planning processes (and also potentially addressed in the NOPR):

- When proposed grid mod investments have utilization (and thus system benefits) beyond the primary purpose (such as communications infrastructure associated with distribution system management, yet, also supporting other current and future functions and services), it can be challenging to determine precisely what portion of the investment to include in the grid mod cost-effectiveness calculation. Some degree of estimation (possibly via sensitivity analyses) may be necessary.
- BCA, when applied to grid investments, and utilizing modeling estimates (such as the cost of avoided fuel purchases) may be presented in a range of estimated costs and benefits, rather than one number. Alternatively, the analysis can identify the input value (such as fuel cost) at which cost-effectiveness is break-even
- The MI PSC has been exploring the pros and cons of using various cost-effectiveness tests, as part of its ongoing “MI Power Plan” effort. Information on presentations, reports and actions taken is available at:
<https://www.michigan.gov/mpsc/commission/workgroups/mi-power-grid/phase-i-electric-distribution-planning>

Other Process Input

- Like with many parts of grid modernization, determining the appropriate approach to use requires identifying the objective(s), policy and otherwise. In this instance, the appropriate cost-effectiveness test(s) to use needs to reflect the objective(s).
 - For example, if the proposed investments are desirable, yet optional, then BCA is likely more appropriate. Similarly, if the proposed investments are mandatory (such as statutorily directed) or system-critical (for grid safety, security, resiliency and the like), then a LCBF is likely more appropriate.
 - Also, consider using both BCA and LCBF for comparison.



GRIDWORKS

- While some webinar participants propose seeking greater legislative guidance regarding applicable policy objectives, others indicated that the NMPRC has wide latitude and that further guidance is not necessary and would significantly delay forward progress. In either instance, the identification of policy objectives should be a collaborative stakeholder engagement process.
- Using a “least-cost” approach, as reflected in LCBF, may seem most appropriate to a state such as NM where there is a high incidence of household poverty. Yet, this inclination should be tempered with also pursuing the longer-term and more holistic benefits that BCA can indicate, which also yield positive utility bill impacts for customers in terms of avoided future costs.