

TACKLING THE QUESTION OF EQUITY: WHO BENEFITS FROM EFFICIENCY INVESTMENTS?

Moderator: Jack Mayernik, National Renewable Energy Laboratory

PAPERS:

Any Which Way the Wind Blows: Estimating Air Emissions Externality Costs

Joe Loper, Itron Inc.

Luke Scheidler, Itron Inc.

Assessing the Economic Impacts of Publicly Funded Investments in Energy Efficiency Programs

Tyler R. Browne, Cadmus

Better Buildings, Better Economy: An Economic Impact Analysis of a Federal Retrofit Program

Matthew Koson, Evergreen Economics

Stephen Grover, Evergreen Economics

Sarah Monohon, Evergreen Economics

Edward Vine, Lawrence Berkeley National Laboratory

SESSION SUMMARY:

This session tackles the question – how to allocate the benefits of energy efficiency investments - by examining its effect on job creation, wage growth, and emissions reduction. Innovative techniques address the assessment of opportunity costs, externalities and the counterfactual. Taken together these papers move from local to national and from environmental to economic impacts, but in total they provide several interesting approaches to answering the question - who benefits from energy efficiency programs and beyond that they take the bold step quantifying how much they benefit.

The first paper in the session, *Any Which Way the Wind Blows: Estimating Air Emissions Externality Costs*, explores an approach to assigning local benefits to emissions reductions from energy efficiency programs. The emissions reductions of EmPOWER Maryland, a set of utility energy efficiency programs, are estimated and the benefits of those reductions are then applied to the residents of Maryland. National findings from the National Research Council and the federal Interagency Working Group on Social Cost of Carbon are adapted to Maryland's localized situation. Key areas of uncertainty are identified and sensitivity tests are applied to show a range of potential impacts. This approach allows analysts and policy makers to examine a range of impacts and test their own assumptions about the health and environmental benefits of emission reductions.

The second paper in this session, *Assessing the Economic Impacts of Publicly Funded Investments in Energy Efficiency Programs*, examines the regional economic impacts of energy efficiency programs, with a particular focus on the effect these programs can have on wages. The analysis focuses on the effect of the Department of Energy's Better Buildings Neighborhood Program on eight Southeastern states. This IMPLAN analysis examines several counterfactual scenarios to test the sensitivity of its assumptions. The analysis looks at a variety of economic metrics including employment effects, employee compensation, value add and gross output but examines the average wage impact under the counterfactual scenarios in greater detail. This approach paints a broader picture of the total effect of energy efficiency programs as compared to more straight forward cost/benefit assessments.

The final paper in this session, *Better Buildings, Better Economy: An Economic Impact Analysis of a Federal Retrofit Program*, looks at the national impact of Department of Energy's Better Buildings

Neighborhood Program. This teams analysis zeros in on the effect different baselines can have on the estimated benefits attributable to federally funded energy efficiency programs. Particular attention is paid to the jobs impacts; this is not surprising given that the Better Buildings Neighborhood Program was initiated as part of the American Recovery and Reinvestment Act.