

NEBS from the Societal Perspective: Methods, Results, Patterns, and Implications

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This poster demonstrates methods and results measuring key societal non-energy benefits (NEBs), including economic development / job creation, and environmental effects. Results from multiple US and international programs are analyzed, and patterns by program type, region, and valuation method are presented. The results provide data useful in optimizing program benefits.

The non-energy benefits associated with energy-efficiency programs are valuable aspects of program participation that arise as an indirect result of the use of energy efficiency measures implemented through such programs. That is, they are benefits that are not directly related to reduced energy use or the associated energy bill savings, but would not have occurred if the technology that produced those energy savings had not been implemented. Skumatz and Dickerson (1997) defines three primary categories of non-energy benefits, based on the recipient of the benefit:

- *Participant benefits* are non-energy effects that are enjoyed only by participants in energy efficiency programs. These benefits include increased aesthetics and comfort in the home, better lighting, better climate control and even a reduction in sickness. Commercial program examples might also include productivity changes, maintenance effects and others.
- *Utility benefits* are non-energy benefits that accrue to the utility or agency delivering the program as a result of the efficiency program. Utility benefits can include reduced transmission and distribution costs, fewer shutoffs and shutoff notices, fewer phone calls made to customers, fewer reactivations, etc. These ultimately represent benefits to ratepayers who see lower revenue requirements for the agency as a result of the program's NEBs.
- *Societal benefits* are non-energy benefits that can be enjoyed by anyone, regardless of program participation. These include changes in job creation / economic multiplier effects, emissions / environmental effects, public health and safety effects, water and waste water treatment or supply infrastructure, and other effects as a result of public programs.

Non-energy benefits valuations related to the societal perspective are becoming increasingly important to evaluators and administrators of programs, and also to communities with sustainability goals. This poster summarizes measurement methods and presents findings on:

- Variations in results by program type – weatherization, appliance rebate, education/outreach
- Differences in results based on geographic region covered by the program (territory)
- Differences in results based on assumptions about whether the program funds were assumed to transfer from industry sectors related to “electricity generation” vs. a market basket of goods, which may be an appropriate proxy for the public goods charge.

On the emissions side, the poster presents information on measurement methods, and:

- Differences in results for peak load vs. baseload-type programs
- Differences in results by valuation method

The comparisons provide guidance on the differential impacts of effects based on program type and design. The results also have implications for state or local agencies that may have development or sustainability goals.