

NEIS USED IN UTILITIES' COST- EFFECTIVENESS TESTS

March 5, 2020



NON-ENERGY IMPACTS INCLUDED IN COST-EFFECTIVENESS TESTS



ENVIRONMENTAL NEIS



HEALTH NEIS

Sources of info: ACEEE Topic Brief and Data Base of State Efficiency Screening Practices

- Cost-Effectiveness Tests: Overview of State Approaches to Account for Health and Environmental Benefits of Energy Efficiency (ACEEE, 2018) (<https://www.aceee.org/sites/default/files/he-ce-tests-121318.pdf>)
- Database of State Efficiency Screening Practices (DSESP, 2019) (<https://nationalefficiencyscreening.org/state-database-dsesp/>)

Cost-Effectiveness Tests: Overview of State Approaches to Account for Health and Environmental Benefits of Energy Efficiency December 2018

Energy Efficiency's Health and Environmental Benefits

The value of utility demand-side energy efficiency programs extends beyond energy savings. Although efficiency has multiple benefits, states fail to include or undervalue many of the nongrantee benefits that accrue to utilities, program participants, and society when evaluating cost effectiveness. Some of the most significant omissions are the health and environmental benefits that energy efficiency generates. These include the avoided cost of utilities' compliance with environmental regulations, improved air quality and other benefits to the environment, better public health, and the improved health of program participants. Even though utilities may feature environmental and health benefits in their marketing, innovative programs that have these benefits are less likely to be implemented if cost-effectiveness tests do not take them into account.

AVOIDED UTILITY ENVIRONMENTAL COMPLIANCE COSTS

Utilities incur costs when complying with state and federal environmental regulations. These can originate at the state or federal level and may seek to limit criteria pollutants, greenhouse gas emissions (GHGs), toxics, and water effluents and use (Woolf et al. 2017). Some of these regulations allow power plants to submit tradable permits or "allowances" to comply with market-based cap-and-trade programs that reduce air pollution. Others may require the installation of particular pollution control technologies. By reducing energy consumption, efficiency programs reduce pollution and may result in avoided compliance costs for sulfur dioxide (SO₂), nitrogen oxide (NO_x), and carbon dioxide (CO₂) (Lazar and Colburn 2013).

SOCIETAL ENVIRONMENTAL BENEFITS

By reducing the need to generate, transmit, and distribute electricity, energy efficiency brings additional value above and beyond the environmental benefits of utility compliance. Fossil-fueled power plants emit a long list of air pollutants that can be toxic to animals, plants, fish, and birds. They also contribute to climate change and harm water quality and aquatic systems (UCS 2017). Coal ash ponds, coal mining, and nonconventional natural gas production are other examples of activities causing environmental harm that energy efficiency can curtail by avoiding the need to burn fossil fuel (EIA 2016; EPA 2016).

SOCIETAL HEALTH BENEFITS

Environmental harms, including the amount of pollution in the air, are directly linked to negative impacts on public health. Power plants emit mercury, particulates (PM₁₀ and PM_{2.5}), ground-level ozone (smog), and CO₂. Each of these pollutants takes a toll on public health. The improvements in air quality that energy efficiency provides reduce the frequency and severity of public health harms (ACEEE and PSR 2015). For example, efficiency helps avoid the

1

Database of State Efficiency Screening Practices (DSESP)

A Resource of the NESP

Introduction

The purpose of the DSESP is to provide information regarding state cost-effectiveness screening practices for ratepayer funded electric efficiency programs. States can use the DSESP to learn about other states' practices, and readily access and better understand policies, processes, and studies that support assumptions used by states in their benefit-cost analyses.

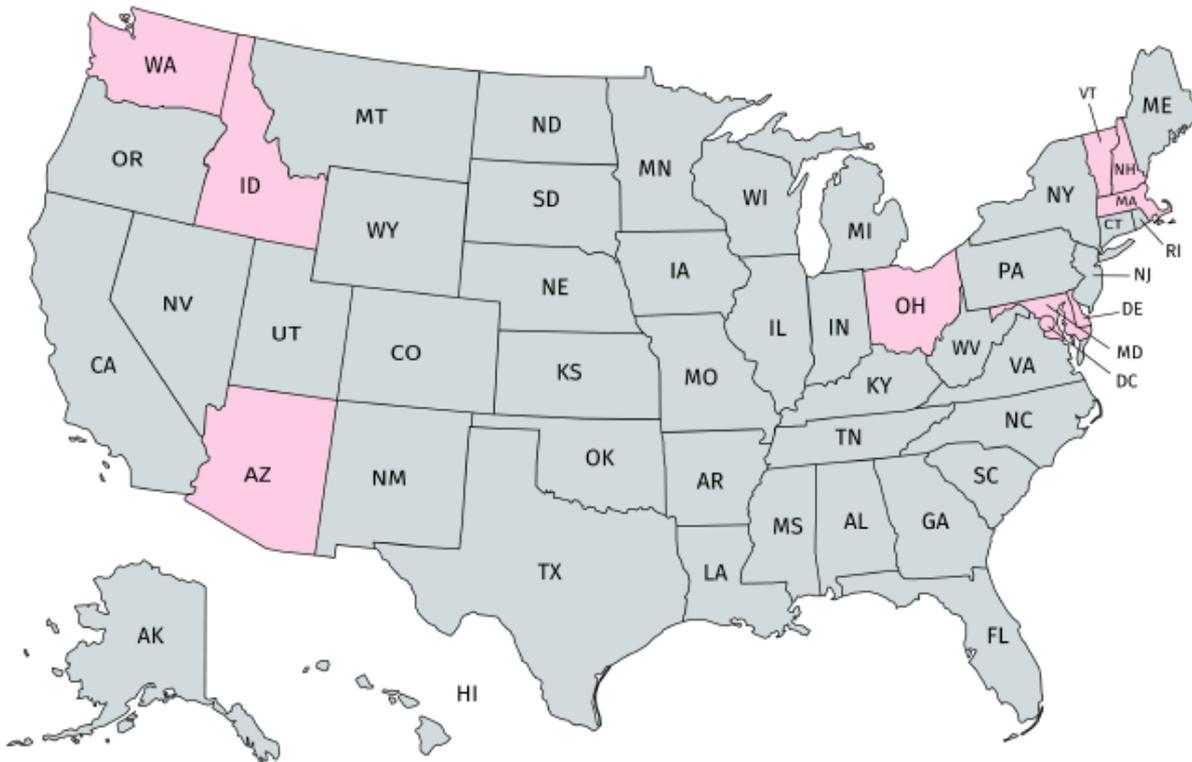
December 13, 2019: The complete DSESP now contains information for 52 states and jurisdictions. As NESP receives feedback and continues research, information on state practices and guidance documents will be updated, alongside additions including underlying studies and methodologies used to estimate a range of utility and non-utility system impacts.

Users can now download a companion glossary document below for ease of terminology review while working in the DSESP.

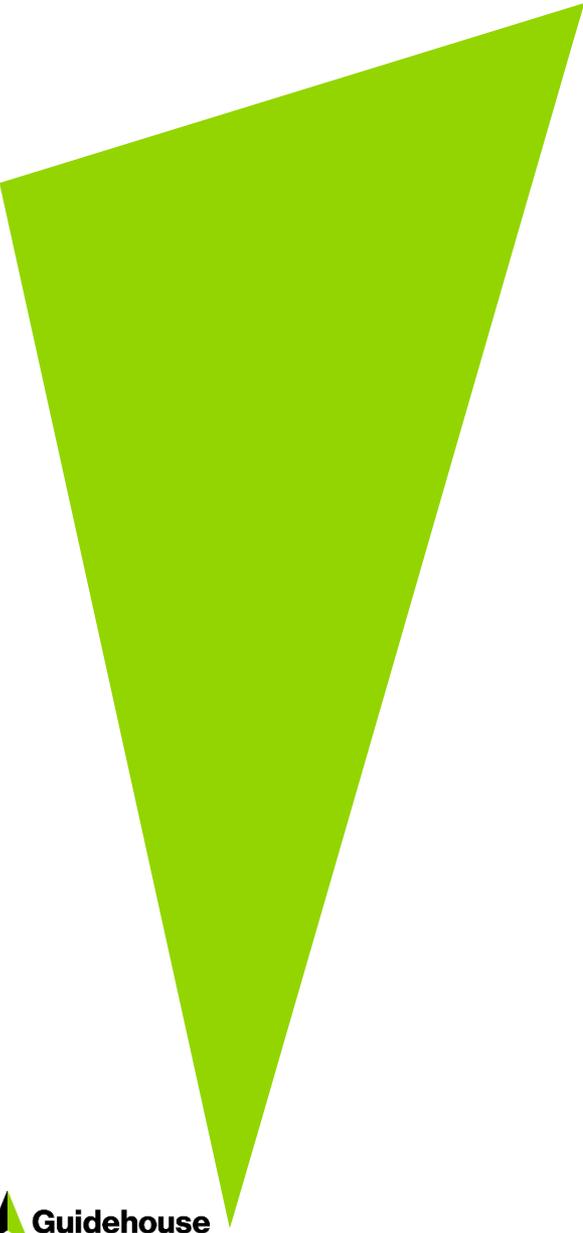
[Download the DSESP](#)
[Download the DSESP Companion Glossary](#)
Most recent update: January 17, 2020

11 STATES INCLUDE HEALTH NEIS

Cost-effectiveness tests use either proxies or monetized quantitative values



- Examples:
 - Improved outdoor air quality due to reduced particulate matter
 - Improved indoor air quality due to weatherization (reduced asthma symptoms)
 - Improved thermal comfort due to weatherization (reduced thermal stress)



Next steps:

In April, Guidehouse will circulate additional information for review by the Working Group.

A follow-up discussion will be held at the May Working Group meeting and a June Working Group meeting will be devoted to this topic, if needed.