Overview: National Standard Practice Manual

for Assessing Cost-Effectiveness of Energy Efficiency (Edition 1)

Online version available at bit.ly/NSPMoverview

Energy efficiency (EE) has historically been assessed through integrated resource planning processes or via standard tests defined in the California Standard Practice Manual[1]. The National Standard Practice Manual (NSPM) builds and expands upon that effort, reflecting current experience and best practices.

The NSPM focuses on the assessment of utility EE resources, but its core concepts can be applied to other types of resources, e.g., supply-side resources and other distributed energy resources (DERs) such as demand response, distributed generation, distributed storage, electric vehicles, and strategic electrification technologies.

The NSPM presents:

- **Universal Principles** for developing and applying cost-effectiveness assessments.
- **A step-by-step Resource Value Framework** for jurisdictions to use to develop their primary cost-effectiveness test: the **Resource Value Test (RVT)**, which addresses traditional components of cost-effectiveness testing, but with explicit consideration of a jurisdiction's applicable policies.
- **Neutral, objective guidance and foundational information** for selecting and quantifying the components of an RVT, and for applying and documenting the underlying policies and data.

The Resource Value Framework

The NSPM provides a multi-step process – the **Resource Value Framework** – that can be used to determine a jurisdiction's primary cost-effectiveness test**:** the **Resource Value Test.** The framework encompasses a jurisdiction's applicable policy goals, assigns value to all relevant impacts (costs and benefits) related to those goals, and embodies a set of universal principles representing sound economic and regulatory practices.

Universal Principles	
Efficiency as a Resource	Recognize that energy efficiency is a resource.
Policy Goals	Account for applicable policy goals.
Hard-to-Quantify Impacts	Account for all *relevant* costs and benefits, including hard-to-quantify impacts.
Symmetry	Ensure symmetry across all relevant costs and benefits.
Forward-Looking Analysis	Apply a forward-looking, long-term analysis that captures incremental impacts of energy efficiency.
Transparency	Ensure transparency in presenting the analysis and the results.

Resource Value Test (RVT)

The NSPM provides that inclusion of utility system impacts is foundational, and any other impacts based on a jurisdiction's applicable policy goals. While the RVT is conceptually a single test, in practice it might be different across jurisdictions because jurisdictions typically have a different mix of applicable policies that inform the inclusion of costs and benefits to the cost-effectiveness assessment. The RVT is, therefore, based upon a *dynamic concept,* where categories of impacts included in the test can vary across jurisdictions and/or over time because jurisdictions' applicable policy objectives can vary.

RVT Reporting Table: To support the 'Transparency' principle, the NSPM provides a reporting template for jurisdictions to document key assumptions and results of their analysis. This template table can also help to support comparisons of program cost-effectiveness across states.

[1] CPUC (California Public Utilities Commission). 2001. California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects

Resource Value Framework Steps

Steps to help develop a jurisdiction's primary test

STEP 1 Identify and articulate the jurisdiction's applicable policy goals.

STEP 2 Include all the utility system costs and benefits.

STEP 3 Decide which non-utility impacts to include in the test, based on applicable policy goals.

STEP 4 Ensure that the test is symmetrical in considering both costs and benefits.

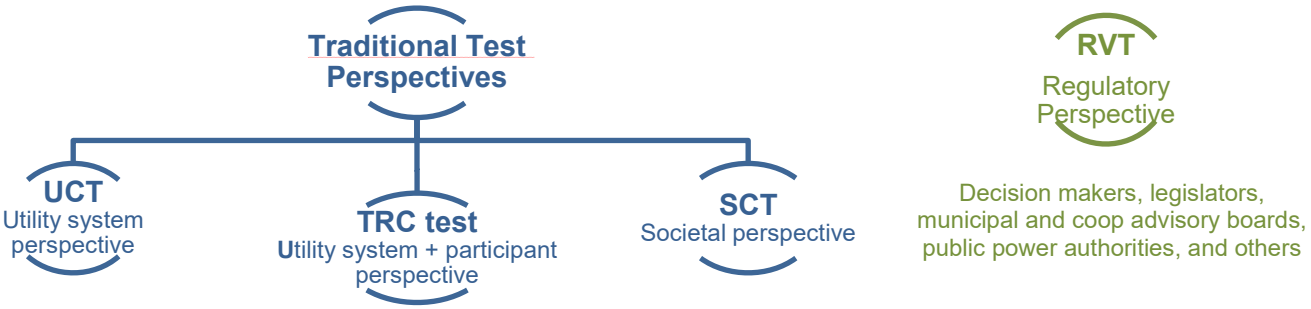
STEP 5 Ensure the analysis is forward looking and incremental.

STEP 6 Develop methodologies to account for all relevant impacts, including hard to quantify impacts.

STEP 7 Ensure transparency in presenting the inputs and results of the cost-effectiveness test.

Resource Value Test *vs* Traditional Tests

The RVT reflects the impacts for which regulators/other decision-makers are responsible. As such, the NSPM introduces the concept of the *regulator perspective*, which differs from the perspectives of the traditional tests – the Utility Cost Test (UCT), Total Resource Cost (TRC) test, and Societal Cost Test (SCT). A jurisdiction's application of the Resource Value Framework may or may not result in developing a primary RVT that is the same as one of the traditional tests. This will depend on whether a jurisdiction's applicable policy goals are conceptually aligned with one of those traditional tests. Further, categories of impacts included may change across jurisdictions and/or over time.



Other Topics Covered

The NSPM provides guidance on: using primary *vs* secondary tests, identifying relevant costs and benefits (and methods for hard-to-quantify impacts), including participant impacts, identifying appropriate discount rates, selecting assessment levels and analysis periods, deciding on treatment of early replacement and free riders, accounting for rate and bill impacts, and more.

Outreach and Application

Since its publication in May 2017, momentum for use of the NSPM is increasing. Several complementary resources have developed to support the use of the manual.

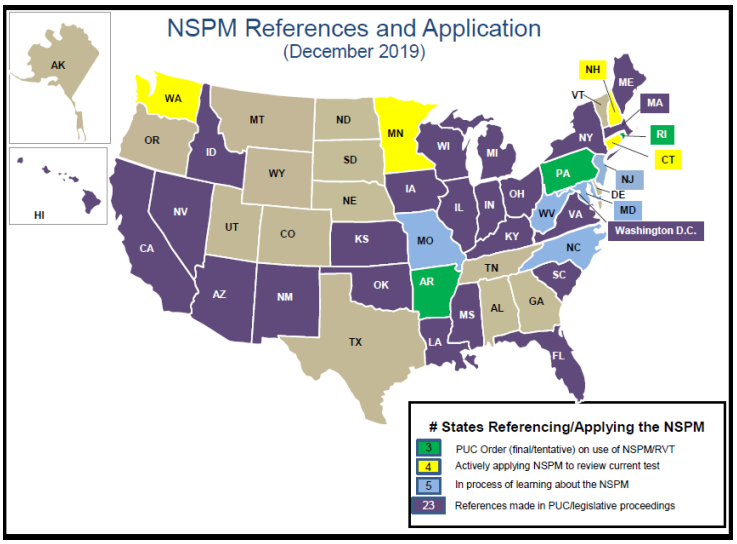
- Building Understanding and Visibility
- Supporting State Application
- NSPM Application and State Case Studies
- The Database of State Efficiency Screening Practices

Building Understanding and Visibility

NESP's extensive outreach to states through presentations in dozens of conferences and meetings have informed regulators, utilities, and other stakeholders by offering a new lens for cost-effectiveness analysis. This has led to increased referencing of the NSPM from coast to coast and in between, including states and cities. The manual is widely viewed as an improved, unbiased, and economically-sound guidance document for cost-effectiveness assessment. A list of NSPM references in proceedings is available on the NESP website here, with a snapshot in the map (below).

Supporting State Application

Based on the case study experience applying the NSPM, several template tables have been created. The Inventory of Applicable Policies and Relevant Impacts Spreadsheets may be useful for jurisdictions examining their cost-effectiveness tests' alignment with policies. The NSPM Cost-Effectiveness Results Reporting Tables support more transparent use of inputs to Benefit-Cost Analysis.



NSPM Application: Case Studies

Arkansas, Minnesota, New Hampshire, and Rhode Island provide real-world examples of application via case studies. Published by NESP here, the case studies feature states that have applied the NSPM principles and concepts to develop a primary cost-effectiveness test, or to "test their test." The case studies include recommendations on how the jurisdictions at hand can better align their cost-effectiveness testing practices with the NSPM principles, and can be used to inform regulators, utilities, evaluators, and other stakeholders about how the NSPM can be useful to their own jurisdictions.

Database of State Efficiency Screening Practices (DSESP)

Synapse Energy Economics, ACEEE, and E4TheFuture have completed a database of state cost-effectiveness testing practices, supporting policies, and links to key guidance documents for all 50 states, PR, and DC. The DSESP includes information on utility and non-utility system costs and benefits and associated values, as well as approaches used to arrive at their values and links to supporting documentation. The database also indicates which states have or are applying the NSPM framework. State-specific snapshots are also available on the NESP website.

NSPM for DERs The NSPM Edition 1 focuses on EE, but NESP is drafting and incorporating stakeholder feedback on an expanded NSPM for distributed energy resources (DERs), for release in Summer 2020. The new edition will provide guidance on inputs and methodologies for benefit-cost analysis of single and multiple DERs: EE, distributed generation, demand response, storage, and electric vehicles. This effort will expand on recent DER research and support regulatory interest in using a common cost-effectiveness framework for DERs. For more information, see the NSPM for DERs page on our website.

Visit **nationalefficiencyscreening.org** to learn about the NESP, to download the NSPM and supporting materials and resources. Questions? Please email NSPM@nationalefficiencyscreening.org.
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