

# **Cost-Effectiveness Testing 2.0**

## **Applying the New National Standard Practice Manual**

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### **ABSTRACT**

The National Standard Practice Manual (NSPM) for Cost-Effectiveness Assessment of Energy Efficiency (EE) was published in May 2017 to provide a comprehensive and improved approach to current practices, building on the decades-old California manual. Since the NSPM's release, efforts are underway to increase understanding of the NSPM's foundational principles and framework, and to translate the theoretical to concrete application - working with people in individual states and nationally to implement the NSPM.

This paper highlights the NSPM principles and process and describes selected case study state applications from four different geographic regions. The case study summaries focus on how the NSPM was used by states to "test their current test," and will describe the: 1) process for reviewing the states' relevant policies; 2) extent of alignment of the states' current testing practices with their applicable policies and associated impacts; and 3) modifications identified to support improvements in the accounting of relevant costs and benefits. The paper addresses the opportunities, challenges and next steps being taken by states to incorporate NSPM into their practices.

Collectively, the paper describes how the NSPM and supporting materials are impacting state practices regarding cost-effectiveness assessment, including (i) making cost/benefit data more accessible to stakeholders, both in the form of plug-and-play input data, methods and calculations, and (ii) advancing cost-effectiveness analyses to be more responsive to state policy objectives, representative of relevant EE costs and benefits, and more flexible, understandable and transparent for regulators and stakeholders.

### **Introduction**

As utility customer-funded efficiency programs approach their fourth decade, these programs are presented with new opportunities and challenges for scaling up and meeting efficiency's full potential as an energy resource. One of those challenges is to properly assess the costs and benefits of efficiency to demonstrate efficiency's cost-effectiveness, while also supporting effective program design and implementation in a challenging environment. The difficulties stem from load growth across the country reaching historic lows, energy prices stabilizing, and prior energy efficiency efforts (including building energy codes and equipment standards) establishing increasingly efficient savings baselines (EIA 2018).

Historically, efficiency's cost effectiveness has been assessed through integrated resource planning (IRP) processes or via standard tests defined in the California Standard Practice Manual (CaSPM). In less challenging times, the simplifications found in many IRP processes, particularly those found in the CaSPM, were not of concern. Efficiency portfolios were usually shown to have cost-benefit ratios well over 1.0, regardless of whether the IRP processes over- or under-estimated cost-effectiveness (Hoffman et al. 2013). Today, with lower energy costs, particularly for natural gas, demonstrating utility customer funded efficiency programs' cost-effectiveness has become less obvious. As a result, the simplifications and deficiencies in the historical approaches (including the lack of symmetry inherent in some of the CaSPM tests), are becoming much more consequential in terms of adversely affecting decision-making. It is time to update some of these practices (the CaSPM was last updated in 2002).

The National Standard Practice Manual (NSPM) was developed to address these deficiencies. The NSPM builds and expands upon the decades-old CaSPM, providing current experience and best practices with the following additions:

- Guidance on how to develop a jurisdiction's primary cost-effectiveness test, which should meet the applicable policy goals of the jurisdiction. The guidance also addresses the difficulties jurisdictions have had in consistently implementing concepts presented in the CaSPM.
- Information on the inputs and considerations associated with selecting the appropriate costs and benefits to include in a cost-effectiveness test and accounting for applicable hard-to-monetize costs and benefits, with guidance on a wide range of fundamental aspects of cost-effectiveness analyses.

The NSPM is a publication of the National Efficiency Screening Project (NESp), which is a group of organizations and individuals working to update and improve the way that utility customer-funded electricity and natural gas efficiency resources are assessed for cost-effectiveness and compared to other resource investments. The preparation was guided by decades of industry experience implementing cost-effectiveness assessments and an extensive Review Committee of individual experts affiliated with the efficiency industry, government agencies (including utility regulators), utilities, and other entities.

The NSPM presents:

- *Universal Principles* for developing and applying cost- effectiveness assessments,
- *A Resource Value Framework (RVF)* in the form of a step-by-step process for jurisdictions (e.g., utility commissions) to use in developing their primary cost-effectiveness test (with explicit consideration of the specific policy framework for the particular jurisdiction), and
- *Neutral, objective guidance and foundational information* for selecting and quantifying the components of a jurisdiction's test(s), and for applying and documenting the policies and data that were used to define the test.

The universal principles are unique and foundational attributes of the NSPM. They are embedded in the RVF and are intended to be the basis for any jurisdiction's cost-effectiveness tests and processes. These principles, provided in Table 1, were developed with the input received from a

broad range of stakeholders during the development of the NSPM, and are consistent with sound economic and regulatory practices.

Table 1. NSPM Universal Principles

<b>Treat Energy Efficiency as a Resource</b>	Efficiency is one of many resources that can be deployed to meet customers' needs, and therefore should be compared with other demand and supply-side energy resources in a consistent and comprehensive manner.
<b>Align with Policy Goals</b>	A jurisdiction's primary cost-effectiveness test should account for its energy and other applicable policy goals and objectives. These goals and objectives may be articulated in legislation, commission orders, regulations, advisory board decisions, guidelines, etc., and are often dynamic and evolving.
<b>Account for Relevant Impacts</b>	Cost-effectiveness practices should account for all relevant, substantive impacts (as identified based on policy goals), even those that are difficult to quantify and monetize. Using best-available information, proxies, alternative thresholds, or qualitative considerations to approximate hard-to-monetize impacts is preferable to assuming those costs and benefits do not exist or have no value.
<b>Ensure Symmetry</b>	Cost-effectiveness practices should be symmetrical, where both costs and benefits are included for each relevant type of impact.
<b>Conduct Forward-Looking Analysis</b>	Analysis of the impacts of resource investments should be forward-looking, capturing the differences between costs and benefits that would occur over the life of the subject resources as compared to the difference between costs and benefits that would occur absent the resource investments.
<b>Provide Transparency</b>	Cost-effectiveness practices should be completely transparent, and should fully document all relevant inputs, assumptions, methodologies, and results.

Already the NSPM has been referenced in a multitude of states, either by commission order or staff recommendation (Arkansas and Washington states), or in regulatory public comments (in 13 other states across the country) and published reports (US DOE SEE Action, and ACEEE) (NSPM References 2018).

In the following section, we review several states where the NSPM principles above have been (or are being) applied to a jurisdiction's existing practice, either in whole or in part, to test relative alignment.

## Selected State Efforts to Apply the NSPM Principles

In the following pages, we describe case studies from four different states. Each case study addresses the process for stakeholder engagement with the NSPM, how the NSPM was used – or is being used – by states to “test their current test,” and describes the: 1) process for reviewing the states’ relevant policies; 2) extent of alignment of the states’ applicable policies

and associated impacts with current testing practices; and 3) assessment of symmetry in accounting for costs and benefits, and any modifications identified. We address the opportunities, challenges and next steps being taken by states to incorporate the NSPM into their practices.

## **Arkansas**

Arkansas is widely regarded as one of the Southeast’s leading energy efficiency states. It was the highest scoring southern state in ACEEE’s 2017 state energy efficiency scorecard both overall (i.e. covering all efficiency policies) and in terms of actual achievements from electric and gas utility funded program savings in 2016 (Berg et al. 2017). Arkansas’s leadership role appears to be a function, at least in part, of (1) an engaged regulator; (2) the institutionalization of a utility-stakeholder collaborative – officially referred to as the “Parties Working Collaboratively” (PWC) – which has met regularly since 2006 to work on EM&V, various related policy issues, efficiency program design, and other issues as needed (Johnson and Klucher 2014); and (3) the hiring by the regulator of an Independent Evaluation Monitor to develop the state’s EM&V framework – including a statewide Technical Reference Manual of deemed savings assumptions – and facilitate discussions of the PWC (Johnson and Klucher 2014).

One of the issues the PWC has considered in recent years is the approach to cost-effectiveness assessment. The Arkansas Public Service Commission requires utilities to report cost-effectiveness from the perspective of all five of the tests in the California Standard Practice Manual. However, its principal focus is on results from the total resource cost (TRC) test “with the inclusion of collaboratively-developed NEBs” (Arkansas Public Service Commission 2013). The PWC subsequently undertook extensive discussions regarding the NEBs to which value should be assigned. In November 2017, the Commission ordered the PWC to “consider the findings and recommendations of the NSPM as it resumes work on the next three-year cycle of planning” (Arkansas Public Service Commission 2017). The PWC began this work in February of 2018, initiating a “case study” of how Arkansas’s current cost-effectiveness screening practices align with the principles and guidance of the NSPM, as well as any potential refinements to those practices that may be appropriate to consider. Technical support is being provided by the NESP.

Initial discussions identified the following primary and secondary questions which the PWC may want to address:

1. What do Arkansas’s energy policies suggest regarding the other (beyond utility system) categories of impacts that should be included in its cost-effectiveness test?
  - a. What are the relevant Arkansas energy policies?
  - b. Does the review of the state’s energy policies confirm the state’s prior decision to include participant impacts in its primary (i.e. TRC) cost-effectiveness test?
  - c. Are there other important categories of impacts that should be added to the current Arkansas test to address and/or be consistent with key policy objectives?
2. If participant impacts are to be included in the state’s cost-effectiveness test, does the test adequately address the NSPM’s symmetry principle?
  - a. Are all major participant costs included?

- b. Are all major participant benefits included, including NEBs?
- c. If not, what options for improving the test would be most appropriate for the state?
  - i. Quantification of specific additional participant NEBs?
  - ii. Additional participant NEBs adder?
  - iii. Adjustments to participant costs (to account for the portion of customer investment related to NEBs – rather than to energy savings) in lieu of adding values for NEBs
- 3. Is current treatment of utility system impacts sufficiently comprehensive and consistent across the state?
  - a. What utility system impacts are currently being included by each utility in its application of the TRC? How are they estimated?
  - b. If any major categories of utility system impacts are not being included by one or more utilities, what options should be considered for including them?
  - c. Are there any utility system avoided costs for which current approaches/assumptions may be systematically over-stating or understating impacts? If so, how should those approaches/assumptions be improved?
- 4. Are current practices regarding selection of discount rates appropriate given the state's policy objectives?
- 5. Are there any cases in which the application of cost-effectiveness tests is inconsistent with NSPM principles?
  - a. Is the Arkansas test being applied principally at the program-level or portfolio (i.e. not to screen out individual measures)?
  - b. Does screening of early retirement measures properly account for dual baselines for both benefits and costs?
  - c. Are rebates provided to free riders uniformly treated as not imposing costs under the TRC?
  - d. What changes, if any, may be appropriate given the review of the practices noted above?
- 6. How can practices and assumptions for cost-effectiveness analyses be made more transparent?
  - a. Should standardized rules for key practices be adopted?
  - b. Should the state consider adopting statewide avoided costs?

The PWC initially prioritized working on the first of these questions. Commission Staff began by identifying and cataloguing all energy policies which have potential relevance to decisions regarding the categories of impacts that should be included in the state's cost-effectiveness test. From that list (produced in March 2018 and refined in April 2018), the PWC has identified a few categories of impacts, such as environmental impacts, economic development impacts, and energy security impacts, which are not currently addressed in the Arkansas cost-effectiveness test. There is arguably some policy direction to consider when determining which of these impacts to include. The PWC will be examining these issues more closely in the coming months. Particular attention will be devoted to the question of whether the value of avoided carbon emissions should be included in a consistent manner across the state. The PWC will also assess the extent to which selected participant NEBs currently included in

Arkansas cost-effectiveness screening practices (e.g. water savings and operation and maintenance cost savings) adequately address the NSPM's guidance on ensuring there is symmetrical treatment of participant costs and benefits and, if not, which options for enhancing symmetrical treatment may merit analysis to support future refinement to the state's cost-effectiveness practices.

The state's utilities will also be charged with documenting the utility system impacts and the sources of assumptions for those impacts that they currently include in their cost-effectiveness screening, probably by July 2018. The PWC will then work in July, August, and September 2018 to address the potential need for refinement to utility system impacts that are used in cost-effectiveness analyses.

One other issue the PWC has committed to exploring is the treatment of rebates provided to free riders, with an initial survey suggesting different utilities are currently handling the issue differently and at times inconsistently with NSPM guidance. It appears likely that recommendations on consistent treatment of this issue will be developed by July 2019.

It is not yet clear whether (or the extent to which) other issues – such as discount rates, treatment of early retirement measures, and the potential value of both greater statewide consistency and transparent documentation of avoided costs and/or other assumptions – will be addressed by this process given the PWC's commitment to complete and provide to the Commission a draft case study by the end of October 2018.

## Rhode Island

Rhode Island has been implementing successful energy efficiency programs for over 25 years, and for the past four years has been ranked among the top five states in the ACEEE Scorecard. These programs have been guided by a robust collaborative process, as well as legislation in 2006 that requires National Grid to implement all energy efficiency resources that are cost-effective and cost less than supply-side resources.

For many years, Rhode Island used the total resource cost (TRC) test to assess the cost-effectiveness of energy efficiency resources, as defined in the Least-Cost Procurement Standards (RI PUC 2017b). Consistent with the theoretical construct of the TRC, the Standards require that the test include all utility system impacts, plus all participant impacts, including all participant non-energy benefits (NEBs) such as increased asset value of the equipment or building, improved productivity, greater economic well-being, and better health outcomes. Consequently, the TRC test in Rhode Island includes a comprehensive list of NEBs, which are quantified and put into monetary terms. Along with Massachusetts, Rhode Island uses the most comprehensive and robust set of participant NEB assumptions in the US.

In 2016, the Rhode Island Public Utilities Commission opened Docket 4600 to get stakeholder input on (a) new rate design principles and concepts, and (b) cost-effectiveness for EE and other types of distributed energy resources (DERs). One of the reasons for opening the docket was to develop a cost-effectiveness framework that can be applied consistently across different types of ratepayer-funded programs and different types of distributed energy resources (RI PUC 2017a).

After months of stakeholder discussions, the Working Group recommended expanding the Rhode Island TRC Test to include a broader range of benefits to better align with its applicable state policies (Raab et al., 2017). The new cost-effectiveness test was named “the

Rhode Island Benefit-Cost Framework.” The RI Framework recognizes some of the benefits and costs related to DERs that are not relevant to energy efficiency, and expands the list of impacts that were included in its previously-used TRC test, including: risk impacts, innovation and market development, environmental impacts, jobs and economic development impacts, societal low-income impacts, public health impacts, and energy security impacts.

Notably, some of these impacts, such as economic benefits, employment benefits, and air quality were already statutorily required in the screening of combined heat and power resources, whereas the statute left more discretion to the Commission on other EE measures (R.I. Gen. Laws § 39-1-27.7(c)(6)(iii)). A motivating issue for Docket 4600 was to make benefit-cost analyses consistent all EE measures, and eventually across other resources and functions on the electric system (RI PUC 2016).

The Commission accepted the recommendations of the Working Group and directed the Company to use the new RI Framework for evaluating the cost-effectiveness of EE, DERs, other Company investments and spending, and new rate proposals (RI PUC Docket 4600). The Commission also simultaneously updated the Rhode Island LCP Standards, which now require that the guiding principles from the NSPM be used in developing a cost-effectiveness test.

With these recent revisions, the Rhode Island Test is now well aligned with the NSPM guiding principles, as summarized in the Table 2 below.

Table 2. Rhode Island EE Practices Relative to the NSPM Guiding Principles

NSPM Principles	Aligned or Consistent with Principle?
Treat Energy Efficiency as a Resource	Yes. RI statute requires that the utility implement all energy efficiency resources that are cost-effective and less expensive than supply.
Align with Policy Goals	Yes. The new RI Framework was determined after comprehensive consideration of the state’s energy and other relevant policy goals in the Working Group process.
Account for Relevant Impacts	Yes, for the most part. Recent Working Group process led to inclusion of additional impacts reflecting relevant state policy goals (e.g., environment, economic development). Further work is needed to account for reduced risk and market transformation benefits.
Ensure Symmetry	Yes, for the most part. Costs and benefits for NEBs are symmetrical. The former TRC Test and the current RI Framework include comprehensive participant NEBs. For symmetry of utility-system impacts, determining the value of reduced risk to the utility is needed.
Conduct Forward-Looking Analysis	Yes. RI applies a rate, bill, and participant impact analysis to investigate the equity issues of energy efficiency plans.
Provide Transparency	Yes. The utility prepares Annual Reports, Annual Plans, and Three-Year Plans detailing the cost-effectiveness results, providing transparency on key assumptions, including its avoided cost values.

While the RI Test effectively aligns with the NSPM Principles, the RI PUC Docket 4600 intent was to develop a cost-effectiveness framework that can be applied consistently across different types of ratepayer-funded programs and DERs. To this end, efforts to identify and

value all relevant impacts for DERs – including avoided distribution costs and in particular avoided locational distribution costs – is a work in process.

## Minnesota

The Minnesota Department of Commerce, Division of Energy Resources recently provided a grant to Synapse Energy Economics (a co-author of the NSPM and this paper) to produce a white paper describing how the key elements of the NSPM could be applied to energy efficiency cost-effectiveness analyses in Minnesota. The white paper will be based on a survey of the relevant stakeholders, a review of relevant statutes and commission orders, and an analysis of those key policy goals that might not be addressed currently in the Minnesota cost-effectiveness practices.

The Minnesota study will include the following steps:

1. Conduct surveys with stakeholders from the Division of Energy Resources, Excel Energy, CenterPoint Energy, the Minnesota Center for Energy and the Environment, Great River Energy, Fresh Energy, the Public Service Commission, and more.
2. Review relevant statutes, regulations, commission orders, state energy plans, or other policy directives to identify and articulate all of the policy goals that are relevant and applicable to utility-implemented energy efficiency resources.
3. Review all the utility system impacts that are currently accounted for by the Minnesota electric and gas utilities to ensure that all are properly accounted for.
4. Catalog all of the non-utility system impacts that are currently included in the Minnesota cost-effectiveness tests.
5. Assess whether any additional non-utility system impacts should be included in the primary test to be consistent with Minnesota's applicable policy goals.
6. Draft recommendations for modifying Minnesota cost-effectiveness practices to address relevant policy goals.

In many ways, the Minnesota cost-effectiveness practices already reflect state policy goals and are well-aligned with the principles of the NSPM. At the outset of the study, the key issues that appeared to warrant additional attention include:

- Consistency of utility-system avoided costs. Minnesota electric and gas utilities currently use avoided costs that are developed independently and are potentially inconsistent.
- The use of multiple tests for screening energy efficiency programs. Minnesota currently uses the Societal Cost test as the primary test to make cost-effectiveness determinations, but also considers the results of the Utility Cost test.
- Whether to include participant non-energy benefits in the Societal Cost test. Minnesota currently does not include participant NEBs in this test.
- The proper treatment of low-income impacts. Minnesota currently does not require low-income programs to pass a cost-effectiveness test.
- Ensuring that the primary test used to evaluate energy efficiency programs is consistent with the methodology and assumptions used in efficiency potential studies and IRP practices.

- The proper discount rate to use. Minnesota currently uses the utility weighted average cost of capital as the discount rate for the Utility Cost test, and for the commercial and industrial customers in the Societal Cost test.

The Minnesota white paper is expected to be available by the end of summer 2018. The recommendations from the study are intended to be used as a starting point for future stakeholder discussions on modifying the Minnesota cost-effectiveness practices.

## **Washington**

Washington has been a national leader in energy efficiency for over three decades. Washington's private and public utilities have long records of offering customer energy efficiency and conservation programs supported by regional organizations including the Northwest Energy Efficiency Alliance (NEEA), the Northwest Power and Conservation Council (Council), and the Bonneville Power Authority (BPA). In November of 2006 Washington voters approved the Energy Independence Act that established an energy efficiency resource standard (EERS) by setting new requirements for electricity resources, including greater use of renewable energy and conservation. Under that statute, utilities with 25,000 or more customers are required "[T]o pursue all available conservation that is cost-effective, reliable and feasible" (Energy Independence Act). The legislation also requires utilities to use methodologies for analyzing and selecting demand-side resources that are consistent with the methodologies used by Council's, including its definition of cost-effectiveness.

- In the summer of 2017 the staff of the Washington Utilities and Transportation Commission (UTC) undertook a review of the state's existing cost-effectiveness test using the NSPM framework as a guide. Per the NSPM guide, UTC staff began by developing an inventory of applicable state policies contained in both state legislation and in prior commission orders. The results of this review serve as input a stakeholder involvement process related to the filing of the 2018-19 Biennial Conservation Plans by the state's investor-owned utilities. While this process addresses other issues related to utility energy efficiency targets, its primary focus during the summer of 2018 will be the review of the alignment of state's cost-effectiveness test with relevant state policies. Washington's existing definition of cost-effectiveness is consistent with the NSPM guide's recommendation that, "every cost-effectiveness test should include relevant utility system costs and benefits" (Washington RCW 80.52.030).<sup>1</sup> In addition, the state's definition includes consideration of "quantifiable environmental cost and benefits" associated with resource development. Therefore, the focus of the UTC's stakeholder review process will primarily be to determine whether the existing definition also aligns

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<sup>1</sup> Per statute, Washington existing definition is as follows: "Cost-effective" means that a project or resource is forecast: (a) To be reliable and available within the time it is needed; and (b) To meet or reduce the electric power demand of the intended consumers at an estimated incremental system cost no greater than that of the least-cost similarly reliable and available alternative project or resource, or any combination thereof. "System cost" means an estimate of all direct costs of a project or resource over its effective life, including, if applicable, the costs of distribution to the consumer, and, among other factors, waste disposal costs, end-of-cycle costs, and fuel costs (including projected increases), and such quantifiable environmental costs and benefits as are directly attributable to the project or resource. (Washington RCW 80.52.030).

with other state policy guidance, such as consideration of participant costs and benefits and other societal benefits, such as the protection of public health and providing equitable service to low income customers.

## Helping States Access Resources to Support Inclusion of Relevant Impacts

The publication of the NSPM has been well-received to date by a range of stakeholders, allowing jurisdictions to reflect on and review their current practices vis a vis the NSPM framework and principles as a construct for “testing their test(s).” But this exercise, as noted in the case studies above, is an initial overarching process step that in large part can be theoretical in its application. What we find is that as jurisdictions review and confirm their applicable policies and identify the relevant impacts which should be accounted for, the next critical – and often most challenging – step is considering how to account for the identified impacts, in particular the “hard to quantify” impacts. Jurisdictions are increasingly adopting policies that recognize the value of energy efficiency as an economic development driver, a reliable and resilient resource, one that contributes to energy security and is a strategy to improve both outdoor and indoor air quality and by extension, public health. The range of public and occupant benefits are often valued qualitatively versus measured quantitatively. Jurisdictions – in particular, public utility commission staff – are asking for guidance and/or ready access to methods, calculations and/or direct “plug and play” input parameters that can be used to support inclusion of such impacts, to the extent that they are relevant to their jurisdiction’s goals.

To this end, a core focus for the National Efficiency Screening Project (NESP) in 2018-2019 is to develop useful resources for PUC staff and other stakeholders to provide ready access to data, methods and calculations associated with a range of cost-effectiveness testing impacts currently in practice or in development. In 2018, the NESP has several efforts underway to build such resources to support NSPM application as follows:

1. *Research on Health and Environmental Impacts from Energy Efficiency.* This research, being conducted by ACEEE, is focused on documenting existing methodological approaches currently used by states to calculate health and environmental benefits of energy efficiency. The research will inform recommended formulas and approaches states can use to make these calculations. It will also provide resources that states can draw on for calculating ambient air quality and related public health impacts, including tools such as the EPA’s forthcoming COBRA/AVERT model which calculates the \$/kwh benefit of health impacts. The research for this effort is based on a combination of data leveraged from ACEEE’s State Scorecard efforts, supplemented by additional research.
2. *Guidance on Job Impacts Methods.* The NESP research activities will include developing a set of guidance for states seeking information on how to quantify the macroeconomic job impacts of energy efficiency investments. This guidance will describe that range of options states can use, from straightforward adders, to national methodologies, to the “Cadillac” version of state-specific analysis, and the associated strengths and weaknesses of the range of approaches.
3. *Review of Data Available/Methods Used to Account for Risk, Reliability, Resilience, and Energy Security.* With states increasingly looking to energy efficiency as a strategy to reduce risk associated with power reliability, resilience, and energy security, stakeholders

are looking for guidance for how to account for this impact, either quantitatively and/or qualitatively. NESP will conduct preliminary research to assess the current landscape and identify gaps to inform future research/guidance needs.

4. *State by State Comparison of Current Cost-Effectiveness Testing Practices.* NESP is actively building a repository of key information regarding current practices, specific types of utility and non-utility system costs and benefits accounted for, and links to guiding decisions/orders and relevant underlying studies and/or data parameters used to account for certain types of impacts (e.g., percent adders in the case of various NEBs). This searchable repository will incorporate the research outlined above, and ultimately feed into ACEEE's State Policy Database. For 2018, this comparative repository will document cost-effectiveness testing practices in about twenty states and will be expanded in 2019 to include other states.

As the above new resources become available – currently planned for Fall 2018 into early 2019 – they will be posted to the NESP and ACEEE websites and widely circulated to states, accompanied by educational webinars, presentations, and state technical support.

## Conclusion and Next Steps

In the year since its publication in May 2017, the NSPM is gradually making in-roads. Over the past year, visibility, recognition and support for the guidance document has grown considerably. Given that the efficiency industry has used or referred to “traditional” cost-effectiveness practices for over two decades – as described in the CaSPM – changes to those practices, approaches, and terminology take time. With forthcoming case study examples across various geographically diverse states and new resources to support NSPM application, it is anticipated that the NSPM will increasingly be used and referenced across states in the country and beyond. Continued state outreach and technical support for NSPM application is helping to identify needed improvements to the NSPM and gaps in guidance.

Moreover, as commission staff face the increasing reality that the silos of energy efficiency, demand response, rooftop solar, storage – and ultimately electric vehicles – are dissipating, the need for a common cost-effectiveness framework for this host of distributed energy resources (DERs) is timely and critical. To this end, the NESP is actively scoping an effort to expand the NSPM to incorporate guidance on a common framework for all DERs (building from the current framework and set of principles), coupled with specific guidance and considerations on the costs, impacts and valuation of each DER. This scoping effort will culminate to potential new guidance in 2019.

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