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# National Standard Practice Manual for Cost-Effectiveness Analyses

Prepared by  
The National Efficiency Screening Project

Overview of Draft Document

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- **NESP:** is a group of organizations and individuals working to update and improve the way that utility customer funded energy efficiency resources are assessed for cost-effectiveness.
- **NESP Review Committee:** Includes roughly 40 experts representing a variety of organizations from around the country.
- **Drafting Committee:** Includes Tim Woolf, Chris Neme, Marty Kushler, Steve Schiller, and Tom Eckman.
- **National Standard Practice Manual:** new cost-effectiveness manual forthcoming May 2017

More information. <http://www.nationalefficiencyscreening.org/>

# Recognizing the Value of NEBs: the Challenge

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- NEBs are now broadly recognized as significant
  - Methods to quantify have become very sophisticated
  - Value of NEBs rising: may outweigh value of energy benefits in some cases
- Argument that costs must be balanced by benefits is made increasingly frequently
- However, NEBs still rarely incorporated into cost-effectiveness tests
- Many jurisdictions uncertain; looking for examples and guidance

# Why a National Standard Practice Manual?

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- California Standard Practice Manual (CaSPM) → prevailing guidance on cost-effectiveness for energy efficiency since 1993 – last updated 2002
- CaSPM limitations:
  - No framework with principles to guide developing primary CE test
  - No guidance on accounting for policy goals
  - Jurisdictions are limited to set of pre-defined tests e.g., Utility Cost Test (UCT), Total Resource Cost (TRC), Societal Cost test (SCT) – that may not reflect the mix of perspectives reflected in relevant policies
  - No guidance on developing critical inputs to CE tests

# The Need for a National Standard Practice Manual (2)

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- Challenges in applying the CaSPM tests
  - Some critical utility system impacts often ignored, e.g., avoided T&D, losses, risk, environmental compliance costs
  - Participant impacts often ignored - 65% of states include participant costs, where 69% don't account for participant benefits (ACEEE)
  - Relevant policy goals and associated impacts not addressed
  - Inputs and results not consistent or transparent
- With increased focus on integrated distributed energy resources (DERs), new CE framework needed
- The time is ripe for a new manual that:
  - Builds on the CaSPM and lessons learned over years
  - Can be applied to all types of DERs

# Purpose and Scope of the NSPM

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- **Purpose:** Provide principles, concepts, and methodologies for sound, comprehensive, balanced assessment of DERs, with detailed guidance on energy efficiency (EE)
- **Scope:** EE resources whose acquisition is funded by, and implemented on behalf of, electricity and gas utility customers
- **Distributed Energy Resources:** Principles, concepts, and methodologies in the NSPM can be applied to all types of distributed energy resources.
  - The applicability and magnitude of some impacts will likely vary by type of DER.

# Key Concepts Underlying the NSPM

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- **Applicable policy goals and needs** should be accounted for in designing the **primary** cost-effectiveness test.
  - the primary test reflects mix of various perspectives affected by the jurisdiction's **applicable policies**
- NSPM introduces concept of **'regulatory' perspective**
  - 'Regulatory' refers to all types of **entities that oversee EE investments**: PUCs, municipal and coop advisory boards, public power authorities, etc.
  - Regulatory perspective includes consideration of **full scope of issues** for which regulators are responsible: 1) overall objective of requiring electricity/gas utilities to provide **safe, reliable, low-cost services** to customers; and 2) meeting their jurisdiction's **applicable policy goals**

## Key Concepts Underlying the NSPM (2)

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- Regulators **don't need to be limited to traditional tests:**  
UTC, TRC or SCT
- NSPM introduces **the Resource Value Framework (RVF):**
  - Six core principles;
  - Multistep process, with application of principles; and
  - Guidance on range of CE considerations

Collectively, the above guides jurisdictions to develop their primary **Resource Value Test (RVT)**



# **NSPM Cost-Effectiveness Principles**

(applicable broadly to DERs)

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1. Recognize that energy efficiency is a resource
2. Account for relevant policy goals
3. Account for all relevant costs and benefits, including hard-to-quantify impacts
4. Apply a forward-looking, long-term analysis that captures incremental impacts of EE
5. Ensure symmetry across all relevant costs and benefits
6. Ensure transparency in presenting the basis of analyses, inputs and results

# Key Elements of the Resource Value Framework

Step 1	Identify and articulate the jurisdiction's policy goals that are relevant to decisions on whether to invest in energy efficiency resources.
Step 2	Include all the utility system impacts in the test.
Step 3	Decide which non-utility system impacts to include in the test, based on policy goals.
Step 4	Develop methodologies and inputs to account for all impacts, including hard-to-monetize impacts.
Step 5	Ensure that the test is symmetrical in considering both costs and benefits.
Step 6	Ensure that the analysis is forward-looking, incremental, and long-term.
Step 7	Ensure transparency in presenting the analysis and the results.

## Relationship to the Traditional Tests

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- Use of the NSPM Resource Value Framework (RVF) *could* result in a jurisdiction adopting one of the traditional tests as its primary test:
  - UTC, TRC, or SCT tests... if the jurisdiction's goals are aligned with these tests
- For many jurisdictions the RVF will likely produce a different test
  - RVF provides regulators the ability to design a test that best reflects their unique applicable policy goals

# Relationship to the Traditional Tests – Examples

**Jurisdiction 1:  
RVT = UCT**



**Jurisdiction 2:  
RVT = TRC**



**Jurisdiction 3:  
RVT = SCT**



*Note: The size of the “pie pieces” in these graphs is not intended to convey any sense of relative magnitude or importance of the different categories of benefits.*

# Relationship to the Traditional Tests – Examples

**Jurisdiction 4:  
RVT ≠ Traditional Tests**



**Jurisdiction 5:  
RVT ≠ Traditional Tests**



**Jurisdiction 6:  
RVT ≠ Traditional Tests**



*Note: The size of the “pie pieces” in these graphs is not intended to convey any sense of relative magnitude or importance of the different categories of benefits.*

# Distributed Energy Resources: Non-Utility System Impacts

		Energy Efficiency	Demand Response	Distributed Generation	Distributed Storage
<b>Costs</b>					
<b>Non-Utility</b>	State or federal tax credits or incentives	◐	◐	◐	◐
	Measure costs (capital costs)	◑	◐	◑	◑
	Interconnection fees	○	○	◑	◑
	Annual O&M	◑	◐	◑	◑
	Participant increased resource consumption	◐	◐	○	◐
	Non-financial costs	◐	◑	◐	◐
<b>Benefits</b>					
<b>Non-Utility</b>	Reduced low-income energy burden	◑	◑	◑	◑
	Public health benefits	◑	◐	◑	◐
	Energy security	◑	◐	◑	◑
	Jobs and economic development benefits	◑	◑	◑	◑
	Environmental benefits	◑	◐	◑	◐
	Participant health, comfort, and safety	◑	○	◐	◐
	Participant resource savings (fuel, water)	◐	○	◐	◐

## For more Information

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