

1. Accenture
2. Advanced Energy
3. Alectra Utilities
4. Ally Energy Solutions
5. Alternative Energy Systems Consulting
6. Ameren
7. American Public Power Association
8. Apex Analytics
9. Apogee Interactive
10. Applied Energy Group
11. APTIM
12. Aquanta
13. Arizona Public Service
14. Armada Power
15. Austin Energy
16. Baltimore Gas and Electric
17. Berkshire Hathaway Energy
18. Black & Veatch Management Consulting
19. Bonneville Power Administration
20. Bristol Tennessee Essential Services
21. Buffalo Niagara Medical Campus
22. Cadmus
23. Calico Energy
24. Central Hudson Gas & Electric
25. Chelan PUD
26. City of Tallahassee Utilities
27. Clean Power Research
28. CLEAResult
29. COI Energy Services
30. Colbun
31. Commonwealth Edison
32. Con Edison
33. Connected Energy
34. Connected Energy Limited
35. Consumers Energy Company
36. Contract Callers
37. CPower Energy Management
38. CPS Energy
39. Customized Energy Solutions
40. Dairyland Power Cooperative
41. DNV GL
42. DTE Energy
43. Duke Energy
44. E Source
45. E4TheFuture
46. Eaton
47. ecobee
48. Edison Electric Institute
49. Efficiency Vermont
50. Emerson Commercial & Residential Solutions
51. EMI Consulting
52. Enbala
53. Encycle
54. Enel X
55. Energy Federation
56. Energy Solutions
57. EnergyHub
58. EnerVision
59. Entergy
60. EPRI
61. ERS
62. Evergy
63. Eversource
64. Extensible Energy
65. FirstEnergy
66. FleetCarma
67. FPL
68. Franklin Energy
69. GDS Associates
70. Generac
71. Georgia Power Company
72. Google (Nest)
73. Great River Energy
74. GridFabric
75. GridOptimize
76. GridPoint
77. Guidehouse
78. Hawaiian Electric Company
79. High West Energy
80. Honeywell Smart Energy
81. ICF
82. Idaho Power
83. IGS Energy
84. Illume Advising
85. Indianapolis Power & Light Co.
86. Integral Analytics
87. IPKeys Power Partners
88. Itron
89. Jackson EMC
90. Landis+Gyr
91. Leap
92. Modesto Irrigation District
93. National Grid
94. National Rural Electric Cooperative
95. NB Power
96. New Braunfels Utilities
97. New Hampshire Electric Cooperative
98. New York Power Authority
99. Nexant
100. North Carolina Electric Membership Corporation
101. NTC
102. OATI
103. Oklahoma Gas & Electric
104. Olivine
105. Oncor Electric Delivery
106. Open Systems International
107. OpenADR Alliance
108. Opinion Dynamics
109. Opus One
110. Oracle Utilities
111. Orange and Rockland Utilities
112. Pacific Gas & Electric
113. PECO, An Exelon Company
114. Pepco, an Exelon Company
115. Portland General Electric
116. Powerley
117. PPL Electric Utilities
118. Public Service Company of Oklahoma
119. Rappahannock Electric Cooperative
120. Resideo
121. RF Demand Solutions
122. Sacramento Municipal Utility District
123. Salt River Project
124. San Diego Gas & Electric
125. Santee Cooper
126. Schneider Electric
127. Scope Services
128. ScottMadden
129. Seattle City Light
130. Shifted Energy
131. Skipping Stone
132. Smart Electric Power Alliance
133. Smartenit
134. Snohomish County PUD
135. SolarEdge Technologies
136. Southern California Edison
137. Southern California Gas Company
138. Steffes
139. Sunverge Energy
140. Tantalus
141. Tennessee Municipal Electric Power Association
142. Tennessee Valley Authority
143. Tetra Tech
144. The Brattle Group
145. Threshold
146. Tierra Resource Consultants
147. TRC
148. Tri-State Generation & Transmission
149. Trickle Star
150. TROVE
151. Tucson Electric Power
152. Uplight
153. Utility Load Management Exchange
154. Vectren
155. Warranty Design
156. Waseda University
157. West Monroe Partners
158. Xcel Energy
159. Zen Ecosystems
160. Zeuthen Management Solutions



PLMA Load Management Dialogue

Calculating Cost-Effectiveness for Energy Efficiency and Demand Response Impacts



Julie Michals
E4TheFuture



Michael Brown
NV Energy and
PLMA Chair

The National Standard Practice Manual (NSPM)

Why the development of the NSPM?

Traditional cost-effectiveness tests often do not capture or address pertinent state policies.

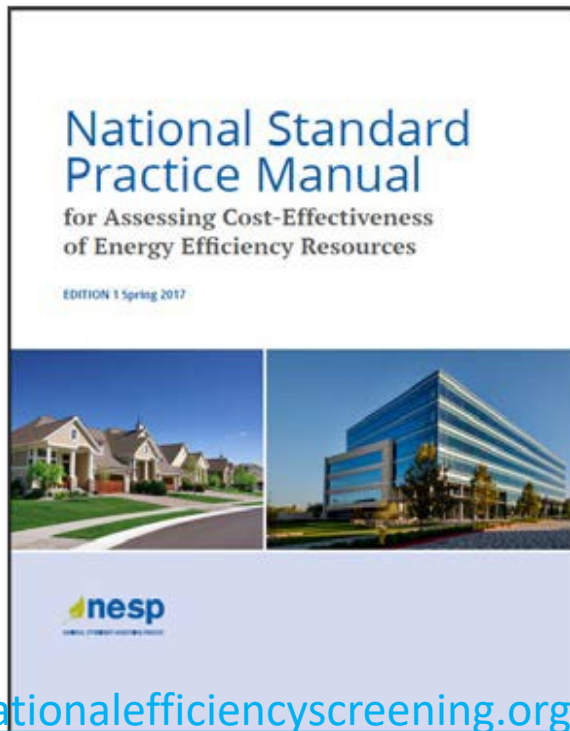
The traditional tests are often modified by states in an ad-hoc manner, without clear principles or guidelines.

Efficiency is not accurately valued in many jurisdictions.

There is often a lack of transparency on why tests are chosen and how they are applied.

About the National Efficiency Screening Project (NESP): NESP is a stakeholder organization and is open to all organizations and individuals with an interest in working collaboratively to improve cost-effectiveness screening practices.

NSPM for EE – May 2017



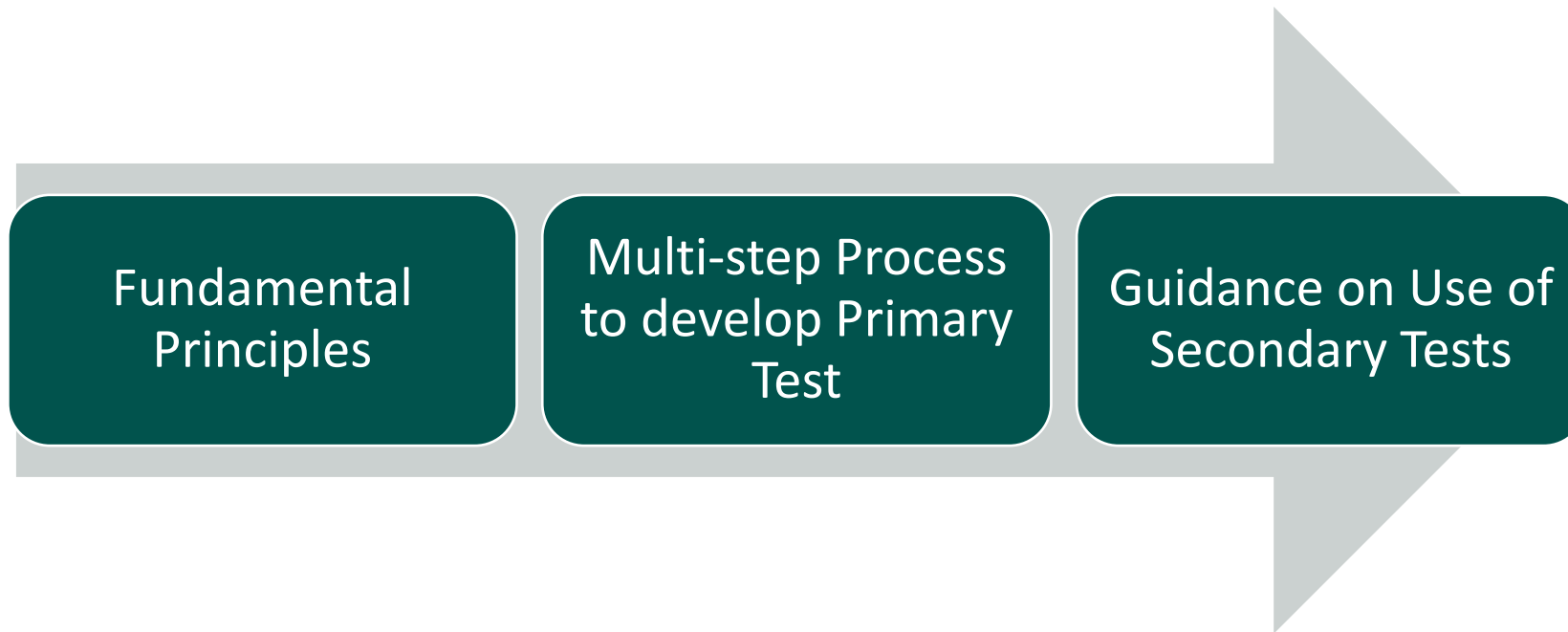
<https://nationalefficiencyscreening.org/national-standard-practice-manual/>

NSPM for DERs (Forthcoming July 2020)

Will incorporate NSPM for EE plus cover DR, DG, DS and electrification (e.g., HVAC, EVs). Scope covers:

1. Single-DER analysis: one type of DER is assessed relative to a fixed/static set of alternative resources.
2. Multiple-DER analysis: DERs are assessed and optimized relative to a fixed set of alternative resources.
3. Integrated-DER analysis: all electric resources, both distributed and utility-scale, are optimized.

NSPM Benefit-Cost Analysis Framework*



*Reflects evolution of Framework from the 2017 NSPM for EE based on current drafting of the NSPM for DERs (forthcoming July 2020)

NSPM Principles

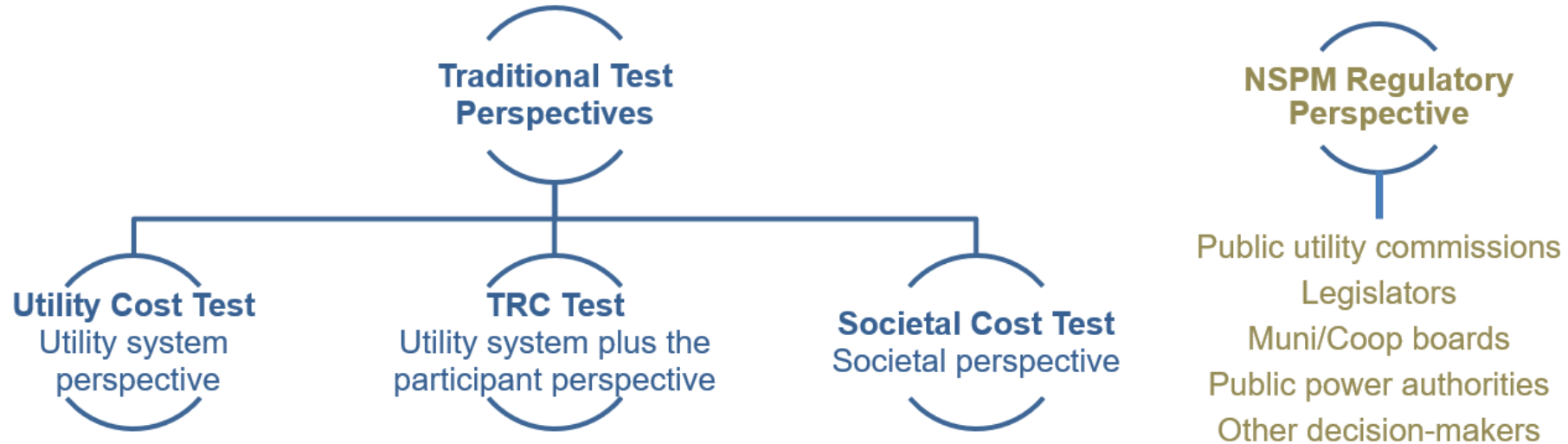
1. Recognize that EE and other DERs **are utility resources**, (and treat **consistently** for benefit-cost analyses).
2. Align primary test with **applicable policy goals**.
3. Ensure **symmetry** across costs and benefits
4. Account for all **relevant, material impacts** (based on applicable policies), even if hard to quantify.
5. Conduct a **forward-looking, long-term analysis** that captures incremental impacts of the DER investment.
6. **Avoid double-counting** through clearly defined impacts.*
7. Ensure **transparency** in presenting the analysis and the results.
8. Conduct BCA **separate from** Rate Impact Analyses as they answer different questions.*

** New principles proposed for NSPM for DERs*

Multi-Step Process for Developing a Primary Test, and Use of Secondary Tests

1. NSPM provides a multi-step process to guide development of **jurisdiction's primary test** – in alignment with the NSPM Principles
2. **Primary Test** answers question: *Which resources have benefits that exceed costs and therefore merit utility acquisition or support on behalf of their customers?*
3. **Secondary Tests** can be used to:
 - Inform decisions on how to prioritize DERs
 - Inform decisions regarding marginally cost-effective resources
 - Promote consistency across multiple DER types

Cost-Effectiveness Testing Perspectives



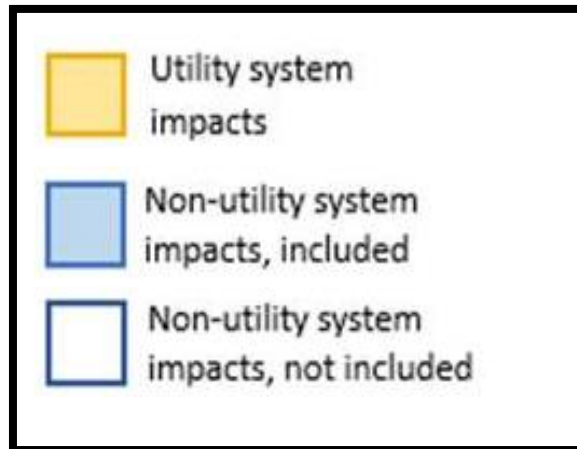
- California Standard Practice Manual – test perspectives are used to define the scope of impacts to include in the ‘traditional’ cost-effectiveness tests
- NSPM focuses on the **‘regulatory’ perspective**, which is guided by the jurisdiction’s energy and other applicable policy goals
- A jurisdiction that applies the NSPM may develop a primary test (or modify its existing test) where the new/revised test may differ from or align with any one of the traditional tests, *depending on its applicable policies*

Jurisdiction Specific Test (JST)

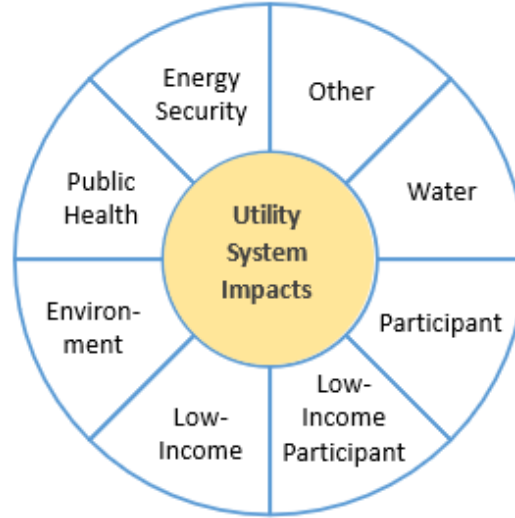
Developed Using the NSPM

A jurisdiction's primary test may align with a traditional CE test or be unique to the jurisdiction, depending on its applicable policies/goals.

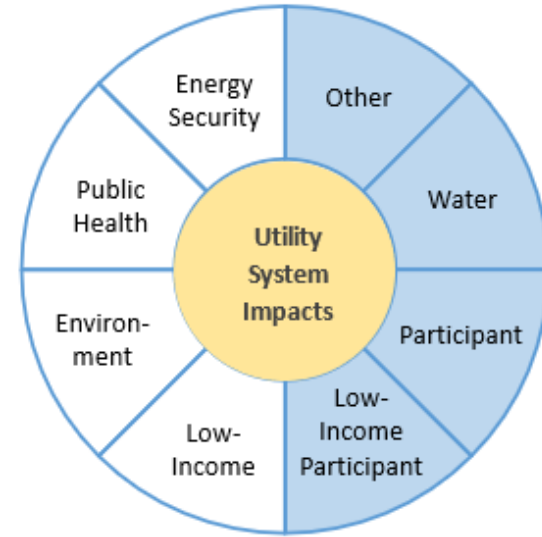
(In all cases, full range of Utility System Impacts should be included)



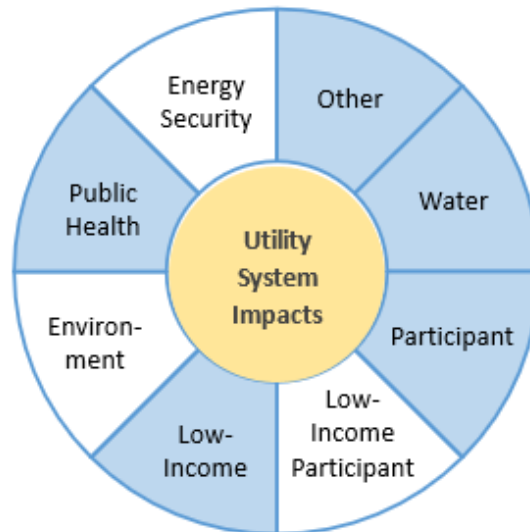
JST can = UCT/PACT



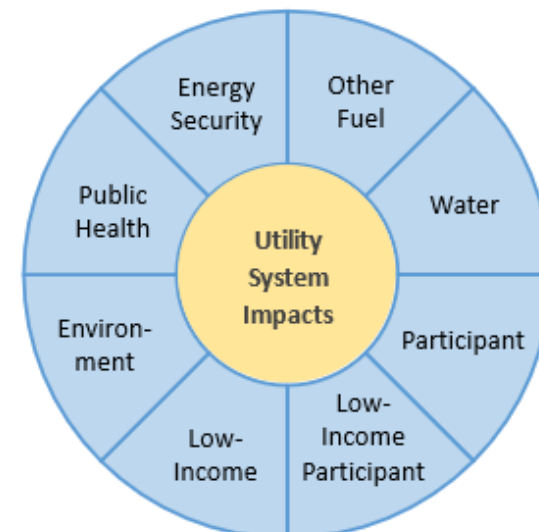
JST can = TRC Test



JST ≠ any traditional CE test



JST can = SCT



For More Info...

Stay informed with the *NSPM Quarterly* Newsletter:

<https://nationalefficiencyscreening.org/national-standard-practice-manual/news/>

**To download the NSPM for EE, Overview of NSPM for DERs,
and other Resources, visit:**

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

Questions? Email NSPM@nationalefficiencyscreening.org

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Load Management Dialogue Series: Award-Winning Initiatives



May 21 – National Grid and EnergyHub for National Grid Connected Solutions

June 4 – Arizona Public Service and EnergyHub for APS Distributed Energy Resource Aggregations

June 18 – Connected Energy (UK) Ltd for Battery Recycling in Belgium

July 9 – Austin Energy for Austin SHINES Project

July 16 – CPS Energy for Public Engagement

Aug. 13 – City of New York, Dept of Citywide Admin Services for Building Operator Engagement

