Oregon Public Utility Commission

Transportation Electrification Investment Framework UM 2165

Approaches to Benefit-Cost Analysis

Public Workshop 2

June 30, 2021

Oregon Public Utility Commission

Oregon Public Utility Commission

Operating Agreements

1. Be energy efficient: (Allow room for multiple perspectives. Leave time for everyone.)
2. Stay engaged (connected) without tripping the circuit breaker. (don't overheat)
3. Consider environmental conditions (mute when not speaking)
4. Seek understanding (listen to understand, not to respond
5. Group Norms (suggestions from participants)

Oregon Public Utility Commission

Who's Who

Hosts (OPUC)

- Sarah Hall, Resource and Programs Development Manager
- Ezell Watson, Director of Diversity, Equity and Inclusion

Facilitator

- Jessica Shipley, Senior Associate, Regulatory Assistance Project

Presenters

- Anna Kim, Senior Utility Analyst, OPUC
- John Shenot, Senior Advisor, Regulatory Assistance Project
- Tim Woolf, VP, Synapse Energy Economics

Oregon Public Utility Commission

Who's Who

Please introduce yourselves in chat.

Name, Organization

Oregon Public Utility Commission

Today's Meeting

Overarching Goal: Help increase utility TE investments in a way that more broadly balances public values and ratepayer interests

UM 2165 (2021) Commission direction for more holistic analysis of TE investments, portfolio level evaluation, synchronized with TE Plans

Today's purpose: Spark discussion for stakeholders and Staff of a wider set of benefits and costs that could be included in the analysis of utility transportation electrification investments

HB 2165 (2021) directs the PUC to consider utility cost recovery for TE infrastructure that reduces greenhouse gas emissions *and* may deliver on a broad range of benefits. HB 2165 requires utilities to collect 0.25% of revenue from retail customers for TE, and requires no less than 50 percent is spent on underserved communities.

Oregon Public Utility Commission

Today's Meeting

Section	Time
Welcome and Operating Agreements – Sarah Hall, Resource & Programs Development Manager, OPUC – Ezell Watson, Director of Diversity, Equity and Inclusion, OPUC	9:00 – 9:15 am
Purpose of Workshop and Agenda – Sarah Hall	9:15 - 9:20
Benchmarking Nationally: Benefit-Cost Analysis for Transportation Electrification – John Shenot, The Regulatory Assistance Project	9:20 – 9:40
Benefit-Cost Analysis for Oregon Energy Efficiency – Anna Kim, Sr. Utility Analyst, OPUC	9:40 – 9:45
Borrowing from Best Practices: Using National Standard Practice Manual for Distributed Energy Resources - Discussion – Tim Woolf, VP Synapse Energy Economics, former Commissioner of Massachusetts Dept. Public Utilities	9:45 - 10:50
Next Steps and Closing	10:50 - 10:55

30 June 2021

How Other States Are Evaluating Transportation Electrification Proposals

Oregon Public Utility Commission Public Workshop

Docket No. UM 2165: Transportation Electrification Investment Framework

John Shenot
Senior Associate
The Regulatory Assistance Project (RAP)®

Fort Collins, Colorado
United States

+1 802 498 0728
jshenot@raponline.org
raponline.org

Proceedings Where Evaluation Questions Arise

- Utility investment in EV charging equipment
- Grid investments to accommodate incremental load from EVs
- Rate cases/rate design – e.g., EV charging tariff
- Performance-based regulation (PBR) investigation

Common Evaluation Approaches

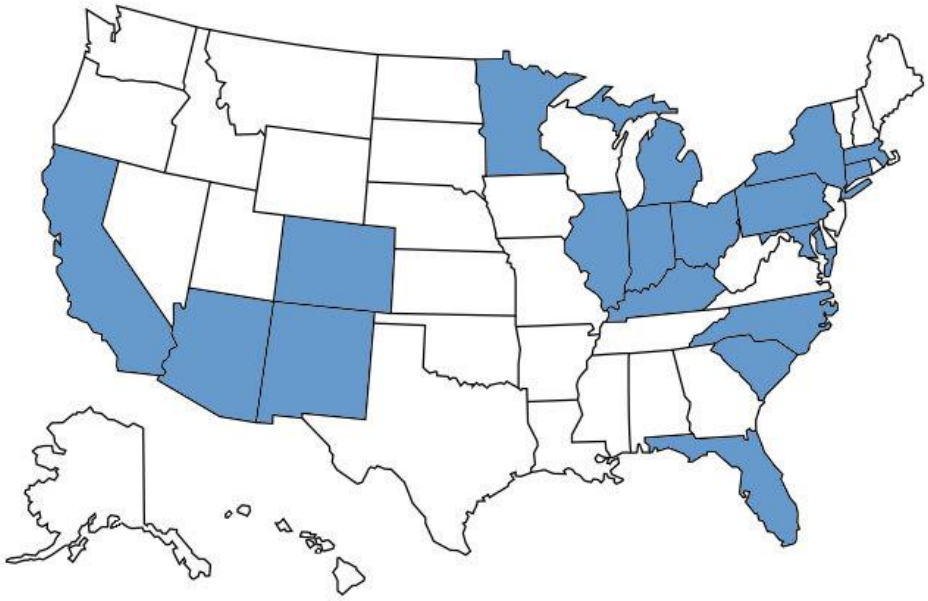
- Benefit-Cost Analysis (BCA)
  - For programs or specific proposed electrification investments
  - Key Challenge: designing the cost test
- Performance vs. Target
  - For compliance with statute/regulation/order or for PBR
  - Key Challenge: for PBR, designing metrics & targets
- Least Cost/Best Fit
  - For planning investments to ensure reliability at least cost
  - Key Challenge: treating all resources equally
- Prudence

Examples

State	Method	Test/Standard	Consistent with Other DERs?
MD	BCA	JST in development	No?
MN	BCA	SCT, UCT, RIM (no primary test)	Mostly
NY	BCA	SCT (primary)	Yes
RI	BCA	JST (primary)	Yes
WA	BCA	SCT (primary)	No
CA	Performance vs Target	Minimize costs and maximize benefits	No
CO	Performance vs Target	Rate Impact <0.5%	No
VA	Prudence	Public Interest	No

External BCA Analyses by MJB&A, E3, and ICF

- Impacts of achieving a statewide target or assumed level of EV deployment
- Cost tests used:
  - PCT – net benefits to EV owners
  - SCT – net benefits to society
  - RIM – impact on electric utility rates



About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org

John Shenot
Senior Associate
The Regulatory Assistance Project (RAP)®

Fort Collins, Colorado
United States

+1 802 498 0728
jshenot@raponline.org
raponline.org

Oregon Public Utility Commission

Costs and Benefits for Energy Efficiency

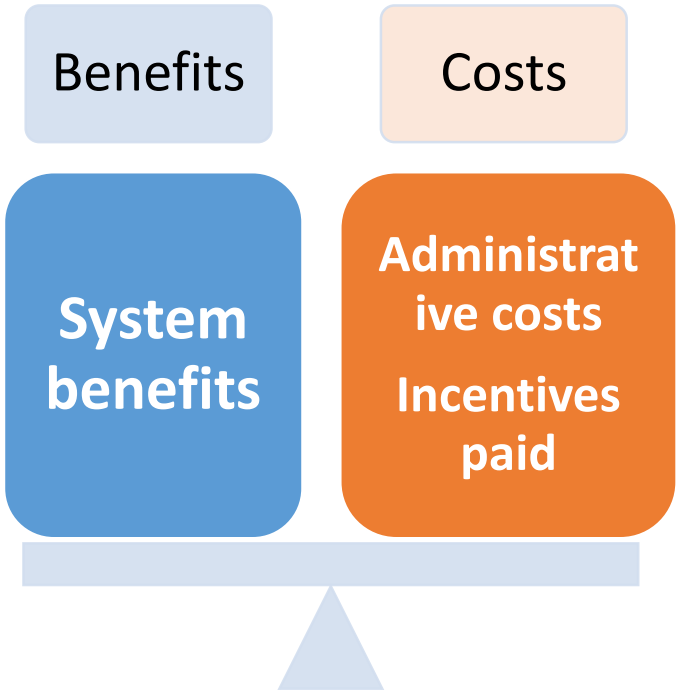
Anna Kim, Sr. Utility Analyst, OPUC

Oregon Public Utility Commission

Cost-Effectiveness for Energy Efficiency

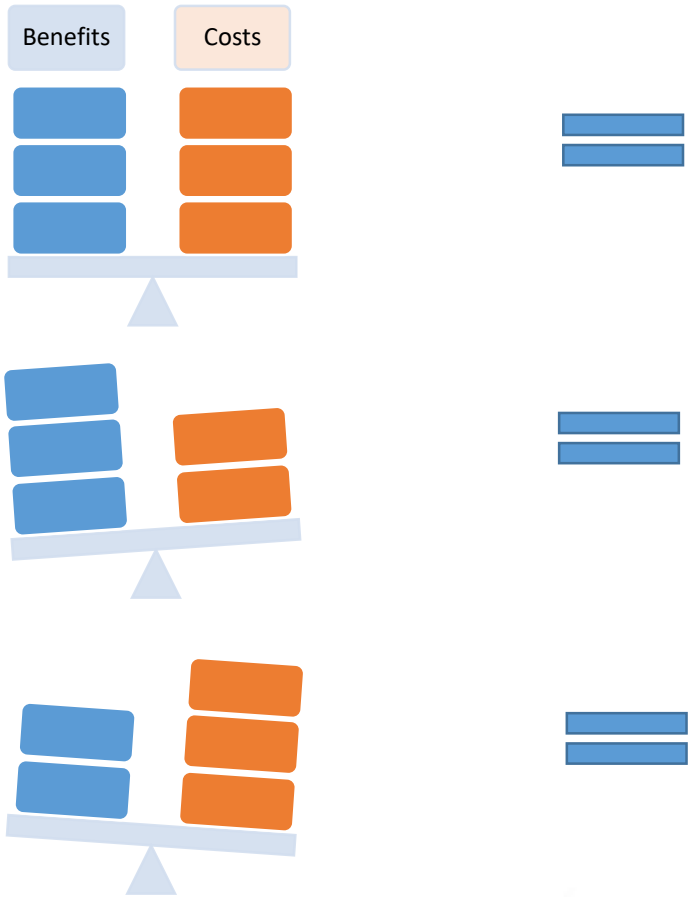
- The value of quantifying costs and benefits is the ability to compare options.
- For energy efficiency, the comparison is against the alternative resource that was not purchased.
- Utilities shall plan for and pursue all available cost-effective energy efficiency.
- OPUC uses two tests to determine what is cost-effective.
  - Does the investment make sense for the system as a whole? (UCT)
  - Does the investment also make sense to the individual? (TRC)

Utility Cost Test (UCT)



Ratio of system costs and system benefits

Utility Cost Test (UCT)



System costs and benefits are equal

More system benefits than buying generating resources
Non-participant bills decrease overall

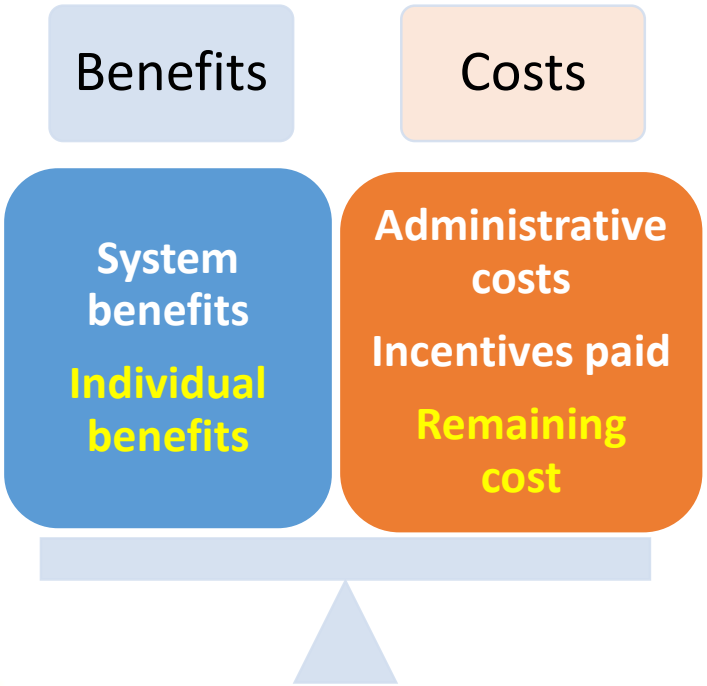
Not better than buying generating resources
Non-participant bills increase overall

Oregon Public Utility Commission

Participants vs. Non-Participants

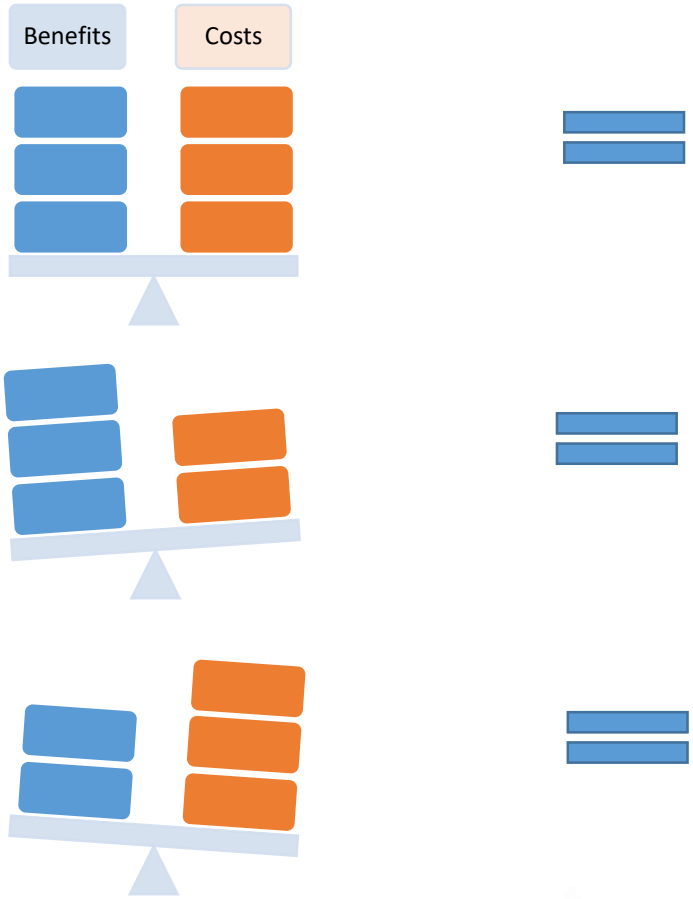
	Passes UCT	Fails UCT
Participant	Receive a discount on efficient equipment Immediate bill savings from new equipment Long-term rates decrease	Receive a discount on efficient equipment Immediate bill savings from new equipment Long-term rates increase
Non-Participant	No immediate benefits Long-term rates decrease	No immediate benefits **Long-term rates increase**

Total Resource Cost Test (TRC)



Ratio of participant's costs and participant's benefits

Total Resource Cost Test (TRC)



Participant's costs and benefits are equal

Participant gains more benefits than costs

Not a good investment for participant

Recent Discussions

UM 2114 workshop discussed strategies to Increase availability of Low-Cost and No-Cost Measures

- Co-funding
- Measure exceptions and pilots
- Non-Energy Benefits (NEBs)
  - We welcome suggestions for additional costs or benefits to pursue

Recent Developments

- Preliminary estimates for reduced arrearages as a system (UCT) benefit
- Manufactured homes replacement development from pilot to program
- Additional co-funding opportunities

National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources

Overview and Application to Transportation Electrification in Oregon

Public Workshop on
Transportation Electrification Investment Framework

Tim Woolf
Synapse Energy Economics
June 24, 2021

Overview

1. Overview of NSPM for DERs
   - With an emphasis on how to develop a primary test

2. Application to Transportation Electrification in Oregon
   - Oregon TE policy directives
   - Develop a primary test
   - Consider secondary tests
   - Account for rate impacts
   - Consider equity and vulnerable customers
   - Prioritize GHG abatement options

Overview of NSPM for DERs

Why an NSPM for DERs?

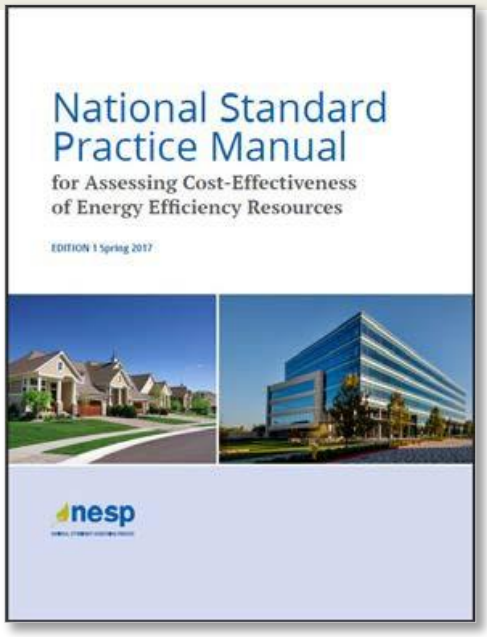
- Traditional cost-effectiveness tests often do not address pertinent jurisdictional/state policies.
- Traditional tests are often modified by states in an ad-hoc manner, without clear principles or guidelines.
- DERs are treated inconsistently in many BCAs or valuations (i.e., in context of programs, procurement, pricing mechanisms, distribution planning, IRP, etc.)
- DERs are often not accurately valued.
- There is a lack of transparency on why tests are chosen and how they are applied.

NSPM for DERs - Background

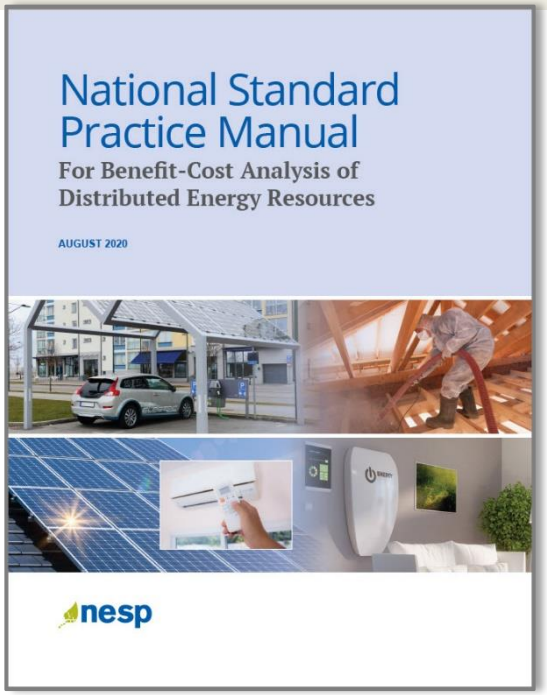
- Managed and funded by E4TheFuture
- Multiple co-authors
  - Extensive understanding of regulatory economics
  - Specialized expertise with different DERs
- Advisory Group
  - 45+ individuals
  - Diversity of perspectives
  - Input on Manual outline and drafts
- NSPM for DERs builds on NSPM for EE (2017)

NSPM is a 'living document' and will be updated and improved over time, adding case studies, addressing gaps, etc. contingent upon funding.

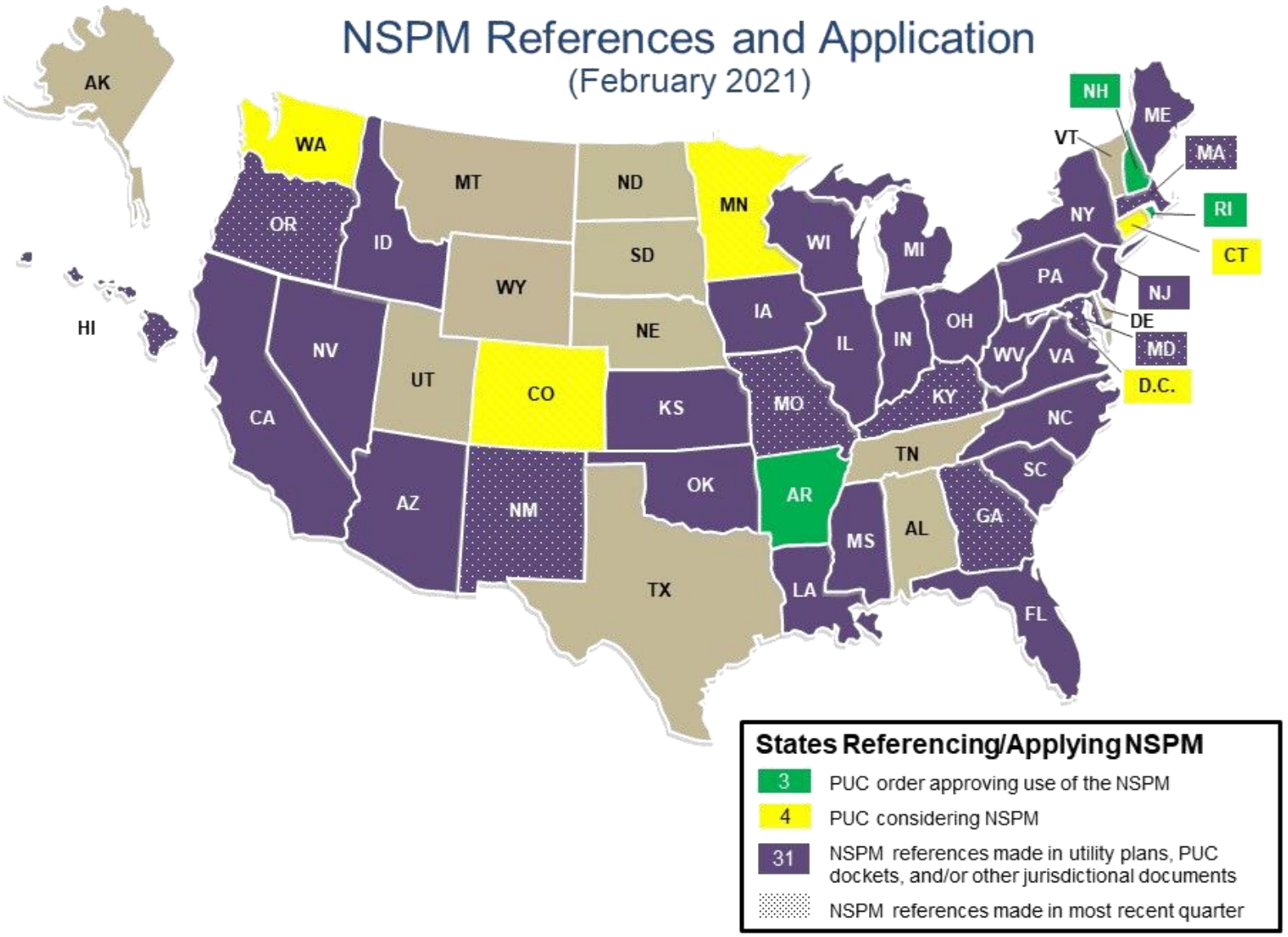
NSPM for EE
May 2017



NSPM for DERs
August 2020



The NSPM for DERs incorporates and expands on the NSPM for EE.


NSPM References and Application
(February 2021)
AK
HI
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
MO
AR
LA
WI
IL
MS
MI
IN
KY
TN
AL
OH
WV
GA
FL
SC
NC
VA
PA
NY
MD
DE
NJ
D.C.
CT
RI
MA
VT
NH
ME
States Referencing/Applying NSPM
3
PUC order approving use of the NSPM
4
PUC considering NSPM
31
NSPM references made in utility plans, PUC dockets, and/or other jurisdictional documents
NSPM references made in most recent quarter

NSPM for DERs - Project Team

Project Management

- Julie Michals, E4TheFuture (Project Manager)

Report Authors

- Tim Woolf, Synapse Energy Economics (Lead Author)
- Chris Neme, Energy Futures Group
- Mike Alter, ICF
- Steve Fine, ICF
- Karl Rábago, Pace Energy and Climate Center
- Steve Schiller, Schiller Consulting
- Kate Strickland, Smart Electric Power Alliance
- Brenda Chew, Smart Electric Power Alliance

NSPM for DERs – Audience and Uses

Audience: All entities overseeing/guiding DER decision (PUCs, SEOs, utilities, DER reps, evaluators, consumer advocates, and others)

Purpose: Guidance for valuing DER opportunities to inform policies and strategies that support state goals/objectives, such as:

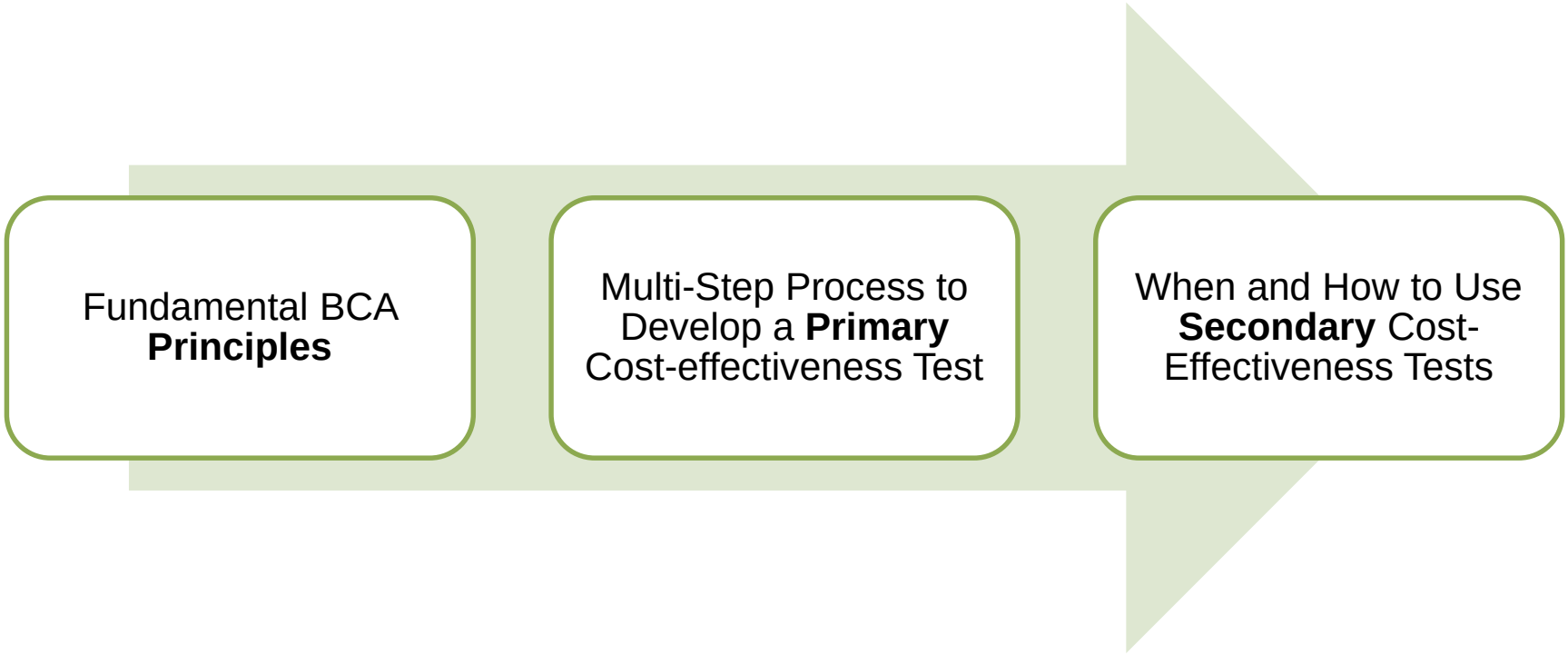
- expanding EE/DR plans, strategies, and programs to a broader set of DERs;
- evaluating and planning for non-wires/pipes solutions;
- incorporating DERs into distribution system planning;
- achieving electrification goals, including EV goals;
- achieving environmental and carbon emission objectives.

Applies to:

- **Programs**: initiatives and policies implemented by utilities or other entities to encourage adoption of DERs
- **Procurements:** initiatives to procure DERs, whether built by a utility or procured from third-party vendors, e.g., competitive procurement
- **Pricing Mechanisms**: such as those designed to compensate DERs for their value to grid or to achieve other policy objectives (e.g., time-of-use rates, peak time rebates, critical peak pricing)

NSPM for DERs - Contents

NSPM BCA Framework



NSPM BCA Principles

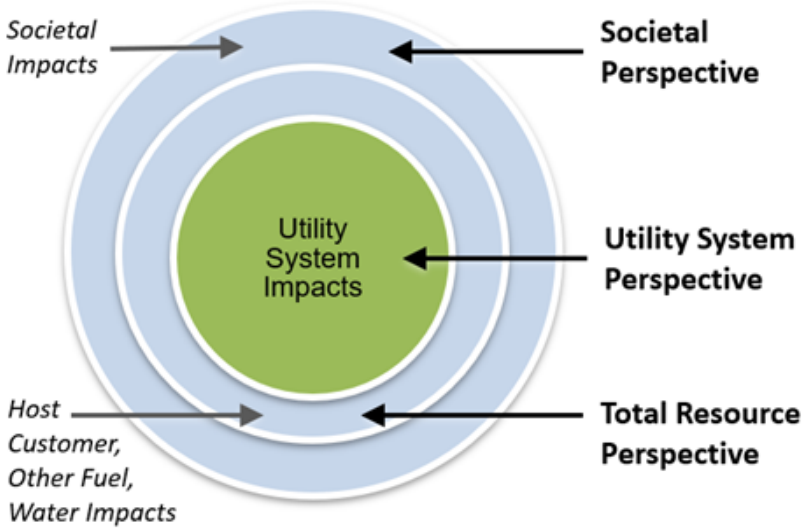
1. Recognize that DERs can provide energy/power system needs and should be compared with other energy resources and treated consistently for BCA.
2. Align primary test with jurisdiction's applicable policy goals.
3. Ensure symmetry across costs and benefits.
4. Account for all relevant, material impacts (based on applicable policies), even if hard to quantify.
5. Conduct a forward-looking, long-term analysis that captures incremental impacts of DER investments.
6. Avoid double-counting through clearly defined impacts.
7. Ensure transparency in presenting the benefit-cost analysis and results.
8. Conduct BCA separate from Rate Impact Analyses because they answer different questions.

Principles are not mutually exclusive.

Cost-Effectiveness Perspectives

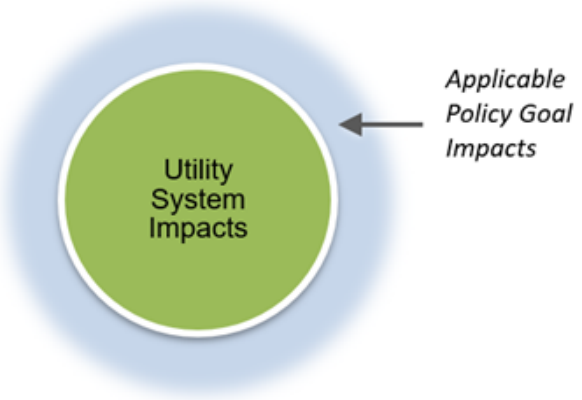
NSPM for DERs

Traditional Perspectives



- Three perspectives define the scope of impacts to include in the most common traditional cost-effectiveness tests.

Regulatory Perspective



- Perspective of public utility commissions, legislators, muni/coop boards, public power authorities, and other relevant decision-makers.
- Accounts for utility system plus impacts relevant to a jurisdiction's applicable policy goals (which may or may not include host customer impacts).
- Can align with one of the traditional test perspectives, but not necessarily.

Defining Your Primary BCA Test

What question does a Primary Test answer?

Which resources have benefits that exceed costs and therefore merit utility acquisition or support on behalf of their customers?

Defining Your Primary Cost-Effectiveness Test

STEP 1 **Articulate Applicable Policy Goals**

Articulate the jurisdiction's applicable policy goals related to DERs.

STEP 2 **Include All Utility System Impacts**

Identify and include the full range of utility system impacts in the primary test, and all BCA tests.

STEP 3 **Decide Which Non-Utility System Impacts to Include**

Identify those non-utility system impacts to include in the primary test based on applicable policy goals identified in Step 1:

- Determine whether to include host customer impacts, low-income impacts, other fuel and water impacts, and/or societal impacts.

STEP 4 **Ensure that Benefits and Costs are Properly Addressed**

Ensure that the impacts identified in Steps 2 and 3 are properly addressed, where:

- Benefits and costs are treated symmetrically;
- Relevant and material impacts are included, even if hard to quantify;
- Benefits and costs are not double-counted; and
- Benefits and costs are treated consistently across DER types

STEP 5 **Establish Comprehensive, Transparent Documentation**

Establish comprehensive, transparent documentation and reporting, whereby:

- The process used to determine the primary test is fully documented; and
- Reporting requirements and/or use of templates for presenting assumptions and results are developed.

STEPS 1-3: Articulate Policy Goals and Identify Relevant Impacts

Example Goals: as articulated in statute, regulations, decisions, etc.

Common Overarching Goals: Provide safe, reliable, reasonably priced electricity and gas services; support fair and equitable economic returns for utilities; promote customer equity; protect/reduce energy burden for low-income and vulnerable customers.

Resource Goals: Reduce electricity and gas system costs; develop least-cost energy resources; improve system reliability and resiliency; reduce system risk; promote resource diversity; increase energy independence; reduce price volatility; provide demand flexibility.

Other Applicable Goals: Ensure stable energy markets; reduce environmental impact of energy consumption; promote jobs and local economic development; improve health associated with reduced air emissions and better indoor air quality.

STEP 4:
Ensure that Impacts are Properly Addressed

Ensure that the impacts identified in Steps 2 and 3 are properly addressed, where:

- Benefits and costs are treated symmetrically;
- Relevant and material impacts are included, even if hard to quantify;
- Benefits and costs are not double-counted; and
- Benefits and costs are treated consistently across DER types

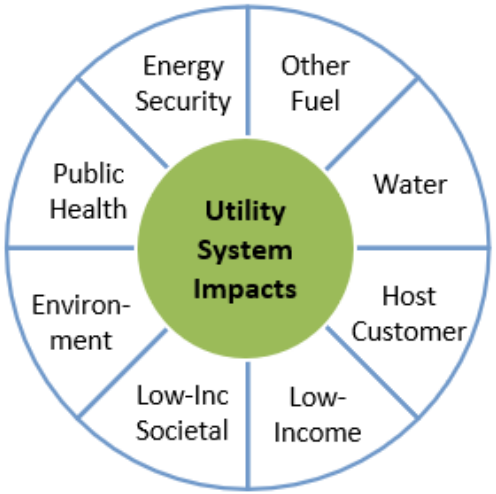
Jurisdiction Specific Test (JST) Compared with Traditional Tests

Test	Perspective	Key Question Answered	Categories of Benefits and Costs Included
Jurisdiction-Specific Test	Regulators or decision-makers	Will the cost of meeting utility system needs, while achieving applicable policy goals, be reduced?	Includes the utility system impacts, and those impacts associated with achieving applicable policy goals
Utility Cost Test*	The utility system	Will utility system costs be reduced?	Includes the utility system impacts
Total Resource Cost Test	The utility system plus host customers	Will utility system costs and host customers' costs collectively be reduced?	Includes the utility system impacts, and host customer impacts
Societal Cost	Society as a whole	Will total costs to society be reduced?	Includes the utility system impacts, host customer impacts, and societal impacts such as environmental and economic development impacts

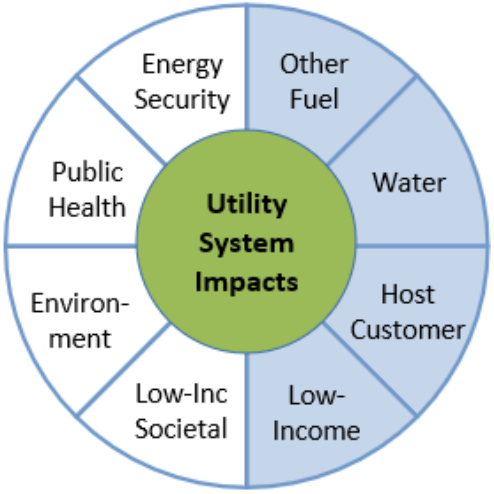
Primary Test = Jurisdiction Specific Test (JST)

Hypothetical JSTs as compared to traditional tests

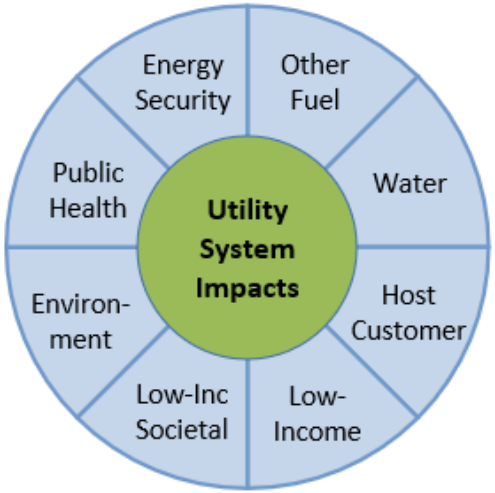
JST 1 = UCT/PACT



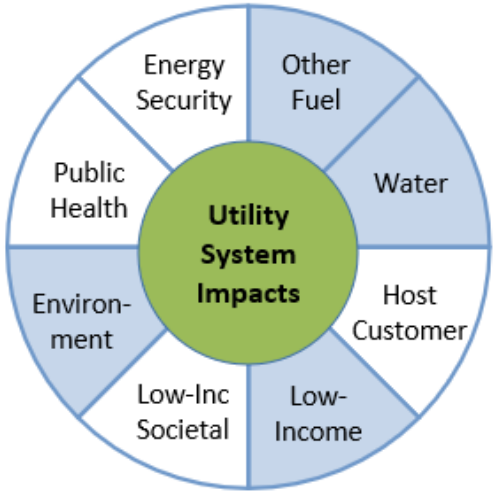
JST 2 = TRC Test



JST 3 = SCT



JST 4 ≠ traditional CE test *



UCT = Utility Cost Test (or PACT = Program Admin Cost Test)
TRC = Total Resource Cost Test
SCT = Societal Cost Test

All utility system impacts included

Non-utility system impacts included

Non-utility system impacts *not* included

*JST 4 includes a different set of non-utility system impacts based on *its applicable policies.*

JSTs may or may not align with traditional tests.

Use of Secondary Tests

NSPM provides guidance on **when and how to use secondary tests.**

While a jurisdiction's primary test informs whether to fund or otherwise support DERs, secondary tests can help to:

- inform decisions on how to prioritize DERs;
- inform decisions regarding marginally non- and/or cost-effective DERs; and
- encourage consistency across DER types.

DER-Specific Chapters

- Energy Efficiency Resources
- Demand Response Resources
- Distributed Generation Resources
- Distributed Storage Resources
- Electrification
  - Including EV and EV to grid technologies

Each chapter covers:

- Benefits and costs of the specific resource
- Key factors that affect impacts
- Common challenges in estimating benefits and costs

The Rate Impact Measure (RIM) Test

The RIM test is an inadequate and misleading way to account for rate impacts:

- The RIM test differs from the other tests in that it includes lost revenues.
  - But the rate impacts created by lost revenues are driven by historical, i.e., “sunk” costs. These should not be included in a BCA.
- The RIM test does not provide meaningful information to understand rate impacts:
  - If the benefit-cost ratio is less than one, what does this mean?
  - If the RIM net benefits are negative, what does this mean?
    - Some in interpret this as increased costs, but costs are not increased.
- The RIM test combines the two analyses (BCA and rate impact analysis) and therefore makes it difficult to understand either issue.

Addressing Rate Impacts

NSPM for DERs: Benefit-cost analyses should be conducted separately from rate impact analyses.

They answer two different questions. Combining them into one test (the RIM Test) makes it difficult to answer either question.

	Benefit-Cost Analysis	Rate Impact Analysis
Purpose	To identify which EE resources utilities should invest in or otherwise support on behalf of their customers.	To identify how EE resources will affect rates, in order to assess customer equity concerns.
Questions Answered	What are the future costs and benefits of DERs? Will costs increase or decrease, and by how much?	What are the rate impacts of EE programs? Will customer rates increase or decrease, and by how much?

Differences Between BCA and Rate Impact Analyses

	Benefit-Cost Analysis	Rate Impact Analysis
Utility system impacts	include	include
Host customer impacts	depends on policy goals	x
Social impacts	depends on policy goals	x
Lost revenues	x	include
Increased revenues	x	include
Results Presented	• Cumulative costs (PV$) • Cumulative benefits (PV$) • Cumulative net benefits (PV$) • Benefit-cost ratios	• Rate impacts (c/kWh, %) • Bill impacts ($/month, %) • Participation rates (#, %)

Very different information

Consider Both BCA and Rate Impact Analysis

Sometimes it is necessary to make tradeoffs between reduced costs and higher rates.

Illustrative example: Energy Efficiency Portfolio

Benefit-Cost Analysis	Net Benefits (mil PV$)	65
	Benefit-Cost Ratio	2.1
Rate Impact Analysis	Long-Term Rate Impacts (%)	0.8
	Bill Impacts Participants (%)	-4%
	Long-Term Participation (%)	68

significant net benefits...

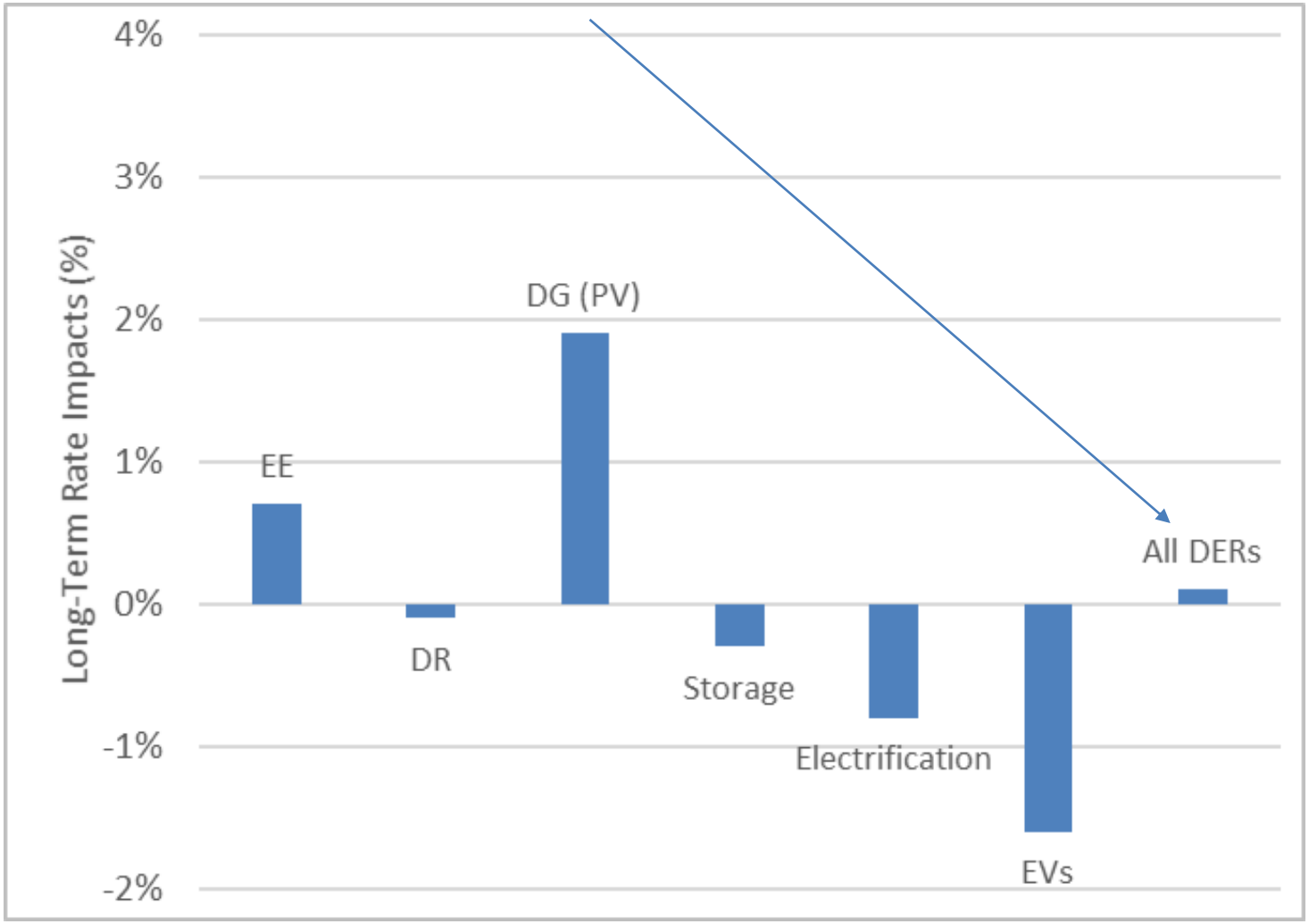
very cost-effective...

but rates increase...

but many customers participate and see lower bills.

Rate Impacts by DER Types

Rate impact analyses should account for combined effect of all DER types



Application to Transportation Electrification in Oregon

TE Policy Directives in Oregon

- Statutory: ORS 757.357(3)
  - Transportation electrification is necessary to reduce petroleum use, achieve optimum levels of energy efficiency and carbon reduction, meet federal and state air quality standards, meet this state's GHG reduction goals described in ORS 468A.205 (Policy) and improve the public health and safety;

- Executive Order 20-04
  - Very clear directives for state agencies, including the PUC, to take actions to reduce GHG emissions.
  - Very clear directives to advance transportation electrification.
  - Prioritize actions to reduce GHG emissions cost-effectively.

- HB 2165
  - Requires utilities to spend on TE infrastructure, 50% on underserved communities.
  - Provides broad authority for PUC to approve utility investments delivering GHG reductions and varied benefits.

- Regulatory:
  - Commission support of consideration of social and environmental benefits through UM 2165.

Impacts to Include in Primary Oregon BCA Test

Type of Impact	Impact	Include?	Rationale
Utility System	Energy	✓	Include all utility system impacts
	Generation Capacity	✓	Include all utility system impacts
	Trans. & Dist.	✓	Include all utility system impacts
	Program Costs	✓	Include all utility system impacts
Host Customer	Incremental costs		Depends on policy goals
	Bill impacts	no	Rate/bill impacts should be separate from BCA
Societal	Other fuels		e.g., Legislation (ORS 757.357(3))
	GHG emissions		e.g., Legislation (ORS 757.357(3))
	Other environmental		e.g., Legislation (ORS 757.357(3))
	Public health		e.g., Legislation (ORS 757.357(3))
	Macroeconomic		Depends on policy goals
	Energy security		Depends on policy goals
	Equity		e.g., Legislation (ORS 757.357(3))

Other Transportation Electrification BCA Tests

- The Utility Cost Test can be useful as a check to see how the TE initiative is likely to affect utility customers in general.
  - This is especially useful in conjunction with the rate, bill, and participation analysis (see below).

- The Participant Cost Test can be useful in designing TE initiatives
  - It shows how likely customers are to participate in TE initiatives
  - It should not be used for screening initiatives, just for designing them.

Impacts to Include in Oregon BCA Tests

Type of Impact	Impact	Primary (Oregon Test)	Secondary (Utility Test)	Program Design (Participant Test)
Utility System	Energy	✓	✓	x
	Generation Capacity	✓	✓	x
	Trans. & Dist.	✓	✓	x
	Program Costs	✓	✓	x
Host Customer	Incremental costs	**?**	x	✓
	Bill impacts	no	x	✓
Societal	Other fuels	✓	x	✓
	GHG emissions	✓	x	x
	Other environmental	✓	x	x
	Public health	✓	x	x
	Macroeconomic	**?**	x	x
	Energy security	**?**	x	x
	Equity	✓	x	x

Consider Both BCA and Rate Impact Analysis

With TE it might be necessary to make tradeoffs between increased costs versus reduced rates.

Illustrative example: TE Initiative

BCA: Societal Test	Net Benefits (mil PV$)	110
	Benefit-Cost Ratio	1.9
BCA: Utility Test	Net Benefits (mil PV$)	-60
	Benefit-Cost Ratio	0.0
Rate Impact Analysis	Long-Term Rate Impacts (%)	-0.5
	Bill Impacts Participants (%)	-12%
	Long-Term Participation (%)	46

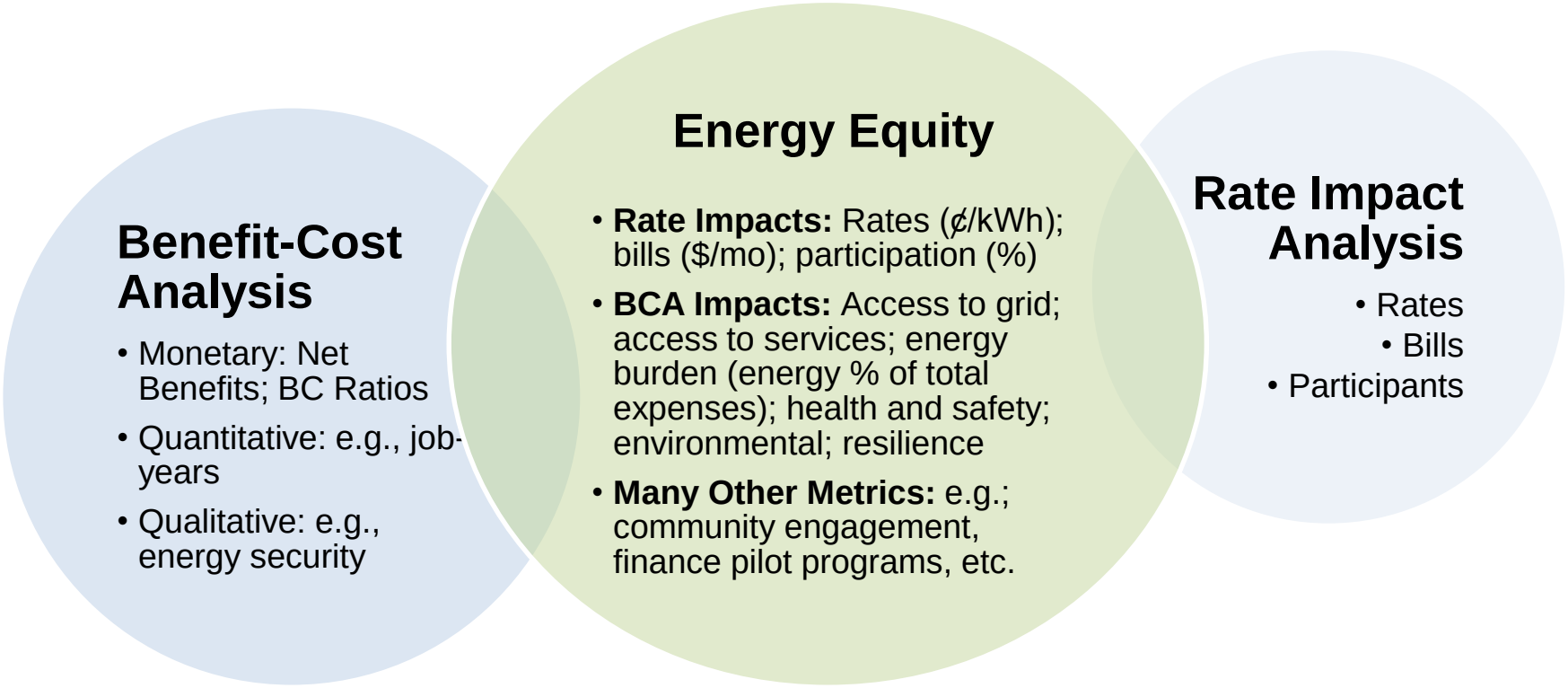
Societal Test: Very cost-effective

Utility Test: Not cost-effective

All customers see reduced rates

Energy Equity and Rate Impact Analysis

Energy equity analysis addresses equity in all aspects of the energy system, including its benefits, burdens, costs, and participation. Equivalent to *energy justice*.



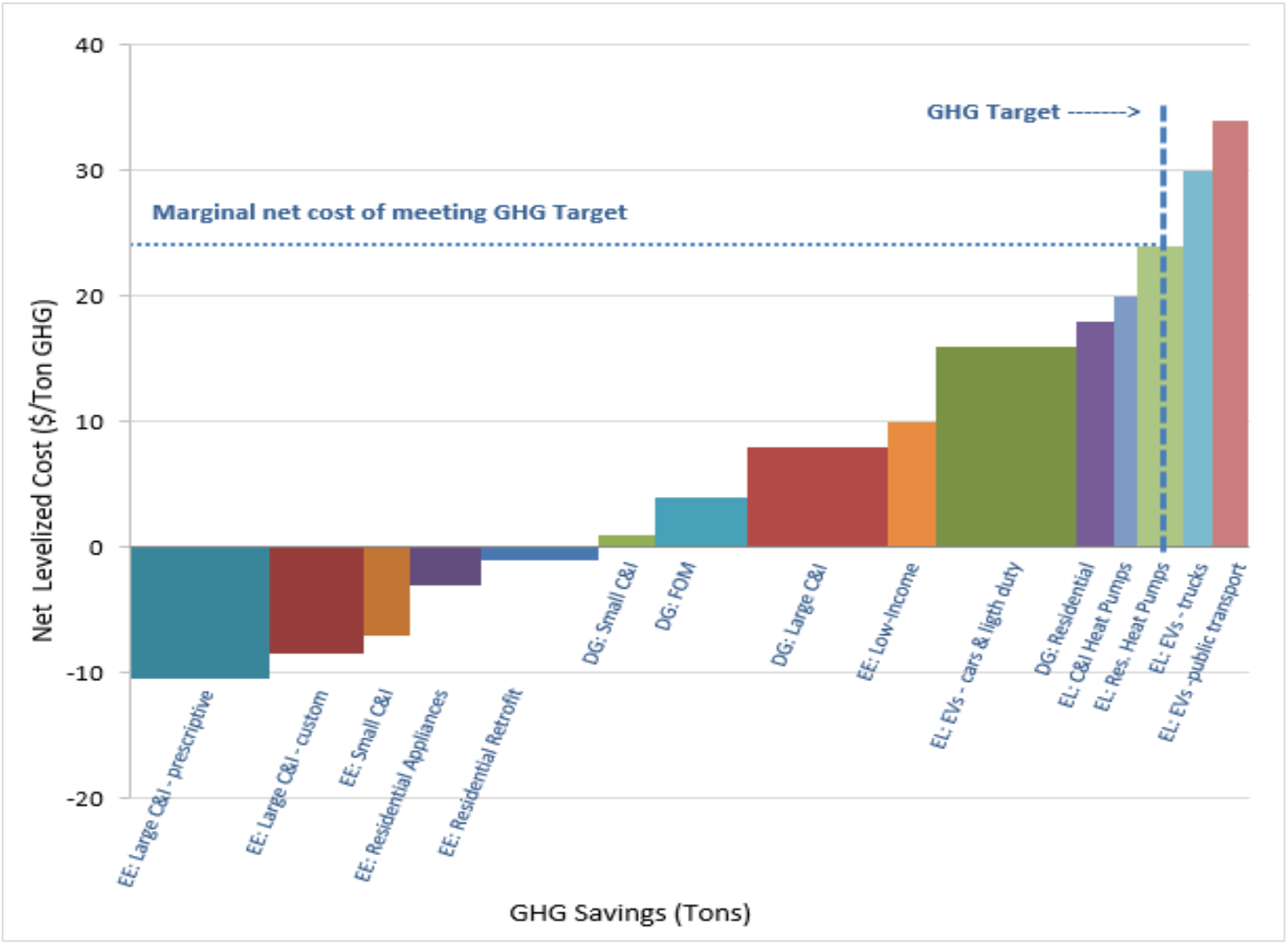
Prioritize actions to reduce GHG emissions cost-effectively

- Required by Executive Order 20-04
- TE should be compared with other GHG abatement options.
- TE should be compared using consistent BCA tests.
- But this comparison might not be enough to tell the full story.

Illustrative Example:
DERs compared using the same primary BCA test

	EE	DR	DG	Storage	Electrification	EVs
Net benefits (PV$)	110	45	98	37	67	87
BCR	2.4	1.8	2.8	1.4	1.5	2.0

Prioritizing across GHG abatement options



Tim Woolf

Senior Vice-President

Synapse Energy Economics

www.synapse-energy.com

Check out NESP Events for BCA/NSPM topical webinars

Stay informed with the NESP Quarterly Newsletter

Oregon Public Utility Commission

Next Steps - Share Written Comments

1. How should the Commission use benefit/cost frameworks to evaluate TE?

2. Have existing benefit/cost frameworks used by the Commission overlooked any costs and benefits that are reasonably associated with transportation electrification? Please explain.

3. As Staff plans additional workshops this summer, what additional topics would you recommend, and why?

Next Steps - Share Written Comments

Please submit all comments on workshop topics by July 14.

- By email – puc.publiccomments@state.or.us

Include "COMMENTS – DOCKET NO. UM 2165" in subject line

- By Mail – Oregon Public Utility Commission, Attn: UM 2005 Draft Guidelines Public Comment, PO Box 1088, Salem, OR 97308-1088
- By Phone – 503-378-6600 or 800-522-2404 or TTY 800-648-3458, weekdays from 8 a.m. - 5 p.m. Pacific

Docket Schedule and Next Steps

Join the service list for UM 2165. Request by email:

puc.hearings@puc.oregon.gov

Please join us for the next workshops

Wednesday, July 28, 2:00 – 4:00 PM – Portfolio investment analysis, with CUB and utility updates

Monday, August 9, 9:00 – 11:00 AM – State-wide program priorities

Friday, August 27, 2:00 – 4:00 PM

Wednesday, September 15, 9:00 – 11:00 AM

Wednesday, September 29, 9:00 – 11:00 AM

Wednesday, October 20, 9:00 – 11:00 AM

October – Draft deliverable for public review

December – Staff presentation to Commission

Oregon Public Utility Commission

Thank You!

Staff Contacts

Eric.Shierman@puc.oregon.gov (971) 239-3916

Sarah.L.Hall@puc.oregon.gov (971) 273-9512

Oregon Public Utility Commission

Additional Reference Slides

Oregon Public Utility Commission

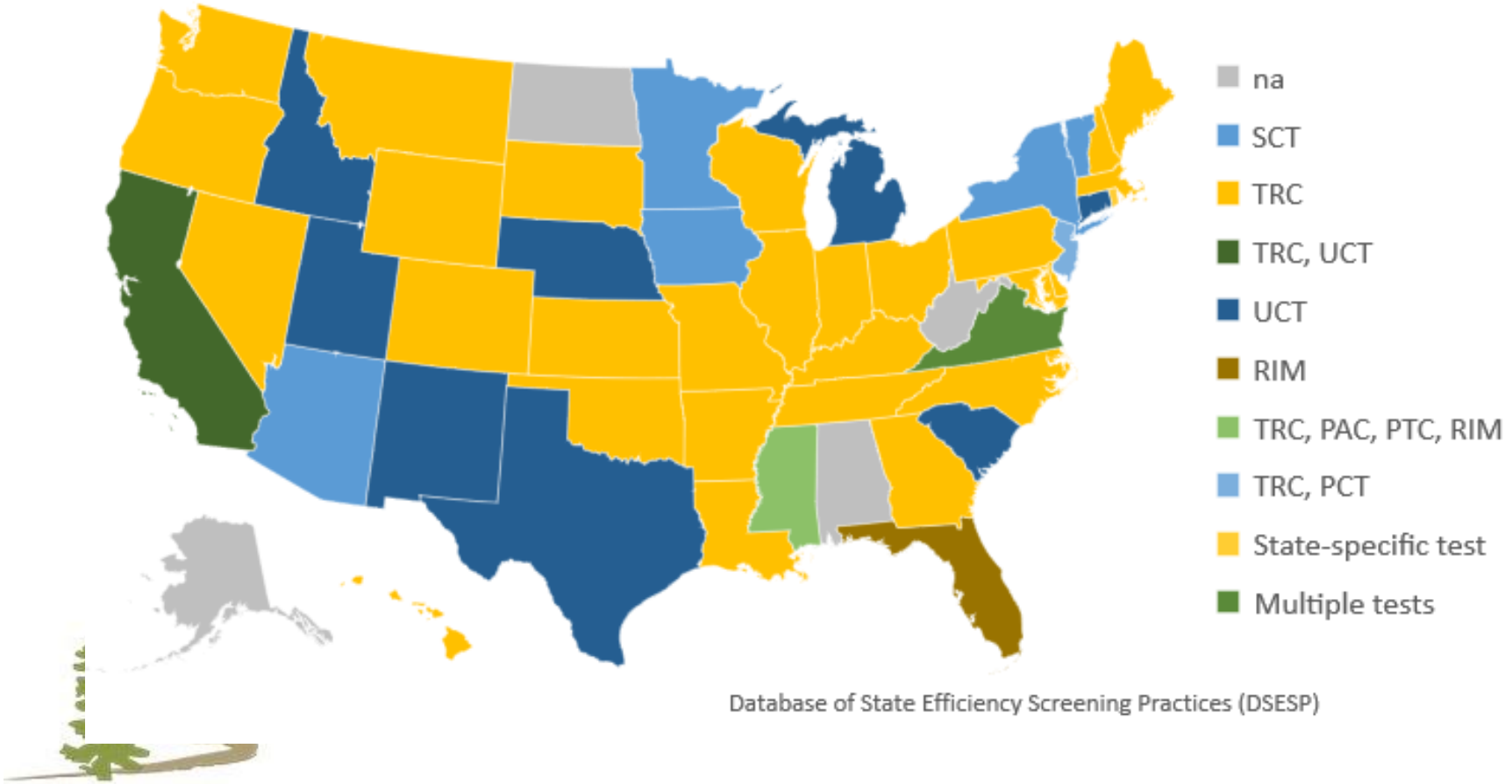
Traditional BCA Tests

Test	Perspective	Key Question Answered	Impacts Accounted For
Utility Cost Test (UCT)	The utility system	Will utility system costs be reduced?	Includes the benefits and costs experienced by the utility system
Total Resource Cost (TRC)	The utility system plus participating customers	Will utility system costs plus program participants' costs be reduced?	Includes the benefits and costs experienced by the utility system, plus benefits and costs to program participants
Societal Cost Test (SCT)	Society as a whole	Will total costs to society be reduced?	Includes the benefits and costs experienced by society as a whole
Participant Cost Test (PCT)	Customers who participate in a program	Will program participants' costs be reduced?	Includes the benefits and costs experienced by the customers who participate in the program
Rate Impact Measure (RIM)	Impacts on rates paid by customers	Will utility rates be reduced?	Includes the benefits and costs that will affect utility rates, including utility system benefits and costs plus lost revenues

Source: National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources, August 2020.

Oregon Public Utility Commission

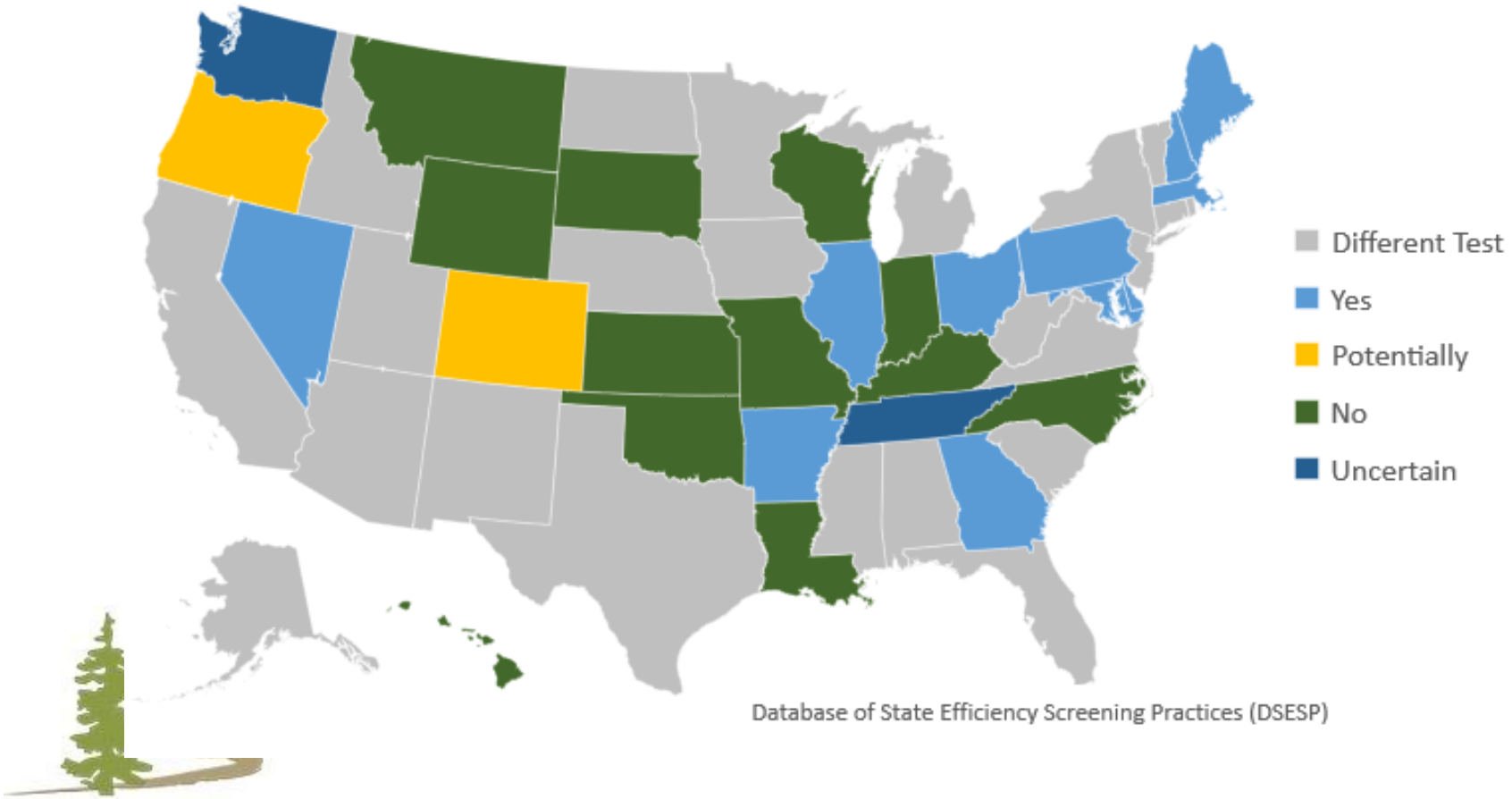
Primary Test for EE Evaluation



Database of State Efficiency Screening Practices (DSESP)

Oregon Public Utility Commission

In States that use TRC, does test include "other fuel impacts"?



Database of State Efficiency Screening Practices (DSESP)