



**Developing a Commission jurisdictional specific  
cost-effectiveness test for distributed energy  
resources incorporating CETA**

**Workshop #1**

**Docket UE-210824**

**Tuesday, May 10, 2022, at 10:30 a.m.**

# Virtual Workshop Reminders



- This a public workshop. The presentation will be recorded and posted.
- **MUTE your microphone when you're not speaking**
- Use chat to ask questions during the presentation
- Use chat or raise hand to speak during Q & A



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

## **Washington UTC Workshops**

Jennifer Snyder, WA Utilities & Transportation Commission (UTC)

Tim Woolf, Synapse Energy Economics

Danielle Sass Byrnett, NARUC Center for Partnerships & Innovation

Julie Michals, E4TheFuture

**May 10, 2022**

# Today's Meeting Agenda

## Welcome and Introductions (15 mins)

- UTC staff – background and purpose of this workshop
- Introduction to speakers

## NSPM Overview & Feedback on Key Stakeholder Comments (60 mins)

- NSPM Framework and Principles
- Why consistency in BCA across DERs and Fuels
- NSPM 5-step Process to Develop/Modify Primary Test
- Benefit-Cost Analysis vs Rate Impact Analyses

## Applicable Washington Policy Goals (30 mins)

- Review CETA goals, identify other possible statutes, orders, and/or policies

## Next Steps and Agendas for Workshop Series (15 mins)

# Background and Purpose of Meeting

## Background

- 2019 Clean Energy Transformation Act (CETA)
- 2020 UTC Rulemakings
- This docket (UE-210804)
  - Focus on how CETA changes the standard practice of using the modified TRC test and UCT as primary and secondary tests.
  - To ensure consistent evaluation of DERs.
  - Follow the process and principles described in the NSPM
  - UTC requested stakeholder comments (November 4, 2021) – generally supporting using the NSPM 5-step process
  - Stakeholder submitted comments (December 14, 2021)

# Purpose of this Workshop

Kick off UE-210804 stakeholder process:

- Ensure stakeholders understand NSPM process and principles
- Consider key comments from stakeholders responding to UTC's Notice of Opportunity for Written Comments in docket
- Preliminary review of WA key policies, focusing on CETA
- Map out workshop series and key topics for applying NSPM BCA Framework and 5-step process

UTC is seeking both verbal input during the workshops and written input after them

Staff intends to develop a jurisdictional specific test that can be recommended to the Commission. This may be a modification to current tests.

# Today's Speakers/Moderator



Danielle Sass-Byrnett, Director  
NARUC Center for Partnerships  
& Innovation (CPI)



Tim Woolf  
Vice President Synapse  
Energy Economics  
Lead Author – NSPM



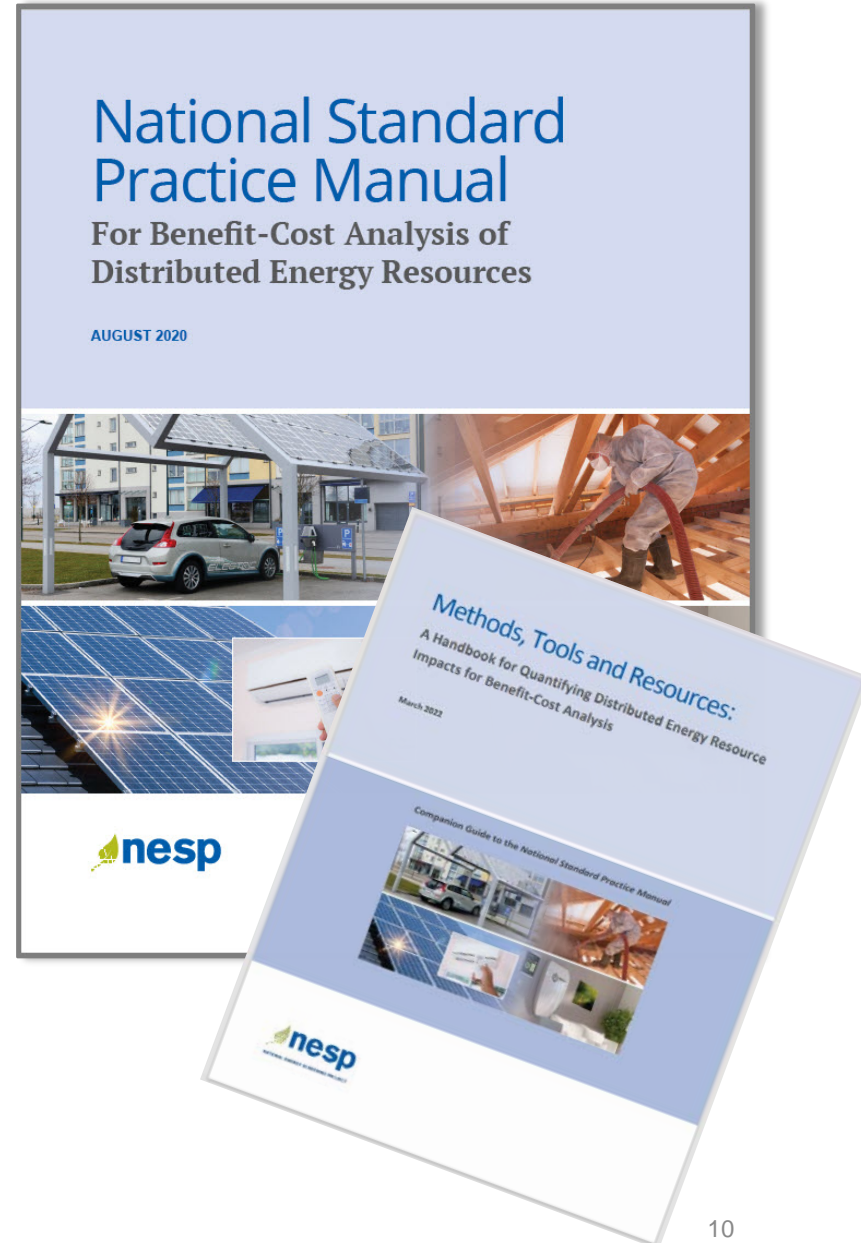
Julie Michals  
Director of Valuation  
E4TheFuture  
NESP Project Coordinator



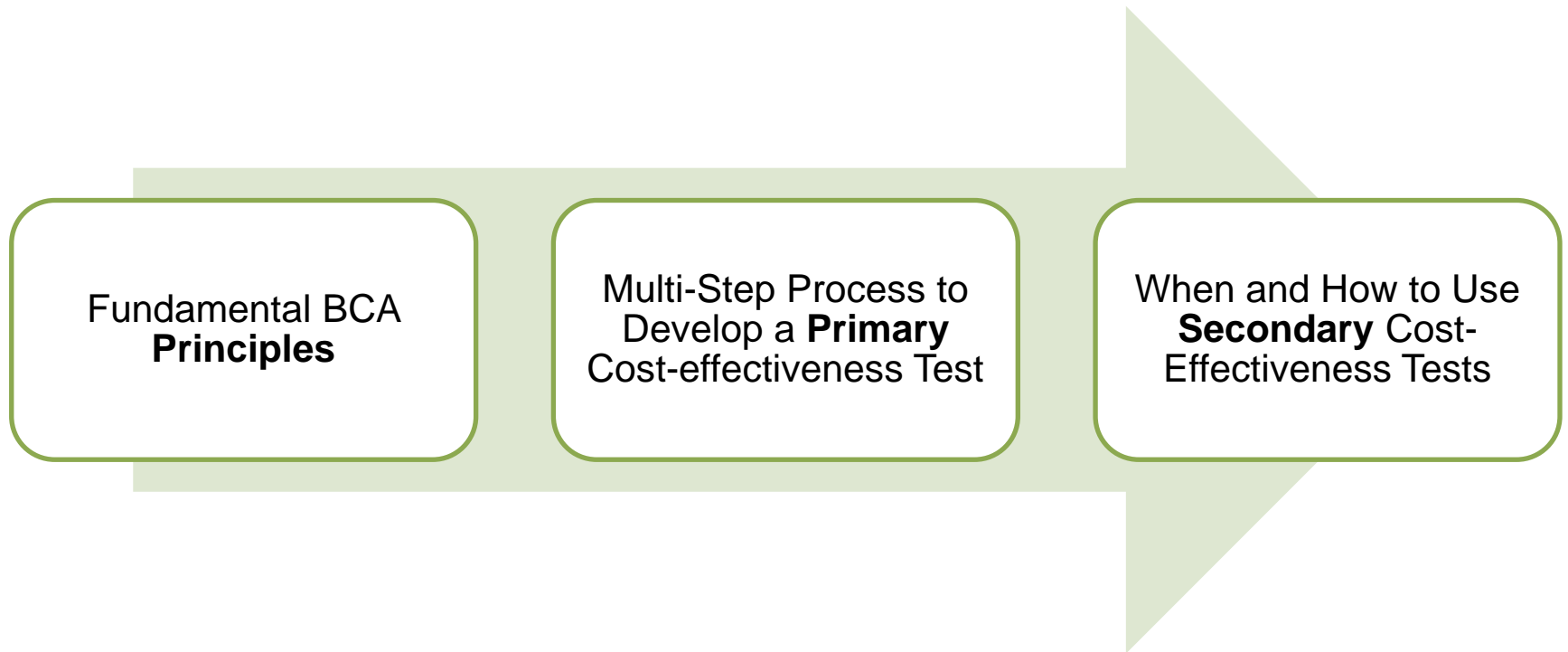
# **NSPM Overview and Key Issues from Stakeholder Comments**

# NSPM for DERs

- Provides a **process** using a BCA Framework to develop a new, *or modify an existing*, primary test.
- NSPM does not prescribe any one test.
- NSPM BCA framework is applicable to different regulatory contexts (programs, procurement, pricing, planning, etc.)
- **NSPM for DERs** → *what impacts go into your primary test*
- NSPM companion document (**Methods, Tools & Resources (MTR) Handbook** for Quantifying DER Impacts) → *how to quantify those impacts*



# NSPM BCA Framework



# What Do Cost-effectiveness Tests Tell Us?

## Primary Test Answers Question:



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

## Secondary Tests Tell Us:

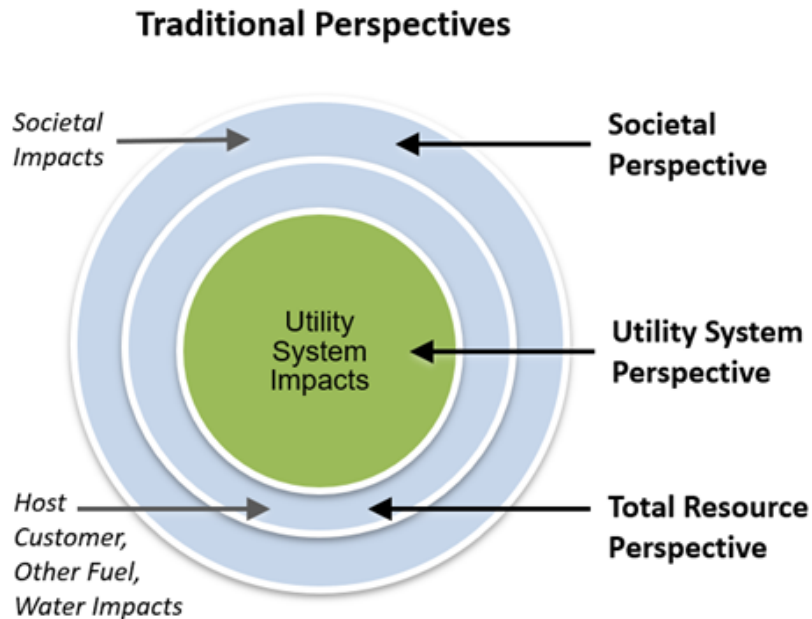
*How will DERs affect utility system costs (if the Utility Cost test is used as a secondary test)*

*How much will it cost to achieve certain policy goals*

*How to treat DERs that are marginally cost-effective*



# Traditional Cost-Effectiveness Test/Perspectives

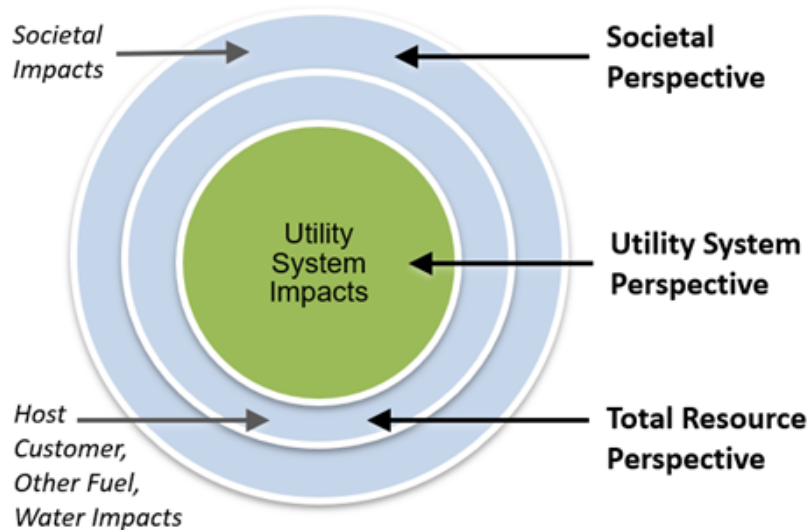


- Three perspectives define the scope of impacts to include in the most common traditional cost-effectiveness tests.

Test	Perspective	Key Question Answered
<b>Utility Cost</b>	The utility system	Will utility system costs be reduced?
<b>Total Resource Cost</b>	The utility system plus participating customers	Will utility system costs plus program participants' costs be reduced?
<b>Societal Cost</b>	Society as a whole	Will total costs to society be reduced?
<b>Participant Cost</b>	Customers who participate in a program	Will program participants' costs be reduced?

# Cost-Effectiveness Perspectives

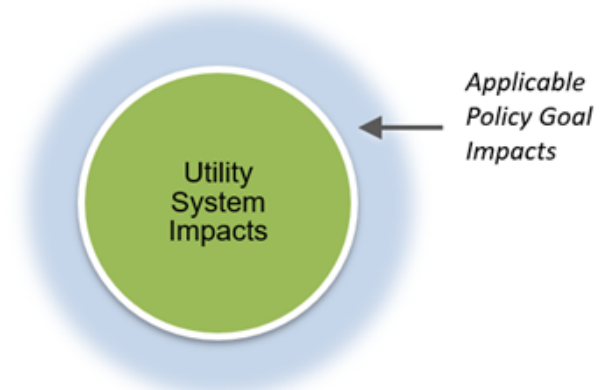
## Traditional Perspectives



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

## NSPM for DERs

### 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.

# 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.

# NSPM Principle #1: Consistency in BCA across DERs

- Consistent BCA framework reduces risk of either over or under-investing in a resource (or combination thereof)
- Siloed approach to valuing different DERs can be complex and overwhelming for commissions, utilities and stakeholders
- Allows for analysis of multiple-DER initiatives
  - Non-wires alternatives & non-pipe alternatives
  - Grid integrated efficient buildings
  - Micro-grids
- Allows for comparison & prioritizing of DER investment options to answer questions such as:
  - *Which DERs should be implemented, and which should be rejected based on key objectives?*
  - *Will key policy goals be met by investing in the DER(s)?*
  - *How can we ensure that customers are not paying too much to achieve policy goals?*



## Notice of Opportunity for Comments – Applicability of primary test to apply to all DERs, fuels and use cases?

- UTC question: *should a primary cost-effectiveness test apply to all DERs, fuels, and use cases?*
  - Some stakeholders expressed concern or don't support applying same primary test to electric and gas, or across DERs
- NSPM Principle #1 sets forth that test should be consistent, but...
  - Important to clarify 'consistency' in test versus relevance of same inputs (i.e., impact factors) across all DERs, fuels and use cases
- Next slides give examples to clarify distinction

# Utility System Benefits & Costs

Type	Utility System Impact	EE	DR	DG	Storage	Electrification
Generation	Energy Generation	●	●	●	●	●
	Capacity	●	●	●	●	●
	Environmental Compliance	●	●	●	●	●
	RPS/CES Compliance	●	●	●	●	●
	Market Price Effects	●	●	●	●	●
	Ancillary Services	●	●	●	●	●
Transmission	Transmission Capacity	●	●	●	●	●
	Transmission System Losses	●	●	●	●	●
Distribution	Distribution Capacity	●	●	●	●	●
	Distribution System Losses	●	●	●	●	●
	Distribution O&M	●	●	●	●	●
	Distribution Voltage	●	●	●	●	●
General	Financial Incentives	●	●	●	●	●
	Program Administration Costs	●	●	●	●	●
	Utility Performance Incentives	●	●	●	●	●
	Credit and Collection Costs	●	●	●	●	●
	Risk	●	●	●	●	●
	Reliability	●	●	●	●	●
	Resilience	●	●	●	●	○

● = typically a benefit  
 ● = typically a cost  
 ● = either a benefit or cost depending on application  
 ○ = not relevant for resource type

# Consistency Across DER Types

(In some cases, impact is not relevant for all DERs or use cases)

**Example:**  
Comparing EV and EE Host Customer Impacts only

Impact Category - Include in Test?	Impacts	Is Impact in Proposed EV Test? (Yes, No, Not Sure)	Is Impact in Current EE test? (Yes, No, Not Sure)
<b>Host Customer Impacts</b>  (Include, since consistency with policy)	DER Measure Costs	yes - EV chargers	Yes - EE measures
	Transaction costs	yes - installing home charger	N/A
	Interconnection Fees (e.g., for solar)	N/A	N/A
	Risk	no	no
	Reliability	no	no
	Resilience	no	no
	Other Fuel (fuel switching)	yes	yes
	Federal Tax Incentive	yes - EV tax credit	no
	<b>Non-Energy Impacts</b>		
	Asset value	no	no
	Productivity	no	no
	O&M	yes (decreased vehicle O&M costs)	yes (C&I lighting)
	Economic well-being	no	No
	Comfort	N/A	Yes
	Health & safety	N/A	Yes
	Empowerment & control	no	no
	Satisfaction & pride	no	no
	Reduced Utility Bills	N/A	no
	Water savings	N/A	yes
	Low-income: Reduced Utility Bills (Arrearages Benefit)	no	yes

# BCA in Different Regulatory Settings



Context	Application	Goal of BCA	Role of Costs & Benefits
<b>Programs</b>	EE, DR, DG, Storage, EVs	determine whether to implement the program	compare program benefits to costs
<b>Procurement</b>	DERs, NWAs, PPAs,	determine the ceiling price	ceiling price should equal the benefits of the procurement
<b>Pricing</b>	Rate design	estimate long-run marginal costs	long-run marginal costs should equal the benefits of modifying consumption
	DER compensation	determine the value of DER	value of DER is the sum of benefits
<b>Planning</b>	Optimize DERs	identify optimal DER portfolio	compare portfolio benefits to costs
	DP, IDP, IRP, IGP	identify preferred resource scenario	compare scenario benefits to costs
	GHG plans	achieve GHG goals at low cost	compare GHG plan benefits to costs
	State Energy Plans	identify resources to meet state goals	compare state plan benefits to costs
<b>Infrastructure Investments</b>	Grid Mod, AMI, EV infrastructure, etc.	determine whether to make the investment	compare investment benefits to investment costs
<b>Prudence Reviews</b>	Retrospective review	determine whether past utility decision was appropriate	compare benefits and costs using test in place at the time the decision was made
	Prospective review	determine whether proposed utility decision is appropriate	compare benefits and costs using test currently in place

*NSPM Principle #1: DERs should be compared and treated consistently with other utility resources. This principle applies to all regulatory contexts/mechanisms*

## Questions/Comments on BCA Consistency Across all DERs

# NSPM 5-step Process

# NSPM 5-step Process

## Defining a Primary Cost-Effectiveness Test

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### **STEP 1** Articulate Applicable Policy Goals

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

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### **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.

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### **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.
-

## STEP 1

### Articulate Applicable Policy Goals

Articulate the jurisdiction's applicable policy goals related to DERs

#### Policy Goals come in many forms:

- Statutes
- Commission orders
- State energy plans
- Executive orders
- Other sources

#### Statutory goals sometimes require interpretation

- First by stakeholders, ultimately by the Commission
- Statutes sometimes do not address issues that need to be resolved for BCA purposes

#### Policy goals can evolve over time

- Example: the CETA Act changed some of the Washington energy goals
- Goals are not static - stakeholders can propose new policy goals



## STEPS 2-3

# Identify Applicable Benefits & Costs

Electric Utility System Impacts are foundational – Always include

Type	Electric Utility System Impact
<b>Generation</b>	Energy Generation
	Capacity
	Environmental Compliance
	RPS/CES Compliance
	Market Price Effects
	Ancillary Services
<b>Transmission</b>	Transmission Capacity
	Transmission System Losses
<b>Distribution</b>	Distribution Capacity
	Distribution System Losses
	Distribution O&M
	Distribution Voltage
<b>General</b>	Financial Incentives
	Program Administration
	Utility Performance Incentives
	Credit and Collection
	Risk
	Reliability
	Resilience

Non-Utility System Impacts – Inclusion depends on applicable policy goals & objectives

Type	Host Customer Impact
<b>Host Customer</b>	Host portion of DER costs
	Host transaction costs
	Interconnection fees
	Risk
	Reliability
	Resilience
	Tax incentives
	Non-energy Impacts
	Low-income non-energy impacts

Reflected in WA policies?

Type	Societal Impact
<b>Societal</b>	Resilience
	GHG Emissions
	Other Environmental
	Economic and Jobs
	Public Health
	Low Income: Society
	Energy Security

Reflected in WA policies?  
And what about energy equity?

## STEPS 2-3

# Identify Applicable Benefits & Costs (2)

## Gas Utility System Impacts

Utility-system Impacts are foundational – Always include

Type	Gas Utility System Impact
Energy/Supply	Fuel / Commodity
	Capacity and storage
	Environmental compliance
	Market price effects
Transportation	Pipeline capacity
	Pipeline losses
Delivery	Local delivery capacity
	Local delivery line losses
General	Financial incentives
	Program admin costs
	Performance incentives
	Credit and collection costs
	Risk, reliability, resilience

These are the utility system impacts to account for when a gas utility is implementing DERs.

### Host Customer Impacts

Same types of impacts as electric

Reflected in WA policies?

### Societal Impacts

Same types of impacts as electric

Reflected in WA policies?

## STEPS 2-3

# Identify Applicable Benefits & Cost (3)

## Other Fuel Impacts

Type	Impacts
Oil, Propane, Wood, Gasoline, etc.	Fuel and O&M
	Delivery Costs
	Environmental Compliance
	Market Price Effects

Reflected  
in WA  
policies?

For DERs implemented by **electric utilities**, other fuels include:

- **Gas** utility system impacts
- Oil, propane, wood, gasoline, etc.

For DERs implemented by **gas utilities**, other fuels include:

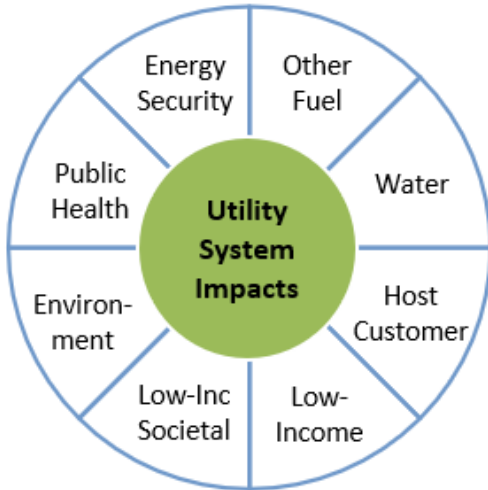
- **Electric** utility system impacts
- Oil, propane, wood, gasoline, etc.

**Stakeholder comments:** Importance of addressing fuel switching, particularly natural gas to electricity

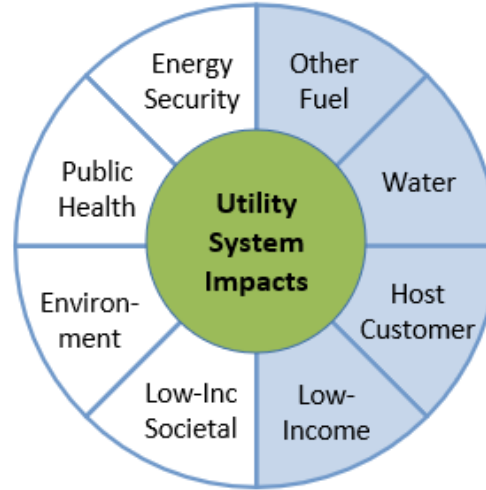
# Primary Test = Jurisdiction Specific Test (JST)

*Hypothetical JSTs as compared to traditional tests*

JST 1 = UCT/PACT



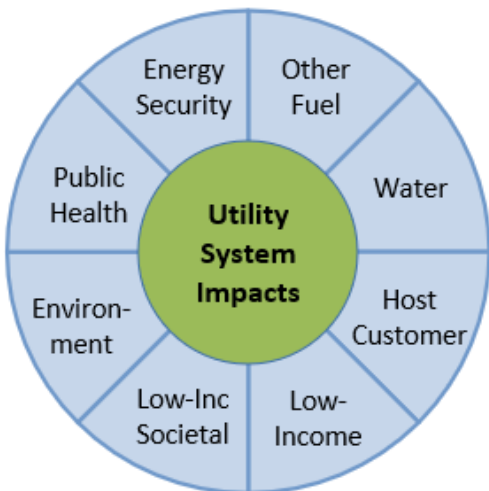
JST 2 = TRC Test



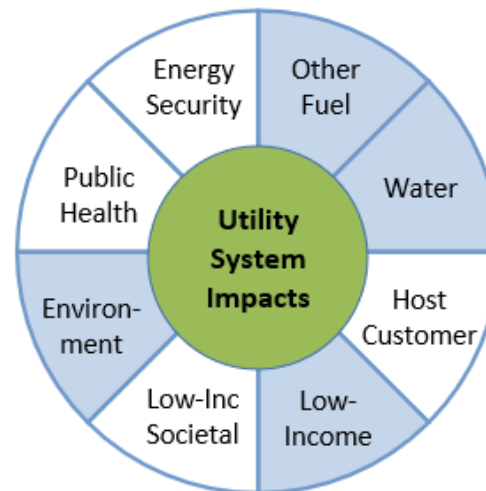
UCT = Utility Cost Test (or PACT = Program Admin Cost Test)  
 TRC = Total Resource Cost Test  
 SCT = Societal Cost Test

- All utility system impacts included
- Non-utility system impacts included
- Non-utility system impacts *not* included

JST 3 = SCT



JST 4 ≠ traditional CE test \*



\*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.

## STEP 4

# Ensure that Benefits & Costs are Properly Addressed

Impacts identified in Steps 2 and 3 are properly addressed whereby:

- Benefits and costs are treated symmetrical
  - For example, if host customer costs are included, then host customer benefits should be included as well.
- There is no double counting of impacts.
  - For example, if environmental benefits and public health benefits are included, any overlap should be netted out.
- All relevant and material impacts are included.
  - Even those that are hard to quantify.
- Benefits and costs are treated consistently across DER types

# Methodologies and Inputs to Account for All Relevant Impacts (Including Hard-to-Quantify Impacts)

Approach	Application
Jurisdiction-specific studies	Best approach for estimating and monetizing relevant impacts.
Studies from other jurisdictions	Often reasonable to extrapolate from other jurisdiction studies when local studies not available.
Proxies	If no relevant studies of monetized impacts, proxies can be used.
Alternative thresholds	Benefit-cost thresholds different from 1.0 can be used to account for relevant impacts that are not monetized.
Other considerations	Relevant quantitative and qualitative information can be used to consider impacts that cannot or should not be monetized.

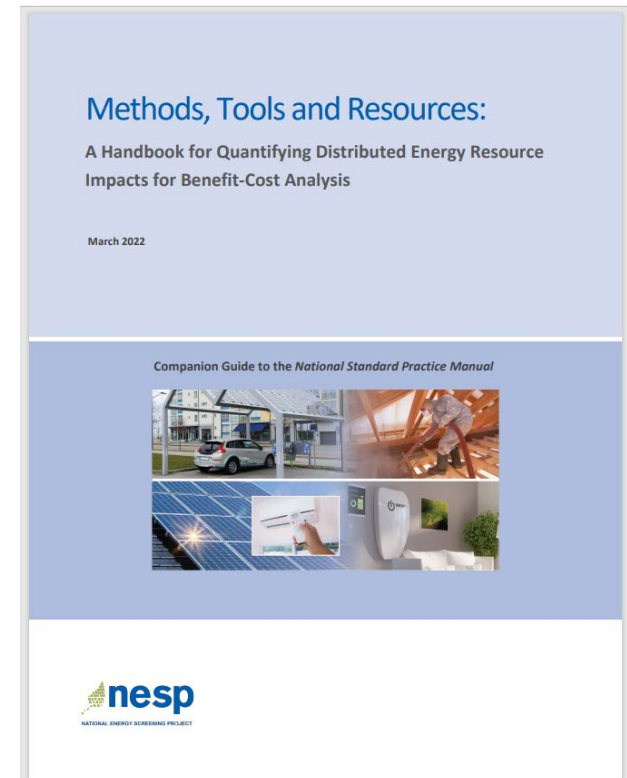
# Methods, Tools & Resources (MTR) Handbook for Quantifying DER Impacts

The NSPM provides guidance on how to develop primary and secondary BCA tests.

MTR Handbook provides guidance on *how to determine the inputs* to those BCA tests.

Contents:

- Key Components to Calculate BCA Impacts
- Electric Utility System Impacts
- Gas Utility System Impacts
- Other Fuel System Impacts
- Host customer Impacts
- Societal Impacts
- Reliability & Resilience
- Energy Equity
- Uncertainty & Risk
- Load Impact Profiles



Available from: <https://www.nationalenergyscreeningproject.org/resources/quantifying-impacts/>

## STEP 5

# Establish Comprehensive, Transparent Documentation

**Example**  
(solar+storage  
use case)

Assumption Category	Assumption Description	Value/Assumption
Utility & Grid Profile	Program Administrator	An investor-owned utility
	Location	A Western state that does not have a Regional Transmission Operator (RTO)
	Regional Generation Mix / Grid Profile	<ul style="list-style-type: none"> <li>• Significant renewable energy penetration, including solar PV.</li> <li>• Grid reliability constraints, e.g., public safety power shutoff (PSPS)</li> </ul>
	Regional Utility Costs	High avoided capacity costs
Policy Context	Key policy/regulatory objectives	<ul style="list-style-type: none"> <li>• State incentive program (in addition to the proposed program offering) to encourage DER deployment, including storage</li> <li>• Aggressive state-level GHG emissions reductions targets with goal of being carbon neutral by 2050</li> <li>• Grid reliability concerns</li> <li>• Regulatory policy requires including host customer impacts in cost-effectiveness tests</li> </ul>
Reference Case	Baseline Program Assumptions	Small commercial customer installs a <u>20 kW</u> rooftop solar array, and is on TOU rate
Proposed Program Details	Program Offering	Small commercial customer installs a <u>20 kW</u> rooftop solar PV array paired with a 14 kW / 86 kWh <sup>25</sup> BESS, and is on a TOU rate. There is a utility and state incentive for BESS installation.
	Financial Incentive for Participants	The state incentive level for participants is \$175 per kWh <sup>26</sup> The utility incentive level is \$75 per kWh
	DER Operational Profile	BESS can only charge based on the solar PV system (cannot charge from the grid) to fulfill requirements to claim the full ITC value, and will discharge for peak TOU optimization
	Program Customer Type	Commercial (small office building) with regular daytime operations
	Rate Class	Small to medium Commercial & Industrial (C&I) TOU rate class <sup>27</sup>
	Program Offering Time Period/Length	3 years
	Contract Length for TOU rate	10 years



## STEP 5

# Establish Comprehensive, Transparent Documentation

**Example**  
(solar+storage  
use case cont.)

Value Stream	Net Present Value (\$ 2021)
<b>ELECTRIC UTILITY SYSTEM IMPACTS</b>	
Avoided Energy	\$ 574,605
Avoided Generation Capacity	\$ 1,330,213
Avoided Distribution Capacity	\$ 112,044
Avoided Transmission Capacity	\$ 169,013
Avoided Ancillary Services (A/S)	\$ 8,559
Avoided Cap & Trade Cost Compliance	\$ 152,494
Avoided Environmental Compliance Costs – GHG Adder	\$ 314,347
GHG Rebalancing	\$ 75
Reduced Risk	\$ 36,355
Utility Program Administration Costs	\$ (515,969)
Utility Program Incentive Costs	\$ (1,312,030)
<b>HOST CUSTOMER IMPACTS</b>	
Increased Customer Reliability	\$ 4,713,688
Federal Tax Credit	\$ 2,179,093
State Incentive	\$ 3,061,404
Depreciation Benefits	\$ 1,451,679
Host BESS Interconnection Costs	\$ (29,495)
Host O&M Costs	\$ (1,354,660)
Host BESS Capital Cost (net of incentives)	\$ (7,069,097)
<b>Total Benefits</b>	<b>\$ 14,103,570</b>
<b>Total Costs</b>	<b>\$ (10,281,252)</b>
<b>Net Benefits</b>	<b>\$3,822,318</b>
<b>Benefit Cost Ratio</b>	<b>1.37</b>

# Questions/Discussion on NSPM 5-step Process

# **Benefit-Cost Analysis versus Rate Impact Analysis**

# Conduct BCA Separately from Rate Impacts (NSPM Principle #8)

The two analyses answer different questions

	Benefit-Cost Analysis	Rate Impact Analysis
<b>Purpose</b>	To identify which DERs utilities should invest in or otherwise support on behalf of their customers	To identify how DERs will affect rates, in order to assess customer equity concerns
<b>Questions Answered</b>	What are the future costs and benefits of DERs?	Will customer rates increase or decrease, and by how much?
<b>Results Presented</b>	<ul style="list-style-type: none"> <li>• Cumulative costs (PV\$)</li> <li>• Cumulative benefits (PV\$)</li> <li>• Cumulative net benefits (PV\$)</li> <li>• Benefit-cost ratios</li> </ul>	<ul style="list-style-type: none"> <li>• Rate impacts (c/kWh, %)</li> <li>• Bill impacts (\$/month, %)</li> <li>• Participation rates (#, %)</li> </ul>

*The Rate Impact Measure (RIM) Test is sometimes used for BCA purposes. However, it combines the two analyses and therefore makes it difficult to answer either question*

# Components of BCAs versus Rate, Bill, and Participation Analyses

	Include in Benefit-Cost Analysis	Include in Rate, Bill, Participant Analysis
Utility system impacts	✓	✓
Host customer impacts	depends on policy goals	do not affect rates
Social impacts	depends on policy goals	do not affect rates
Lost revenues	do not affect costs	✓
Increased revenues	do not affect costs	✓
Net metering bill credits	do not affect costs	✓

*Source: NSPM for DERs Appendix A - Rate Impact Analyses*

# Rate, Bill, and Participant Impacts

A thorough understanding of rate impacts requires an analysis of three important factors:

- **Rate impacts**, provide an indication of the extent to which rates for all customers might increase.
- **Bill impacts**, provide an indication of the extent to which customer bills might be reduced for those customers that install DERs.
- **Participation impacts**, provide an indication of the portion of customers that will experience bill reductions or bill increases.
  - Participation impacts are also key to understanding the extent to which customers are adopting DERs based on DER policies.

Rate, bill, and participant impacts address one aspect of customer equity: participants typically experience higher bill savings than non-participants.

# Rate Impacts

**Definition:** Change in customer rates from the DER(s)

Total rate impacts driven by 3 factors:

1. The cost of the DER.
2. The costs avoided by the DER.
3. Changes in electricity or gas sales.

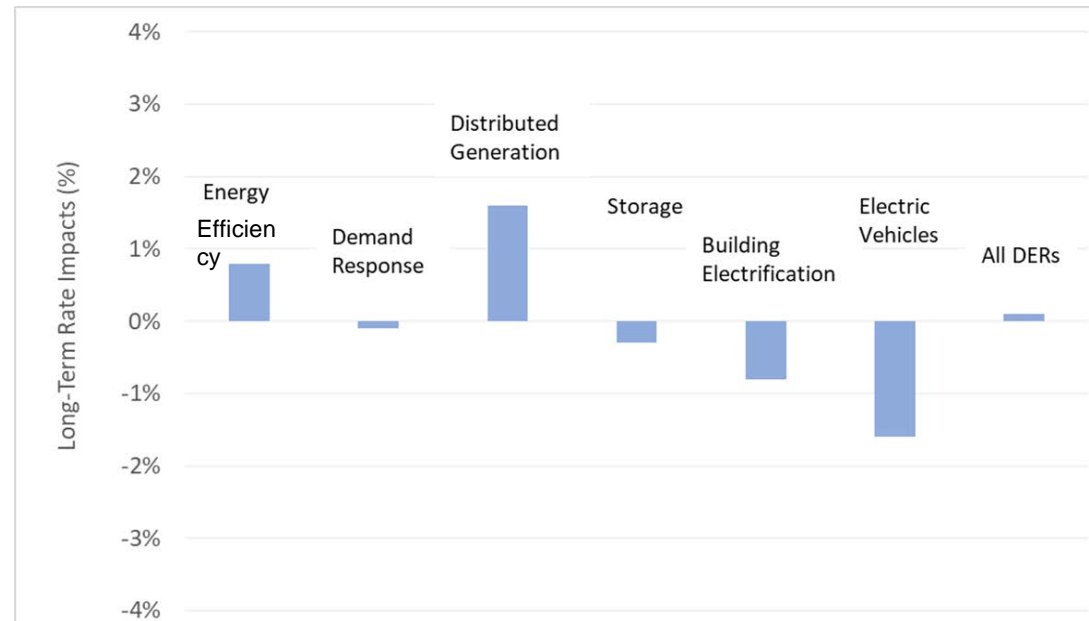
Rate impacts should be presented in terms of long-run averages.

- Short-run impacts do not tell the whole story.

Consider rate impacts of all DER types together.

- These are the impacts that customers experience.

*Illustrative Example:*



# Bill Impacts

**Definition:** Change in customer bills from the DER(s)

Bill impacts are driven by two factors:

1. The rate impacts
2. The participant savings from the DER(s)

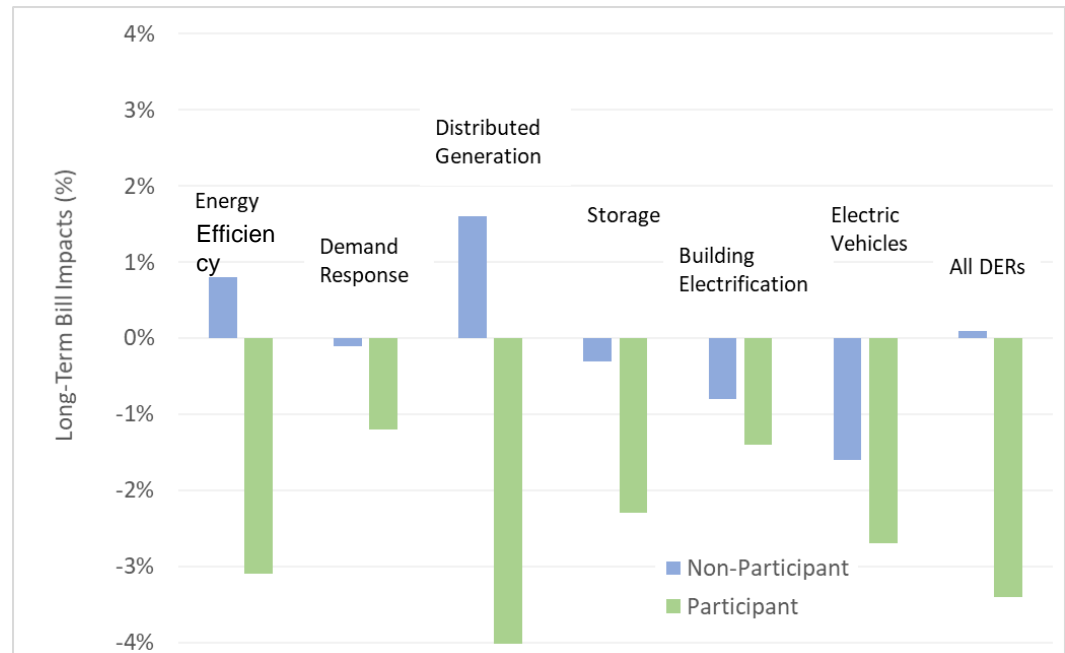
For DER non-participants, the bill impacts will be the same as the rate impacts.

Estimate bill impacts of both the DER participants and non-participants.

- This difference lies at the heart of the customer equity issue.

Consider bill impacts of all DER types together.

*Illustrative Example:*





# Participation Rates

**Definition:** The percent of the eligible customers that adopt a DER.

Present in terms of long-term impacts.

- Because bill savings can last for many years.

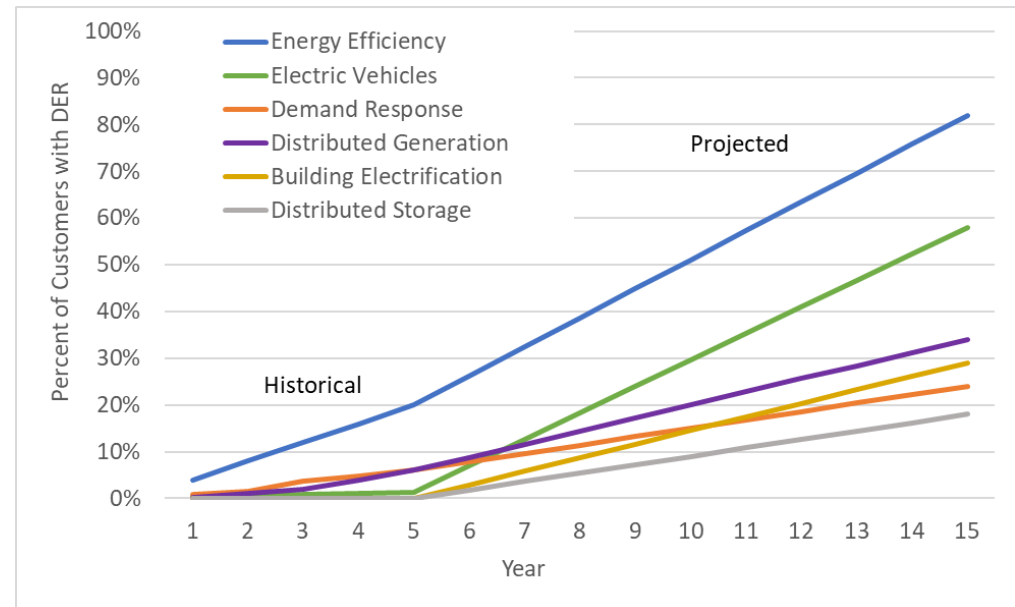
Account for unique participants:

- Some customers might participate in more than one DER program.
- Some customers might participate in one EE or DR program for multiple years.

In general, greater participation helps to mitigate customer equity issues:

- More customers experience bill savings.

*Illustrative Example:*



# What about Energy Equity?

- Distributional equity requires assessing *which customers* experience the costs and benefits of utility programs and investments.
- BCAs are not designed to address distributional equity.
  - Instead, BCA designed to measure costs and benefits *on average* across utility system, broad customer categories, host customers, or society. For example:
    - Avoided costs (i.e., benefits) - typically a blend of avoided costs experienced by all customers – no distinction made for customer categories/target populations. Not possible to distinguish net benefits to target populations.
    - One exception: DER programs designed to serve target populations (e.g., low-income programs) can be evaluated separately from other programs to show whether those programs will provide net benefits to that population. *But this says nothing about how all the other DER programs will affect the target populations.*
- BCAs can help address distributional equity issues if they are supplemented with a *distributional equity analysis* (DEA).

# Distributional Equity Analysis (DEA)

DEAs can be designed to explicitly account for the difference in impacts between target populations and other customers.

- In ways that BCAs cannot.

Rate, bill, and participation analyses are a type of DEA.

- They help to reveal equity issues between host customers and other customers.
- While this is very useful information, it says nothing about target populations.

Rate, bill, and participation analyses can be expanded to include:

- Impacts on target populations
- Additional metrics related to energy equity

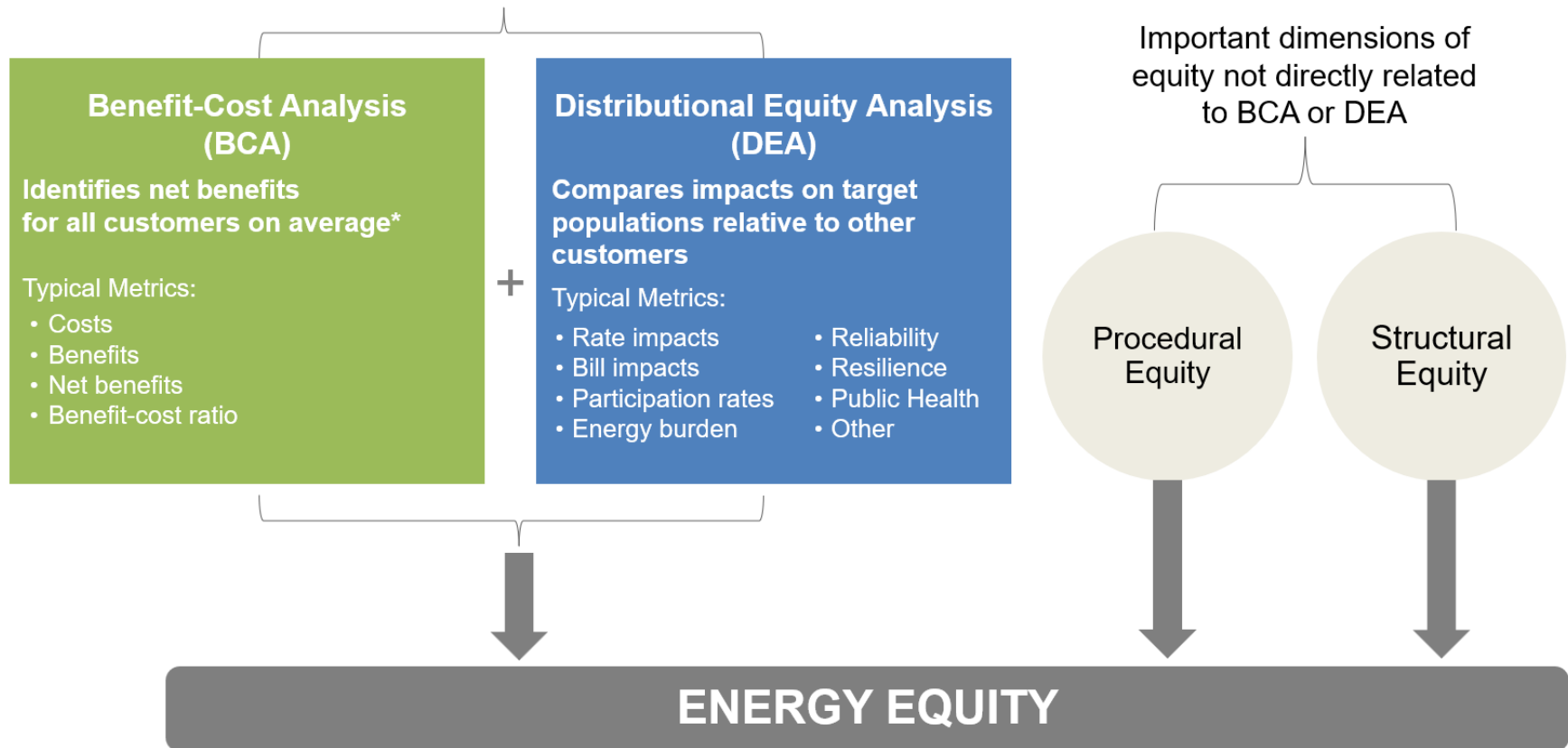
Distributional analysis has been used by the Federal government for years.

- But it is new to the electricity industry

# BCA vs DEA – Complementary Analyses

Suggestion: Address topic in more depth in separate workshop

Together, BCA and DEA provide information on different kinds of program impacts



\*Non-utility system impacts can be accounted for in BCAs if consistent with the jurisdiction's policy goals, but inclusion of these impacts in BCA does not provide a measure of equity across target populations.

# Questions/Discussion on BCA vs Rate Impacts and Energy Equity

# Washington Energy Policy Goals

# Clean Energy Transformation Act Goals

CETA goals and clean energy rule requirements:

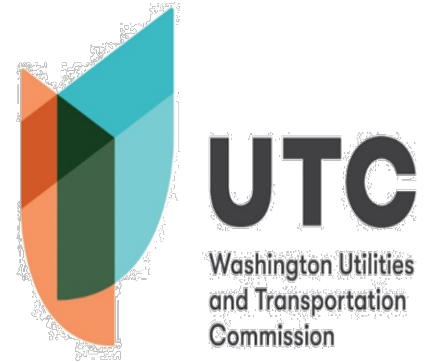
- SB 5116 and HB 1257 incorporate **social cost of carbon** into cost-effectiveness for electric and gas
- An electric utility must, consistent with the requirements of RCW 19.280.030 and 19.405.140, ensure that **all customers are benefiting from the transition to clean energy** through:
  - the **equitable distribution** of energy and nonenergy benefits and reduction of burdens to vulnerable populations and highly impacted communities;
  - long-term and short-term **public health and environmental benefits**;
  - **reduction of costs and risks**; and
  - **energy security and resiliency** (RCW 19.405.040(8))

# Applicable Policy Goals Presented by Staff

1. Provide **safe, adequate**, and efficient services
2. Support fair, just, reasonable, and sufficient rates
3. Reduce energy burden of low-income households
4. Avoiding increased burdens to highly impacted communities
5. Ensure all customers benefit from the transition to clean energy through the **equitable distribution of energy and nonenergy benefits and reduction of burdens to vulnerable populations and highly impacted communities**
6. Ensure all customers benefit from the transition to clean energy through long-term and short-term **public health** and **environmental benefits** and reductions of costs and risks
7. Ensure all customers benefit from the transition to clean energy through **energy security** and **resiliency**
8. Maintain system **reliability**
9. Develop **lowest reasonable cost** resources
10. Enable significant and swift **reductions in greenhouse gas emissions**







# Next Steps: Remaining Workshops



# Follow-Up Workshops

**Workshop #1** (May 10 - today)

**Workshop #2** (tbd)

- Discuss current DER BCA practices in Washington
- Step 1: Identify and confirm Washington's applicable policy goals

**Workshop #3** (tbd)

- Step 2: Identify all utility system impacts to include in BCA tests
- Step 3: Determine which non-utility system impacts to include in the primary test
- Step 4: Ensure costs and benefits are properly addressed

After Workshop #3, Staff will prepare Straw Proposal for stakeholder comment and discussion at next workshop

**Workshop #4** (tbd)

- Discuss Straw Proposal
- Discuss additional topics, e.g., secondary tests, discount rates
- Step 5: Ensure transparency

**Topics TBD** – Accounting for Energy Equity, Methods for Quantifying Impacts

# Homework Assignments

- Look for a Notice for Comment by the end of the week
  - Exercise: Fill in template table (which we will circulate) of which impacts to include in the primary test given policy goals reviewed today (or others you might identify)
  - Other questions Staff has identified during this workshop
- Preparation for next workshop – Utilities and Staff
  - Current practice for different DERs
  - Data collection and presentation for workshop #2
- Any other general comments on today's workshop? File in docket UE-210804
- Contact Staff: [Jennifer.Snyder@utc.wa.gov](mailto:Jennifer.Snyder@utc.wa.gov)



## Stakeholder Exercise: Identify What Non-Utility Impacts Should be Included in Primary Test based on Policy Goals

	Impact	All DERs?	Comments
Participant	Participant costs		
	Participant benefits		
Other fuels	Other fuels		
Water	Water		
Low-income	Low-income		
Societal	GHG emissions		
	Other environmental		
	Public health		
	Macroeconomic		
	Energy Security		
	Energy Equity		
	Resilience		
	Other		

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