Definitions of Impacts

Table 1. Electric Utility System Impacts

Type	Utility System Impact	Description
Generation	Energy Generation	Production or procurement of energy (kWh) from generation resources on behalf of customers
	Capacity	Generation capacity (kW) required to meet the forecasted system peak load
	Environmental Compliance	Actions to comply with environmental regulations
	RPS/CES Compliance	Actions to comply with renewable portfolio standards or clean energy standards
	Market Price Effects	The change in wholesale market prices as a result of changes in customer consumption
	Ancillary Services	Services required to maintain electric grid stability and power quality
Transmission	Transmission Capacity	Maintaining the availability of the transmission system to transport electricity safely and reliably
	Transmission System Losses	Electricity or gas lost through the transmission system
Distribution	Distribution Capacity	Maintaining the availability of the distribution system to transport electricity or gas safely and reliably
	Distribution System Losses	Electricity lost through the distribution system
	Distribution O&M	Operating and maintaining the distribution system
	Distribution Voltage	Maintaining voltage levels within an acceptable range to ensure that both rea and reactive power production are matched with demand
General	Financial Incentives	Utility financial support provided to DER host customers or other market actors to encourage DER implementation
	Program Administration	Utility outreach to trade allies, technical training, marketing, and administration and management of DERs programs or strategies
	Utility Performance Incentives	Incentives offered to utilities to encourage successful, effective implementation of DER programs
	Credit and Collection	Bad debt, disconnections, reconnections
	Risk	Uncertainty including operational, technology, cybersecurity, financial, legal, reputational, and regulatory risks
	Reliability	Maintaining generation, transmission, and distribution system to withstand instability, uncontrolled events, cascading failures, or unanticipated loss of system components
	Resilience	The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions

Table 2. Gas Utility System Impacts

Type	Gas Utility System Impact	Description
Energy/Supply	Gas commodity	The gas capacity required to meet forecasted peak load as well as the fuel and O&M impacts associated with gas
	Environmental Compliance	Actions required to comply with environmental regulations
	Market Price Effects	The change in wholesale prices as a result of changes in customer consumption
Transportation	Pipeline capacity	The fixed charges for pipeline transportation services that deliver natura gas to the LDC city gate
Distribution	Pipeline losses	The volumetric difference between the gas entering the LDC city gate and the gas measured at customers' meters
	Gas distribution	Local distribution company costs to deliver gas from the city gate to retail customers
General	Financial Incentives	Utility financial support provided to DER host customers or other market actors to encourage DER implementation
	Program Administration Costs	Costs incurred by the DER program administrator related to the planning design, implementation, and evaluation of a DER program or initiative
	Performance Incentives	Incentives offered to utilities to encourage successful, effective implementation of DER programs
	Credit and Collection Costs	Costs associated with customers who are deficient on energy bill payments, including notices and support provided to customers in arrears, terminations, disconnections, reconnections, carrying costs associated with arrears and writing off bad debt.
	Risk	Uncertainty including operational, technology, cybersecurity, financial, legal, reputational, and regulatory risks
	Reliability	Maintaining the gas system to withstand instability, uncontrolled events, cascading failures, or unanticipated loss of system components
	Resilience	The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions

Table 3. Other Fuel Impacts

Type	Other Fuels Impact (oil, propane, wood, gasoline)	Description
Other Fuels	Commodity	The fuel and O&M impacts associated with other fuels
	Environmental Compliance	Actions required to comply with environmental regulations
	Market Price effects	The change in wholesale prices as a result of changes in customer consumption

Table 4. Host Customer Impacts

Host Customer Impact	Description
Energy Related Impacts	
Host portion of DER costs	Costs incurred to install and operate DERs
Interconnection fees	Costs paid by host customer to interconnect DERs to the grid
Risk	Uncertainty including price volatility, power quality, outages, and operational risk related to failure of installed DER equipment and user error; this type of risk can depend on the type of DER
Reliability	The ability to prevent or reduce the duration of host customer outages
Resilience	The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions
Tax incentives	Federal, state, and local tax incentives provided to host customers to defray the costs of some DERs
Non-Energy Impacts (NEIs)	
Transaction costs	Costs incurred to adopt DERs, beyond those related to installing or operating the DER itself (e.g., application fees, customer time spent researching DERs, paperwork, etc.)
Asset value	Changes in the value of a home or business as a result of the DER (e.g., increased building value, improved equipment value, extended equipment life)
Productivity	Changes in a customer's productivity (e.g., in labor costs, operational flexibility, O&M costs, reduced waste streams, reduced spoilage)
Economic well-being	Economic impacts beyond bill savings (e.g., reduced complaints about bills, reduced terminations and reconnections, reduced foreclosures—especially for low-income customers)
Comfort	Changes in comfort level (e.g., thermal, noise, and lighting impacts)
Health & safety	Changes in customer health or safety (e.g., fewer sick days from work, reduced medical costs, improved indoor air quality, reduced deaths)
Empowerment & control	Satisfaction of being able to control one's energy consumption and energy bill
Satisfaction & pride	Satisfaction of helping to reduce environmental impacts (e.g., key reason why residential customers install rooftop PV)

Table 5. Societal Impacts

Societal Impact	Description
Resilience	Resilience impacts beyond those experienced by utilities or host customers
GHG Emissions	GHG emissions created by fossil-fueled energy resources
Other Environmental	Other air emissions, solid waste, land, water, and other environmental impacts
Economic and Jobs	Incremental economic development and job impacts
Public Health	Health impacts, medical costs, and productivity affected by health
Energy Security	Energy imports and energy independence

4		1		3	2	1	0	3	3	4	0	0						
4		1		3	2	1	0	3	3	4	0	0						
4		1		3	2	1	0	3	3	4	0	0						

e receive more detail about the intended use of this document.

that we are not certain whether a single jurisdiction cost-effectiveness test is appropriate for all DERs; for example, DERs that build
ad.

Impacts Relevant to the Policy (Indicate YES, NO, or NOT CLEAR/NOT SURE)													
Utility System	**Other Fuels**	**Societal**							**Host Customer**		**Other**		
Electric Utility System (or Gas Utility) Impacts	**Other Fuels (gas, oil, propane)**	**Resilience**	**Energy Security**	**GHG Emissions**	**Other Environmental**	**Public Health**	**Economic Development/ Jobs**	**Energy Burden/Equity**	**Host Customer (non-low income)**	**Host Customer Low-Income**	**Other (specify)**	**Other (specify)**	**NOTES**
YES (All DERs)	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*	*NOT SURE*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*			
YES (EE)	*YES (EE)*	*NOT SURE*	*YES (EE)*	*YES (EE)*	*YES (EE)*	*NOT SURE*	*YES (EE)*	*NOT SURE*	*YES (EE)*	*YES (EE)*			
YES (All DERs)	*YES (All DERs)*	*NOT SURE*	*NO*	*NO*	*NO*	*NO*	*NO*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*			RCW 19.280.100 states that DER planning may allow utilities to better anticipate the impacts of the transforming relationship between electric utilities and their customers by "identifying and quantifying customer values that are not represented in volumetric electricity rates", among others. While broad, we believe that these other values allude to the societal impacts listed here, though they are not explicitly referred to in the bill.
YES (All DERs)	*YES (All DERs)*	*NOT SURE*	*NOT SURE*	*YES (All DERs)*	*YES (All DERs)*	*NO*	*NO*	*NOT SURE*	*NOT SURE*	*YES (All DERs)*			As defined in RCW 19.280.020, *integrated resource plan* is an "analysis describing the mix of generating resources, conservation, methods, technologies, and resources to integrate renewable resources and, where applicable, address overgeneration events, and efficiency resources that will meet current and projected needs at the lowest reasonable cost to the utility and its ratepayers and that complies with the requirements specified in RCW 19.280.030(1)." We believe that the lowest reasonable cost referred to in this definition includes the benefits arising from conservation, technologies, renewable resources, and efficiency resources, though they are not explicitly referred to in this bill.
YES (All DERs)	*YES (All DERs)*	*NOT SURE*	*NOT SURE*	*YES (All DERs)*	*NOT SURE*	*NOT SURE*	*NOT SURE*	*YES (All DERs)*	*YES (All DERs)*	*YES (All DERs)*			
YES (EE)	*YES (EE)*	*YES (EE)*	*NOT SURE*	*YES (EE)*	*YES (EE)*	*YES (EE)*	*YES (EE)*	*YES (EE)*	*YES (EE)*	*YES (EE)*			
YES (EV)	*YES (EV)*	*NOT SURE*	*NOT SURE*	*YES (EV)*	*NOT SURE*	*NOT SURE*	*NOT SURE*	*YES (EV)*	*YES (EV)*	*YES (EV)*			OPUC Order Number 18-376 directs utilities to design programs using clean fuels program credit revenue independent from ratepayer support. This separate treatment of utility clean fuels program revenue has functionally made clean fuels program revenue not subject to the same cost-effectiveness requirements as ratepayer dollars. As OR TE programs and plans have evolved, clean fuels program revenue will likely be treated as a benefit when accounted for in a BCA. While the WA Clean Fuels Program rulemaking is still underway, this is one policy to consider when elaluating EV related DERs. Order Number 18-376: https://apps.puc.state.or.us/orders/2018ords/18-376.pdf Clean Fuels Program Rulemaking: https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-424-455 Please see "Additional Note" #2.
YES (EV)	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*	*YES (EV)*			Please see "Additional Note" #2.

For Utilities to Fill Out - What Impacts are Currently Accounted for in Primary CE Test?

(If an impact is not relevant to a particular DER type, indicate N/A)

Impact Category	Specific Impact	Is the impact accounted for in current DER BCA/Valuation? (yes, no, not sure, N/A)					Notes
		EE	DR	DG	DS	EVSE	
Electric Utility System Impacts	Generation: Energy Generation						
	Generation: Capacity						
	Generation: Environmental Compliance						
	Generation: RPS/CES Compliance						
	Generation: Market Price Effects						
	Generation: Ancillary Services						
	Transmission: Capacity						
	Transmission: System Losses						
	Distribution: Capacity						
	Distribution: System Losses						
	Distribution: O&M						
	Distribution: Voltage						
	General: Financial Incentives						
	General: Program Administration Costs						
	General: Utility Performance Incentives						
	General: DG tariffs						
	General: Credit and Collection Costs						
	General: Risk						
	General: Reliability						
	General: Resilience						
	Other - describe						
Gas Utility System	Energy: Gas Commodity						
	Energy: Environmental Compliance						
	Energy: Market Price Effects						
	Transp: Pipeline Capacity						
	Distribution: Pipeline losses						
	Distribution: Gas distribution						
	General: Credit and Collection Costs						
	General: Financial Incentives						
	General: Program Administration Costs						
	General: Utility Performance Incentives						
	General: Credit and Collection Costs						
	General: Risk						
	General: Reliability						
	General: Resilience						
	Other: Describe						
Societal Impacts	Greenhouse Gas Emissions						
	Other Environmental Impacts						
	Public Health						
	Economic Development and Jobs						
	Resilience						
	Energy Security						
	Other						
Host Customer Impacts	Measure Costs (Host)						
	Transaction costs (Host)						
	Interconnection Fees						
	Risk						
	Reliability						
	Resilience						
	Other Fuel						
	Tax Incentives						
	Non-Energy Impacts (non-low income)						
	Asset value						
	Productivity						
	Economic well-being						
	Comfort						
	Health & safety						
	Empowerment & control						
	Satisfaction & pride						
	Non-Energy Impacts (Low income)						
Other (Specify)							
Other (Specify)							