Recommended Performance Incentive Mechanisms for Liberty

The following potential Performance Incentive Mechanisms were presented by Courtney Lane of Synapse Energy Economics, Inc. to the Performance Based Ratemaking Working Group on February 2, 2023.

Performance Area	Metric	Definition	Calculation	Notes
Reliability and Resilience	Installed Demand Response Capacity	Total capacity (MW) enrolled in emergency curtailment, by feeder or another geographic identifier.	Total MW available to be called-upon for emergency load curtailment, by feeder.	These metrics can be in addition to SAIDI and SAIFI as proposed by Liberty.
	Critical Customer Outage Duration	Cumulative critical customer-hours of outages during a major event, mapped by feeder.	Total number of hours critical customers are without power during a major event.	
	Critical Customers Impacted	Number and percentage of Critical Customers experiencing an outage during a major event, mapped by feeder	Total number or % of critical customers that lose power during a major event.	

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Performance Area	Metric	Definition	Calculation	Notes
	Average Time to Recovery	The average time to recovery during a major event, by class, mapped by feeder	The average time (minutes) from loss of power to recovery during a major event by rate class.	
Affordability	Arrearages	Gross amount of arrearages ($) per year, by rate class (residential and low-income)	$ of gross arrearages per year	These metrics would need to be implemented in coordination to ensure that a reduction in arrearages is not occurring due to increased disconnections.
	Number of Customer Disconnections	Number of customer disconnections per year, by rate class (residential and low-income)	Number of customer disconnections per year	
Equity	Customer Service Quality by geography	CEMI (Customers Experiencing Multiple Interruptions tracked with and without major event days)	CEMIN (Where N = the number of interruptions 3, 5, 7, 9)	CEMI measures the ratio of customers experiencing multiple sustained interruptions (including customers experiencing three or more, five or more, seven or more, or nine or more interruptions as reported IEEE standards), against the

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				total number of customers served on the system.
	Reliability in Named Communities	Outages per year compared to named- and non-named communities (i.e., disadvantaged, low-income, or other identifier)	Average and median length (in minutes) of power outages per year, separately calculating Named and Non-named Communities for comparison.	This could also be done for SAIDI and SAIFI if there is a way to identify these communities and align with system data.
Customer Service	Number of customer complaints	Number of customer complaints received from utility internal processes (call center, customer service email or letter, and in-person) and Commission. Should be tracked for each of the following categories: billing and payment, customer service, construction and maintenance, online, field services, credit and	Annual average rate of customer complaints per 10,000 customers (or other chosen number)	This metric would be in addition to Liberty's proposed PIM.

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		collections, and power quality/reliability.		
Distributed Energy Resources	Savings from Non-Wires Alternatives (NWA)	Net Present Value of savings to customers from utilizing NWAs to avoid or defer traditional investments	Net Present Value of savings to customers from utilizing NWAs to avoid or defer traditional investments	Incentivizing utilities to invest in cost-effective NWAs instead of traditional wires-side investments can produce cost savings for customers and promote DERs like storage. PIM could be shared savings between customers and Liberty.
	Third-Party Developer Data Access	Third-party service access to sufficiently granular feeder and substation performance data (8760 load profiles, voltage sag, power quality, etc.) and aggregated and anonymized customer data	Existence of a platform to enable access to data.	Would incentivize Liberty to provide more granular data access through hosting capacity map or other platform.
Electric Vehicles	EV Load Shifting and Customer Engagement	Percent of managed charging customers' residential EV	Total annual energy consumed (MWh) by EVs	This metric provides incentive to promote

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		charging load occurring during off-peak hours.	charging during off-peak hours at the residences of customers enrolled in Liberty's Residential EV TOU rate divided by the Total annual energy consumed (MWh) by EVs charging at residences of customers enrolled in Xcel Energy's [Liberty's] EV time-of use rates or other managed charging programs	participation in EV TOU to promote grid-efficient charging.
Advanced Metering Infrastructure (AMI) Customer Engagement	Customer access and utilization of energy usage data	Number of customers logging into Liberty web portal with customer energy usage	Number of customers logging into utility web portal with customer energy usage	These two metrics promote enablement of customer access to more granular energy usage data that can help customers take control of energy usage. May need to be tracking-only at first
	Customer access and utilization of interval data	Number or % of customers logging into Liberty website providing access interval data, by rate class	Number or % of customers logging into utility website providing access interval data, by rate class	

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Performance Area	Metric	Definition	Calculation	Notes
	Customer access and utilization of Green Button Connect	Number or % of customers accessing Green Button Connect data	Number or % of customers accessing Green Button Connect data	Metric would incentivize Liberty to implement and promote Green Button Connect, which will aid in customer understanding of energy usage and management. May need to be tracking-only first.
	Third-party service access to customer data	Number or % of customers who have enabled data access to third parties through Green Button or other platform	Number or % of customers who have enabled data access to third parties	Increasing data access to third-party vendors and DER developers can increase the development of innovative energy service to customers like energy management platforms and promote increased penetration of solar and storage.
	Time-varying rate participation	Percent of participation, by class, enrolled in a time-varying rate.	Percent of customers enrolled by class divided by total customers in class.	Encourage Liberty to market and engage customers to enroll in TOU rates or other peak shifting

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Performance Area	Metric	Definition	Calculation	Notes
				rate to shift demand utilize AMI.
	Savings from time-varying rates	MWs of load reduction from customer response to time-varying rates		

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