Energy and OR DR Offering Characteristics

	Ideal State for DER	Ontario	ISO-NE	NYISO	California
Value Stack for DER	• DCM • Capacity • Energy • Ancillary Services • Other Incentives	• DCM • Capacity • Ancillary Services	• DCM • Capacity • Energy • Ancillary Services • Other Incentives	• DCM • Capacity • Energy • Ancillary Services • Other Incentives	• DCM • Capacity • Other Incentives
Aggregation	Allowed for all products (multiple DER types)	Allowed for Capacity only	Allowed for all products (multiple DER types)	Allowed for all products (multiple DER types)	Allowed for all products (multiple DER types)
Minimum Size	Should be able to aggregate in order to meet minimum size requirements	1MW per site	100 kW per site	100 kW, minimum 1 MW size for aggregation	100 kW, minimum 0.5 MW size for aggregation
Telemetry	Strike balance between visibility and costs for DERs; if require real-time telemetry, reduce latency and allow for timely corrections	5 min (capacity) 4 seconds (E&AS)	1 or 5 minutes	1 hr (capacity) 6 seconds (E&AS)	15 min (capacity) 4 seconds (E&AS)
Data Settlement	Settle on high resolution interval data, calculated ex post	Monthly (capacity) Real-time (E&AS)	Corrected telemetered data used for settlement	Monthly (capacity) Real-time (E&AS)	Monthly (capacity) Real-time (E&AS)
Sub Metering	Allow sub-metering to allow for performance assessment based on output	Facility metering point	Required for behind-the-meter resources	Allowed	Allowed
Co-optimized Dispatch	Integrate DERs into energy and ancillary services markets	Must-offer requirement into energy, resources co-optimized in real time	Must-offer requirement into energy, resources co-optimized in real time	Must-offer requirement into energy, resources co-optimized in real time	Must-offer requirement into energy, resources co-optimized in real time
Market Participation Restrictions	Set duration requirements that are sensible for the product's realistic dispatch duration	Aggregation not allowed for BTM assets for E&AS	Value stacking, aggregation, and multiple metering configurations allowed	• Optionality for BTM and DER participation between SCR, VDER, DER and ESR programs • Value stacking, aggregation, and multiple metering configurations allowed	• DERs May participate either as non-injecting Proxy Demand Resource (PDR) or injecting as Non-Generating Resource (NGR) • Current barriers for BTM resources providing E&AS

Market Resources

- https://www.iso-ne.com/static-assets/documents/2020/04/20200408-co-located-market-participation.pdf
- https://www.iso-ne.com/static-assets/documents/rules_proceds/operating/isone/op14/op14_rto_final.pdf
- https://www.iso-ne.com/static-assets/documents/rules_proceds/operating/isone/op18/op18_rto_final.pdf
- https://www.iso-ne.com/static-assets/documents/2018/10/manual_mvdr_measurement_and_verification_of_onpeak_and_seasonal_peak_demand_resources_rev07_20181004.pdf
- https://www.nyiso.com/documents/20142/2923301/ancserv.pdf/df83ac75-c616-8c89-c664-99dfea06fe2f
- http://www.caiso.com/Documents/IntegratedDay-AheadMarketDraftTechnicalDescription-FlexibleRampingProduct.pdf
- https://www.caiso.com/Documents/DistributedEnergyResourceProviderParticipationGuideandChecklist.pdf