

COMMENTS OF ENERGY CURTAILMENT SPECIALISTS (“ECS”) ON FLEXIBLE RAMPING PRODUCT TECHNICAL WORKSHOP

Energy Curtailment Specialists, Inc. (“ECS”) respectfully submits these comments to the Flexible Ramping Product Workshop given on May 29, 2012.

I. INTRODUCTION

ECS is one of the nation’s largest demand response and energy management companies, and a leading Demand Response Provider for commercial, industrial, and institutional customers. ECS is a non-utility demand response provider (“DRP”) and is an active participant in the Aggregator Managed Program (“AMP”) offered by Pacific Gas & Electric Corporation (“PG&E”) and the Capacity Bidding Program (CBP) offered by PG&E, Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E).

II. INCLUDE DR AS A FLEXIBLE RAMPING PRODUCT

Demand Response (DR) has proven to provide viable, measurable and proven MW reductions in many electric markets across North America. DR loads currently participate in wholesale and retail programs from Regulation Up and Down, Responsive Reserve and Non-Spinning Reserve. Requirements for response time range from day-ahead to instantaneous response times. Allowing DR to participate in the CAISO Flexible ramping product should be no exception. Load participation in Flexi ramp broadens the electric market by enabling consumers to participate as economically dispatched demand response (DR).¹ This has the potential to increase market efficiency through price elasticity of demand, lower overall costs to consumers, and expand the pool of assets available to CAISO.

¹ Defined as “a temporary change in electricity usage by a Demand Resource in response to market or reliability conditions.” North American Energy Standards Board Phase 2 Measurement & Verification Standards, as approved by the NAESB Demand Side Management/Energy Efficiency Subcommittee, Dec. 1, 2010.

DR can be used to improve real-time dispatch flexibility and manage cost effectiveness by decreasing Daily Flexi-Ramp constraint costs. DR Flexi ramping can be maintained by economic dispatch or by unit commitment as currently proposed during the Flexible Ramping Technical Workshop.

Importantly, DR is not ramp-constrained and it does not have minimum-run times as the current generation resource mix. This eliminates a need to compensate units for lost opportunity costs that are not needed in real-time.

The ISO is addressing probabilities that load ramping will be faster or slower than the expected ramping capability. DR may reduce the size of the “tails” of the ramping distribution. To the extent that DR load with fast ramping potential is removed from the load curve (where it will not change its ramping since it’s not compensated for doing so), the tails of the probability distribution will shrink, thereby reducing CAISO’s need to dispatch inefficient generation to meet flexible ramping requirements to cover those “tail” events.

III. POSSIBLE DESIGN CRITERIA

The ISO will need to establish a registration process for DR loads that will participate in the flexi-ramp product.

1. Real-Time Values

The following values will be necessary for DR participation in Flexi-ramp:

- Net Real Power Consumption
- Minimum Run Time
- Minimum Down Time
- Maximum Power Consumption
- Low Power Consumption

- Ramp Rate
- Scheduled Power Consumption
- Offer Price
- Offered energy (MW)

2. Measurement and verification

A DR resource dispatched in the Flexi-ramp will reduce its load by an amount equivalent to its offer within five minutes of receiving the dispatch signal. This can be the delta between the resources's Net Real Power Consumption at the time of dispatch and its Net Real Power Consumption five minutes later, measured using telemetry data.

A secondary level of M&V may be necessary to ensure that the demand response described above represents a true departure from the DR resource's business as usual energy consumption. This will require development of a customer baseline (CBL) for DR resources whose energy usage falls within an acceptable range of certainty, or a comparable performance evaluation method for DR resources with less predictable energy usage patterns. The secondary level of M&V methods should be consistent with the wholesale demand response M&V standards adopted by the North American Energy Standards Board (NAESB) and filed with the Federal Energy Regulatory Commission (FERC).

IV. DEMAND RESPONSE AGGREGATIONS

Participation by DR aggregations should be further be discussed by all the stakeholders. There has been talk by the ISO of regional points defined by major transmission interfaces such as Path 15 and Path 26.

ECS advocates, as Flexi-Ramp will be defined at a more granular level, that the approach of Load Aggregation Points (LAPs, or “Sub-LAPS”) can be used for DR Aggregations. Identification of the LAPs potentially could be accomplished by mimicking the criteria used by the CAISO in the development of its Reliability Demand Response Product.

V. CONCLUSION

Enabling DR resource participation in Flexi-ramp will require changes to the CAISO market systems. A cost-benefit analysis for DR participation in Flexi-ramp capacity should be conducted but should also ensure that the long-term benefits of Demand Response as a Flexible Ramping Product are equally measured and weighed.

DR resource participation in CAISO’s Flexible Ramping Product can level the field for supply and demand in the CAISO market. It would allow energy consumers to receive compensation for providing demand response and will provide the ISO a market mechanism for procuring sufficient ramping capability to handle variability and uncertainties in a cost-effective manner.

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