

**Comments of Viasyn, Inc.  
Flexible Ramping Product Straw Proposal**

<b>Submitted by</b>	<b>Company</b>	<b>Date Submitted</b>
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Viasyn appreciates the opportunity to comment on the ISO's Flexible Ramping Product Straw Proposal. In these comments Viasyn seeks to develop a more complete understanding of the ISO's proposal and, if the below questions have merit, request the ISO to incorporate further clarification in subsequent revisions of the proposal.

**Maximum Ramp Requirement**

The ISO proposes the maximum flexible ramping requirement to be based on the 95% confidence interval of between interval net system demand changes.<sup>1</sup> The ISO also proposes to not shift the maximum requirement in response to changes in the expected interval-to-interval net system movement because the "maximum requirement is independent of the expected [...] net system movement."<sup>2</sup>

- Can the ISO clarify how the driver of the maximum requirement (between interval net system demand changes) is not related to the expected net system movement?
  
- Under what circumstances or based on what calculations does the ISO propose to allow the maximum requirement to change, and in what level of granularity is this assessed (i.e. 5-minute, 15-minute, hourly, etc.)?

**Demand Curve**

The ISO proposes the calculation of the demand curve to be based on the marginal value of the incremental addition of 100 MW flexible ramping capacity blocks<sup>3</sup> in mitigating power balance violations estimated to occur under a zero flexible ramping condition.<sup>4</sup> In this calculation, the ISO proposes a 1-to-1 relationship between an additional MW of flexible ramping and an associated MW reduction in power balance violations, and proposes to reflect this marginal value in the demand curve.

As well, the ISO proposes to allow the x-axis (MW quantity) of the demand curve to shift based on changes in expected interval-to-interval net system movement;<sup>5</sup>

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<sup>1</sup> Straw Proposal at page 12.

<sup>2</sup> Straw Proposal at page 16.

<sup>3</sup> We reference the ISO's 100 MW, 5-step demand curve here, however these comments apply to any other arbitrary, stepped demand curve that utilizes the power balance violation calculation in determining the demand curve prices.

<sup>4</sup> Straw Proposal at page 13.

<sup>5</sup> Straw Proposal at page 17, Figure 4.

however because the demand curve is proposed to be based on the marginal value of flexible ramping in modifying the estimated power balance violation distribution, a shift in the x-axis (MW quantity) of the demand curve changes the fundamentals of the original calculation of the demand curve.

- How does the ISO propose to estimate the power balance violation distribution under a zero flexible ramp condition, and is the ISO concerned that inaccuracies in this estimation will introduce flaws in price formation?
- How often will the ISO re-estimate the power balance violation distribution for purposes of calculating the demand curve?
- What is the relationship between the power balance violation calculation of the demand curve and the calculation that allows shifts in the demand curve?
- What methodology is used to calculate shifts in the demand curve, and will this methodology allow each step in the demand curve to shift independently? If not, how does the ISO propose to treat the relationship between the last step of the demand curve (200-300 MW step in the straw example) and the power balance violation calculation, as this step will truncate/expand independently from the remainder of the demand curve as the demand curve shifts?
- Can the ISO clarify the relationship between the demand curve and the flexible ramping clearing price? The flexible ramping clearing price is based on the marginal resource's energy opportunity cost, however it is not discussed in the Straw Proposal the role of the demand curve, either in the determination of a procurement target or in the formation of a clearing price.

Thank you for your consideration of these comments.