



**Comments of VIASYN, Inc.  
FERC Order 764 Market Changes - Intermittent Resource Protective Measures**

Submitted by		Company	Date Submitted
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**1. Introduction**

VIASYN, Inc. offers these comments on the California Independent System Operator’s (the ISO) Straw Proposal regarding Intermittent Resource Protective Measures associated with FERC Order 764 market design changes. Section 2 provides a summary of our concerns and recommendations. Section 3 provides a description of the broadest example of our concerns, summarizing forecast inaccuracy for aggregated SP15 solar resources in 2012.

**2. Summary & Recommendations**

VIASYN is generally supportive of the FERC Order 764 compliance proposal but is concerned that under the new Participating Intermittent Resource Program (PIRP) design the PIRP forecast provider will have significantly greater influence over the settlement outcome of participating intermittent resources (PIRs). We encourage the ISO to consider the following 2 items, which would remove the exposure of PIRs to excessively inaccurate PIRP forecasts, while maintaining the objectives of the original modifications to PIRP:

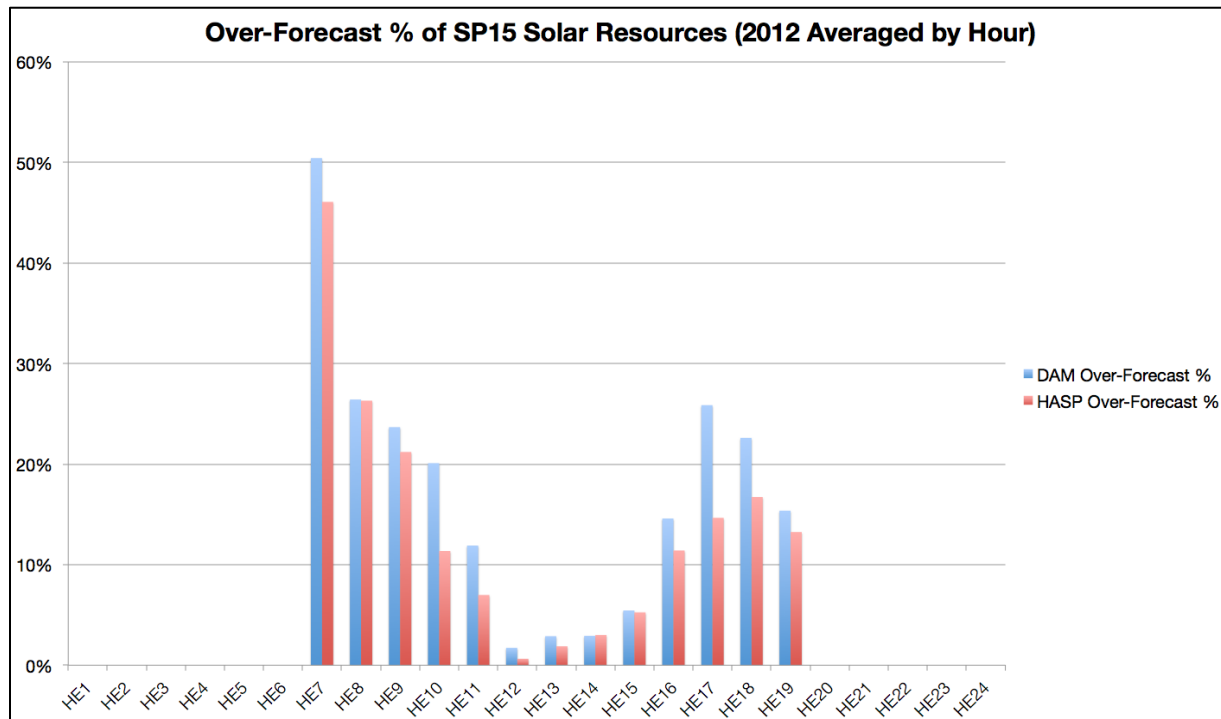
1. we encourage the ISO to provide participants with a process through which they can work with the forecast provider to tailor their forecast to more accurately represent their resources’ production characteristics if the forecast continues to deviate from expected values after initial implementation; and
2. we encourage the ISO to administer a deviation metric threshold evaluation that reduces the charge/payment to a resource, in proportion to the extent that the forecast deviates beyond the threshold via the use of a performance metric formula, during a month where:
  - (i) greater than 70% of all 5-minute RTM intervals are greater than the meter, or 70% of all 5-minute RTM intervals are less than the meter, and/or
  - (ii) the uninstructed imbalance energy quantity for the month is greater than 5% of the metered quantity for the month.

Item 2 improves the settlement of variable energy resources because it is one step closer to compensating resources based on actual production as opposed to a forecast of actual production.

### 3. Forecast Inaccuracy

In June, the ISO posted eligible intermittent resource performance data<sup>1</sup> for the period 01/01/2012 through 12/10/2012. This aggregated data report showed the accuracy of DAM and HASP forecasts for eligible intermittent resources, including those in PIRP. Although most resource categories (NP15 solar/wind, SP15 wind) showed average hourly under forecasting during on-peak hours where real-time prices are likely to spike, data for SP15 solar showed consistent over forecasting of 11-17%<sup>2</sup> between 4PM-6PM (see FIGURE 1 & 2). In fact, eligible intermittent SP15 solar resource production was, on average, over-forecasted by 8%<sup>3</sup> in 2012 (for hours ending 7-19).

**FIGURE 1: Over-Forecast % of SP15 Solar Resources (2012 Averaged by Hour)**



A forecast submitted in more granular intervals will not eliminate the persistent characteristic of these deviations. In fact, a more granular forecast with direct (non-averaged) exposure to RTM prices will exacerbate the consequences of these deviations. This illustrates a systematic error by the forecast provider and is a cost levied upon the resource category through no fault of their own. These costs do not serve as price signals, are unmanageable, and are not based on causation. This same type of systematic error may very well be present in other categories of resources on a resource-by-resource basis.

We therefore believe that a deviation metric threshold evaluation should be utilized because it minimizes the settlement impact that may arise due to systematic forecast deviations.

<sup>1</sup> CAISO 2012 Report for Wind/Solar Resources (excel): <http://www.caiso.com/Documents/2012Report-Wind-SolarResources.xls>

<sup>2</sup> Calculated as:  $[\text{avg}(\text{HE}_{XY}) - \text{avg}(\text{HE}_{XY})] / \text{avg}(\text{HE}_{XY})$

<sup>3</sup> Calculated as:  $[\text{avg}(\text{HE}_{YF}) - \text{avg}(\text{HE}_{YM})] / \text{avg}(\text{HE}_{YM})$  where HE = Hour Ending, X = Hour, Y = Year, F = Forecast Value, M = Meter Value

We appreciate your consideration of these comments.

**FIGURE 2: DAM & HASP Forecast Accuracy of SP15 Solar Resources  
(2012 Averaged by Hour)**

<b>Hour Ending</b>	<b>DAM % Over (Under) Forecast</b>	<b>HASP % Over (Under) Forecast</b>
HE7	50.4%	46.1%
HE8	26.4%	26.3%
HE9	23.7%	21.2%
HE10	20.1%	11.4%
HE11	11.9%	7.0%
HE12	1.7%	0.6%
HE13	2.9%	1.9%
HE14	2.9%	3.0%
HE15	5.4%	5.3%
HE16	14.6%	11.4%
HE17	25.9%	14.7%
HE18	22.6%	16.7%
HE19	15.4%	13.2%