

# Stakeholder Comments

## Subject: 2017 Policy Initiatives Roadmap

Submitted by	Company	Date Submitted
<i>Michael Katz, Director of Strategic Planning and Regulatory Affairs</i> <a href="mailto:michaelkatzenergy@yahoo.com">michaelkatzenergy@yahoo.com</a>	<i>Advanced Rail Energy Storage, LLC</i>	<i>November 17, 2016</i>

Advanced Rail Energy Storage (“ARES”) appreciates the opportunity to provide comments on the 2017 Policy Initiatives Roadmap and to highlight issues with the scoring of the Regulation Pay-for-Performance Enhancements initiative. ARES is pleased to see that this initiative has been included in the revised catalog, but believes that it should receive more points in at least 3 areas.

As ARES discussed in its initial comments on the Stakeholder Catalog, the regulation market is not functioning to compensate resources for performance in most hours. Mileage payments are the source of compensation for performance, and with mileage prices hovering around zero or 1 cent/MWh in most hours, the market design provides no incentives for accurate and faster resources to enter this market. Furthermore, there is minimal performance payment differences for resources providing regulation regardless of their regulation performance.

ARES believe that this is a serious impediment to encouraging the development of new, accurate and fast-responding storage resources, and suggests that the market dynamics that are driving the mileage price to negligible levels most hours should be examined and remedied to provide these resources with compensation for performance, as contemplated under Order 755.

ARES submits the following comments targeted at the criteria used by the CAISO to score initiatives in each area, and encourages the CAISO to take on this initiative in the upcoming policy initiative cycle.

## **Grid Reliability**

The scoring in the grid reliability criterion appears to be largely subjective, as the CAISO has declined to describe how it is calculating the score in this category to ensure an accurate score.

The Regulation Pay-for-Performance Enhancements initiative should be assessed as having much higher than only minimal improvements to grid reliability. A CAISO study of renewable integration<sup>1</sup> shows that more and faster ramping regulation resources will be needed as more intermittent resources are added to the system. In order to meet this need, the CAISO needs to determine the regulation market refinements necessary to encourage the development of these types of resources. A portfolio of fast-ramping and accurate regulation facilities has the potential to reduce the amount of regulation needed to meet the grid needs, which in turn could moderate the total regulation costs to customers.

This initiative helps to fix the flawed market design that currently results in negligible pay-for-performance. Without the appropriate market design and incentives for fast and accurate regulation resources, the CAISO may find itself short of the type of regulation resources needed for grid reliability in the future.

## **Improving Market Efficiency**

The current regulation-up and regulation-down prices are attractive enough such that the marginal regulation bidders won't risk losing the reg-up and reg-down awards by bidding mileage prices above zero. ARES believes that this behavior occurs because the CAISO uses a co-optimization algorithm to find to least-cost combination of regulation and mileage bids to select the winning set of bidders for each hour. When a bidder offers reg-up and reg-down mileage bids above zero and the mileage clearing prices are zero, then this bidder has the potential to lose the reg-up and reg-down awards regardless of the reg-up and reg-down price offers from this bidder.

The key design problem is that the co-optimization of regulation and mileage bids was based on the premise there would be significant revenue available from delivering regulation

---

<sup>1</sup> See pages 51 and 52 of <https://www.caiso.com/Documents/Integration-RenewableResources-OperationalRequirementsandGenerationFleetCapabilityAt20PercRPS.pdf>

mileage. If there was significant mileage revenue, then CAISO regulation market design would have resulted higher payments for fast ramping and accurate regulation resources compared to poor regulating resources. In the CAISO report “Pay for Performance Regulation Draft Final Proposal February 13, 2012,<sup>2</sup>” the optimization shows an example with mileage bids ranging from \$2 to \$3.8/MWh. If mileage prices were in this range, then the regulation market would have achieved the pay-for-performance design goal.

With regulation mileage prices at or slightly above zero, there is no payment differentiation among fast and accurate regulation resources and slow and inaccurate regulation resources, resulting in no incentive for fast-resources to join the market. Paying the appropriate prices for regulation and mileage will encourage new resources with regulation capabilities to enter the market.

### **Desired by Stakeholders**

This criterion is a fundamentally flawed metric with respect to the Regulation Pay-for-Performance Enhancements initiative. Existing regulation resources with mediocre to poor regulation capabilities prefer that the virtually all the regulation payments are embedded in the regulation-up and regulation-down payments. With the co-optimization algorithm finding the least-cost combination of regulation and mileage bids, resources are advantaged when bidding zero for mileage. Since the bulk of the stakeholders have strong incentives for the current set of rules, this metric encourages the status quo versus a better designed regulation market where performance is compensated appropriately.

### **Conclusion**

ARES encourages the ISO to reevaluate its scoring of the high level prioritization criteria in order to more appropriately assess the benefits of enhancing mileage payments through the Regulation Pay-for-Performance Enhancements initiative.

---

<sup>2</sup> <http://www.caiso.com/Documents/DraftFinalProposal-PayforPerformanceRegulation.pdf>