Comments of LS Power Associates, L.P. on Renewable Integration Phase 2

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I. Introduction

LS Power Associates, L.P. (LS Power) appreciates this opportunity to provide comments on the Discussion and Scoping Paper on Renewable Integration Phase 2. We appreciate that the CAISO is working to scope the extent of the market needs to address integrating the 33% Renewable Portfolio Standard into the system. LS Power believes that creating the roadmap for this process will be critical to creating a fully functioning market system.

II. Comments on the Renewable Integration: Market and Product Review Discussion and Scoping Paper

A. Allocation of Renewable Costs (2.4)

How to allocate the costs associated with integrating 33% renewables into the grid may be nearly as challenging and contentious an issue as passing the law that now requires at least 33% of the state's energy to come from renewable energy sources. LS Power believes that it is critical to identify underlying principles that can guide the CAISO and Stakeholders through this process. In our mind, the key principle that we should embrace is:

> *Renewable Integration costs should be managed on the most efficient basis in order to minimize the cost impacts of achieving the 33% RPS on CA consumers*

Much discussion is centering on whether costs for renewable integration should be placed directly on the Variable Energy Resources (VERs) or allocated in a different manner. LS Power believes that the most cost effective way of managing integration costs is to allow each LSE to manage integration costs across their portfolios. Any additional reserve procurement costs should be spread system wide, rather than being tied to specific resources or technologies. There are a few reasons for this

1) LSEs have the ability to consider the performance abilities of different resources during their procurement process and can choose renewable resources that complement each other or that may have technologies that better integrate, lessening costs to their system.

2) Based on the current set up, costs for integrating other technology resources are not allocated on a resource by resource basis. The largest single contingency of a "conventional" resource can pose a huge operating burden on the grid, but the cost incurred in procuring operating reserves to protect against this situation is not borne by each generator, instead it is integrated more broadly into the system.

3) While it is true that VERs simply by nature of their fuel supply do bring in variability to the grid, but it should be noted that other technologies can pose similar challenges as well. For instance, start and stops of pumping loads over the course of daily load cycle can bring in sudden abrupt variability as well, but the cost for this increase is borne by the entire system, not just by the pump load.

   In order to address the some operational challenges posed by VERs, CAISO has been developing new Interconnection Standards, which among other things require these technologies to install VAR support, Voltage Control, Active Power Management, and Ramp Rate Control features. These features will certainly offer more controllability to CAISO Dispatchers, and help address several concerns related to variability. These features however do come at a significant cost for VERs. Adding integration costs on top of the Interconnection Standards associated costs will potentially inhibit the development of these resources, thereby risking meet state's RPS policy goals.

4) It is also key that whatever pathway is taken for allocating integration costs that CAISO address that fact that in the standard contracts that CPUC jurisdictional utilities use there are no provisions for passing through future integration costs that could be imposed on generation. This process should ensure that VERs do not have their financial compromised by Integration efforts.

B. Integration costs for VER imports (2.4.1)

LS Power believes that dynamically scheduled and pseudo-tied variable energy resources should be treated for integration and cost allocation purposes the same way as in-state VERS

We appreciate the CAISO's consideration of these comments.