J.P. Morgan Comments CAISO Stakeholder Initiatives Catalogue

Submitted by	Company	Date Submitted
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J.P. Morgan Ventures Energy Corporation and BE CA, LLC (collectively, "J.P. Morgan") appreciates this opportunity to provide comments on the California ISO's (CAISO's) September 27, 2012, draft Stakeholder Initiatives Catalogue" ("Catalogue"). J.P. Morgan offers the following comments.

General Comments

The CAISO and the state are at a critical point regarding the further development of the wholesale power market in California. As stated repeatedly by the CAISO, the continuing and further integration of intermittent renewable resources on to the power system is significantly changing the way system must be operated. CAISO studies indicate it will require flexible operating resources to help reliably manage the grid under a high intermittent renewable resource scenario. Flexible resources are needed to help manage both instantaneous fluctuations in load and supply output and longer and more severe daily ramping and load following requirements. Therefore, the CAISO must ensure that flexible resources are available to the system on a long and short-term basis. To that end, the CAISO, working in conjunction with local regulatory authorities and market participants, must establish a wholesale electricity market design and resource adequacy program that establishes incentives for both the development of new flexible resources as well as the retention of existing flexible resources.

- J.P. Morgan supports the development of a multi-year forward capacity market to ensure that enough new generating capacity is developed in advance of when it is needed and that needed existing generation is sufficiently compensated to maintain operations. The market would price capacity at either the cost of new capacity or the going forward cost (e.g., retrofit costs) of existing capacity that is required to stay online. In addition, recognizing that it may take up to seven years to build new capacity or substantially repower/retrofit existing facilities, the development of any long-term capacity market must be coupled with the further development of the CAISO's markets for ancillary services and such other products/services necessary to reliably operate the grid. The importance of the development of robust reserve markets to complement development of a capacity market is highlighted in a recent paper regarding the power market in Germany:
 - "...another source for insufficient incentives to stay in the market is an inappropriate design of the reserve power market. If well-designed, power reserve markets make sure that flexible-enough generators (such as gas plants) can earn economic rents sufficient not only to cover incremental production costs but also to cover quasi-fixed costs (short-run fixed costs). This holds even if the existing capacity is only rarely called to actually deliver electricity. One key challenge in

Germany's transition phase is to adjust the specifications of reserve levels and products in an increasingly renewable-dominated system. If, for instance, efficient balancing of a renewable-dominated system requires also less flexible resources to stay in the market (such as hard coal plants, which cannot quickly ramped up), an efficient reserve power market must adjust by adding or redefining the product portfolio accordingly (e.g., reserve that is less flexible but available for longer time-periods). An appropriate power reserve market design, one that reflects the reserve requirements of the system, implies that suppliers will keep their resources in the market as long as they can provide these products at lower costs than new entry. Because power reserve products are interlinked with each other through arbitrage, competitive reserve markets with appropriate product definitions will lead to an efficient, cost-minimal provision of reserve capacities in the short- and medium-term. Together with a well-designed capacity market, a well-designed power reserve market will then lead to long-term efficient exit and entry decisions."

J.P. Morgan supports the further development of the CAISO ancillary services and reserve markets to provide the CAISO with access to the flexible resources necessary to reliably operate the grid. J.P. Morgan recommends that the CAISO expand its efforts to develop needed new spot-market reserve markets and examine the need for new short and near-term (monthly, annual) reserve products.

Specific Comments

New Initiatives

Capacity Market - Develop and administer a forward capacity auction, with appropriate reconfiguration auctions, that will clear at an amount equal to the supply necessary to meet forward capacity procurement obligations. All supply – both new and existing – will be paid the market clearing price (the market clearing price will either be set by the cost of needed new supply or the going-forward cost of needed existing generation). Load serving entities would be able to self-supply or bilaterally contract with capacity, but such capacity must be cleared through the auction. The auction will include necessary locational and flexible capacity constraints so that the CAISO can satisfy aggregate system requirements. Settlements would occur in the appropriate forward delivery year. The auction will include appropriate demand and supply market-power mitigation measures.

Reserve Markets – Develop needed new reserve markets – both spot-market and longer term (monthly, annual) – that procure flexible capacity capabilities needed for reliable system operation. Such markets would be bid-based and allow providers to recover their incremental and quasi-fixed costs. [Development of specific products would depend on the CAISO's specification of flexible capacity requirements, e.g. fast ramping, load/resource-following, etc.]. Interrelated efforts include the CAISO's ongoing Flexi-ramp product initiative, the 30-minute reserve initiative, extended LMP (the pricing of minimum load energy in general), pricing of Minimum On-Line Constraints (MOCs), and perhaps the CAISO's recent iDAM proposal.

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¹ See *Economics and design of capacity markets for the power sector*" Peter Cramton and Axel Ockenfels, 30 May 2011.

Finally, J.P. Morgan urges the CAISO to reconsider its initial labeling of initiatives as "Discretionary" or "Non-Discretionary." Rather than pre-designating certain non-FERC mandated initiatives as "non-discretionary", J.P. Morgan recommends that the CAISO instead conduct a thorough ranking process after the CAISO collects input from all stakeholders. At that point in time, after a careful assessment, the CAISO and stakeholders can together develop a truly integrated and well-thought out roadmap for evolving the design of the CAISO market.

J.P. Morgan appreciates the opportunity to provide these comments.