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Diamond Generating Corporation Comments on Joint Agency IEPR Workshop on Risk of Economic Retirement for CA Power Plants (17-IEPR-14)

Additional submitted attachment is included below.

Diamond Generating Corporation

Comments on April 27, 2017 Join Agency IEPR Workshop on Risk of Economic Retirement for California Power Plants (17-IEPR-14)

May 8, 2017

Diamond Generating Corporation ("Diamond") provides the following comments regarding the Joint Agency IEPR Workshop on Economic Retirement for California Power Plants (the "Workshop"). As the owner and operator of fast-ramping peaker generation constructed in the wake of the 2000-2001 energy crisis, Diamond can confirm that the risk of economic retirement is a real and near term issue that the California Energy Commission ("CEC"), California Public Utilities Commission ("CPUC") and the California Independent System Operator ("CAISO"), and all three entities collectively the ("Agencies") must address promptly in order to maintain the reliability "insurance" these resources provide to the CAISO. Firm capacity resources face risks of early retirement insofar as the potential revenue streams from the CAISO markets are not sufficiently compensatory to maintain asset availability. Similarly, these is no readily available bilateral contracting opportunities (e.g., a multi-year commercial commitment or product for firm capacity resources) available to ensure that these resources remain well maintained and available for local and system needs within the CAISO.

The Agencies should plan to act in the near term to address the economic retirement risk concern. As more firm capacity resources (i.e., dispatchable and flexible natural gas resources that do not have inherent duration limitations on their operations) approach the end of their existing long term contracts, the market continues to see dramatically increasing penetration of solar resources with variable and limited operating durations. As discussed below, by focusing efforts on ensuring near term refinements to procurement policies and practices ahead of when these dispatchable resources are due to come off contract, the Agencies can ensure that the reliability insurance value of firm capacity resources remains secure for local and system needs. That reliability insurance is critical for safe and consistent electric system performance, particularly as California works its way through a dynamic and transformative period for the electric system. Accordingly, Diamond recommends that the Agencies create a specific procurement process applicable to existing, firm capacity resources where they compete on a regularized, 3-year cycle for contracts with five-year terms.

The fleet of existing natural gas resources provides a critical, reliability insurance policy for California's grid and economy. While there is an overabundance of generating capacity in today's system, maintaining the ongoing availability of certain existing natural gas resources will be an important "insurance" investment while there are so many fundamental market and policy

shifts underway. In other words, maintaining the availability of the existing gas fleet enables the CAISO to address a multitude of changes and uncertainties, including:

(1) an expanded RPS program that incents renewable energy production at times when system demand may not need that energy;
(2) a lowering net demand curve—which recently set a new historic low—and will continue to lower as SB 350 energy efficiency investments are made;
(3) the impact of "hidden load" that is masked by behind the meter solar resources which can be subject to instantaneous production variation when cloud cover is present and during the sunset production reduction;
(4) depressed energy prices as zero energy cost, zero-carbon resources such as solar PV and wind exert downward pressure on the CAISO markets and further dilute the ability to capture variable costs or any contribution to fixed costs through the energy market;
(5) uncertainty regarding future retail load shapes that are expected to change significantly with increased electrification and application of default residential and small commercial time-of-use ("TOU") rate structures;
(6) significant electrification of transportation and thermal energy production as part of an overall strategy to reduce statewide GHG emissions; and
(7) ongoing Community Choice Aggregation ("CCA") expansion, which can be expected to lead to an increasingly disaggregated procurement implementation, notwithstanding integrated resource planning efforts.

Any one of these changes could have a dramatic effect on the wholesale energy markets, but the convergence of these phenomena in the next couple of years underscores the need to move promptly to ensure that the system retains and sufficiently compensates firm capacity resources that provide the critical flexibility and operational duration attributes that the CAISO will require in order to have strong system reliability.

The need for reliability insurance does not mean that today's surplus of capacity should stay on the system. For example, the once-through cooling ("OTC") facilities are clearly on a path towards retirement for well explained environmental and economic reasons. Some OTC facilities may have locational benefits—like other non-coastal resources within the system—that suggests a value for retaining an ability to provide energy, frequency response, or other characteristics at their specific nodes. Yet, insofar as California operates with a hybrid market structure and CAISO's markets continue to provide insufficient revenue streams to directly support such resources, some form of multi-year contracting is needed. In light of California's policy preference to avoid any investments in new, greenfield gas projects, the Agencies should instead focus on competition across the existing operating fleet where their interconnection points coupled with certain duration and other operational characteristics will enhance system reliability.

For example, the Agencies should consider ways to encourage technological enhancements at existing facilities that will have the greatest value in the future low-carbon grid. As noted during the Workshop discussions, the recent SCE hybrid peaker/storage project, the generator "clutch" projects, and black-start system restoration capabilities, all provide considerable and particularized value from gas resources as part of a high-renewables system. Today's procurement processes do not send the right signal to encourage these capital investments. Moreover, with the pending end to many firm capacity resource contracts in the next two years, there is a critical need to have a path to retain and enhance existing gas resources to support California's future electric grid and the economy that depends upon a reliable system.

The Agencies could facilitate an orderly retirement process through three-year "open season" competitive procurement cycles with up to five-year forward contract terms. The regularized open season cycle will give generators an opportunity to compete on the basis of characteristics and costs as a means for resources to evaluate new technologies and potentially secure contract renewals with the desired operational attributes, or undertake an orderly retirement if the market signal is that they are no longer necessary. If a resource is unsuccessful in one of the cycles and is not ultimately needed, the resource can retire or do a layup until the next regular open-season cycle. In addition, the five-year contract term is a "no regrets" approach, particularly if California's policy as reflected in the loading order is not geared towards greenfield development of gas resources.

Finally, Diamond wishes to express its concerns regarding two key areas of discussion during the Workshop. First, Diamond does not agree with the characterization of Utility Owned Generation ("UOG") cost of service being a "market power mitigation" mechanism. Utilities enjoy a form of market power insofar as they are generally insulated from the economic retirement risk issue since they do not have term contracts and because they are not reliant on a market that is insufficiently compensatory. Since UOG is not subject to the same market pressures as merchant generators, UOG may have an asymmetric competitive advantage in a system where there is little or no valuation of those services that firm capacity resources are able to provide to the CAISO. A discrete "open-season" contracting approach as described above can serve as a partial check against any inappropriate exercise of UOG market power.

Second, the Agencies discussed the possibility of a risk of retirement review of resources within a single local capacity reliability sub-area. The concept that the Agencies discussed at the workshop sounded as though the CAISO would enter into new short term (e.g., one-year) cost of service contracts. We do not believe this would be the most cost effective option for addressing the economic retirement risk issue. The process may not necessarily lead to an orderly retirement process because not all resources within a local reliability area or sub-area may be facing the end of their long term contracts at the same time. It is also not clear whether this process would send signals for incorporation of new technologies such as faster start or expanded

operating range enhancements, or storage collocation, that may be valuable in a system that has significant energy production from variable energy resources. Instead, the three-year open season process described above would provide greater certainty for both resource owners and the grid operator. Diamond also recognizes that if a local sub-area is insufficiently competitive, then a cost of service contract may be an effective backstop to keep the resource available with a reasonable return while addressing concerns about potential abuse of market power.

Diamond appreciates the Agencies' efforts to tackle these challenging issues and looks forward to working with the Agencies and other parties to proactively address these issues. Near term action is needed as many existing gas projects will begin rolling off of current contracts well before the IRP process will lead to new procurement. A three-year open season competitive solicitation process for existing resources that provides five-year contracts provides the best chance of enabling orderly retirement in a cost-effective manner.

If you have any questions or would like to discuss these comments, please do not hesitate to contact me.

Respectfully submitted,

/s/

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