To: CAISO Board of Governors;
Mr. Ashutosh Bhagwat
Mrs. Angelina Galiteva
Mr. Mark Ferron
Mr. Richard Maullin
Mr. Dave Olsen
PO Box 639014
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From: Cogentrix Energy Power Management, LLC

Date: October 26, 2016

RE: Urgent need for CAISO action regarding flexible Peaking Plants

Dear Governors,

Cogentrix and our owner The Carlyle Group applaud California's nation-leading commitment to build out of renewables generation. The CAISO should be recognized for its continued efforts to ensure reliability while achieving an unprecedented build out of solar resources. However, as the CAISO knows better than anyone, the infamous "duck chart" is showing up earlier than predicted just a few years ago, with a net ramp exceeding prior projections.

The need for flexible peaking generation has been identified and highlighted by the CAISO and other market experts. In particular, sub-10 minute start aero-derivative machines are well suited for short-duration dispatches required for the evening-net ramping requirement. Ultimately we expect a renewables-reliant grid to be augmented by storage and other alternative resources to help offset the intermittency of renewables and meet load while renewables are not generating. However, until the time the time when large scale storage is feasible and economical, natural gas fired aero-derivative peakers will be necessary to maintain grid reliability. Unfortunately, many of those assets are at a real risk. Downward pressure in the resource adequacy markets is deteriorating the revenue stream on which peaking resources rely.

The Cogentrix California portfolio is made up six natural gas-fired, simple cycle peaking facilities:

1) The CalPeak portfolio, consisting of four 49.5 MW aero-derivative peakers, two of which are located in the San Diego Subarea (Border and Enterprise), one in Fresno County (Panoche) and one in Solano County between Vacaville and Dixon (Vaca Dixon),
2) The 96 MW Malaga Power facility located in Fresno, and;

3) The 122 MW Midway Peaking Project, also located in Fresno County.

The two projects located in San Diego do not have power purchase or resource adequacy agreements as of January 1, 2017 and the other Northern California CalPeak projects are not contracted starting in 2018. This lack of contracts introduces considerable risk regarding the future availability of the units. Relative to comparably sized gas steamers, such as many of the once through cooling (OTC) units, or even more modern CCGT units, the Cal Peak peakers require less land, consume less water, and emit less CO2, while providing superior flexibility and responsiveness

Cogentrix's two San Diego assets, Border and Enterprise, are particularly illustrative examples of the phenomenon described above. Upon the expiration of a three year RA agreement at the end of 2016, as of today Border and Enterprise has a total of 2MWs of RA sold for 2017. As a result, the portfolio will experience a significant financial loss in 2017. Cogentrix has made numerous attempts to negotiate a capacity sale with SDG&E, including participating in an RFO conducted late this past summer. Unfortunately, in lieu of procuring capacity via a competitive process, the CPUC is scheduled to approve a bilaterally negotiated RA agreement between SDG&E and NRG with the inflexible Encina facility, a 1950s and 1960s vintage plant that utilizes once through cooling and is slated for retirement at the end of 2017.

The lack of a capacity sale by Border and Enterprise will preclude those assets from performing certain maintenance activities that an appropriately compensated generator would perform. Additionally, the lack of capacity sales jeopardizes their ability to be available in 2017 and significantly calls into question whether they will be available in 2018 and beyond when Encina is currently required to be retired and Carlsbad is not yet delivered. The risk of the loss of Border and Enterprise is particularly acute given the acknowledged delay in the delivery of NRG's Carlsbad plant, delays in transmission upgrade projects as well as the CEC's Local Capacity Annual Assessment Tool (LCAAT) baseline analysis that demonstrates that the San Diego Subarea will be short of capacity in 8 of the 10 coming years, even accounting for Carlsbad eventually coming online.

The issue of how to keep truly flexible peakers on the system is before us now and we recommend that it is time for the CAISO to make a determination as to what generation characteristics are desired for grid operations and which plants are needed. Cogentrix appreciates the recent CAISO filing in the CPUC's RA Phase 3 proceeding where the CAISO states the following;

> "Stable revenue streams that extend <u>three to five years</u> into the future are critical to ensure that the resources that retire today are not the resources needed to maintain reliability tomorrow. The Commission should develop a process to ensure that any resource retirement occurs in an orderly and economic fashion and does not impair the long-term reliability of the system or jeopardize the state's environmental policies."

More importantly, we recommend that the CAISO communicate its determination to the CPUC and the load serving entities (LSEs) with the appropriate sense of urgency this issue requires. Cogentrix is recommending 5 year transitional contracts for flexible aero-derivative

peakers as bridge to the future green grid. The risk of loss of these assets could require much longer and more expensive commitments from California ratepayers to subsidize the cost of building replacement capacity.

A long-term solution is crucial as more renewable generation comes online and peaking plants continue to roll off long-term contracts, additional downward pressure will be applied to the merchant RA and energy markets exacerbating the ability of generators to remain viable. Revenue certainty beyond one year is critical for existing generation to continue to be the insurance policy for reliability. Loss of existing flexible generation will result in increased cost to ratepayers to support new generation or increased environmental harm caused by keeping OTC plants open beyond their mandated shutdowns. Peakers are particularly at-risk given their reliance on RA contracts for cash flow visibility. Weakening economics in the RA and energy markets will force peakers to forego required maintenance or shutdown, similar to the Sutter facility and potentially the La Paloma facility.

The draft CEC 2016 Integrated Energy Policy Report (IEPR) Update was issued last week and in it the CEC commented on several of the challenges we identify in this letter. In order to assure resources needed for local reliability remain available, the CEC has recommended that the CPUC revise its resource adequacy program to require that resources required for local reliability are contracted sufficiently forward to assure their availability until new options can be assessed, permitted, and developed. We urge the CAISO to file comments on the 2016 IEPR Update on Nov 7th with the CEC supporting this recommendation and stressing the urgency for timely action.

We look forward to continuing to work with CAISO management and staff on this most important issue, that if not addressed will lead to reliability problems throughout California and detract from the other important regionalization issues.

Respectfully,

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