Docket Number:	13-AFC-01
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Project Title:	Alamitos Energy Center
TN #:	214888-1
Document Title:	Revised Intervenor Los Cerritos Wetlands Land Trust, Part 2, Bill Powers Rebuttal Testimony
<b>Description:</b>	*** THIS DOCUMENT SUPERSEDES TN 214886 - Note: TN 214886 an attachment for rebuttal and is cited in this revised rebuttal testimony ***
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Submitter Role:	Intervenor
Submission Date:	12/19/2016 10:38:05 AM
Docketed Date:	12/19/2016

In re:

Application for Certification for the: Alamitos Energy Center

Docket No. 13-AFC-01

## INTERVENOR LOS CERRITOS WETLANDS LAND TRUST Part Two Rebuttal Testimony REVISED

Testimony of Bill Powers on behalf of the Trust

December 19, 2016

This rebuttal testimony addresses the following statements in the Applicant's Opening Testimony, Part 2, II.D Potential Operational Related Impacts; Avoidance and Minimization Measures:<sup>1</sup>

Startup and shutdown periods are a normal part of the operation of natural gas-fired power plants. Emissions are greater during startup and shutdown than during steady-state operation. During startup and shutdown, the turbines are not operating at full load, which is where they are most efficient, and the exhaust temperatures are lower during startup and shutdown compared to steady-state operations. . . Therefore, SCAQMD has established separate BACT limits for startups and shutdowns. As outlined in the SCAQMD FDOC, combined-cycle turbine cold startups will be limited to 60 minutes, while non-cold startups and shutdowns will be limited to 30 minutes.

According to the final 2016 decision in the CPUC proceeding that authorized 640 MW of gas-fired generation at Alamitos, any resource bidding into SCE's request for offers for resources to provide grid reliability in the LA Basin must provide full output within 20 minutes of dispatch. The CPUC final decision states:<sup>2</sup>

We find SCE's inclusion of a 20-minute response time condition for demand response resources procured through this RFO reasonable given the circumstances<sup>3</sup>... CASIO stated that it required the 20-minute response time condition for demand response in local areas for reliability reasons<sup>4</sup>

The California Independent System Operator (CAISO) specifically requires grid reliability resources to provide full load output within 20 minutes to meet the requirements of CAISO Tariff Section 40.3.1.1.<sup>5</sup> CAISO states:<sup>6</sup>

Tariff Section 40.3.1.1, requires the CAISO, in performing the Local Capacity Technical Study, to apply the following reliability criterion:

Time Allowed for Manual Adjustment: This is the amount of time required for the Operator to take all actions necessary to prepare the system for the next Contingency. The time should not be more than thirty (30) minutes.

<sup>&</sup>lt;sup>1</sup> Applicant's Opening Testimony, Part 2, December 16, 2016, pp. 8-9.

 $<sup>^2</sup>$  CPUC, D.16-05-043, Order Modifying Decision 15-11-041 and Denying Rehearing of the Decision as Modified, May 26, 2016.

<sup>&</sup>lt;sup>3</sup>Ibid, p. 18.

<sup>&</sup>lt;sup>4</sup> Ibid, p. 19.

<sup>&</sup>lt;sup>5</sup> CAISO, 2017 Local Capacity Technical Analysis Final Report And Study Results, April 29, 2016.

<sup>&</sup>lt;sup>6</sup> Ibid, pp.15-16.

Accordingly, when evaluating resources that satisfy the requirements of the CAISO Local Capacity Technical Study, the CAISO assumes that local capacity resources need to be available in no longer than 20 minutes so the CAISO and demand response providers have a reasonable opportunity to perform their respective and necessary tasks and enable the CAISO to reposition the system within the 30 minutes in accordance with applicable reliability criteria.

The GE Frame 7A.05 units cannot comply with CAISO's definition of compliance with CAISO Tariff Section 40.3.1.1. This is non-compliance with an applicable "Laws, Ordinances, Regulations and Standards" (LORS) that results in elevated startup air emissions. The inability of the GE Frame 7A.05 to reach full load within 20 minutes of a dispatch call means: 1) elevated startup air emissions will continue beyond the CAISO-mandated 20-minute maximum startup period permitted for resources intended to serve as grid reliability resources, thereby subjecting local residents and the SCAQMD to elevated startup emissions that would not be emitted during startup of complaint grid reliability gas-fired resources, and 2) the GE Frame 7A.05 units should not qualify as grid reliability resources due to startup timelines that exceed 20 minutes.