

DOCKETED

Docket Number:	16-IEPR-02
Project Title:	Natural Gas
TN #:	211195
Document Title:	Stem, Inc. Comments: Stem Comments on Joint Agency Action Plan
Description:	N/A
Filer:	System
Organization:	Stem, Inc.
Submitter Role:	Public
Submission Date:	4/22/2016 1:54:00 PM
Docketed Date:	4/22/2016

Comment Received From: Stem, Inc.

Submitted On: 4/22/2016

Docket Number: 16-IEPR-02

Stem Comments on Joint Agency Action Plan

Additional submitted attachment is included below.

The Honorable Robert B. Weisenmiller
Dockets Office, MS-4
Re: Docket No. 16-IEPR-02
1516 Ninth Street
Sacramento, CA 95814-5512

April 22, 2016

RE: ALISO CANYON ACTION PLAN FOR LOCAL ENERGY RELIABILITY-SUMMER 2016

Dear Chair Weisenmiller,

Stem respectfully submits these comments in regards to the *Joint Agency Aliso Canyon Action Plan for Local Energy Reliability (Action Plan)* and the related Public Workshop on April 8, 2016. Stem is a developer, owner, and operator of grid-connected advanced energy storage systems. Stem systems are installed and interconnected at customer sites behind the utility meter and utilize advanced analytics to charge and discharge the storage devices for optimal economic benefit. Having successfully participated in the Southern California Edison solicitation for Local Capacity Resources with an 85 MW aggregated distributed storage solution, Stem is uniquely positioned to comment on solutions to meet electric reliability needs in the Los Angeles Basin.

I. OVERVIEW

Stem appreciates the time and dedication of the Joint Agencies to develop both the Technical Assessment and Action Plan to address the anticipated local electric reliability needs of residents and businesses in the affected area due to the Aliso Canyon gas leak. As an experienced provider of customer-sited energy storage solutions, Stem's comments will focus on the following recommendations as ways to enhance the Joint Agencies 18 mitigation measures to reduce the risks associated with natural gas curtailment:

- Investment in customer-sited (a.k.a. behind-the-meter) battery energy storage should be considered as an approach to meet the need for fast-responding load reduction resources



data
analytics
power

100 Rollins Road
Millbrae
California 94030

T 415 937 7836
F 415 373 0484
stem.com

- The relevant State Agencies should provide the utilities assurance that any contracts issued to meet Aliso Canyon-related needs will receive fast track approval
- State, municipal, and utility-owned buildings could be prioritized and utilized for the deployment of storage solutions
- State Agencies and Utilities should work with local agencies to fast track interconnection and permitting processes for customer-sited energy storage systems deployed to meet Aliso Canyon needs

Stem fully understands the urgency of the current situation and the need to deploy solutions as quickly as possible, and we are optimistic that energy storage can be a vital component to the strategy to mitigate the impacts of the Aliso Canyon gas leak.

II. INVESTMENT IN CUSTOMER-SITED BATTERY ENERGY STORAGE SHOULD BE CONSIDERED TO ADDRESS THE NEED FOR FAST-RESPONDING LOAD REDUCTION RESOURCES

One of the key mitigation measure categories identified in the Action Plan is to focus on reducing natural gas and electricity usage through a variety of existing programs and mechanisms, such as increasing targeted energy efficiency and expanding demand response efforts. While Stem fully supports these approaches, we would urge the Joint Agencies to consider investment in the deployment and/or repurposing of existing customer-sited energy storage resources as an addition to these actions. Energy storage has the unique ability to act as a reliable and fast-responding demand reduction resource that, when aggregated, can provide services to both the end customers as well as grid operators on demand. This is extremely important in terms of meeting the needs of the Aliso Canyon gas shortage, because, as detailed in the Technical Assessment:

*“The supply shortfalls, loss of storage withdrawal (beyond Aliso), or loss of pipeline capacity could alternatively be **real-time changes in demand** (such as a fast/sustained ramp of gas-fired electric generation) or forecast variances.”¹*

¹ Aliso Canyon Risk Assessment Technical Report, Pg. 33

What this means is the grid operators may need to react in real-time to changes in demand and thus may call upon fast-responding resources that do not require significant advanced notification in order to reduce load. This was reaffirmed by the California Independent System Operator (CAISO) in their comments on Southern California Edison's (SCE) Proposal submitted to the California Public Utilities Commission (CPUC):

*"The CAISO agrees that SCE should prioritize procurement of fast-responding resources because **longer-starting resources are not likely to address the real-time operational challenges** and the limited flexibility of gas-fired generation units caused by the loss of the Aliso Canyon facility."*²

This will be a challenge for traditional utility demand response (DR) programs because in most cases they require a day-ahead notification to customers if there will be a demand response event. This challenge was reflected by the Joint Demand Response Parties, who represent the traditional DR aggregators that participate in the existing utility DR programs, in their comments to SCE's Proposal:

*"The type of new, fast-responding DR product described in the March 23 ACE and SCE April 4 Proposals is an experimental form of DR that, to the Joint DR Parties' knowledge, does not exist anywhere."*³

Given that these DR aggregators are not familiar with an existing traditional DR product that would meet the needs identified by SCE, it is reasonable to assume that SCE will have a limited ability to call upon their DR programs as a reliable mitigation measure to meet needs in the LA Basin this summer. This supports our recommendation for the Joint Agencies to direct investment in customer-sited energy storage resources that can meet the fast-responding, flexible requirements identified by SCE and others. These resources are not "experimental", as Stem has direct experience in deploying and managing these resources to meet fast-responding dispatch requirements through our participation in the CAISO's real-

² Reply Comments of the California Independent System Operator Corporation, Pg. 1

³ Comments of Joint DR Parties on SCE Proposal, Pg. 5

time market as a Proxy Demand Resource (PDR).

The key to meeting these requirements is the ability for these resources to be aggregated and managed as a firm, dispatchable fleet through software controls. It is important to ensure that any energy storage systems deployed to meet the identified needs be coupled with software that enables grid operators to dispatch these resources, either directly or through a qualified aggregator, to meet real-time requirements.

III. UTILITIES SHOULD HAVE ASSURANCE THAT ANY CONTRACTS ISSUED TO MEET ALISO CANYON-RELATED NEEDS WILL RECEIVE FAST TRACK APPROVAL

Any investment and deployment of customer-sited energy storage resources will likely be channeled through a utility procurement mechanism, with the likely result being a direct contract between the utility and storage provider. In non-emergency situations, these contracting processes often have long timelines and regulatory approval gateways. We would suggest that the Joint Agencies provide clear guidance to the respective utilities that any contracts issued in response to meeting the needs of the Aliso Canyon gas leak receive fast-track approval in order to ensure that these resources can be deployed as expeditiously as possible.

IV. STATE, MUNICIPAL, AND UTILITY-OWNED BUILDINGS COULD BE PRIORITIZED AND UTILIZED FOR THE DEPLOYMENT OF STORAGE SOLUTIONS

One of the most time consuming components of deploying customer-sited energy storage resources is the customer identification and acquisition process. Given the urgency of the situation, one possible option to support quick deployment of these resources is to utilize state, municipal and utility-owned facilities as host sites for these systems. The Joint Agencies can instruct these entities to identify facilities that are located in the impacted region and work with qualified vendors to install these resources in time to meet the need for this summer.

V. STATE AGENCIES AND UTILITIES SHOULD WORK WITH LOCAL AGENCIES TO EXPEDITE

INTERCONNECTION AND PERMITTING PROCESSES

Another related challenge to quickly deploying these system is that the standard interconnection and permitting processes for customer-sited energy storage resources can often take several weeks if not months. This is largely due to the relatively non-standard ways in which these local agencies process the permitting request for these types of systems. In an emergency situation such as this, it will be vital for these local agencies and utilities to receive approval and financial support in order to expedite the relevant permitting and interconnection processes. This will be an extremely important component to the overall ability for customer-sited energy storage resources to be deployed at scale within the identified timeframes.

VI. CONCLUSION

Stem appreciates the opportunity to submit these comments and looks forward to continuing to work with the Joint Agencies and other stakeholders in order to minimize the overall impacts of the Aliso Canyon crisis.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ted Ko". The signature is fluid and cursive, with the first name "Ted" and last name "Ko" clearly distinguishable.

Ted Ko
Director of Policy
Stem, Inc.
Email: ted.ko@stem.com