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Update to Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin for Summer 2016

Prepared by the Staff of the California Public Utilities Commission, California Energy Commission, the California Independent System Operator, and the Los Angeles Department of Water and Power

May 27, 2016

The California Energy Commission jointly conducted a workshop with the California Public Utilities Commission (CPUC), the California Independent System Operator (California ISO), and the Los Angeles Department of Water and Power (LADWP) on April 8, 2016 to discuss the near-term gas and electricity reliability risks to the Los Angeles Basin due to recent events at the Southern California Gas Company's (SoCalGas) Aliso Canyon gas storage facility. The joint agencies presented an action plan and technical analysis describing the reliability risks and recommended mitigation measures to reduce those risks for summer 2016. The agencies asked for stakeholders to comment on the Action Plan and risk assessment.

Forty-one stakeholders subsequently commented on the Action Plan and risk assessment. The main portion of this update addresses the general themes from the comments and provides information about the implementation status of the mitigation measures. Specific comments and associated agency staff responses are documented in an attachment to this update. In general there was significant support for the 18 mitigation measures presented at the workshop, and none of the comments demonstrate that any of the measures should be deleted. They do, however, suggest a number of clarifying questions and that further explanation of certain aspects of the risk assessment is required. Table 1 lists key stakeholder comments and the associated clarification. In response to the comments, the agencies have added three new measures: to expand and accelerate battery energy storage, to explore dual fuel capability for LADWP units, and to protect California ratepayers. Staff conducted follow-up evaluations on more measures that are addressed in the response to specific comments. Table 2 provides a status update of the mitigation measures, many of which are already being implemented, and which the joint agencies are tracking to ensure timely implementation.

Table 1
Stakeholder Comments and Clarification

	Statement	Clarification
A.	The analysis should have used the total SoCalGas system supply capability of 5.7 Bcfd (3.875 Bcfd firm pipeline capacity plus 1.8 Bcfd storage at Honor Rancho, La Goleta, and Playa Del Rey).	Operational risk exists when there is a mismatch between scheduled gas (receipts) and actual customer demand (sendout), rather than the total daily pipeline and storage withdrawal capacity.
B.	Neighboring states like Arizona and Nevada do not need to rely on natural gas storage facilities	Operators upstream of California rely heavily on the linepack[1] of their long pipeline systems, which is a form of storage. El Paso Natural Gas does have one storage field attached to it in New Mexico, and the pipelines in these states also have tighter balancing provisions than California. Those states have or may consider storage, especially as they change their generation portfolios to ones that are more variable.
C.	It is not a concern that gas consumption in other states upstream of California could	Southern California is at the terminus of interstate pipelines that originate in Texas

[1] The volume of gas that can be stored in a pipeline is often referred to as linepack.

	Statement	Clarification
	restrict supplies.	and Wyoming and Alberta and serve load between there and California. We have seen supplies consumed by customers "upstream" (i.e., between us and the producing basins) during extreme weather conditions. Examples occurred in February 2011 and February 2014.
D.	SoCalGas flowing gas supply is not limited to its 3.875 Bcfd of firm pipeline capacity. SoCalGas can bring more gas in at the border, using the full 6.7 Bcfd of interstate capacity that comes to the California border.	While the capacity that comes to the border is in fact higher, SoCalGas does not have the capacity to receive more than 3.875 Bcfd into its system, assuming all of its lines are fully operational. This "mis-match" between capacity coming to SoCalGas versus its "take-away" capacity is the result of long-standing state policy to create competition among pipelines and gas suppliers to benefit California.
E.	Was Playa Del Rey storage considered in the hydraulic simulations?	The Playa Del Rey supply was used as reserves to meet system stress conditions. On two of the days where the hydraulic simulation showed curtailment results, the difference between system supply and demand resulted in gas from Playa Del Rey being called from reserve and used to meet the actual demand for the simulated day in virtually every hour of the day.
F.	The critical issue on a peak day is how quickly a storage field can send gas into the pipeline system, and not the volume of gas in the storage field.	This statement does not account for the fact the withdrawal capacity of a storage field is directly related to the inventory in the field. As the inventory is depleted due to storage utilization, the withdrawal deliverability is reduced.
G.	Honor Rancho storage is on the LA Basin pipeline loop and directly relevant to providing balancing service within the LA Basin.	The risk assessment fully utilized gas from Honor Rancho in the hydraulic simulations. Honor Rancho is connected to the high pressure backbone transmission system and not to the lower pressure transmission connected to Aliso Canyon that constitutes LA pipeline loop. It thus provides limited support to the LA Basin. Honor Rancho cannot fully substitute for lost supplies from Aliso Canyon for several reasons: withdrawal capacity is about half of Aliso Canyon; its main job is to provide support to the San Joaquin Valley, Coastal areas, and the Inland Empire; and it is unable to meet the large and

	Statement	Clarification
		rapid hourly changes in electric generation gas demand due to its distance and location relative to the load centers in LA Basin.

Table 2

Status of Mitigation Measures

CATEGORY	MITIGATION MEASURE	STATUS UPDATE
Prudent Aliso Canyon Use	1. Make available 15 Bcf stored at Aliso Canyon to prevent summer electricity interruptions	Discussions underway to develop protocol. Draft plan and order expected early June. CPUC disposition expected by mid-June.
	2. Efficiently complete the required safety review at Aliso Canyon to allow safe use of the field	DOGGR website shows testing underway.
Tariff Changes	3. Implement tighter gas balancing rules	Incorporated into proposed settlement submitted 4/29/16. CPUC disposition expected in June.
	4. Modify operational flow order rule (OFO)	OFO rule changes incorporated into proposed settlement, submitted 4/29/16. CPUC disposition expected in June.
	5. Call OFO's sooner in gas day	On Standby List for further development if needed
	6. Provide market information to generators before cycle 1 gas scheduling	Changes approved by ISO Board of Governors on 5/4/16. Incorporated into ISO FERC Tariff filing submitted 5/9/16.
	7. Consider ISO market changes that increase gas-electric coordination	Incentives approved by ISO Board of Governors 5/4/16 and incorporated into ISO FERC Tariff filing submitted 5/9/16.
Operational Coordination	8. Increase electric and gas operational coordination	Training scheduled for 5/26/16 and additional table top exercises scheduled for 5/16/16 & 5/31/16, includes CAISO, LADWP, SoCalGas. Coordinating with Peak Reliability and WECC to maximize transfer capability.
	9. Establish more specific gas allocation among electric generators in advance of curtailment	Discussions underway to develop protocol. Draft plan and order expected by mid-May. CPUC disposition by end of May.
	10. Determine if any gas maintenance tasks can be safely deferred	CPUC and SoCalGas working on list of potential projects of pipelines into LA Basin.
LADWP Operational Flexibility	11. Curtail physical gas hedging	Physical gas hedging has been curtailed until further notice to improve ongoing operational flexibility.
	12. Stop economic dispatch	LADWP has halted economic dispatch in

CATEGORY	MITIGATION MEASURE	STATUS UPDATE
		an effort to maximize flexibility.
	13. Curtail block energy and capacity sales	Block energy and capacity sales have been curtailed.
	14. Explore dual fuel capability	LADWP is exploring use of alternative fuel and required air permit exemptions with South Coast Air Quality Management District to be used in emergency situations.
Reduce Natural Gas and Electricity Use	15. Ask customers to reduce natural gas and electricity energy consumption	CPUC Advice letter for Flex Alert and gas messaging funding completed 4/28/16. Task force for gas messaging created and ISO is ready for Flex Alert triggers.
	16. Expand gas and electric efficiency programs targeted at low income customers	CPUC approved decision on 4/21/16 with monthly impact reporting to begin 5/23/16.
	17. Expand demand response programs that target air conditioning and large commercial use	Proposed Decision Issued 5/4/16 with CPUC disposition expected early June.
	18. Reprioritize existing energy efficiency towards projects with potential to impact usage	List of custom projects identified by utilities. SCE and SoCalGas will finalize agreements to accelerate projects. LADWP has budgeted $178 million for 2016-2017 fiscal year for energy efficiency programs and is in the review and award process of RFP responses to support the following programs:. a) Commercial Direct Install - Launched the week of 4/18/2016. b) Behavioral EE - Launch by 7/1/2016. c) Residential LED lighting program - Launch by 7/1/2016. d) Air Conditioning Tune up - Launch by 7/1/2016. e) Upstream Commercial HVAC - Launch by 7/1/2016. f) Demand Response (DR) program: accelerating to enroll into 2016 DR program from 10 MW to up to 60 MW. LADWP also completed an MOU with L.A. Unified School District to implement energy savings measures, formally kicked off on 4/6/2016.
	19. Reprioritize solar thermal program spending to fund projects for summer and by end of 2017	CPUC approved funding transfer from general market program to low-income program. CPUC Advice letter filed 4/15/16 for incentive design

CATEGORY	MITIGATION MEASURE	STATUS UPDATE
		modifications to SoCalGas CSI Thermal Program.
	20. Accelerate Electricity Storage	CPUC and SCE identified electricity storage projects in SoCalGas territory which could help alleviate needs caused by Aliso Canyon this year. Working on multiple approaches to accelerate online dates. CEC is also exploring how they can help accelerate projects in LADWP territory. LADWP will accelerate a utility scale battery storage project of 10 MW for implementation as soon as viable. LADWP is also actively working with our existing solar developers to explore additional battery installation options.
Market Monitoring	21. Protect California Ratepayers	As examples of actions, FERC and CAISO Department of Market Monitoring will monitor markets for market manipulation

Many commenters, both at the workshop and in in written comments, expressed concern that the Action Plan is an endorsement of the continued use of Aliso Canyon for the long term. That is not the case. The Action Plan was designed with a much more narrow purpose: analyzing and preparing for any risks to energy reliability *this summer* associated with the anticipated gas curtailments resulting from Aliso Canyon, and to develop mitigation measures to minimize this risk. The agencies have begun a separate risk assessment analysis for winter 2016/2017 reliability and are actively pursuing independent third party review of the analysis[2] and will present that analysis at a public workshop in August 2016. In addition, they will conduct a separate evaluation of the potential long term viability of Aliso Canyon in 2017.

Many of the mitigation measures are already underway and provide a least regrets plan of action to mitigate the gas and electric reliability risk. Nineteen of the 21 mitigation measures do not involve the use of Aliso Canyon. Additionally, the Department of Conservation's Division of Oil, Gas and Geothermal Resources (DOGGR) is overseeing a comprehensive safety review to ensure that no other wells at Aliso Canyon will leak. (Information about the status of this review can be found at http://www.conservation.ca.gov/dog/AlisoCanyon.) Under this review, gas may be injected into Aliso Canyon only after all 114 wells have passed comprehensive tests or have been isolated from the gas storage reservoir.

[2] The agencies received some comments to conduct third party review of the summer 2016 analysis, but the agencies decided not to conduct this review due to timing since many of the mitigation measures are already well underway.