

## DOCKETED

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**Environmental Defense Fund's Comments on Joint Agencies' Aliso Canyon Action Plan and Reliability Analysis**

*Additional submitted attachment is included below.*

California Energy Commission  
Dockets Office, MS-4  
1516 Ninth Street  
Sacramento, CA 95814-5512

**Subject: Comments of Environmental Defense Fund on the Joint Agency Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin and the Aliso Canyon Risk Assessment Technical Report**

Dear Chair Weisenmiller,

EDF appreciates the opportunity to comment on the Joint Agency Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin dated April 5, 2016 (the “Action Plan”) and the Aliso Canyon Risk Assessment Technical Report dated April 5, 2016 (the “Technical Report”).

**1. Executive Summary**

a. Technical Report

- The Technical Report should more fully evaluate whether, in light of the limited operability of Aliso Canyon, additional utilization of existing pipeline capacity on SoCalGas’ system, beyond what is suggested by historical experience, is likely. Without such an evaluation, the Technical Report is at risk of inflating concerns about natural gas curtailments. There is also a need for a more granular analysis of the electric system impacts, in order to facilitate a more informed discussion of potential solutions addressing reliability concerns.

b. Action Plan

- Resuming the use of Aliso Canyon is a short term measure that cannot stand in for lasting market refinements that are needed for California to reduce its dependence on natural gas and diversify its portfolio of energy resources.
- Measures to conserve electricity and natural gas (including the use of Flex Alerts, expanding and maximizing the use of demand response and energy efficiency programs etc.) must be emphasized along with the deployment and pairing of localized renewable electricity generation and energy storage solutions that can diminish overall gas use. In optimizing such programs to address reliability concerns, there are considerable benefits to be gained from consulting stakeholders who are participating in various regulatory proceedings/venues across California focused on expanding the use of distributed energy resources (“DERs”)
- Market refinements to address reliability concerns, which are currently being considered by CAISO, will not only address immediate reliability concerns, but also enhance price formation and foster improved system-wide outcomes from a broader and longer term perspective.

- While LADWP's implementation of several measures to address reliability concerns (e.g. curtailing physical gas hedging, halting economic dispatch to other market participants) will likely increase operational flexibility, they are also likely to lead to economically inefficient outcomes, imposing potentially significant costs on LADWP and its customers. Therefore, these measures are unsustainable and cannot be relied on if reliability concerns continue beyond summer/winter 2016. This underscores the need to consider market refinements in order to enhance price formation and create more lasting solutions to reliability concerns, and to emphasize DERs as a cornerstone strategy of a longer term solution.
- Greater operational coordination among the relevant entities, including CAISO, SoCalGas and LADWP, can help mitigate reliability concerns. Developing clear curtailment rules and procedures is necessary.
- Gas maintenance programs are required by state and federal laws to enhance the safety of the gas system. The deferral of such programs, which advance paramount safety concerns, in order to address near-term reliability concerns must be considered a last resort.

## **2. Technical Report**

EDF understands and appreciates the task before the Joint Agency task force as one of great importance. Getting the analysis wrong in either direction may open the door to power supply impacts affecting the people, businesses and the environment of California.

While EDF understands the need to model and plan for worst case scenarios, we also observe that accuracy in the modeling exercise is important to ensure that the responsive planning exercise is performed and completed appropriately. Additionally, the people and businesses responding to this potential crisis could be greatly benefitted by a more granular discussion and analysis of the potential electric system shortfalls. In this vein, we offer two main comments.

### a. The Technical Report should more fully evaluate whether additional capacity utilization within the existing natural gas infrastructure will take place in light of the limited operability of Aliso Canyon

The Technical Report finds a significant risk of natural gas curtailments this summer if Aliso Canyon cannot be returned to full operational service. However, the underlying reasoning is both incomplete and erroneous.

The report identifies the primary factor contributing to this risk as mismatches between nominated gas flows on the pipeline system and actual daily gas demand. It notes that while system design allows for SoCalGas to accept as much as 3.875 Bcf per day from pipelines bringing gas into its system from gas producing areas, daily operating data shows that 3.4 Bcf per day has been the highest flowing supply coming into its system at any time in the last five years, and, most often, it is 3.0 Bcf per day or less. On this basis, the report concludes that SoCalGas would not be able to serve all the forecasted summer and winter peak day demand without some withdrawals from Aliso Canyon.

Historical experience suggesting that the highest flowing supply coming into SoCalGas' system is lower than system design does not imply that the company cannot use its full pipeline capacity of 3.875 Bcf per day, if needed. The availability of natural gas storage in the form of Aliso Canyon is a significant factor that modulated actual supply flows through SoCalGas' pipeline system.

In the wake of the Aliso Canyon incident, with natural gas storage no longer available in the same vast quantities as before, actual pipeline flows through SoCalGas' system could be higher than historical experience may suggest. More specifically, as gas system managers factor into their gas management decisions the fact that Aliso gas can no longer be relied on, they will likely make use of the extra capacity that is available, but remains unused within the gas system. However, this has not been factored into the discussion in the Technical Report, putting it at risk of inflating concerns about natural gas curtailments.

b. The Technical Report should provide a more granular analysis and discussion of the potential electric impacts

As discussed at the April 8 workshop in oral comments delivered by EDF, the reliability assessment is couched in terms of reduced gas volume availability and how that may result in reduced availability for electric generation. However, the report offers little guidance or targets on the amount of energy that needs to be saved by businesses, entrepreneurs, or citizens. Without a more granular discussion of the extent of electric shortfalls that separately considers impacts on the LADWP and CAISO systems, groups like ours, and third party energy providers like those that presented at the April 8 workshop, have a significantly reduced ability to discuss the relative impact of their recommended solutions on the overall need. If this multi-agency effort intends to call forth all available solutions to fully address reliability concerns, additional analysis on the electric shortfall needs to be conducted and communicated to stakeholders so we may more accurately discuss and propose solutions that can respond to the overall need.

**3. Action Plan**

EDF appreciates the Joint Agencies' effort to comprehensively identify all available solution sets to address reliability concerns prompted by the closure of Aliso Canyon. A cost-benefit analysis of each of these solution sets, including impacts on electric reliability, and an assessment of their ancillary impacts, both costs and benefits (e.g. on customers, California's GHG reduction goals) is vitally important. To the extent that several new measures are pursued jointly, their combined impacts on system reliability, customers and GHG reduction goals must be assessed to avoid unintended negative impacts resulting from the interaction of these interventions. Without such an analysis, it will be a challenge to prioritize among alternative solution sets and determine the optimal way forward.

a. Prudent Use of Aliso Canyon

The primary emphasis of the Action Plan is on resuming the use of Aliso Canyon in order to restore the status quo, and other non-market changes that are intended to be short term measures. If anything, the Aliso Canyon incident shines a light on California's overreliance on natural gas, and the consequences of such overreliance on system reliability and customer impacts. This is a significant opportunity for California to identify and address existing market gaps that prevent cleaner and lower cost energy alternatives from competing with natural gas on an equal footing. As discussed below, California must focus on market refinements to better align gas and electric markets' schedules that can help address the mismatch between nominated gas flows and actual gas demand, and on measures that call forth cleaner alternatives to natural gas storage and allow all energy resources to compete on a level playing field. The effort to resume the use of Aliso Canyon as before must be recognized for what it is - a short term measure that cannot stand in for lasting market refinements that are needed for California to reduce its dependence on natural gas and diversify its portfolio of energy resources. This broader and longer-term perspective is necessary to meet California's environmental goals.

b. Reduce Natural Gas and Electric Use

Measures proposed in the Action Plan to conserve electricity and natural gas, including the use of Flex Alerts, expanding and maximizing the use of demand response programs targeting air conditioning and commercial use, are the least cost and most environmentally beneficial solutions to existing reliability concerns. In addition, maximum attention must be given to the deployment and pairing of localized renewable electricity generation and energy storage solutions that can diminish overall gas use while also giving consumers the tools to shift energy consumption.

Additionally, EDF encourages consideration of automated demand response programs with a near term focus on commercial and industrial customers. California's three major IOUs provide automated demand response programs that automatically implement a customer's pre-programmed load reductions. San Antonio's CPS Energy also utilizes automated demand response programs to help address peak summer load challenges. There are other load management and demand response programs being managed by the California's major IOUs that provide examples of near term strategies for providers in the area impacted by the limited operability of Aliso Canyon. In addition, EDF is eager to learn more about the marketing and outreach strategy outlined in the Action Plan.<sup>1</sup> As rightfully pointed out, significant attention is needed to minimize customer confusion. Leveraging other agency stakeholders, contractors and community organizations is critical. EDF encourages ample lead time for roll-out of the marketing and outreach effort.

Just about half of Los Angeles's electricity needs comes from less than 5 percent of its buildings, with inefficiency in those buildings driving wasteful energy use. EDF supports targeted efforts to prioritize energy efficiency for the most vulnerable and to accelerate programs and projects in the energy efficiency pipeline that carry the benefit of reducing summer electric peak and winter gas demand. EDF was encouraged by the CPUC's announcement of \$145 million in redirected funds to reduce demand among low income households through no-cost weatherization and to suspend certain rules around deployment.<sup>2</sup> Energy efficiency remains one of the most cost-effective strategies for cutting demand in the near and long-term. EDF is encouraged by LADWP's effort to add new components to its current portfolio of efficiency programs for all types of residential and commercial customers. In optimizing the use of such programs to address reliability concerns, there are considerable benefits to be gained from consulting stakeholders who are participating in various regulatory proceedings/venues across California focused on expanding the use of DERs, including demand response. Examples of programs that can enhance DERs and thus reduce reliance on electricity generated from natural gas power plants, as well as natural gas use by other sources such as water heaters, include enhanced energy efficiency, storage, and self-generation. These are all viable alternatives that can simultaneously complement the economics of demand response. Two examples of programs that are already in place are the Demand Response Auction Mechanism ("DRAM") and Investor-Owned Utility plans for residential Time of Use electricity rate pilots.

c. Tariff Changes

The Action Plan recognizes that the mismatch between nominated gas flows and actual gas demand is at the heart of existing reliability concerns prompted by the closure of Aliso Canyon. Fundamentally, this mismatch arises from the misalignment of gas and electric markets' schedule in California.

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<sup>1</sup> Page 30 of the Action Plan.

<sup>2</sup> See CPUC Press Release, "CPUC Continues to Support Conservation Efforts to Ensure Reliable Energy to Southern California Following Aliso Canyon Leak" April 21, 2016, available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M160/K095/160095970.PDF>.

The Federal Energy Regulatory Commission advanced efforts to optimize alignment so that Day Ahead Market commitments precede the timely nomination cycle (Docket PL 14-2-000) when gas markets are most liquid. At that time, with natural gas storage being available for balancing supply and demand, California determined that the market changes needed to align gas and electric market schedules were unnecessary. With the limitations on short notice fuel supply resulting from a diminished Aliso Canyon, CAISO and other stakeholders must reconsider the matter, and reassess the benefits of aligning the schedules of the two markets. This would limit the mismatch between nominated gas flows and actual gas demand, addressing the issue at the heart of existing reliability concerns.

CAISO's proposed market refinements, including changes to compensation and bidding rules in order to allow resources to be compensated for the full costs of natural gas procurement through CAISO markets, are steps in the right direction. Unless the costs of providing flexible services are reflected in energy bids or commitment cost bid caps, ineffective price formation will diminish the impetus for market participation by flexible resources. Flexibility is a fundamental attribute for maintaining reliability and price formation is the core market element for calling forth flexibility providers.

The Action Plan also recommends that the existing 10 percent monthly balancing requirement be replaced with tighter requirements. However, the Technical Report and the Action Plan both recognize that even with 5% daily balancing, which has been proposed by SoCalGas, the risk of curtailments cannot be eliminated.

To quote from the Technical Report, "[...] The Technical Assessment Group recognizes that daily balancing is difficult and may not be fully effective based on the dynamic nature of the electric system [...] When some mismatches still inevitably occur, electric outages as a result of insufficient gas supply remain a risk."

While the reliability benefits associated with the proposed 5% daily balancing requirement are at best, uncertain, this measure will no doubt impose a financial burden on shippers. In fact, with the increased threat of OFOs/EFOs with Aliso Canyon being taken out of operation, shippers are likely to adjust their nominated flows to more closely match actual demand, even in the absence of tighter balancing requirements. The obvious costs and uncertain benefits call into question the usefulness of tighter balancing requirements in mitigating reliability concerns. Accordingly, EDF recommends that CAISO and the Joint Agencies reassess whether the proposed tighter balancing requirements on shippers are indeed necessary – and the duration over which they are necessary – throughout the summer months.

d. Maximize LADWP Operational Flexibility

EDF applauds LADWP for having already implemented several measures to address reliability concerns (e.g. curtailing physical gas hedging, halting economic dispatch to other market participants, and curtailing block energy and capacity sales). While these measures are likely to increase LADWP's operational flexibility, they will all likely lead to economically inefficient outcomes for the system as a whole, imposing potentially significant costs on LADWP and its customers as noted in the Action Plan.

Therefore, these measures are, by their very nature, unsustainable and cannot be relied on if reliability concerns continue beyond summer/winter 2016. This underscores the need to consider market refinements as part of the Action Plan to create more lasting solutions to reliability concerns stemming from the closure of Aliso Canyon, and to emphasize DERs as a cornerstone strategy of a longer term solution, as discussed above.

e. Operational Coordination

Greater operational coordination among the relevant entities, including CAISO, SoCalGas and LADWP, can help mitigate reliability concerns. As noted in the Action Plan, developing clear curtailment rules and procedures is necessary. In addition to such beneficial measures, the Action Plan also includes the safe deferral of gas maintenance tasks as a mitigation measure. The plan notes that SoCalGas will file a list of projects that it believes need to be deferred to ensure reliability, which will be evaluated by the CPUC to understand and mitigate safety risks.

As the plan notes, such gas maintenance programs are *required* by state and federal laws to enhance the safety of the gas system. Therefore, the deferral of such programs, which advance paramount safety concerns, must be considered a last resort.

**4. Conclusion**

In conclusion, the Joint Agencies must carefully consider the costs and benefits of all available options from a broader vantage point, assessing not only the incremental reliability impacts, but also GHG emissions impacts and customer impacts in order to be able to effectively prioritize among various alternatives. It is important to ensure that these interventions do not lead to unintended consequences that conflict with the state's existing regulatory mandate to develop a more efficient and cleaner grid.

While some short term measures may be needed to address the reliability challenges posed by the now diminished Aliso Canyon facility, the Joint Agencies must recognize that these challenges may extend into the future, beyond summer/winter 2016, making this an opportune time to reassess California's reliance on natural gas storage, and implement market refinements to facilitate price formation, and ultimately bring least cost energy resources to the fore.

Sincerely,

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