

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid Reliability and Resilience Pricing)

Docket No. RM18-1-000

**COMMENTS OF THE CALIFORNIA INDEPENDENT
SYSTEM OPERATOR CORPORATION**

The California Independent System Operator Corporation (“CAISO”) submits these comments¹ in response to the Department of Energy’s (“DOE’s”) Notice of Proposed Rulemaking released at the end of September and published in the *Federal Register* on October 10, 2017.² Although the proposed rule would not apply to Independent System Operators (“ISOs”) and Regional Transmission Operators (“RTOs”) without capacity markets, the CAISO submits these comments to assist the Commission in assessing the proposals in the Notice of Proposed Rulemaking (“NOPR” or “proposed rule”).³

I. OVERVIEW

The proposed rule would not apply to the CAISO because the CAISO does not have a capacity market. Further, there are no baseload coal or nuclear resources physically located in the CAISO balancing authority area (BAA) that would be eligible for

¹ The CAISO also joins the comments submitted by the ISO/RTO Council. The ISO/RTO Council comments address, among other issues, the inappropriateness of the proposed rule and the deadlines and other logistic issues regarding compliance with any final rule.

² *Grid Resiliency Pricing Rule*, 82 Fed. Reg. 46,940 (Oct. 10, 2017) (“NOPR”). A letter from the Secretary of Energy directing the Federal Energy Regulatory Commission’s (“Commission,” or “FERC”) to take action on the proposed rule accompanied the NOPR.

³ These comments also address certain questions listed in the Request for Comments on Questions issued by the Commission’s Office of Energy Policy and Innovation (“OEPI”) on October 4, 2017.

the compensation scheme in the proposed rule. The CAISO does not support adoption of the proposed rule. However, if the Commission adopts a final rule in this proceeding or takes other action, it should not require the CAISO and other ISOs and RTOs without capacity markets to submit compliance filings. Even if the rule were to apply to ISOs and RTOs without capacity markets, the CAISO already has mechanisms in place that ensure the CAISO BAA remains reliable and resilient in the face of unexpected loss of supply resources.

There is no basis for a universal finding that having a 90-day, on-site fuel supply is essential for ISOs and RTOs to maintain grid reliability or resilience. Resource fleets, fuel supply options, threats to reliability and resiliency, environmental requirements, and operating conditions differ widely among the various RTO and ISO regions. Each ISO and RTO must consider the unique circumstances in its respective region to ensure that it can withstand threats to its system's reliability and resiliency. Effectively defining and planning for grid reliability and resiliency requires a coordinated effort among the ISO or RTO and its respective state(s), and must consider the specific risks, conditions, and resource mix in the region while effectively balancing cost and environmental considerations. Any action taken by the Commission in this proceeding must allow each ISO and RTO to have the flexibility to determine which resources and capabilities are needed to maintain reliability and resiliency based on the specific circumstances in its respective region.

The CAISO's experience highlights the need to take into account the unique characteristics of each ISO and RTO. Regional planning, procurement, coordination, programmatic, and reliability efforts in the CAISO BAA have produced a diverse

infrastructure and “set of tools” that have enabled the CAISO to operate a system that has remained both reliable and resilient in the face of significant threats to the loss of supply such as with the restricted operations of the Aliso Canyon gas storage facility (Aliso Canyon), the unexpected shut-down of the San Onofre Nuclear Generating Station (SONGS), fires affecting transmission lines, severe droughts, and the solar eclipse. The CAISO BAA does not have any resources that would be eligible for the compensation proposed in the NOPR, but in aggregate, its diverse set of resources has effectively met system needs. The specific resiliency problems identified in the NOPR do not plague California, and there is no basis or need for the proposed rule in the CAISO BAA to ensure that the system remains reliable and resilient.

Notwithstanding the foregoing, if the Commission adopts a final rule in this proceeding, such final rule should be limited in scope and reflect the following considerations:

First, any final rule must recognize that the needs, circumstances, and conditions that exist in each ISO and RTO are unique and vary significantly. In particular, the applicability and impact of the proposed rule are not uniform across regions. Thus, the Commission should allow ISOs and RTOs to exercise the same regional flexibility that it has applied in numerous other rules.

Second, resources eligible for full cost of service compensation should be limited to those resources that an ISO or RTO identifies as needed for reliability pursuant to a regional needs assessment process. As the entities responsible for reliable system operations, each ISO and RTO is in the best position to determine what specific resource characteristics are necessary for grid reliability and resilience.

Third, because the NOPR is intended to address the risk of premature retirement of certain resources that are currently in operation, compensation under any final rule should be limited to a narrowly defined group of existing resources. Specifically, the Commission should limit compensation under any final rule to those existing baseload resources that are at risk of premature retirement (and that ISO or RTO regional processes have found are needed for reliability). Because the proposed rule is based on the asserted risk of potential retirements of fuel-secure baseload generation, there is no justification for full cost of service compensation for new generators that are not currently operational. The Commission should not incentivize the construction of new resources that are not needed in the region, but that might seek to avail themselves of guaranteed cost recovery. Moreover, the proposed compensation scheme should not apply to other resources identified in the OEPI questions. Such resources either lack the requisite fuel supply, face other capability limitations that should render them ineligible, and/or are eligible for sufficient compensation through other mechanisms and thus are not likely at risk of premature retirement.

Fourth, any cost of service payment for a needed resource should take the form of an availability payment that provides for fixed cost recovery outside of the energy markets. The Commission should not require changes to the day-ahead and real-time markets and should not undermine the efficiency of those markets or embed improper incentives in them.

Finally, to the extent the Commission considers any changes that constitute a significant departure from the regulatory requirements in the proposed rule, *e.g.*, proposing uniform changes to the day-ahead and real-time markets, compliance with

the Administrative Procedure Act would require issuing a revised NOPR, or an entirely new NOPR, and providing an opportunity for public comment on any new proposal. Such additional procedures would be particularly necessary given the extremely short time allotted for reviewing the voluminous comments that are expected in this proceeding and preparing reply comments that take into account the myriad alternatives that commenters may suggest.

II. COMMENTS

A. The Need to Recognize Regional Differences.

OEPI Questions addressed: Need for Reform #3, #4, and #5

There are significant differences among ISO and RTO regions for purposes of assessing resilience and reliability. ISOs and RTOs have different resource adequacy frameworks and vastly different resource mixes, fuel supply options, load curves, environmental requirements, and risks to reliability. As such, there is no basis for imposing a uniform rule on every ISO and RTO.

For example, there are no baseload coal generation units physically located in the CAISO BAA that would be eligible for compensation under the proposed rule. The CAISO BAA has only one operating nuclear plant in its region, and that plant is currently under California cost of service rate regulation.⁴ Compensation under the proposed rule applies only to resources that are not subject to state or local cost of service regulation.⁵ Thus, the specific resources the NOPR expressly seeks to compensate do not exist in the CAISO BAA.

⁴ Pacific Gas & Electric Company has also announced it plans to phase out the operation of the Diablo Canyon Nuclear Power Plant.

⁵ NOPR, 82 Fed. Reg. at 46,948.

Threats to reliability and resiliency also vary from region-to-region. Because of the wide variation in the emergencies each region is most likely to face, there is no basis for a universal requirement that each ISO or RTO must have resources available with a 90-day, on-site fuel supply. The proposed rule identifies the 2014 Polar Vortex, Superstorm Sandy, and hurricanes as examples of recent natural disasters reinforcing the need for Commission action.⁶ These conditions differ, however, from the types of events more likely to occur in the CAISO BAA. In the CAISO BAA, system reliability is more likely to be impacted by earthquakes or fires than severe cold snaps or hurricanes. An earthquake or fire could force-out a generator with a 90-day fuel supply (or the transmission lines necessary to transmit power from such generator) just as easily as it could force-out a generator without such a supply. Further, many resources in the CAISO BAA face use limitations due to air permit and other requirements. These limitations can restrict the operations of a unit with a 90-day fuel supply. The requirements of any final rule must permit flexibility to account for the unique types of conditions and challenges each ISO and RTO faces.

The types of challenges the CAISO faces requires a diverse set of resources to address, not a 90-day fuel supply. To that end, the CAISO BAA has significant resource diversity that promotes resilience and has enabled the system to endure substantial operational challenges including continuing limited operation of Aliso Canyon, the unexpected shut-down of the SONGS, the solar eclipse, severe droughts, and rampant wild fires. Natural gas resources account for approximately 61.1 percent of the resource mix, hydro accounts for 14.2 percent, and solar accounts for 13.7

⁶ *Id.* at 46,945.

percent, wind, geothermal, and biofuel units make up 6.1 percent, nuclear generation is 4.3 percent, and oil generation provides 0.4 percent.⁷ In addition, a robust transmission system, energy efficiency mandates, access to imports from neighboring BAAs, increasing storage levels, a proliferation of distribution-side resources, demand response, and the Flex Alert program⁸ play an important role in providing system flexibility and resilience. The CAISO BAA also addressed challenges posed by Aliso Canyon and SONGS with improved coordination with natural gas pipeline systems, market design enhancements, increased storage, revised balancing rules, and the addition of synchronous condensers.

For all these reasons, the CAISO region differs from other regions with organized markets. Any final rule in this proceeding should allow for a regional flexibility approach for compliance rather than imposing a “one size fits all” approach to address grid reliability and resiliency issues. The Commission has long recognized it is beneficial to allow ISOs and RTOs to develop approaches to comply with major rules that reflect the unique circumstances of their respective regions. Specifically, the Commission has adopted a regional flexibility standard in many prior Commission rulemaking proceedings, and such a standard is particularly warranted under these circumstances.⁹

⁷ CAISO 2017 Summer Loads & Resource Assessment at 10, 44 (May 11, 2017), available at: <https://www.aiso.com/Documents/2017SummerAssessment.pdf>. Other percentage mixes have been published. These numbers are based on a resource’s net qualifying capacity, which describes the amount of capacity that can be counted from each resource to meet resource adequacy requirements and takes into account availability and deliverability.

⁸ The Flex Alert program is a voluntary energy conservation program that alerts and advises consumers about how and when to conserve energy. It is an important tool for the CAISO during periods of high demand or other stressed conditions to maintain system reliability.

⁹ See, e.g., *Long-Term Firm Transmission Rights in Organized Electricity Markets*, Order No. 681, FERC Stats. & Regs. ¶ 31,226, at P 100 (“Order No. 681”), *reh’g denied*, Order No. 681-A, 117 FERC ¶ 61,201 (2006); see also *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146, at P 823 (2003) (permitting transmission providers to

To the extent, the Commission adopts a final rule and directs ISOs and RTOs without capacity markets to submit a compliance filing, the Commission should continue to recognize a regional flexibility compliance approach.

B. Options to Demonstrate Compliance.

OEPI Questions addressed: Other #3

Any final rule should retain the NOPR's proposal to permit ISOs and RTOs to demonstrate that they already comply with the proposed regulatory requirements.¹⁰ ISOs and RTOs have a wide range of unique mechanisms for addressing the distinct reliability needs and risk-of-retirement issues in their regions. The Commission should allow regions to use or adapt such existing mechanisms to comply with the final rule rather than requiring the development of new mechanisms or requiring significant market overhauls that are unnecessary to remedy the narrow issue identified in the NOPR. For example, if the final rule were to apply to the CAISO, the CAISO should be able to demonstrate compliance based on its existing Commission-approved mechanisms. These provisions work together to ensure system reliability with appropriate compensation for needed resources.

offer regional variations based on existing regional reliability requirements), *order on reh'g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007), *cert. denied*, 552 U.S. 1230 (2008); *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, FERC Stats. & Regs. ¶ 31,241, at P 559 ("We therefore allow regional flexibility in cost allocation[.]"), *order on reh'g*, Order No. 890-A, FERC Stats & Regs. ¶ 31,261 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228 (2009), *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

¹⁰ NOPR, 82 Fed. Reg. at 46,946.

The CAISO oversees a resource adequacy framework in accordance with section 40 of the CAISO tariff. Under this framework, load serving entities must demonstrate they have secured sufficient supply resources on a year-ahead and month-ahead basis to satisfy reliability needs identified by the CAISO.¹¹ The CAISO uses these showings to assess whether each load serving entity has acquired sufficient capacity to meet its share of the peak load plus any applicable reserve margin, in addition to local and flexible capacity requirements.¹² Local regional authorities (“LRAs”) can establish resource adequacy programs, and if they do, the CAISO will defer to the LRA-established resource adequacy requirements.¹³ The CAISO worked with stakeholders and the Public Utilities Commission of the State of California (“CPUC”) to establish resource adequacy requirements for CPUC-jurisdictional utilities.¹⁴ Subsequently, the CPUC and other local regulatory authorities “have established resource adequacy programs to ensure that CAISO has sufficient resources offered into its market to maintain reliable grid operation.”¹⁵ In the event an LRA has not adopted resource adequacy requirements, the CAISO tariff permits applying a default planning reserve margin and qualifying capacity criteria.¹⁶

¹¹ CAISO, *Regional Resource Adequacy Issue Paper*, at 6 (Dec. 9, 2015) available at www.caiso.com/Documents/IssuePaper-RegionalResourceAdequacy.pdf.

¹² *Id.*

¹³ *Id.*

¹⁴ CAISO, Electric Tariff Filing to Reflect Market Redesign and Technology Upgrade, Docket No. ER06-615-000, at 59 (Feb. 9, 2006).

¹⁵ *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211, at P 4 (2011).

¹⁶ *Regional Resource Adequacy Paper* at 6.

Under the resource adequacy framework, generators and other resources can enter into contracts with load serving entities that provide for fixed recovery.¹⁷ In exchange, these resources must make their capacity available to satisfy regional and local needs.

The CAISO has developed a resource adequacy availability incentive mechanism (“RAAIM”) to help ensure resource adequacy resources remain available to meet demand.¹⁸ In contrast to being a “pay-for-performance” program intended to incentivize compliance with dispatch instructions, RAAIM incentivizes resource adequacy resources to comply with their must-offer obligations.¹⁹ This helps ensure not only that a resource is running, but that it is also complying with an obligation to submit economic bids and/or self-schedules to the CAISO’s markets.²⁰

If the CAISO does not have sufficient capacity to address regional or local reliability needs through resource adequacy contracts, the CAISO can also rely on its exceptional dispatch and capacity procurement mechanism (“CPM”) designations. The CAISO can manually exceptionally dispatch resources “in addition to or instead of resources with a Day-Ahead Schedule dispatched by the RTM [real-time market] optimization software during a System Emergency, or to prevent an imminent System Emergency, or a situation that threatens System Reliability and cannot be addressed by the RTM optimization.”²¹ Capacity that the CAISO exceptionally dispatches that does

¹⁷ *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211, at n.5.

¹⁸ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,002, at P 15 (2015).

¹⁹ *Id.*

²⁰ *Id.* at P 29.

²¹ CAISO tariff section 34.11.1.

not have a resource adequacy contract is entitled to a one-month or two-month CPM designation – and an accompanying capacity payment – depending on whether the resource is meeting a system need or a non-system need.²²

The CPM also serves as a “backstop mechanism” to allow the CAISO “to procure capacity to address a deficiency or supplement resource adequacy procurement by load serving entities, as needed, to maintain grid reliability.”²³ CPM resources are essentially treated as resource adequacy resources. The CPM supplements resource adequacy program, rather than supplanting or interfering with it. The CPM option is available under certain specified circumstances, including (but not limited to) a deficiency in local capacity area resources; an insufficiency of resource adequacy resources in a load serving entity’s annual or monthly resource adequacy plan; the occurrence of a significant event that threatens reliability; the existence of a reliability or operational need requires CAISO to exceptionally dispatch non-resource adequacy capacity; or the risk of a resource retiring in the current resource adequacy compliance year that will be needed for reliability by the end to the following calendar year.²⁴

Resources designated under the CPM are compensated based on bids into a competitive solicitation process with a soft offer cap and, if their fixed costs exceed the soft offer cap, they can cost-justify a higher rate by making a filing with the Commission.²⁵ The latter option allows CPM resources to recover their annual fixed cost of service, including but not limited to capital costs, return on equity, cost of debt,

²² CAISO tariff section 43A.3.6.

²³ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001, at P 2 (2015).

²⁴ *Id.* at n. 12.

²⁵ *Id.* at P 29.

and operations and maintenance (“O&M”) costs.

The CAISO generally relies on resource adequacy programs as supplemented by the CPM to secure resources needed for system reliability. In some circumstances, however, the CAISO may also rely on its authority to enter into reliability must-run (“RMR”) contracts. Governed by section 41 of the CAISO tariff, these contracts are geared towards reliability on a local level, and they allow a generator to recover up to all of its fixed costs, consistent with the compensation regime contemplated in the NOPR.²⁶ The CAISO awards these contracts to local generators on a one-year basis.²⁷ These contracts make certain that generators bound by the contracts can make their output available to the CAISO in order to meet local reliability needs.²⁸

RMR contracts permit an owner of a generator unit to select from one of two conditions of how its unit will operate when the CAISO dispatches it to address local reliability needs.²⁹ If the RMR unit owner chooses Condition 1, it is compensated a certain percentage of its annual fixed costs while still being able to participate in CAISO market transactions and retaining all applicable revenues.³⁰ Alternatively, if the RMR unit owner chooses Condition 2, it is paid 100 percent of the unit’s fixed costs.³¹ However, an RMR unit owner under Condition 2 is not permitted to engage in CAISO

²⁶ A Commission-approved *pro forma* RMR contract is set forth in Appendix G to the CAISO tariff.

²⁷ *Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at P 408 (2006) (“CAISO MRTU order”), *order on reh’g*, 119 FERC ¶ 61,076, *order on reh’g*, 120 FERC ¶ 61,023 (2007), *reh’g denied*, 124 FERC ¶ 61,094 (2008), *aff’d*, *Sacramento Mun. Util. Dist. v. FERC*, 616 F.3d 520 (D.C. Cir. 2010).

²⁸ CAISO MRTU Order at P 408.

²⁹ *Id.* (footnote omitted).

³⁰ *Id.*

³¹ *Id.*

market transactions, unless the CAISO issues a relevant dispatch notice.³² When the CAISO dispatches the Condition 2 RMR unit for reliability purposes, the owner of the generator unit is required to bid all of its capacity at formula-based prices.³³

The aforementioned mechanisms collectively provide the CAISO with the necessary tools to ensure that any resource needed to maintain the reliability of the CAISO BAA, including resources at risk of premature retirement, is available to address system needs. These mechanisms have also kept the system resilient, and the Commission has found that each of these mechanisms provide for just and reasonable compensation to resources. The final rule should permit the CAISO, as well as other ISOs and RTOs, to rely on these types of Commission-approved tariff provisions to demonstrate compliance with the proposed reliability and resiliency compensation regulations.

C. The Final Rule Must Only Compensate Resources That Satisfy an ISO or RTO Needs Assessment.

OEPI Questions addressed: Eligibility, General Eligibility Questions, #1

The proposed rule would apply only to resources that are able to “provide essential energy and ancillary reliability services, including but not limited to voltage support, frequency services, operating reserves and reactive power.”³⁴ One of the obligations of ISOs and RTOs is to maintain reliability within their respective BAAs. ISOs and RTOs are in the best position to determine how to meet reliability needs within their footprints. As such, ISOs and RTOs should be the entities to determine what the

³² *Id.*

³³ *Id.*

³⁴ NOPR, 82 Fed. Reg. at 46,948.

reliability needs in their respective regions are and which resources are needed to support reliability. Any final rule should provide for each ISO and RTO to undertake reliability needs assessments, which the ISO or RTO would then use to identify any resources that may be eligible for compensation under any final rule. There is no evidentiary basis for a finding that every resource with a 90-day fuel supply is needed to maintain system reliability and resiliency in every ISO and RTO region and must be compensated for its full cost of service.

As, explained in Section II.A above, the significant differences among ISOs and RTOs results in very different reliability needs for each region. Resources that an ISO or RTO does not find are needed for reliability in its region should not be guaranteed recovery full cost of service recovery merely because they have a specified set of characteristics that may not even be necessary or valuable in a given region.

D. Compensation under the Final Rule Must Apply Only to Existing Resources.

OEPI Questions addressed: Eligibility, General Eligibility Questions, #2

In support of the proposed rule, the DOE highlights risks associated with potential early retirements of coal and nuclear plants, noting that due to market changes, the U.S. is facing a “significant loss of fuel-secure generation.”³⁵ The NOPR also cites statistics relating to coal and nuclear generating plants that have recently retired or are set to retire in the near future.³⁶ The aim of the proposed rule is to provide such resources with an opportunity to recover their fully allocated costs to incent the continued operation of such resources. The NOPR provides no justification to

³⁵ *Id.* at 46,942.

³⁶ *Id.*

guarantee cost recovery for future coal or nuclear resources (or any other type of resource) not yet in service. The proposed rule does not suggest that future generating plants should also be given similar compensation, nor should it. The Commission should not incentivize the construction of new resources that are not needed in a region to meet reliability but that developers may pursue simply to avail themselves of guaranteed cost recovery. Compensation under any final rule should be limited to resources currently in operation because those are the only resources that are at risk of premature retirement.

E. Additional Types of Resources Should Not Be Eligible for Compensation.

OEPI Questions addressed: Eligibility, General Eligibility Questions, #4; Eligibility, 90-day Requirement, #1; Eligibility, Fuel Supply Requirement, #1

The proposed rule is designed to address the needs of specific resources at risk of premature retirement due to market conditions. To qualify as an eligible grid reliability and resiliency resource, the resource must have a 90-day fuel supply on-site in the event of an emergency, extreme weather conditions, or a natural or man-made disaster.³⁷ OEPI Question Eligibility, General Eligibility Questions #4 asks whether other resources, if technically capable of sustaining output for a sufficient duration and meeting the other proposed requirements, should be eligible for the compensation provided under the NOPR. OEPI also asks whether technical capability is the appropriate criterion for eligibility. The answer to both questions is NO!

³⁷ *Id.* at 46,948.

The driving considerations of whether a resource should be eligible for the proposed compensation scheme should be whether: (1) the ISO or RTO has determined, after performing a needs assessment, that the unit is required to maintain reliability in the region, based on the specific conditions and needs within the region; and (2) the resource is demonstrably at risk of premature retirement because it is unable to earn sufficient revenues to remain in operation. Both factors are missing from the rule's requirements, and that could result in significant cost increases to ratepayers to maintain resources that are not needed (while ratepayers are simultaneously obligated to pay for the resources that actually are needed). These two principles should be mandatory requirements of any rule. Further, the NOPR is intended to apply to traditional baseload power plants "frequently relied upon to make our grid reliable and resilient."³⁸ Any final rule should not be extended to additional resources. The mere fact that a resource has a 90-day, on-site fuel supply should not guarantee cost of service recovery if the aforementioned considerations are not satisfied.

The CAISO notes that, in the CAISO BAA, several of the resource types identified in OEPI General Eligibility Question #4 are either not at risk of premature retirement or should not be treated as eligible resources under the NOPR. Alternative compensation mechanisms are available for many of these resource that can provide for fixed cost recovery, and the rule should not apply to them. For example, California has adopted a renewable portfolio standards ("RPS") that requires load-serving entities to procure 50 percent of their energy requirements from eligible renewable resources by

³⁸ NOPR at 46943, 46945.

2030.³⁹ Increasing state RPS requirements has provided, and will continue to provide, opportunities for renewable resources, including geothermal resources, to obtain compensation under long-term power purchase agreements entered into with load serving entities. The CPUC has also adopted storage procurement targets (more than 1800 MW for different types of storage) for its jurisdictional load serving entities, which provide compensation opportunities for storage resources.

There are other technical and practical reasons why the Commission should not extend the guaranteed compensation scheme in the NOPR to the other resources specified in the OEPI questions.

The NOPR contemplates compliance with state and local regulations. To be considered an eligible grid reliability and resiliency resource, such a resource must comply with federal, state, and local environmental laws, rules, and regulations.⁴⁰ Based on its experience committing and dispatching units in the CAISO BAA, the CAISO is uniquely familiar with the operational limitations facing many generators in the CAISO BAA to comply with applicable environmental requirements, including, but not limited to, air permit restrictions. These restrictions can limit the running time for a large number of generators. Generators with dual-fuel storage and generating units with firm natural gas contracts could be subject to air permit restrictions that limit their running times. Even if such resources had a 90-day fuel supply, they would violate their air permits by running over a prolonged period to address a specific need. Thus, use limitations can prevent many resources from performing the role contemplated in the

³⁹ See CAISO, *FAST FACTS*, at 1 (2016), available at https://www.aiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf.

⁴⁰ NOPR, 82 Fed. Reg. at 46,948.

NOPR. That is why reliability in the CAISO BAA must be addressed, among other things, by a diverse set of resources. Relevant rules and laws will vary state by state, and the different types of restrictions must be taken into account in determining which resources are vital to reliability and resiliency. ISOs and RTOs are in the best position to determine what specific resources are needed for reliability in their respective regions.

Also, by definition, units with firm natural gas contracts do not have a 90-day fuel supply on-site. Rather, these units depend on natural gas pipelines to deliver fuel, which can be disrupted by various issues. For instance, severe weather conditions and natural disasters can disrupt pipeline delivery. Earthquakes and fires can also force the generating unit out-of-service. Natural gas pipelines are also susceptible to man-made disasters, and disruptions also occur due to inventory issues. Operational Flow Orders (“OFOs”) can affect the amount of supply to gas-fired generation in the event of too much or too little inventory. Finally, fuel siphoning along the pipeline could affect the amount of natural gas delivered, thereby lowering the amount of generation available during emergency conditions. These resources should be excluded from compensation under any final rule.

Hydroelectric units also should not be eligible resources under any final rule. Hydroelectric resources in the CAISO BAA are not only resource adequacy resources, they are utility-owned, and are subject to state/local cost of service recovery. Most hydroelectric generation in the CAISO BAA is run-of-river, and such resources will not have a 90-day on-site fuel supply. In the CAISO BAA, hydroelectric generators could lack a 90-day on-site fuel supply because they are adversely affected by drought or

other conditions. The amount of water available for hydroelectric generation also varies year-to-year and season-to-season. During a 90-day timeframe, the seasons could change, with the possibility that significantly less water is available for generation. All hydroelectric generators in the CAISO BAA are use-limited resources under the CAISO tariff that do not have a must offer obligation 24 hours a day, 7 days a week. As such, the CAISO cannot count on them to provide uninterrupted reliability services for the period contemplated in the NOPR. Hydroelectric resources must also comply with their licenses that impose numerous obligations, limitations, and use-requirements on them, including recreational and water-use requirements. The role of electricity production may be secondary to other uses. These limitations, and the potential variability they present, is not ideal in maintaining grid reliability. These characteristics require prudence when running hydroelectric resources to ensure they are available when most needed. For all these reasons, there is no justification for treating hydroelectric resources as eligible resources under any final rule.

Finally, energy storage should not be considered an eligible grid reliability and resiliency resource under any final rule. Energy storage depends on electric energy being produced by a generator and being delivered to the storage site. Moreover, such resources may be unable to hold a sufficient amount that supports operation for 90 days, as the proposed rule envisions. Additionally, there remains the possibility that the storage device may not be charged when demand arises during an emergency or that it may not be available 24 hours a day, 7 days a week for a 90-day period. Energy storage, therefore, should not be considered an eligible resource for the purposes of a final rule.

F. Compensation Under the Final Rule Should Be in the Form of an Availability Payment Outside of the Energy Markets.

OEPI Questions addressed: Other, #3

The NOPR does not specify details on how the reliability and resiliency rate should be paid to eligible resources. It is critical that the final rule avoid disruptions to functioning energy markets that have been carefully developed over many years. Enhancements to those markets require careful consideration, stakeholder input, and testing through market simulations. Any requirement to require compensation to eligible resources through the energy markets, particularly in the highly accelerated timeframes contemplated in the NOPR, could have unintended consequences. As such, the Commission should not require changes to day-ahead and real-time markets in any final rule. Instead, any final rule should permit any compensation to eligible resources to be provided in the form of availability payments outside the markets that provide for recovery of a resource's fixed costs. ISOs and RTOs have experience with a variety of availability payments. For example, in the CAISO BAA forms of availability payments include resource adequacy contracts, CPM designations, and RMR contracts. Any final rule that permits fixed cost compensation through these types of availability payment mechanisms will avoid adverse impacts on existing energy markets.

G. The Commission Should Not Establish Any Requirements in the Final Rule That Depart from the Proposals in the NOPR.

OEPI Questions addressed: Other, #3

Some commenters may request that the Commission address the issues discussed in the NOPR with pricing proposals or other potential requirements that differ significantly from those envisioned in the NOPR. Indeed, comments that have already been submitted propose far-reaching changes that go well beyond the narrowly tailored

proposal in the NOPR. Courts have previously rejected final rules when an agency attempts to adopt requirements in a final rule that are not logically connected to a proposed rule.⁴¹ Given the potential for harm to day-ahead and real-time markets that have been developed and approved by the Commission over many years through prudent design efforts informed by ample stakeholder input, any final rule should not include market change mandates that were not specifically proposed in the NOPR. Instead, any alternatives considered by the Commission in response to comments should be the subject of a revised NOPR or an entirely new NOPR. Such additional notice and comment procedures are particularly important in the instant proceeding. Given the extraordinarily short period for reply comments, the Commission cannot rely on initial comments to provide notice of potentially significant changes from the NOPR's proposed requirements. Affected parties will not have sufficient time to review all of the hundreds of initial comments on the NOPR or to formulate reasoned responses to all of the issues raised in those comments, particularly where the comments recommend specific, broad market changes not clearly delineated in the NOPR. It is essential that the Commission solicit sufficient input for any requirements in any final rule that could result in drastic market changes.

III. CONCLUSION

Any final rule in this proceeding should not subject the CAISO to any compliance obligation because the CAISO does not have a capacity market, does not have any baseload coal or nuclear resources that would be eligible for compensation under the NOPR, and does not need the rule to ensure reliability and resiliency on in its balancing

⁴¹ See, e.g., *Ass'n of Private Sector Colleges and Universities v. Duncan*, 681 F.3d 427, 435 (D.C. Cir. 2012); see also *Environmental Integrity Project v. EPA*, 425 F.3d 992, 998 (D.C. Cir. 2005).

authority area. Any final rule should limit the resources eligible for compensation to those that the relevant ISO or RTO determines are needed for system reliability. Because the proposed rule is justified based on the risk of premature retirement of current resources, any final rule should apply only to existing resources. Also, the Commission should not expand any final rule to include non-baseload resources, use-limited resources, resources without a 90-day fuel supply on site, resources that can only operate for a limited period of time, and resources that do not have alternative means of compensation available. Any compensation mechanism required by the final rule should take the form of an availability payment that provides for fixed cost recovery outside the day-ahead and real-time markets. Lastly, the Commission should not implement any requirements in a final rule that represent a significant departure from the NOPR without issuing a further NOPR that provides opportunities for review and comment.

Respectfully submitted,

By: /s/ Anthony J. Ivancovich

Sean A. Atkins
Michael Kellermann
Alston & Bird LLP
950 F Street N.W.
Washington, DC 20004
Tel: (202) 239-3300
Fax: (202) 654-4872
sean.atkins@alston.com
michael.kellermann@alston.com

Roger E. Collanton
General Counsel
Anthony Ivancovich
Deputy General Counsel
Anna McKenna
Assistant General Counsel
Andrew Ulmer
Director, Federal Regulatory Affairs
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7209
Fax: (916) 608-7222
aivancovich@caiso.com
amckenna@caiso.com
aulmer@caiso.com

October 23, 2017

Counsel for the California System
Operator Corporation

CERTIFICATE OF SERVICE

I certify that I have served the foregoing document upon the parties listed on the official service list in the captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 29th day of March, 2017.

/s/ Grace Clark
Grace Clark