

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

**Building for the Future Through Electric Regional)
Transmission Planning and Cost Allocation and)
Generator Interconnection)**

Docket No. RM21-17-000

**COMMENTS OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
ON NOTICE OF PROPOSED RULEMAKING**

Table of Contents

I. EXECUTIVE SUMMARY	1
II. COMMENTS	8
A. Long-Term Transmission Planning Reforms.....	8
B. Coordination of Regional Transmission Planning and Generator Interconnection Processes	33
C. Consideration of Dynamic Line Ratings and Advanced Power Flow Control Devices in Long-Term Regional Transmission Planning.....	36
D. The Commission Should Not Preclude the CWIP Incentive for Long-Term Regional Transmission Facilities.....	43
E. The Commission Should Not Unduly Disrupt Existing Regional Planning Processes That Already Incorporate Local Transmission Planning And Identify Potential Opportunities to Right-Size Replacement Transmission Facilities	46
III. CONCLUSION	51

The California Independent System Operator Corporation (CAISO)¹ submits these comments in response to the Federal Energy Regulatory Commission's (Commission) Notice of Proposed Rulemaking (NOPR) issued on April 21, 2022 in the captioned docket.²

I. EXECUTIVE SUMMARY

The CAISO supports the NOPR's general goal of enhancing existing regional transmission planning processes by requiring that transmission providers also conduct long-term planning that considers transmission needs driven by changes in demand and the resource mix. The CAISO supports holistic, proactive, and forward-looking transmission planning based on the best available information, consideration of plausible scenarios, and a "least regrets" approach to approving transmission. The CAISO already engages in long-term planning, and its existing transmission planning process is consistent with the direction of the NOPR.

However, several of the NOPR's proposals are overly prescriptive in the level of detail they would require for long-term planning (and other elements of the transmission planning process). These overly prescriptive requirements would not afford transmission planners sufficient flexibility to conduct the specific activities and

¹ Capitalized terms not otherwise defined herein or in the NOPR have the meaning set forth in the CAISO tariff, and references to specific sections, articles, and appendices are references to sections, articles, and appendices in the current CAISO tariff unless otherwise indicated.

² 179 FERC ¶ 61,028, 87 Fed. Reg. 26504 (2022). On May 25, 2022, the Commission issued a Notice on Requests for Extension of Time in the captioned docket that extended the deadline for submitting initial comments on the NOPR from July 18 to August 17, 2022, and extended the deadline for submitting reply comments from August 17 to September 19, 2022.

processes they believe are necessary in their region to plan effectively, efficiently, and timely to meet future transmission needs and support achievement of climate goals. Also, as written, the NOPR may require transmission planners to eliminate existing transmission planning processes that are effectively meeting needs driven by public policy requirements, rendering the resulting going-forward planning process significantly less effective and efficient.

The Commission should not adopt a uniform “one size fits all” regime for long-term planning or impose overly prescriptive requirements. Rather, the Commission should adopt a final rule in this proceeding (Final Rule) that affords transmission planners maximum flexibility to incorporate long-term planning into their existing transmission planning framework without unduly disrupting the existing planning framework. The Commission should only adopt general long-term planning principles for transmission planners to meet and include in their tariffs, and it should allow individual transmission planners to develop the specific tariff rules and processes they need to implement long-term planning most effectively and efficiently given the specific circumstances, risks, challenges, and conditions they face in their region. Finally, the Commission should remain mindful of the long-standing “rule of reason” regarding what rules properly belong in a tariff and what rules appropriately can be included in business practice manuals or other documents not on file with the Commission.

The CAISO is particularly concerned the NOPR could force the CAISO to modify its tariff to discontinue its assessment of public policy needs and transmission solutions in its annual transmission planning process, and instead require the CAISO to consider needs driven by public policy requirements only as part of the proposed Long-Term

Regional Transmission Planning process, which would be conducted every three years. The Final Rule should not require that transmission providers evaluate needs driven by public policy requirements (and approve projects meeting those needs) only through the NOPR's Long-Term Regional Transmission Planning process, nor should it impose unreasonable or prescriptive burdens on transmission planners to justify continued use of their existing processes that consider needs driven by public policy requirements through their annual regional transmission planning processes. There is no record to support a finding that the CAISO's annual public policy planning process has become unjust and unreasonable and must therefore be eliminated and replaced by the NOPR's Long-Term Regional Transmission Planning regime. Accordingly, the Commission should allow the CAISO to retain its annual public policy planning process. The CAISO's experience shows there is a need for the CAISO to be able to consider and approve public policy projects on an annual basis, and it is too burdensome to conduct the Long-Term Regional Transmission Planning contemplated by the NOPR annually. Also, eliminating the CAISO's ability to consider public policy needs in its iterative, holistic annual transmission planning process, would render the CAISO unable to approve more cost-effective or efficient transmission projects that meet public policy needs in addition to meeting reliability needs or providing economic benefits. As explained below, the CAISO does not oppose adopting the Long-Term Regional Transmission Planning approach contemplated in the NOPR, with certain modifications, as a *supplement* to its annual public policy planning process.

The proposals in the NOPR would impose many detailed requirements on transmission planners in connection with the Long-Term Regional Transmission

Planning process. Two examples of the overly prescriptive nature of the NOPR include proposals to require transmission planners to (1) develop a minimum of four long-term planning scenarios in each long-term planning cycle and (2) assume responsibility for identifying geographic zones for the development of future generation and undertake all of the requisite analyses and studies required to identify such zones.

The NOPR offers no rationale why a minimum of four long-term planning scenarios is necessary, especially given that many commenters suggested three was the appropriate number. Transmission planners are in the best position to determine the appropriate number of scenarios they should conduct each planning cycle. Accordingly, they should have the flexibility to determine how many long-term scenarios are appropriate given the specific circumstances of each planning cycle. If the Commission believes it must require a minimum number of scenarios, the CAISO believe three is the appropriate number. The CAISO conducts scenario-based planning in evaluating public policy transmission needs and solutions and typically utilizes three cases, including a base case. Requiring transmission planners to conduct a minimum of four long-term planning scenarios every cycle is unnecessary and will simply create additional work for transmission planners without providing significant additional benefits.

Similarly, the NOPR's proposal making transmission providers responsible for undertaking all of the activities required to identify geographic zones for resource development is too prescriptive and would cast aside existing processes that are working effectively. The CAISO tariff permits local regulatory authorities to identify energy resource zones and provide resource portfolios to the CAISO for use in the

transmission planning process. For example, pursuant to a memorandum of understanding with the CAISO, the California Public Utilities Commission (CPUC) in its integrated resource planning proceeding conducts production cost studies and identifies resource portfolios that the CAISO augments with input from other stakeholders and uses in its transmission planning process to approve reliability and public policy transmission projects. The CAISO should not be required to assume all of these responsibilities, as the NOPR appears to contemplate. Shifting responsibility to the CAISO to conduct all of the requisite studies and analyses would greatly – and unnecessarily -- increase the CAISO's workload and staffing requirements. The CPUC and other local regulatory authorities are responsible for resource planning activities in the first instance, and they already have the experience and necessary infrastructure in place to conduct these activities. The Final Rule should thus clarify that transmission providers (1) have the discretion to continue utilizing the resource portfolios and energy zones developed by state and local regulatory authorities, and (2) are not required to undertake all of the studies and activities required to identify resource portfolios or geographic zones for resource development.

The CAISO supports effective coordination between transmission planning and generator interconnection processes. However, the NOPR's proposal that transmission providers consider in the transmission planning process upgrades identified in prior generator interconnection processes but not pursued imposes an unnecessary burden on transmission providers and provides no tangible benefit. The fact a network upgrade continues to appear in the interconnection process may have no relevance to the transmission planning process or an actual transmission need. The number of

resources in the CAISO's interconnection queue far exceeds the State's needs over the next 10 years, so the CAISO's annual generator interconnection queue cluster study process necessarily will identify transmission needs that are not required. Effective transmission planning should be forward looking, not backward looking like the NOPR proposal.

The CAISO supports the NOPR proposal that transmission providers consider the application of dynamic line ratings and advanced power flow devices on existing transmission facilities as alternatives to meet needs identified in the Long-Term Regional Transmission Planning process. However, the CAISO does not support the separate NOPR proposal to require transmission providers to consider such measures as a possible accompaniment to every new transmission facility the transmission planner has identified to meet a reliability need. The CAISO believes this will unnecessarily create more work for transmission planners without yielding significant benefits. Incorporating such measures would not alter the scope of the underlying transmission facilities that are necessary to meet a reliability need. The CAISO, however, supports considering these grid enhancing technologies in connection with new transmission facilities intended to meet economic or public policy needs.

Any Final Rule should not reflect the NOPR's proposal to preclude the construction work in progress (CWIP) incentive for Long-Term Regional Transmission Facilities. The mere potential for increased uncertainty regarding the need for Long-Term Regional Transmission Facilities does not justify precluding the developers of such facilities from using CWIP. The Commission has recognized the many benefits of the CWIP incentive, and CWIP promotes competition by removing a significant barrier

to transmission development. If the Commission is concerned about the uncertain need for Long-Term Regional Transmission Facilities, the proper course of action is to ensure robust standards are in place to prevent the approval of speculative projects in the first instance, not to punish the developers of such projects that were authorized under a Commission-approved planning process.

Further, the Final Rule should not unduly disrupt existing transmission planning processes, such as the CAISO's, that already evaluate both local and regional expansion transmission needs and solutions in a single, integrated regional transmission planning process. CAISO transmission owners have no ability to approve expansion projects, including local expansion and upgrade projects, in their asset management and maintenance processes; only the CAISO has that authority. The CAISO already identifies local transmission expansion and upgrade needs and approves solutions in its regional transmission planning process. The CAISO can modify "local" maintenance and replacement projects of any voltage level to meet identified transmission expansion needs more efficiently or cost-effectively. The Final Rule should permit the CAISO to continue addressing local transmission expansion needs through its regional planning process and three established stakeholder meetings; the Final Rule should not require the CAISO to hold three separate (and additional) stakeholder meetings just for local expansion planning.

In conclusion, any Final Rule should only establish general principles for transmission providers to follow when planning for future generation, identifying renewable energy zones or actionable resource portfolios, and considering longer-term transmission needs. The Commission should not establish proscriptive or detailed

minimum requirements regarding inputs, assumptions, and scenarios, and it should not seek to impose a “one-size-fits-all” framework on every region to achieve the NOPR’s objectives. There are significant, relevant differences among regions, and there is more than one way to plan for future generation to achieve the Commission’s objectives. Accordingly, the Commission should afford all planning regions sufficient latitude and flexibility to determine how they most efficiently and effectively can implement a regional long-term transmission planning framework that plans for anticipated future demand and generation based on each planning region’s particular circumstances.

II. COMMENTS

A. Long-Term Transmission Planning Reforms

The Commission proposes to require that transmission providers participate in a regional transmission planning process that includes Long-Term Regional Transmission Planning, meaning regional transmission planning on a sufficiently long-term, forward-looking basis to identify transmission needs driven by changes in the resource mix and demand, evaluate transmission facilities to meet such needs, and identify and evaluate transmission facilities for potential selection in the regional transmission plan.³ The Commission proposes several requirements on how transmission providers must conduct Long-Term Regional Transmission Planning. In particular, the Commission proposes to require that transmission providers identify transmission needs driven by changes in the resource mix and demand through the development of Long-Term

³ NOPR at P 68.

Scenarios.⁴ The Commission proposes that transmission providers: (1) use a transmission planning horizon no less than 20 years into the future in developing Long-Term Scenarios and reassess and revise those scenarios at least once every three years; (2) incorporate into their Long-Term Scenarios Commission-identified categories of factors that may drive transmission needs driven by changes in the resource mix and demand; (3) develop a plausible and diverse set of at least four long-term scenarios; (4) use “best available data” in developing their Long-Term Scenarios; and (5) consider whether to identify geographic zones with the potential for development of large amounts of new generation.⁵

As indicated above, the CAISO supports long-term transmission planning and, in particular, planning to identify transmission needs driven by changes in the resource mix and demand. The CAISO supports the NOPR’s general objectives and many of the high-level principles underlying the NOPR (e.g., scenario-based planning, identifying resource zones or portfolios for generation development, and identifying potential long-term needs and trends). However, the CAISO has two overarching concerns with the approach to long-term regional planning articulated in the NOPR. First, the CAISO is concerned the NOPR proposals, if adopted, potentially will eliminate the CAISO’s annual planning process to meet needs driven by public policy requirements, which process has been highly effective in approving projects to meet identified public policy needs. Second, many elements of the NOPR are overly prescriptive, impose

⁴ The NOPR uses the term Long-Term Scenario to describe a tool to identify transmission needs driven by changes in the resource mix and demand and to enable evaluation of transmission facilities to meet such needs, across multiple scenarios that incorporate different assumptions about the future electric power system over a sufficiently long-term planning horizon. NOPR at PP 69, n. 129 and 84.

⁵ NOPR at P 78.

unnecessary burdens on transmission planners, and do not afford transmission planners sufficient flexibility to implement planning processes that might work more effectively and efficiently in their regions. The CAISO discusses these two concerns below as they relate to specific elements of the proposed Long-Term Regional Transmission Planning process.

1. **The Commission Should Allow Transmission Planners to Retain Their Annual Public Policy Planning Processes In Addition to Implementing the NOPR's Long-Term Regional Transmission Planning Process**

- a. **The NOPR Proposal**

The NOPR states that transmission providers may continue to rely on their existing regional transmission planning and cost allocation processes to comply with Order No. 1000's requirements related to transmission needs driven by reliability concerns or economic considerations.⁶ The NOPR does not propose to change the existing Order No. 1000 requirement to consider transmission needs driven by Public Policy Requirements in the regional transmission planning process, but it provides that transmission providers will comply with this requirement through the proposed Long-Term Regional Transmission Planning process.⁷

⁶ NOPR at P 72 (citing *Transmission Planning & Cost Allocation for Transmission Owning & Operating Public Utilities*, 136 FERC ¶61,051 at P 11 (2011) (Order No. 1000), *order on reh'g*, 139 FERC ¶61,132 (Order No. 1000-A), *order on reh'g & clarification*, Order No. 1000-B, 141 FERC ¶61,044 (2012), *aff'd sub nom*, *S.C. Pub. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014).

⁷ *Id.* at P 73. Public Policy Requirements are requirements established by local, state or federal laws or regulations (*i.e.*, enacted statutes passed by the legislature and signed by the executive and regulations promulgated by a relevant jurisdiction, whether within a state or at the federal level). Public Policy Requirements include local laws or regulations passed by a local governmental entity, such as a

The NOPR also explains that Order No. 1000 does not mandate that transmission providers select any transmission facility in their regional transmission plans.⁸ Consistent with this transmission planning flexibility the Commission provided in Order No. 1000, the NOPR proposes to give transmission providers the flexibility (subject to certain minimum requirements) to propose the selection criteria that they, in consultation with their stakeholders, believe will ensure that more efficient or cost-effective regional transmission facilities to address region-specific transmission needs driven by changes in the resource mix and demand ultimately are selected in the regional transmission plan for purposes of cost allocation.⁹ Thus, the NOPR does not require transmission providers to select any particular transmission projects in their regional transmission plans.¹⁰

The NOPR recognizes that transmission providers in some planning regions have developed processes to consider (and approve solutions for) transmission needs driven by public policy requirements in their regional planning processes. The NOPR would allow such transmission providers to propose to continue using some or all aspects of the existing regional transmission planning and cost allocation processes they use to consider transmission needs driven by public policy requirements, but only if they meet certain requirements specified in the NOPR.¹¹ However, such continued use of existing regional transmission planning and cost allocation processes would not

municipal or county government. *Id.* at P 13 n.12 (citing Order No. 1000 at P 2 and Order No. 1000-A at P 319).

⁸ *Id.* at P 236 (citing Order No. 1000 at P 331).

⁹ NOPR at P 242.

¹⁰ Commissioner Phillips's concurrence to NOPR at P 4 (citing NOPR at P 242).

¹¹ *Id.* at P 74.

supplant transmission providers' obligations to comply with the Long-Term Regional Transmission Planning requirements established in any Final Rule.¹² Moreover, the NOPR would require that in their filing to comply with any Final Rule, transmission providers seeking to retain existing regional transmission planning and cost allocation processes to consider transmission needs driven by public policy requirements would have to demonstrate that continued use of any such processes does not interfere or otherwise undermine the Long-Term Regional Transmission Planning proposed in the NOPR by demonstrating that continued use of such processes is consistent with or superior to any Final Rule.¹³

Finally, the Commission preliminarily finds that transmission providers can propose a regional transmission planning process that plans for reliability needs, economic needs, transmission needs driven by public policy requirements, and transmission needs driven by changes in the resource mix and demand simultaneously through a combined approach. Transmission providers proposing to address all such transmission needs in a single regional transmission planning process would bear the burden of demonstrating continued compliance with Order No. 1000 in addition to compliance with the requirements of any Final Rule; to do so, they would be required to demonstrate that such process is consistent with or superior to the requirements of both Order No. 1000 and the Final Rule.¹⁴

¹² *Id.*
¹³ *Id.*
¹⁴ *Id.* at P 75.

b. The Final Rule Should Not Preclude the CAISO From Continuing to Conduct Its Annual Evaluation of Needs Driven by Public Policy Requirements and to Approve Projects to Meet Any Identified Needs

The NOPR proposals related to existing public policy transmission planning processes are neither legally supported nor justified from a policy perspective. The Final Rule should not require that transmission planners evaluate and approve public policy projects only through the Long-Term Regional Transmission Planning process, nor should it impose unreasonable requirements on transmission providers to justify retaining existing public policy assessments in their annual transmission planning processes. Rather, the Final Rule should grant maximum flexibility to transmission planners to retain their existing, annual public policy planning and approval processes in addition to implementing the Long-Term Regional Transmission Planning process contemplated in the NOPR. Particularly for the CAISO, it would be highly problematic to decouple public policy planning from reliability and economic planning in the CAISO's annual transmission planning process. To assist the Commission in understanding the CAISO's position on this issue and the importance to the CAISO in retaining its ability to approve projects driven by public policy requirements in its annual transmission planning process, the CAISO first briefly describes the key features of its annual transmission planning process (and its 20-Year Transmission Outlook).

The CAISO's annual transmission planning process includes three successive phases and considers reliability, public policy, and economic needs on an iterative, holistic basis. The CAISO considers reliability needs and solutions first, followed by

public policy needs and solutions, and then economic needs and solutions.¹⁵ In each phase of the annual planning process, the CAISO may modify or enhance a solution identified in an earlier phase to meet the next level of need (and the previously identified need) more efficiently or cost-effectively, or it may adopt an entirely new solution to meet both needs. In other words, although the CAISO's planning process considers reliability, public policy, and economic needs sequentially, it allows the CAISO to revisit projects identified in a prior phase if an alternative project identified in a subsequent stage can meet the previously identified need and provide additional benefits not considered in the prior phase. For example, a public policy need can cause the CAISO to modify the initial solution it identified for a reliability need if a project can meet both needs more efficiently or cost-effectively. In such a case, the CAISO would categorize the solution based on the latter-studied benefit type, in this example, a "policy-driven" transmission project; although, the transmission solution would provide multiple benefits and meet multiple needs.¹⁶ Likewise, an economic study can change or modify the preferred initial solution for a reliability need, a public policy need, or both.¹⁷ The CAISO finalizes its preferred solution only after it completes all three phases.

¹⁵ Under its tariff, the CAISO considers both transmission and non-transmission alternatives to meet identified transmission needs. CAISO tariff sections 24.1, 24.4.5. For example, the CAISO has approved energy storage solutions to meet identified transmission needs. See CAISO 2021-2022 Transmission Plan at 31-36, available at <http://www.aiso.com/Documents/ISOBoardApproved-2021-2022TransmissionPlan.pdf>.

¹⁶ Categorizing a transmission solution as reliability, public policy, or economic, does not dictate or affect cost allocation in the CAISO. The costs of all transmission facilities 200kV and above approved in the transmission planning process are allocated system wide and recovered through the CAISO's regional transmission access charge. The CAISO allocates the costs of network transmission facilities below 200kV to the applicable Participating Transmission Owner, who recovers the costs of such lower voltage facilities from its customers that use the low voltage facilities. CAISO tariff Appendix F, Schedule 3, section 12.1.

¹⁷ Business Practice Manual for Transmission Planning Process at 50-51.

This iterative approach allows the CAISO to approve on an annual basis transmission solutions that provide reliability, public policy, and economic benefits separately, as well as projects that provide multiple benefit streams and meet multiple types of transmission needs. In practice, the CAISO has approved numerous transmission projects that provide both public policy and reliability benefits or public policy and economic benefits. The NOPR potentially jeopardizes the CAISO's ability to achieve these benefits and efficiencies in its annual transmission planning process.

The CAISO currently approves transmission projects in its annual transmission planning process based on a 10-year outlook, which reflects the general timeframe for a major new transmission project. However, the CAISO tariff expressly allows a transmission planning horizon longer than 10 years.¹⁸ The CAISO recently determined that due to the unprecedented need for new renewable resources, increased demand resulting from electrification of transportation and other industries, and rapidly changing resource fleet, a longer-term blueprint is critical to chart the transmission planning horizon beyond the conventional 10-year time frame used in the past. Accordingly, in 2021 the CAISO embarked on creating a 20-Year Transmission Outlook to explore longer-term grid requirements and options for meeting the State of California's greenhouse gas and renewable energy objectives reliably and cost-effectively. The new process ran in parallel with the longstanding annual transmission planning process

¹⁸ See Section 24.2(b) of the CAISO tariff, which states that the CAISO's transmission planning process will "reflect a planning horizon covering a minimum of ten (10) years."

and culminated in the CAISO issuing its first 20-Year Transmission Outlook in May 2022.¹⁹

The 20-Year Transmission Outlook provides a long-term conceptual plan of the transmission grid in 20-years in order to meet the resource and electric load needs and align those needs with state agency input on integrated load forecasting and resource planning. The 20-Year Transmission Outlook does not include a process for approving specific transmission projects. Project approvals occur only through the iterative, annual reliability, economic, and public policy assessment process described above. However, the 20-Year Transmission Outlook can inform transmission needs and the scope of the transmission solutions the CAISO approves in the annual transmission planning process.²⁰ Layering the 20-year outlook on the annual transmission planning process provides greater context to the transmission planning process and informs planning decisions so the CAISO can identify solutions that will “fit” the energy landscape not just in the near-term but well into the future. This new approach allows considerations that extend beyond 10 years to inform annual planning decisions regarding reliability, economic, public policy, and multi-value needs and solutions.

Any Final Rule adopting a Long-Term Regional Transmission Planning requirement should not preclude the CAISO from retaining its existing Commission-approved process for considering transmission needs driven by public policy as part of

¹⁹ <https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/20-Year-transmission-outlook>.

²⁰ The 20-Year Transmission Outlook focuses on higher level technical studies to test the feasibility of alternatives, not the detailed comprehensive analyses underpinning the 10-year plan. For example, the 20-Year Transmission Outlook considers the potential impacts of increased electrification in other sectors and more aggressive fossil fuel resource retirement scenarios.

its annual transmission planning process. Public policy considerations are an integral part of the CAISO's iterative, annual transmission planning process, and decoupling them from that process -- by making them solely part of Long-Term Regional Transmission Planning -- would greatly undermine the CAISO's annual, iterative transmission planning process and adversely affect the CAISO's ability to address public policy (and other) needs in the most timely, efficient, and cost-effective manner. In its annual transmission planning process, the CAISO has successfully planned and approved many public policy transmission projects and multi-benefit projects (that included public policy benefits), including projects designed to meet California's robust Renewables Portfolio Standard (RPS) and climate goals. The NOPR does not even suggest, much less provide, specific evidence that the CAISO's consideration of public policy requirements in its annual transmission planning process is unjust and unreasonable. There is no legitimate basis for the Commission to act under Section 206 of the Federal Power Act (FPA) to eliminate the CAISO's annual process or require that the CAISO only consider public policy needs ("lumped together" with certain other types of needs) in a Long-Term Regional Transmission Planning process conducted every three years.

Such a directive would hinder the CAISO's ability to achieve the policy objectives that are a basis for the NOPR. Eliminating the CAISO's annual public policy needs review would preclude the CAISO from approving public policy projects on an annual basis. The NOPR errs insofar as it assumes that transmission planners need only plan for public policy projects every three years or that all public policy needs only arise 15-20 years in the future. The CAISO has approved many public policy projects that were

needed within a 10-year planning horizon. In a rapidly changing industry, the ability to approve public policy projects annually, particularly smaller and more targeted projects, is critical. Conducting the burdensome long-term regional planning process contemplated in the NOPR every year is not a reasonable option. The CAISO must be able to approve public policy projects every year, not every three years. The Final Rule should not preclude or unduly limit that opportunity.

Also, eliminating the CAISO's annual public policy assessment would hinder the CAISO's ability to approve more efficient or cost-effective projects to address all regional needs. As indicated above, the CAISO routinely approves projects that meet multiple types of transmission needs and provide multiple benefits. Public policy needs are not completely decoupled from reliability and economic needs in the CAISO's annual planning process. Accordingly, it would be detrimental to customers to allow the CAISO to retain the reliability and economic evaluations in its annual planning process, but require the CAISO to conduct its public policy evaluations only in the three-year long-term regional planning cycle. Such an approach would preclude the CAISO from designing and approving in its annual transmission planning process more efficient or cost-effective multi-benefit projects that could meet public policy needs in addition to reliability and/or economic needs.

For the foregoing reasons, any Final Rule in this proceeding should neither preclude the CAISO from retaining its annual public policy evaluation and project approval process, nor unduly limit its application with regard to all aspects of the process (including cost allocation). The NOPR proposes that any transmission provider seeking to retain an existing public policy planning and cost allocation processes must

demonstrate, in its filing to comply with any Final Rule, that continued use of such processes does not interfere with or otherwise undermine the Long-Term Regional Transmission Planning process proposed in the NOPR by demonstrating that continued use of the processes are consistent with or superior to the Final Rule.²¹ The NOPR provides no specific guidance or criteria regarding how a transmission provider can demonstrate its existing public policy process “does not interfere with or undermine” the proposed Long-Term Regional Transmission Planning process. Nor does the NOPR find the CAISO’s existing annual public policy assessment to be unjust and unreasonable or identify any aspects of such assessment that would render it unjust and unreasonable.

The CAISO should not have to re-justify its annual public policy planning process for a third time²² or demonstrate that its existing process is consistent with or superior to the different (and additive) Long-Term Regional Transmission Planning process proposed in the NOPR. Requiring the CAISO to make such a showing would be especially inappropriate given that, as explained above, (1) the Long-Term Regional Transmission Planning process would be supplemental to the annual transmission planning process and would only be undertaken every three years, and (2) the NOPR

²¹ NOPR at P 74.

²² The CAISO had to demonstrate the justness and reasonableness of its public policy planning tariff provisions in connection with its revised transmission planning process and again in connection with Order No. 1000 compliance. See *Cal. Indep. Syst. Operator Corp.*, 143 FERC ¶61,057 at PP 63-98 (2013), *order on clarification & compliance*, 146 FERC ¶61,198 at PP 26-35 (2014); *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶61,224 (2010). The NOPR identifies no reason why the CAISO should be required to justify its existing, annual public policy assessment process and cost allocation yet again, especially when Long-Term Regional Transmission Planning will be an addition to the CAISO’s existing processes. The NOPR makes no findings under Section 206 of the FPA findings that would render the CAISO’s existing processes unjust and unreasonable.

proposes to give transmission planners the flexibility to propose selection criteria to address region-specific transmission needs and not require transmission planners to select any transmission projects (including Long-Term Regional Transmission Facilities) under that process.²³ The CAISO should be able to conduct both its existing annual public policy planning process and the Long-Term Regional Transmission Planning process just as in the 2021-2022 planning cycle the CAISO conducted both its annual planning process and a 20-Year Transmission Outlook.

The Commission should not preclude transmission providers from retaining planning frameworks that are working effectively and approving the transmission needed to meet climate goals, nor should the Commission establish unreasonable barriers to their retention of such processes. There are many ways to achieve effective public policy and long-term transmission planning. The Commission should afford transmission planners maximum flexibility to implement transmission frameworks that will result in effective planning in their regions and not adopt the barriers and overly prescriptive requirements proposed in the NOPR. Long-Term Regional Transmission Planning should augment and inform existing, effective processes; it should not undo or unduly disrupt them. Likewise, transmission planners should not be required to re-justify annual transmission planning processes that have been effective in meeting public policy needs, especially when the NOPR makes no specific findings that such existing frameworks are unjust and unreasonable.

²³ See NOPR at P 242. The NOPR proposes to define a Long-Term Regional Transmission Facility as a transmission facility identified as part of Long-Term Regional Transmission Planning and selected in the regional transmission plan for the purposes of cost allocation to address transmission needs driven by changes in the resource mix and demand. NOPR at n. 507.

2. The NOPR Is Overly Prescriptive and Dictates Too Many of the Details of Long-Term Regional Transmission Planning

The NOPR seeks to impose many compliance directives on transmission planners in connection with Long-Term Regional Transmission Planning. These include requiring transmission planners to use a 20-year horizon for long-term transmission planning and develop Long-Term Scenarios at least every three years. But the NOPR goes even further and seeks to impose a host of even more detailed and prescriptive requirements that transmission planners must follow in developing the Long-Term Scenarios.

As indicated above, the CAISO supports long-term transmission planning to account for changes in demand and the resource mix. The CAISO also finds acceptable a 20-year look ahead conducted a minimum of every three years. However, the CAISO is concerned that other long-term planning requirements proposed in the NOPR are too prescriptive, unnecessary, and/or unduly burdensome. The CAISO understands that the Commission may desire to set “bare minimum” requirements for transmission planners to follow in establishing Long-Term Regional Transmission Planning processes. However, the requirements the Commission proposes in the NOPR go well beyond the “bare minimum” necessary to ensure compliance or achieve the NOPR’s general goals, especially given the NOPR would give transmission providers the flexibility to propose selection criteria to address region-specific transmission needs and does not propose to require that transmission planners approve Long-Term Regional Transmission Facilities identified under the

applicable long-term planning criteria. Indeed, some of the detailed requirements the NOPR would impose on transmission providers appear to be more in the nature of granular implementation details that typically would be included in a business practice manual rather than in the tariff. In developing a Final Rule, the Commission should apply its “rule of reason” in determining what information is required to be in the tariff.²⁴

In its Final Rule, the Commission should be less prescriptive and give regional planners greater flexibility to implement the rules and processes they believe are necessary in their regions to implement long-term planning and plan effectively for the transmission needs of anticipated future generation and demand. The Commission should only identify the high-level principles/rules transmission providers should follow in conducting Long-Term Regional Transmission Planning; the Commission should not prescribe every detail regarding how to implement the transmission planning process as the NOPR seeks to do. The CAISO discusses below two examples of how the NOPR is overly and inappropriately prescriptive.

²⁴ “Decisions regarding whether an item should be placed in a tariff or in a business practice manual are guided by the Commission’s rule of reason policy, under which provisions that significantly affect rates, terms, and conditions of service, are readily susceptible of specification, and are not generally understood in a contractual agreement must be included in a tariff, while items better classified as implementation details may be included only in the business practice manual.” *Midcontinent Indep. Sys. Operator, Inc.*, 169 FERC ¶61,137, at P 252 (2019) (internal quotation marks omitted). See also *Midcontinent Indep. Sys. Operator, Inc.*, 168 FERC ¶61,060, at P 17 (2019) (“MISO’s proposed Tariff definition provides a reasonably articulated framework, and it is consistent with the direction provided in the March 29 Order for MISO to leave the more granular implementation details in BPM [Business Practice Manual]-008.”); *Cal. Indep. Sys. Operator Corp.*, 122 FERC ¶61,271, at P 84 (2008) (“The Business Practice Manuals exist to provide additional implementation details and transparency about the CAISO’s operations to market participants.”).

a. The Commission Should not Require Transmission Planners to Develop a Minimum of Four Long-Term Scenarios

The Commission proposes to require that transmission providers develop at least four distinct long-term scenarios as part of Long-Term Regional Transmission Planning.²⁵ The NOPR proposes that the Long-Term Scenarios must incorporate the minimum categories of factors listed in the NOPR and must be consistent with federal, state, and local laws and regulations that affect the future resource mix.²⁶ The NOPR requires that the four scenarios be: (1) plausible (*i.e.*, they must reasonably capture probable future outcomes); and (2) diverse in the sense that transmission providers can distinguish distinct transmission facilities or benefits of similar facilities in each scenario.²⁷ The NOPR recognizes transmission providers may create a base case and three alternatives or high-, medium-, and low-level assumptions for the factors that are important for Long-Term Regional Transmission Planning, along with a scenario that accounts for high-impact, low-frequency events.²⁸ At least one of the four scenarios must account for uncertain operational outcomes during high-impact, low-frequency events.²⁹

The Commission should not require transmission planners to develop a minimum of four Long-Term Scenarios as part of Long-Term Regional Transmission Planning. The NOPR offers no evidence, rationale, or justification why four is the

²⁵ NOPR at P 121.

²⁶ *Id.*

²⁷ *Id.* at P 123.

²⁸ *Id.* at P 122.

²⁹ *Id.* at P 124.

appropriate minimum number of scenarios transmission planners must develop. Indeed, the NOPR cites a variety of views expressed by commenters: some commenters suggested that at least three scenarios is the appropriate number, another commenter suggested at least four scenarios, and other commenters recommended three-to-four scenarios, and still other commenters did not recommend a specific number of scenarios.³⁰ The NOPR identifies no specific benefit from developing four scenarios as opposed to three scenarios (or some other number).

Under these circumstances, the requirement to develop a minimum of four Long-Term Scenarios is arbitrary and unnecessary, and the Commission should not include that requirement in the Final Rule. The Commission issued the NOPR pursuant to Section 206 of the FPA,³¹ but the Commission has failed to meet its burden under FPA Section 206 to demonstrate that its proposal regarding the minimum number of scenarios is just and reasonable and supported by substantial evidence.³² “When applied to rulemaking proceedings, the substantial evidence test ‘is identical to the familiar arbitrary and capricious standard,’ which ‘requires the Commission to specify the evidence on which it relied and to explain how that evidence supports the conclusion it reached.’”³³ The Commission has provided no evidence, let alone

³⁰ *Id.* at P 119.

³¹ *Id.* at P 1. FPA Section 206 requires that “[w]henver the Commission, after a hearing held upon its own motion or upon complaint, shall find that any rate, charge, [etc.] . . . is unjust, unreasonable, unduly discriminatory or preferential, the Commission shall determine the just and reasonable rate, charge, [etc.] classification, rule, regulation, practice, or contract to be thereafter observed and in force, and shall fix the same by order.” 16 U.S.C. §824e(a).

³² *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 64-65 (D.C. Cir. 2014) (Commission findings that result in rulemaking pursuant to FPA Section 206 “must be supported by ‘substantial evidence’” (quoting 5 U.S.C. § 706(2)(E))).

³³ 762 F.3d at 54 (quoting *Wis. Gas Co. v. FERC*, 770 F.2d 1144, 1156 (D.C. Cir. 1985)).

substantial evidence, to support its NOPR proposal to require development of at least four Long-Term Scenarios.

The NOPR also suggests transmission planners could develop a low-, medium-, and high-level assumption for the factors they believe are important for Long-Term Regional Transmission Planning, along with a scenario that accounts for a high-impact, low-frequency event.³⁴ The NOPR offers no reason why a transmission planner should develop two separate low-likelihood set of assumptions. This would not seem to “reasonably capture probable future scenarios.” Thus, the Commission has not met its FPA Section 206 burden to show this NOPR proposal is just and reasonable and supported by substantial evidence. Indeed, the evidence points in the opposite direction. Modeling more scenarios requires greater time and effort in an environment where transmission planners are already stretched thin addressing infrastructure issues. The number of scenarios should be sufficient to support reasoned decision making, but it should not delay long-term planning or unduly burden transmission planners.

In lieu of the prescriptive requirements proposed in the NOPR, the Commission should grant transmission planners the flexibility to determine the minimum number of Long-Term Scenarios that are appropriate given the specific circumstances in their region and given the specific circumstances of the particular planning cycle and to document this determination in filings to comply with the Final Rule. The most important need is that any scenarios conducted by a transmission planner be robust enough to identify plausible outcomes.

³⁴ NOPR at P 122.

If, however, the Commission were to adopt a minimum number of long-term scenarios, the CAISO recommends three scenarios as the appropriate number. As the NOPR recognizes, in its public policy planning process, the CAISO creates a base case scenario regarding the assumptions about resource locations that are most likely to occur and one or more stress scenarios to compare to the base case scenario.³⁵ The CAISO tariff does not require the CAISO to develop a minimum number of alternative scenarios.³⁶ The CAISO typically has utilized three scenarios in its public policy planning process, a base case scenario and two sensitivity scenarios.³⁷ The CAISO has successfully planned transmission to meet reliability needs, as well as increasing renewable portfolio standards robust clean energy requirements, without needing to develop a minimum of four scenarios each planning cycle. There is no demonstrable need for a minimum of four Long-Term Scenarios.³⁸

³⁵ *Id* at P 115.

³⁶ CAISO tariff section 24.4.6.6.

³⁷ In developing its resource portfolios that feed into the CAISO's transmission planning process, the CPUC has typically utilized one base case along with one or two sensitivities for informational purposes.

³⁸ The NOPR also provides that the planning scenarios should account for all applicable federal, state, and local laws. NOPR at PP 104-106. This is wholly unrealistic and unduly burdensome. The CAISO, and presumably every other independent system operator and regional transmission organization, is not in a position to know every single local law in its region, nor does it have the staffing or time to scour the laws of every municipality and county in the State of California. Any Final Rule should require transmission planners to consider only those laws and regulations that stakeholders have actually identified for them. The burden should not be on the ISOs and RTOs. For example, CAISO tariff Section 24.3.3 (a)(iii) provides that stakeholders will submit to the CAISO state, county, and municipal policy requirements or directives for consideration in the development of the draft Unified Planning Assumptions and Study Plan. The NOPR also fails to address how transmission planners should handle situations where there are conflicting laws that might cancel each other out or negatively affect other laws.

b. The Commission Should Permit Transmission Planners to Retain Existing Processes for Identifying Geographic Resource Zones or Resource Portfolios for Use in the Transmission Planning Process

The CAISO also opposes the prescriptive nature of the NOPR's proposal to require each transmission provider to consider whether to: (1) identify, with stakeholder input, specific geographic zones within the transmission planning region that have the potential for development of large amounts of new generation; (2) assess generation developers' commercial interest in developing generation within the identified geographic zones; and (3) incorporate designated zones, and the identified commercial interest in each zone, into Long-Term Scenarios.³⁹ The NOPR describes three steps transmission planners must follow to identify geographic zones in their regional transmission planning process. These steps involve extensive assessments of (1) geophysical, meteorological, and other data to identify potential geographic zones that could accommodate large generation development, (2) siting, permitting, and development challenges, and (3) commercial interest.⁴⁰ Transmission providers must then incorporate this information regarding designated geographic zones into Long-

³⁹ NOPR at P 145.

⁴⁰ NOPR at PP 147-50. The Commission proposes to require transmission providers to assess commercial interest by considering the following: (1) the generation developer's existing energy resources within the zone; (2) the number and size of any interconnection requests from developers with completed facilities study agreements for generation located within the zone; (3) a generation developer's leasing agreements with landowners within the zone; (4) a generation developer's letters of credit associated with generation it may develop in the zone; (5) any merchant or other entity commitments to build (including deposits or payments to secure or fund) transmission facilities that would serve generation within the zone; (6) a generation developer's power purchase agreements with a credit-worthy counterparty associated with generation within the zone; and (7) any other factors for which generation developers have provided evidence as indications of commercial interest in developing generation within the zone. *Id.* at P 150.

Term Scenarios.⁴¹ The NOPR contemplates that transmission providers will provide stakeholders, including relevant state and federal siting authorities, an opportunity to provide input on the geographic zones, but it does not contemplate any larger role for them.⁴²

The CAISO urges the Commission to adopt a Final Rule that permits greater flexibility regarding the process for identifying geographic zones for resource development for use in the transmission planning process. As the Commission noted in the NOPR, there are many ways to do this.⁴³ Accordingly, each region should be allowed to find its own solution. In particular, any Final Rule should allow transmission providers to work more closely with their states – and even to rely on the states -- to identify resource zones and resource portfolios for transmission providers to use in the Long-Term Regional Transmission Planning process, consistent with how the CAISO engages with the CPUC and other local regulatory authorities today.

The CAISO, CPUC, and other local regulatory authorities coordinate closely to ensure a reliable transmission system that also supports achievement of California's RPS and environmental goals. CAISO tariff section 24.3.1 provides that in developing the annual Study Plan and Uniform Planning Assumptions, the CAISO will consider "Energy Resource Areas or similar resource areas identified by Local Regulatory Authorities." CAISO tariff section 24.4.6.6 contemplates that the CPUC and local regulatory authorities will submit resource planning results and identify resources

⁴¹ *Id.* at P 151.

⁴² *Id.* at P 148.

⁴³ *Id.* at P 136.

portfolios to enable the CAISO to identify needed transmission upgrades. The CAISO uses these data as critical inputs to identify reliability, policy, and economic transmission needs. The CAISO and the CPUC have a formal memorandum of understanding (MOU) that reflects their resource planning coordination.⁴⁴ In the MOU, the CAISO and the CPUC agreed to “work together to coordinate the CAISO’s revised transmission planning process and identification of needed transmission infrastructure with the CPUC’s subsequent siting/permitting processes.”⁴⁵ Specifically, the CAISO agreed to consider and incorporate CPUC-developed generation scenarios into the transmission planning process. As discussed above, CPUC provides the CAISO with resource portfolios to inform the CAISO’s transmission planning process efforts. The CAISO uses the CPUC’s base case portfolio to assess reliability needs and the base case and sensitivity cases to assess public policy transmission needs.⁴⁶ The data provided by the CPUC inform the CAISO regarding new generation capacity coming to the grid based on the utilities’ procurement efforts and projected future resource needs. The CPUC develops the generation resource portfolios by conducting production cost modeling studies to optimize resource build-out, while considering the State of California’s policy goals, reliability needs, and economic tradeoffs.⁴⁷ By using these resource-optimized portfolios, the CAISO’s transmission planning process directly considers generation resources outside the interconnection queue. The CAISO vets these portfolios with

⁴⁴ Memorandum of Understanding Between the California Public Utilities Commission (CPUC) and the California Independent System Operator Corporation (ISO) Regarding the Revised ISO Transmission Planning Process (May 13, 2010), available at <https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462040>.

⁴⁵ *Id.* at 1.

⁴⁶ The CPUC also provides the CAISO with portfolios to use in public policy sensitivity studies.

⁴⁷ See the CPUC’s Integrated Resource Plan web page at [Integrated Resource Plan and Long Term Procurement Plan \(IRP-LTPP\) \(ca.gov\)](https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462040).

stakeholders in the transmission planning process. Thus, the CAISO does not develop the resource portfolios used in the transmission planning process in the first instance.

This coordinated process provides the CAISO, the CPUC, and project developers with greater assurances that CAISO-approved transmission solutions can be permitted and ultimately built. The CAISO included the MOU in a 2010 tariff amendment filing with the Commission to implement a revised transmission planning process. The tariff amendment included an evaluation process and criteria for approving transmission solutions to meet identified Public Policy Requirements and directives.⁴⁸ In accepting the tariff amendment filing, the Commission noted that the MOU provides for CAISO consideration of study scenarios that reflect the CPUC's long-term procurement process and rejected requests to require the CAISO to amend its tariff to address how it would coordinate with the CPUC's planning process or include all input, assumptions, and study scenarios.⁴⁹

The NOPR, however, appears to require transmission providers like the CAISO to initiate and undertake all study activities required to identify geographic zones for resource development. If so, that is unnecessarily prescriptive. Further, it is contrary to the CAISO's existing, Commission-approved approach, which the NOPR has not found to be unjust and unreasonable. The Final Rule should allow a greater role for the states

⁴⁸ CAISO tariff amendment filing on Revised Transmission Planning Process, Docket No. ER10-1401-000 (June 4, 2010). The MOU was included as Attachment C to that filing.

⁴⁹ *Cal. Indep. Sys. Operator Corp.*, 133 FERC ¶61,224 at P 162 (2010). The CAISO's economic planning documentation and other CAISO tariff and business practice manual provisions also contemplate that the CPUC and other local regulatory authorities will provide resource planning and resource portfolio information and policy directives to the CAISO for use in the transmission planning process. See Transmission Economic Assessment Methodology (TEAM), available at <http://www.aiso.com/planning/Pages/TransmissionPlanning/Default.aspx>. See also CAISO tariff sections 24.3.1 and 24.4.6; Business Practice Manual for Transmission Planning at 22, 24, 49.

in developing resource portfolios and/or identifying geographic zones and, more specifically, it should allow arrangements like the CAISO has with the CPUC to identify geographic resource zones or resource portfolios to be used in the transmission planning process.

There is no need to require the CAISO to (1) abandon its well-established and successful coordination with the CPUC and other local regulatory authorities and (2) instead conduct all of the required studies and analyses in the first instance. State regulatory authorities have the specific expertise and experience, and are well-equipped, to undertake the necessary analysis and identify preferred geographic zones or resource portfolios. As the Commission recognized in the Advance Notice of Proposed Rulemaking (ANOPR) in this docket, “states are uniquely situated in determining how much anticipated future generation is needed, or in providing information related to infrastructure siting or resource mix as influenced by state and local policies.”⁵⁰ The states have planning and procurement authority regarding “facilities used for the generation of electric energy.”⁵¹ The CPUC’s authority extends to resource adequacy, integrated resource planning, and bilateral procurement of generation and other preferred resources. Moreover, the CPUC has siting and permitting authority regarding the construction of planned transmission facilities.

The NOPR itself recognizes the important role of states in the transmission planning process and proposes to rely on state determinations on other important matters. For example, the NOPR requires transmission providers to seek state

⁵⁰ *Building for the Future Through Electric Regional Transmission Planning & Cost Allocation & Generator Interconnection*, Advance Notice of Proposed Rulemaking, 176 FERC ¶61,024 at P 52 (2021).

⁵¹ 16 U.S.C. §824(b)(1).

agreement regarding cost allocation and implement a process to coordinate with state entities to develop the criteria for selecting projects in the Long-Term Regional Transmission Planning process.⁵² Under these circumstances, there is no legitimate reason the Final Rule should preclude the CAISO from using in its transmission planning process -- subject to vetting with stakeholders -- resource portfolios or geographic zones developed by the states through their resource planning efforts. Relevant regional differences exist, and the Commission should allow each region to implement (or retain) processes that will identify resource portfolios or geographic zones for resource development in the most timely, efficient, and cost-effective manner.

The NOPR proposal would needlessly shift to the CAISO all of the work currently being done at the CPUC. It would require the CAISO to undertake all of the data collection and study work, including conducting generation production cost studies (which the CPUC currently undertakes). This would significantly, and unnecessarily, increase the CAISO's workload and staffing needs, consuming limited CAISO resources that could be focused on other transmission planning efforts and enhancements. Any Final Rule should clarify that transmission providers are permitted to utilize resource planning scenarios developed by state and local regulatory authorities rather than require transmission planners to collect their own data, conduct their own production cost studies, and identify their own resource portfolios and geographic resource zones. It is unreasonable to require transmission planners such as the CAISO to "reinvent the wheel" when these activities are already being undertaken in the region by state and

⁵² NOPR at PP 241-244; 299-303.

local authorities, especially given that the NOPR is promoting a greater role for the states in connection with transmission planning.

B. Coordination of Regional Transmission Planning and Generator Interconnection Processes

The Commission proposes to require that transmission providers consider in their Long-Term Regional Transmission Planning processes regional transmission facilities that address interconnection-related needs the transmission provider has identified multiple times in the generator interconnection process, but that were never constructed due to withdrawal of the underlying interconnection request(s). Specifically, the NOPR proposes to require that transmission providers evaluate for selection in the regional transmission plan facilities to address interconnection-related needs that have been identified in the generator interconnection process as requiring interconnection-related network upgrades where: (1) the transmission provider has identified interconnection-related network upgrades in interconnection studies to address those interconnection-related needs in at least two interconnection queue cycles during the preceding five years (beginning at the time of the withdrawal of the first underlying interconnection request);⁵³ (2) the interconnection-related network upgrade identified to meet those

⁵³ The withdrawal of a single interconnection customer when other interconnection customers assigned to the interconnection-related network upgrade remain in the interconnection queue cycle does not qualify as a withdrawal of an interconnection queue interconnection request for the purposes of this reform. NOPR at P 169 n. 301. Also, the Commission does not propose to limit this reform to interconnection-related network upgrades that are identical to those identified in prior interconnection queue cycles. Instead, the Commission proposes to focus on the relevant interconnection-related needs that those upgrades are intended to address. To this point, the Commission proposes to require that transmission providers in each transmission planning region consider whether the interconnection-related need for which the transmission provider identified the interconnection-related network upgrade is the

interconnection-related needs has a voltage of at least 200 kV and/or an estimated cost of at least \$30 million; (3) those interconnection-related network upgrades have not been developed and are not currently planned to be developed because the interconnection request(s) driving the need for the upgrade has been withdrawn; and (4) the transmission provider has not identified an interconnection-related network upgrade to address the relevant interconnection-related need in an executed generator interconnection agreement or in a generator interconnection agreement that the interconnection customer requested that the transmission provider file unexecuted.⁵⁴

The Commission should not adopt this proposal in any Final Rule. It would place an unnecessary burden on the CAISO and other transmission providers. The CAISO's policy-driven transmission framework already considers the future needs of the grid based on resource planning efforts undertaken at the CPUC. The CAISO uses the Generator Interconnection and Deliverability Allocation Procedure (GIDAP) in Appendix DD of the CAISO tariff to integrate the generator interconnection and transmission planning processes, including an annual queue cluster study process to evaluate generator interconnection requests.⁵⁵ Because the resources in the CAISO's generator interconnection queue far exceed (by many multiples) the state's needs over the next 10 years, the cluster study process will necessarily identify transmission needs driven by these excessive and unneeded volumes. When state resource planning

same in multiple interconnection queue cycles. That is, if an interconnection-related need is driving the identification of an interconnection-related network upgrade on the transmission system in one interconnection queue cycle and an interconnection-related network upgrade with, for example, a different voltage, starting point, or ending point is identified in the next interconnection queue cycle to address the same interconnection-related need, then the first criterion listed above would be satisfied. *Id.* at P 171.

⁵⁴ *Id.* at P 166.

⁵⁵ CAISO tariff appendix DD, section 2.1.

requirements suggest further transmission upgrades and expansions are needed, the CAISO will consider the types of solutions identified in earlier cluster study approaches, but requiring further consideration of the same projects simply because the queue was overcrowded in multiple prior cycles is administratively burdensome and unlikely to lead to any different outcomes.

The fact a network upgrade continues to show-up in the interconnection processes may have no relevance to the transmission planning process, and the idea interconnection upgrades appearing in multiple cluster studies should move into the regional planning process is a non-sequitur. The metric the NOPR proposes is too backward looking and, as such, will not promote productive, forward-looking transmission planning. Transmission planning should focus on current and future expected conditions and should not, as the NOPR proposes, look backwards at upgrades identified in previous in generator interconnection processes that were never built.

Under the NOPR, multiple interconnection cycles will have passed before the “old” upgrade is considered in the transmission planning process. Also, as the CAISO previously explained in this proceeding, most generator interconnection-related network upgrades are not large transmission projects like building new transmission lines.⁵⁶ Therefore, the Commission should not require that transmission planners automatically include in regional transmission planning process generator interconnection upgrades that appeared in multiple cluster studies but were never built.

⁵⁶ CAISO Reply Comments on ANOPR, Docket No. RM21-17 at 74 (Nov. 30, 2021), available at [Microsoft Word - RM21-17 CAISO ReplyComments 20211130](#)

C. Consideration of Dynamic Line Ratings and Advanced Power Flow Control Devices in Long-Term Regional Transmission Planning

The NOPR proposes to require transmission providers in each transmission planning region consider for each identified regional transmission need whether selecting transmission facilities in the regional transmission plan that incorporate dynamic line ratings or advanced power flow control devices would be more efficient or cost-effective than transmission facilities that do not incorporate these technologies.⁵⁷ Under the NOPR proposal, transmission providers should first consider whether incorporating dynamic line ratings or advanced power flow control devices into existing transmission facilities could meet the same regional transmission need more efficiently or cost-effectively than other potential transmission facilities. Second, when evaluating new transmission facilities for potential selection in the regional transmission plan, transmission providers must consider whether incorporating dynamic line ratings and advanced power flow control devices as part of any potential regional transmission facility would be more efficient or cost-effective.⁵⁸ The Commission proposes that the costs to incorporate dynamic line ratings or advanced power flow control devices selected in the regional transmission plan - whether as an addition to an existing transmission facility or as

⁵⁷ NOPR at P 272. The NOPR proposes that this requirement apply in all aspects of the regional transmission planning processes, including the existing regional transmission planning processes for near-term regional transmission needs and Long-Term Regional Transmission Planning.

⁵⁸ *Id.* at P 274.

part of a new regional transmission facility - will be allocated using the applicable regional cost allocation method.⁵⁹

As discussed below, the CAISO supports the NOPR's first proposed directive to consider dynamic line ratings, advanced power flow control devices, and potentially other grid enhancing technologies as alternatives to meet a transmission need identified in the transmission planning process. However, the NOPR's second proposed directive to consider whether incorporating dynamic line ratings and advanced power flow control devices as part of any potential regional transmission facility will be more efficient or cost-effective is overly prescriptive and, in some cases, it will create unnecessary work for transmission planners. Finally, the CAISO supports the NOPR's cost allocation proposal for dynamic line ratings, advanced power flow control devices, or potentially other grid enhancing technologies.

- 1. The CAISO Supports Considering Dynamic Line Ratings, Advanced Power Flow Control Devices, and Potentially Other Grid Enhancing Technologies as Alternatives to Meet a Transmission Need Identified in the Transmission Planning Process**

Dynamic line ratings, advanced power flow control devices, and other grid enhancing technologies offer the promise of greater efficiency and reliability for transmission operations. As load grows in the coming years because of increased electrification, the ability to deploy dynamic line ratings, advanced power flow control devices, and other grid enhancing technologies may, in some instances, be effective

⁵⁹ *Id.*

tools to enhance the efficiency and reliability of transmission operations. The CAISO supports assessing whether dynamic line ratings, advanced power flow control devices, and other grid enhancing technologies can help meet an identified transmission need in the regional transmission planning process. The CAISO has previously recommended using advanced power flow control devices and other grid enhancing technologies as alternatives to capital transmission additions. For example, in its 2017-2018 Transmission Plan, the CAISO approved the reliability-driven Vaca Dixon-Lakeville 230 kV Corridor Series Compensation project.⁶⁰ In that case, the CAISO determined that the Smart Wires alternative submitted in the CAISO's process could provide the required series compensation. In other instances the CAISO has identified battery energy storage to meet transmission needs.⁶¹ The CAISO has also identified a major phase shifting transformer installation (the Imperial Valley Phase Shifting Transformer) as an alternative to meet a transmission need and two HVDC lines in the San Jose area for flow control capability.⁶²

The CAISO evaluates and approves reliability and economic transmission solutions (and non-transmission alternatives) at all transmission voltage levels in its transmission planning process. Transmission operators and developers, as well as other stakeholders, have opportunities to propose grid enhancing technologies to address identified needs. The CAISO's transmission planning process is open to all

⁶⁰ See CAISO 2017-2018 Transmission Plan at 98, 102-103: http://www.aiso.com/Documents/BoardApproved-2017-2018_Transmission_Plan.pdf.

⁶¹ *Id.* at 142.

⁶² See CAISO 2013-2014 Transmission Plan at 6, 97: http://www.aiso.com/Documents/Board-Approved2013-2014TransmissionPlan_July162014.pdf.

stakeholders and interested persons, and it benefits from widespread participation by current and prospective transmission owners, transmission developers, equipment and technology vendors, and ratepayer and environmental representatives. If using dynamic line ratings, advanced power flow control devices or other grid enhancing technologies can meet an identified transmission need and it is more cost effective or efficient than other alternatives, the CAISO will identify such solution as a needed solution in its annual transmission plan.

In assessing grid enhancing technologies as potential alternatives to transmission projects, the Commission and stakeholders should understand that these technologies must perform a transmission function and meet a specific transmission system need identified by the CAISO. They must demonstrate they can meet the identified transmission reliability need, produce net economic benefits, or help address a policy-driven need. In addition, the CAISO or participating transmission owner must have the capability to operationalize any grid enhancing technology selected as a transmission project, *i.e.*, the technology must be feasible to integrate into grid operations.

Additionally, calculating the benefits of deploying dynamic line ratings and advanced power flow control devices may be far more challenging today, when systems are rapidly transforming, compared to the past where changes on the electric system occurred more gradually. Even determining the general benefit of the grid enhancing technology would likely require performing some type of counterfactual analysis to ensure that no other factor was responsible for increasing the capacity, efficiency, reliability, or economic benefits of existing transmission facilities. Grid conditions are

constantly changing, especially given the rapid transformation of the resource fleet, demand usage patterns, and more extreme weather conditions. Numerous factors can affect the yearly (and long-term) efficacy of using dynamic line ratings or advanced power flow control devices to meet an identified transmission need, including, *inter alia*, generation and transmission additions (and retirements), natural gas prices, generation and transmission outages, rapid growth of variable energy resources and distributed energy resources, changes in load, new weather patterns, drought, and fires. All of these factors can affect flows on the transmission system and change the effectiveness of transmission projects or grid enhancing technologies such as dynamic line ratings or advanced power flow control devices.

In any Final Rule, the Commission should recognize that dynamic line ratings and advanced power flow control devices are primarily an operational tool. To this end, the Commission should recognize that transmission planners will not know what system conditions will necessarily exist in the future and whether it will be feasible to deploy dynamic line ratings or advanced power flow control devices to meet an identified transmission need. There will be cases where these technologies will meet an identified transmission need and cases where they will not. Any Final Rule should only require public utility transmission providers to (1) assess dynamic line ratings or the addition of an advanced power flow device on an existing facility and (2) then explain in sufficient detail for stakeholders to understand why it selected or did not select that technology to meet an identified transmission need.

2. The Final Rule Should Not Require Transmission Providers to Consider Whether incorporating Dynamic Line Ratings or Advanced Power Flow Control Devices as Part of Any New Regional Transmission Facility To Meet a Reliability Need Would Be More Efficient or Cost-Effective

The CAISO's transmission planning process includes three phases: (1) developing unified planning assumptions and a study plan; (2) identifying reliability, economic, and public policy needs and solutions to meet those needs, and (3) conducting competitive solicitations for applicable projects. During the second phase of the transmission planning process, the CAISO assesses reliability needs applying mandatory reliability standards and the CAISO's own planning standards, and it identifies solutions to meet these needs.

The NOPR's directive to consider whether incorporating dynamic line ratings and advanced power flow control devices as part of any new regional transmission facility would be more efficient or cost-effective faces the same challenges of assessing whether these technologies represent stand-alone alternatives to meet a transmission need. The CAISO believes in some cases it will make sense to recommend incorporating these technologies into a new transmission facility, but not in all cases. Indeed, the CAISO previously has found the need for advanced power flow control devices in select cases, and it expects to continue exploring potential applications on a case by case basis in the future where the circumstances warrant. However, requiring the transmission provider to study the possible application of these devices for every new project can be burdensome, especially when they are unlikely to solve the identified need. For example, if the CAISO identifies a reliability need in its transmission

planning process, it will then identify a project to meet that need. Incorporating dynamic line ratings or advanced power flow control devices as part of that new transmission facility may enhance the project's economics, but it is unlikely to change the size or scope of the transmission facility identified to meet the reliability need. In other words, incorporating operational tools such as dynamic line ratings or advanced power flow control devices as a component of a new transmission facility likely will not produce a more cost effective or efficient alternative to meet identified reliability needs except in the most limited of circumstances.

For these reasons, requiring transmission planners to assess whether every new project meeting a reliability need should incorporate dynamic line ratings or advanced power flow devices is overly prescriptive, will command significant resources, and will create unnecessary work. On the other hand, it is reasonable to consider whether dynamic line ratings and advanced power flow control devices may increase the efficiency or cost-effectiveness of a facility the CAISO identifies to meet economic or public policy needs. The CAISO recommends that if the Commission, believes it is necessary to require transmission planners to consider dynamic line ratings or active power control devices in connection with a proposed project, it should only do so in connection with new economic or policy driven transmission projects, not new reliability projects.

D. The Commission Should Not Preclude the CWIP Incentive for Long-Term Regional Transmission Facilities

The NOPR would not permit transmission owners to use the construction work in progress (CWIP) rate incentive for Long-Term Regional Transmission Facilities, but states they may still book costs incurred during the pre-construction or construction phase as Allowance for Funds Used During Construction (AFUDC) and only recover those costs after the project is in service.⁶³ The Commission seeks comment on this proposed requirement, in particular whether it would reasonably balance consumer and investor interests.⁶⁴

The Commission should permit transmission developers to choose whether they want to use CWIP or AFUDC for Long-Term Regional Transmission Facilities, and it should not *per se* preclude the use of CWIP. The Commission should evaluate requests to use the CWIP incentive on a case-by-case basis rather than institute a blanket prohibition on the CWIP incentive for Long-Term Regional Transmission Facilities. The CAISO appreciates the Commission's concerns about balancing investor and ratepayer interests, but allowing the use of CWIP is reasonable and provides many benefits.

The availability of CWIP will facilitate the development of Long-Term Regional Transmission Facilities. In Order No. 679, the Commission determined that the availability of CWIP furthers the goals of FPA Section 219 by providing up-front regulatory certainty, rate stability, reduced interest expense, and improved cash flow

⁶³ NOPR at P 333.

⁶⁴ *Id.* at P 334.

by reducing the pressures on a transmission developer's finances caused by investing in transmission projects with long lead times that can negatively affect cash flow and the ability of the project sponsor to attract capital at reasonable rates.⁶⁵ As the Commission has recognized, CWIP can enable higher credit ratings, thus lowering the cost of capital.⁶⁶

Allowing transmission developers to utilize CWIP for Long-Term Regional Transmission Facilities will also encourage participation in competitive transmission processes and place incumbent and non-incumbent transmission developers on a more level playing field. The inability to recover CWIP can present a barrier to transmission development and participation in competitive transmission processes by non-incumbent transmission developers. The CAISO notes that, to address these types of concerns, the Commission approved the CAISO's tariff amendment to establish a mechanism whereby an approved project sponsor that is not a CAISO participating transmission owner (PTO) can recover Commission-authorized transmission revenue requirements associated with projects under construction (e.g., CWIP) before the facilities are turned over to CAISO operational control.⁶⁷ For similar reasons, the Commission should allow CWIP for Long-Term Regional Transmission Facilities.

The Commission should not preclude transmission developers from using CWIP for Long-Term Regional Transmission Facilities, especially given it would

⁶⁵ *Promoting Transmission Investment through Pricing Reform*, Order No. 679, 116 FERC ¶61,057 at PP 115-17 (Order No. 679), *order on reh'g*, Order No. 679-A, 117 FERC ¶61,345 (2006), *order on reh'g*, 119 FERC ¶61,062 (2007).

⁶⁶ *Id.*

⁶⁷ *Cal. Indep. Sys. Operator Corp.*, 146 FERC ¶61,237 (2014).

continue to allow the CWIP incentive for reliability and economic transmission projects. The NOPR suggests that the need to preclude CWIP arises from the “incremental uncertainty” surrounding the need for Long-Term Transmission Facilities.”⁶⁸ This is seemingly at odds with the Commission’s finding in Order No. 679 that the availability of CWIP “removes a disincentive to construction of transmission, which can involve very long lead times and considerable risk to the utility that the project may not go forward.”⁶⁹ This finding aptly describes Long-Term Regional Transmission Facilities. As defined in the NOPR, a Long-Term Regional Transmission Facility is identified as part of Long-Term Regional Transmission Planning,⁷⁰ which means the facility likely will have a very long lead time.

The CAISO recognizes the Commission’s concern about the risk of overbuilding and protecting ratepayers from the costs of certain transmission facilities whose need appears to be “less certain” than other transmission facilities. However, the more appropriate course of action would be to address this issue up-front by ensuring the tariff rules for Long-Term Regional Transmission Facilities have sufficiently robust approval criteria in place to reduce the risk that costly, unneeded Long-Term Regional Transmission Facilities will be approved and built in the first instance. However, instead of focusing on the root cause of the problem, the NOPR focuses only on an effect of the root cause and, in doing so, it targets developers who take on the risk of building approved Long-Term Transmissions Facilities and potentially limits competition.

⁶⁸ See NOPR at P 331.
⁶⁹ Order No. 679 at P 117.
⁷⁰ NOPR at n.507.

E. The Commission Should Not Unduly Disrupt Existing Regional Planning Processes That Already Incorporate Local Transmission Planning And Identify Potential Opportunities to Right-Size Replacement Transmission Facilities

To address concerns regarding local transmission planning processes, the NOPR provides two proposals: (1) an iterative stakeholder meeting process; and (2) a separate “right-sizing” process.⁷¹ Regarding the first proposal, the NOPR envisions “leveraging the existing stakeholder process for regional transmission planning”,⁷² to require transmission providers to establish an iterative process that would ensure stakeholders have meaningful opportunities to participate and provide feedback on local transmission planning throughout the regional transmission planning process. The Commission proposes to require that the regional transmission planning process include at least three stakeholder meetings concerning the local transmission planning process of each transmission provider that is a member of the transmission planning region before each transmission provider’s local transmission plan can be incorporated into the transmission planning region’s planning models. Specifically, the Commission would require an assumptions meeting, a needs meeting, and a solutions meeting.

Regarding the second proposal, the NOPR suggests that, as part of each Long-Term Regional Transmission Planning cycle, transmission providers in each transmission planning region should be required to evaluate whether transmission

⁷¹ NOPR at PP 400-15.

⁷² *Id.* at P 400.

facilities operating at or above 230 kV that the owner of the transmission facility anticipates replacing in-kind during the next 10 years can be “rightsized” to address regional transmission needs identified in the Long-Term Regional Transmission Planning process more efficiently or cost-effectively.

The NOPR appears targeted toward planning regions that have separate local and regional transmission planning processes and that allow transmission owners to approve transmission expansions and upgrades in their local planning processes. Transmission planning in the CAISO balancing authority area does not fit that mold. The Final Rule should not unduly disrupt existing transmission planning processes such as the CAISO’s, that already evaluate both local and regional transmission expansion needs and solutions in a single, integrated regional transmission planning process.

As the CAISO explained in this proceeding and in another Commission proceeding, the CAISO conducts the transmission planning activities for all upgrades and expansions of facilities under its operational control, which include transmission facilities at all voltage levels and at all locations on the system.⁷³ The CAISO evaluates reliability, economic, public policy, and other transmission needs specified in the tariff at both the local level (*i.e.*, low voltage transmission facilities within a single PTO’s footprint) and at the regional level (*i.e.*, high-voltage transmission facilities). The CAISO evaluates all local and regional transmission needs and solutions holistically through a

⁷³ See CAISO Reply Comments on ANOPR at 24-27 available at [Microsoft Word - RM21-17 CAISO ReplyComments 20211130](#). See *Cal. Pub. Util. Comm’n, et al. v. Pacific Gas and Elec. Co.*, 164 FERC ¶¶61,161 at PP 35-37 (2018), *reh’g denied*, 168 FERC ¶¶61,171 (2019). PTOs cannot approve upgrades or transmission work in their asset management processes that expand (other than incidentally) the capacity of the CAISO grid. System capacity expansions and upgrades can occur only through the CAISO’s regional transmission planning process.

single regional transmission planning process. It does not conduct separate processes for local and regional transmission needs, nor is it necessary. The CAISO alone determines if there is any need for a transmission upgrade or expansion within a PTO's service territory and determines the appropriate solution to meet that need. Further, if a PTO's asset management, maintenance, or in-kind replacement project can be expanded or modified to address a CAISO-identified transmission need in a local area (or system wide), the CAISO can order such expansion or modification in the CAISO's regional transmission planning process, and the expansion would be subject to the CAISO's authority.⁷⁴ The CAISO's ability to evaluate and "right size" such replacement or maintenance projects to meet CAISO-identified transmission needs is not limited just to high voltage facilities, *i.e.*, facilities at and above the 230 kV threshold proposed in the NOPR, it applies to all transmission facilities under the CAISO's operational control.

The CAISO's PTOs conduct separate maintenance and asset management processes designed primarily to connect load, assess their facilities to ensure they continue to operate in a safe and reliable manner, and to provide information to stakeholders. Specifically, Southern California Edison Company has its Transmission Maintenance and Compliance Review process.⁷⁵ Pacific Gas and Electric Company has its Stakeholder Transmission Access Review process.⁷⁶ San Diego Gas & Electric Company has its TO5 Transmission Planning Process.⁷⁷ Under those processes, the

⁷⁴ 164 FERC ¶61,161 at P 69.

⁷⁵ *Southern California Edison Co.*, 164 FERC ¶61,160 (2018) (SCE Maintenance Order), *reh'g denied*, 168 FERC ¶61,170 (2019).

⁷⁶ PG&E TO Tariff, FERC Electric Tariff. Volume No. 5, Appendix IX (STAR Process Tariff).

⁷⁷ San Diego Gas & Electric Co, Docket No. ER19-221, SDG&E Offer of Settlement and Settlement Agreement (filed Oct. 18, 2018), *San Diego Gas & Electric Co.*, 170 FERC ¶61,240 (2020)(order approving settlement).

PTOs cannot approve any kind of project that expands or upgrades the capacity of the transmission system (other than incidentally). They cannot approve transmission upgrades and expansion projects to meet applicable reliability criteria, public policy needs, or economic needs as those concepts are defined in the CAISO tariff. Only the CAISO can approve such expansion and upgrade projects, which it does through its regional transmission planning process. This distinguishes the CAISO's transmission planning framework from the planning frameworks of other regional entities that allow individual public utilities to approve in their local transmission planning processes upgrade/expansion projects within their service territories to meet local reliability, economic, public policy, and other needs. On the other hand, CAISO PTOs can only approve "pure" transmission maintenance and asset management projects that do not expand the capacity of an existing transmission facility.

The CAISO's process for evaluating "local" transmission upgrades and expansions already achieves the NOPR's objectives, and it does so efficiently because the CAISO evaluates all transmission needs and solutions (both local and regional, high voltage and low voltage) holistically in a single regional transmission planning process. The CAISO's transmission planning process already utilizes the three stakeholder meeting approach contemplated in the NOPR, and in these meetings the CAISO considers both "local" and "regional" upgrade and expansion transmission needs.⁷⁸ In other words, the three "local planning" meetings contemplated in the NOPR already

⁷⁸ See CAISO tariff sections 24.4.3 and 24.4.9.

occur; they are simply subsumed in the CAISO's regional planning process meetings.⁷⁹

The CAISO requests that the Commission clarify the NOPR does not require the CAISO to hold three separate (and additional) meetings solely to address low-voltage (local) needs and solutions, and the CAISO can continue to address both local and regional transmission needs in the same meetings as it does today. The Commission should not unduly disrupt existing processes that are working efficiently or introduce unnecessary inefficiencies into the process. There is no valid reason to require the CAISO to hold six stakeholder meetings (three for local and three for regional) when it can (and already does) achieve the same result by continuing its existing three stakeholder meeting process that evaluates both local and regional needs.

Finally, the CAISO requests that the Commission clarify that the NOPR does not preclude the CAISO from continuing to consider modifications to "in-kind" replacements for facilities below 230 kV in its annual transmission planning process. As indicated above, in its Commission-approved planning framework the CAISO approves facilities at all voltage levels in its transmission planning process. Thus, if the CAISO identifies a transmission need, and modifying or expanding an in-kind replacement of a facility below 230 kV can meet that need, the CAISO has the authority to approve such a project in its planning process. Precluding the CAISO from modifying in-kind

⁷⁹ The NOPR appropriately acknowledges precedent that asset management and maintenance projects that do not incrementally expand the transmission are not subject to Order No. 890 and do not require approval by and ISO or RTO in a regional planning process. NOPR at P 385. The Commission should retain this practice. As the CAISO indicated in its reply comments on the ANOPR, it is wholly inappropriate and unnecessary to require the CAISO or any other regional planner to approve in the regional planning process asset management and maintenance projects that do not constitute system expansions. See CAISO ANOPR Reply Comments at 22-37, available at [Microsoft Word - RM21-17_CAISO_ReplyComments_20211130](#)

replacements of facilities below 230 kV would undermine efficient transmission planning in the CAISO region.

III. CONCLUSION

For the foregoing reasons, the Commission should take action in this proceeding consistent with the discussion herein.

/s/ Anthony Ivancovich

Roger E. Collanton
General Counsel
Anthony Ivancovich
Deputy General Counsel
Andrew Ulmer
Assistant General Counsel

Sean A. Atkins
Bradley R. Miliauskas
Davis Wright Tremaine LLP
1301 K Street, NW
Suite 500 East
Washington, DC 20005

California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630

Counsel for the California Independent
System Operator Corporation

August 17, 2022

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 17th day of August, 2022.

/s/ Martha Sedgley

Martha Sedgley