BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 19M-0495E

IN THE MATTER OF THE COMMISSION’S IMPLEMENTATION OF §§ 40-2.3-101 AND 102, C.R.S., THE COLORADO TRANSMISSION COORDINATION ACT.

INITIAL COMMENTS, NOTICE OF PARTICIPATION, AND ENTRY OF APPEARANCE OF SUSTAINABLE FERC PROJECT


Notice of Participation

Sustainable FERC Project intends to participate in this proceeding. Sustainable FERC Project is a coalition of state, regional, and national environmental and public interest organizations working to expand the deployment of clean energy resources into the nation’s transmission grid. Sustainable FERC Project is housed within Natural Resources Defense Council (NRDC). Sustainable FERC Project will be represented in this proceeding by its undersigned counsel, Scott F. Dunbar of the law firm Keyes & Fox LLP. Pursuant to Commission Rule 1201(c), Mr. Dunbar hereby enters his appearance on behalf of Sustainable FERC Project in this proceeding.

Initial Comments

Sustainable FERC Project appreciates the opportunity to provide these comments to the Commission as it begins its work to implement the Colorado Transmission Coordination Act (CTCA).
I. Definitions of Market Options

As an initial matter, Sustainable FERC Project agrees with the more detailed definitions of Power Pool, Joint Tariff, Energy Imbalance Market (EIM), Regional Transmission Organization (RTO), and Extended Day Ahead Market (EDAM) the Commission proposes in its decision initiating this proceeding, Decision No. C19-0756. For convenience, throughout these comments, Sustainable FERC Project will refer to EIM, RTO, and EDAM using the umbrella terms “organized market” or simply “market.”

II. The Benefits and Costs of Organized Markets.

The Commission seeks comments on the costs and benefits that the Commission should consider as it implements the CTCA. ¹ Sustainable FERC Project recommends that the Commission take an expansive view when assessing costs and benefits. In general, well-designed organized markets can produce net benefits. The Commission will, of course, need Colorado-specific information to make an informed decision on whether Colorado’s utilities should participate in an organized market and which option best serves the state’s customer needs and policy priorities. The “North Star” for guiding market design choices is that markets should actively facilitate and help to accelerate the state’s energy and environmental priorities, rather than hinder them. We identify below some of the primary benefits of organized markets, along with potential risks or costs, and then identify a number of key substance and process attributes of effective market designs.

¹ Decision No. C19-0756, ¶ 39(a).
A. Benefits of organized markets.

The Commission received a wide variety of reports and studies on the benefits of organized markets in the course of Proceeding No. 16I-0816E, the Commission’s investigatory docket regarding the Mountain West Transmission Group. The Commission Staff has filed these studies into the current proceeding, so Sustainable FERC Project will not discuss them here. Below we address several studies that we believe will benefit the record in this proceeding.

In 2015, the California Independent System Operator (CAISO) commissioned a series of rigorous studies to assess the potential benefits of an expanded organized market in the Western Interconnection. Known as the SB 350 Studies after the California law directing their development, the studies analyzed a wide variety of costs, benefits, and other issues.² Perhaps most helpful to this proceeding is the study titled “Review of Existing Regional Market Impact Studies,”³ which found that, as a general pattern, studies of regional markets have found:

- Regional markets produce production cost savings of 1 to 3 percent;⁴
- Prospective studies of regional markets have tended to underestimate benefits such as improved utilization of transmission, improved efficiency of generation, increased competition, improved reliability, and improved system planning;⁵
- Retrospective studies of regional markets have documented economic benefits higher than those estimated in prospective studies;⁶

² The 12 volumes of studies are available under “Technical Reports and Studies” at: http://www.caiso.com/informed/Pages/RegionalSolutions.aspx.
⁴ Id. at 2-5.
⁵ Id. at 5-10
⁶ Id. at 10-14.
• Regional markets can **reduce the need to invest in generating capacity**;\(^7\)

• Regional markets **improve access to low cost renewables** and **reduce the cost of complying with state renewable energy standards**;\(^8\) and

• Regional markets can **reduce the cost of balancing renewable generation**.\(^9\)

Sustainable FERC Project recommends that the Commission consider each of the above-listed benefits (each of which appears in **bold**, above) as it explores a potential organized market for Colorado.

One key benefit of organized markets is their ability to **reduce the need to curtail excess renewable generation**. When a market has a large geographic footprint, the market can balance clean energy resources with other clean resources located elsewhere in the system footprint and facilitates reserve sharing, which reduces planning reserve margins and reduces costs to consumers associated with maintaining unnecessary resources. In December 2015, the consulting firm Energy+Environmental Economics (E3) and the National Renewable Energy Laboratory (NREL) completed the Western Interconnection Flexibility Assessment on behalf of the Western Electricity Coordinating Council (WECC) and the Western Interstate Energy Board (WIEB).\(^10\) In this comprehensive report, E3 and NREL assessed the ability of resources in the Western Interconnection to accommodate high penetrations of renewables while maintaining reliability and investigated strategies that would enable such higher penetrations of renewables.\(^11\) Among its

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\(^7\) *Id.* at 14-17.

\(^8\) *Id.* at 17-18.

\(^9\) *Id.* at 19-22.


\(^11\) *Id.* at p. iv.
conclusions, the report found, “Regional coordination offers a low-hanging fruit as an enabling strategy for renewable integration.”\textsuperscript{12} The reason: lack of regional coordination causes renewable generation to be curtailed even when there is physical transmission capacity available. As the report stated: “Relaxing the constraint on interregional exchange to allow the use of the transmission system to its physical limits results in a reduction of renewable curtailment from 6.4% to 3.0%.”\textsuperscript{13}

The Commission should be aware of studies specifically pertaining to an expanded EIM in the West. E3 prepared a report for WECC that estimated the \textit{production cost savings benefits} of implementing an EIM across the entire Western Interconnect to be $141.4 million in 2020.\textsuperscript{14} A follow up study by NREL studied the \textit{potential operational savings benefits} of an EIM in the Western Interconnect.\textsuperscript{15} NREL calculated the operational benefits of a “West-wide” EIM at between $146 million and $294 million annually.\textsuperscript{16}

As the Commission’s questions make clear, if the utilities participate in an organized market, it will be crucial to ensure that customers enjoy the benefits of such participation. It is Sustainable FERC Project’s understanding that, for Public Service, the economic benefits discussed above would flow through to customers in the form of reductions to the Electric Cost Adjustment (ECA), which includes purchased energy and wheeling costs, and the Purchased

\textsuperscript{12} Id. at p. 216.

\textsuperscript{13} Id. at xxiv. See also p. 221.


\textsuperscript{16} Id. at xviii.
Capacity Cost Adjustment (PCCA), which reflects the utility’s cost of purchased capacity. In the case of Black Hills, the Energy Cost Adjustment (ECA) includes market wholesale energy purchases, so economic benefits should flow through to ratepayers through the ECA. Sustainable FERC Project intends to address this issue in reply comments if the utilities’ discussion reflects a different understanding.

Finally, more general values of organized markets include the transparent, cost-minimizing offer-based market framework that is capable of dispatching supply and demand resources across multiple utility balancing areas more cost-effectively than would occur in individual balancing areas. A regional organized market also allows the integration and dispatch of energy storage, electric vehicles, and other distributed energy resources more effectively than less transparent or fragmented utility-specific alternatives. Regional markets also are able to more quickly adopt evolving FERC standards, rules, and practices necessary to reduce discriminatory behavior and ensure just and reasonable rates (e.g., rules requiring non-discriminatory treatment of energy storage, demand response, and variable energy resources).

B. Risks of organized markets.

FERC-regulated organized markets are not without their risks. One consideration is the possibility of adverse FERC actions. For example, FERC has approved wholesale market designs that sometimes interfere with state resource adequacy and resource mix choices. This is playing out in a variety of FERC proceedings where the RTO seeks to “mitigate” (increase) price-based capacity market offers from resources receiving “out of market” financial incentives or subsidies

17 Public Service Company of Colorado, COLO. PUC No. 8 Electric Tariff, Sheet Nos. 141B-141E and 143A-143I.

18 Black Hills Colorado Electric, LLC, Colo. PUC No. 11 Electric Tariff, Sheet Nos. 61-63 and 82-84.
from state policies intended to (usually) compensate them for their emission-free generation attributes. For example, FERC has approved ISO New England’s application of a “minimum offer price rule” (MOPR) to mitigate offers from state-subsidized clean energy resources.\(^19\) Clean energy resources that fail to clear in the ISO-NE market due to mitigation are then only able to enter if they buy out existing (likely fossil) resources – and if such resources are willing to retire – which has the potential to both delay the entry of clean energy in the market and increase the cost of that clean energy to consumers.\(^20\) FERC has also given tentative approval to PJM’s effort to apply the MOPR to a wide range of zero-carbon resources receiving out of market revenues, including wind, solar, and nuclear power.\(^21\) The customer costs of applying the MOPR in PJM under its proposal will be in the hundreds of millions to billions of dollars.\(^22\)

It is unlikely that the Commission would approve state-jurisdictional utilities joining an organized market construct in Colorado that includes a separate capacity market regime. Unlike most of the states in the eastern wholesale markets, Colorado continues to regulate public utilities through cost-of-service ratemaking. The eastern capacity markets developed because of a belief that energy markets did not provide sufficient revenue to ensure reliability and encourage the efficient entry and exit of resources owned by independent power producers. There is no need for


\(^{21}\) See Initial Submission of PJM Interconnection, LLC in FERC Docket Nos. EL16-49 et al. (Oct. 2, 2018).

a capacity market in states with cost-of-service regulation because those states can ensure resource adequacy through regulation.

However, FERC-approved rules short of a full capacity market could still undermine Colorado clean energy policies. For example, an RTO is responsible for maintaining reliability during steady state and stressed system conditions throughout the year. As part of that responsibility, an RTO requires that all load-serving entities within its footprint have sufficient capacity to meet peak customer demand. How the RTO measures the capacity value of the load serving entities’ (LSEs’) resources is the key to accurately representing the total value of the system’s resources. Poorly designed RTO rules for capacity accreditation that devalue clean energy resources would result in higher costs for consumers, interference with state rules and policies for resource adequacy, and a drag on Colorado’s clean energy progress.

Traditional ways to account for resource capabilities, grounded in measuring system needs dominated by central station generators, are poorly suited for capability needs in a system dominated by variable energy and many distributed energy resources. Nearly all studies of a deeply decarbonized electric grid emphasize that reliability comes from portfolios of renewable resources bound together by energy storage and flexible load.23 The Commission therefore should ensure that it supports market designs and systems of capacity and energy accreditation capable of incentivizing these resources while fully accounting for state energy preferences.

In summary, one of the key lessons of existing market designs for Colorado is clear: the state should not accept any market design that prevents or impedes state-supported resources from

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counting towards system capacity. Also, to maintain market designs that protect the state’s interests, the state must also ensure that it has a strong role in governance at an RTO.

C. Attributes of effective market design.

We recommend that the Commission view any market design through the lens of how the market facilitates Colorado energy and environmental policy choices rather than impedes them. With many years of experience in other markets, Sustainable FERC Project and many others believe that the Federal Power Act requires markets to actively facilitate public policy choices rather than simply accommodate them. “Accommodation” is passive and reactive and can be prone to the creation of onerous rules and practices that constrain state policies and customer choice and increase costs. Active facilitation, in contrast, places the market operator in a cooperative and active position vis-à-vis the state, and considers state priorities to be a primary goal of effective market design.

The creation and evolution of organized markets in the West is an exciting opportunity for Colorado to play a leading role in the design of the markets. The Commission can learn from and avoid the many mistakes that have occurred in other markets and instill best practices in market design in new markets. To that end, we encourage the Commission to ensure that any market design includes at a minimum the following attributes:

1. Fully value the capacity, energy, and reliability values of wind and solar resources, including those incentivized by state and local policies.

2. Fully credit and value demand-side management, such as price-responsive demand and demand response (including allowing aggregation of small customer-owned resources).

3. Fully value all energy efficiency on the system.

4. Market products that incent and maximize grid flexibility, including to reduce peak demand and manage ramp needs.
5. Effective integration of electric vehicles into markets.

6. Avoidance or minimization of markets and planning seams issues (e.g., in planning, a single process for evaluating new transmission lines, cost allocation that recognizes all of the benefits of these lines).

7. Support for advanced grid technology to maximize the real-time capacity value of power lines (e.g., through dynamic line ratings).

8. Alignment of generator interconnection and system planning rules and models.

9. Governance structures that include public interest organizations as members (with non-discriminatory fees) and other governance improvements discussed below.

For other market design attributes necessary to facilitate integration of high levels of wind and solar resources, see Customer Focused and Clean: Power Markets for the Future (2018).

III. State Environmental and Clean Energy Goals and Mandates.

The Commission’s question on the relationship between market design and environmental and clean energy goals rightly recognizes the vital role of the power grid in achieving those goals. Colorado has ambitious environmental and clean energy goals, including reducing carbon emissions from the power sector by 25 percent by 2025, 50 percent by 2030, and 90 percent by 2050, tapping into the energy savings and carbon cutting values of energy storage and other customer-owned distributed energy resources, and supporting widespread transportation electrification.

Assuming effective designs that avoid the pitfalls discussed above, any of the market options under consideration has the potential to facilitate meeting these goals. A robust power grid

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26 CRS § 40-2-201.

27 CRS § 40-2-135.

28 CRS § 40-5-107.
is physically necessary to wire together utility-scale and customer-owned clean energy resources, electric vehicles, and buildings to cleanly and efficiently meet customers’ power needs, and organized markets are necessary to make this more integrated system run well. For the reasons discussed below, integrated markets can make it easier to integrate higher levels of renewables, responsive demand, and storage at low cost. However, it is possible that integration into one or more of the market options under consideration could change the dispatch of generation resources in Colorado in ways that increase emissions in the short run. We would urge the Commission to require modeling analysis of any short-term changes in emissions to inform its decision.

Critically, an organized market can significantly help to integrate large utility-owned and small customer-owned resources. Both will be necessary to achieve Colorado’s energy goals. Utility-scale wind and solar resources throughout the region will meet the lion’s share of the state’s carbon reduction goals (together with energy efficiency, demand management, and other solutions). Regional markets will improve access to and reduce the costs of using those resources. Smaller distributed energy resources also will be critical, both for their own carbon-savings value and also for their value in integrating variable wind energy and solar power into the system. For example, electric vehicles at scale can reduce peak demand and mitigate ramping needs far more cost-effectively than stand-alone storage.29 Organized wholesale power markets provide the framework necessary to integrate the large and small resources into a single system.

An RTO could enable Colorado to better meet its environmental goals because of its additional planning function not found in the other market choices. For example, MISO’s groundbreaking set of 17 local and regional “multi-value projects” approved by the MISO Board

of Directors in the 2011 MISO transmission plan were found to be far more effective at delivering economic, reliability, and public policy benefits to states and customers in the region than hundreds of smaller projects.\textsuperscript{30} It would have been virtually impossible to develop these projects balancing area by balancing area.

In short, wholesale organized power markets can (assuming they avoid incursions on Colorado’s jurisdiction over resource adequacy as discussed above) help Colorado to meet its clean energy goals because they can:

1. Dispatch large amounts of wind and solar power with an efficient, \textbf{high-capacity transmission grid};

2. \textbf{Prioritize flexible grid resources and services} needed to reliably and efficiently integrate a renewables-dominant grid (\textit{e.g.}, through storage, efficient gas, and electric vehicles);

3. Enable \textbf{millions of electric vehicles and electrified buildings} to tap into the grid’s renewable power; and

4. Fully \textbf{value competitive and policy-driven Colorado clean energy}.

\textbf{IV. The Importance of Effective Governance.}

Sustainable FERC Project appreciates that the Commission’s order opening this proceeding specifically requests comments regarding the Commission’s evaluation of market governance issues.\textsuperscript{31} Not all markets are created equal from a governance perspective. Below we discuss what we consider to be the key principles of good market governance. To summarize,


\textsuperscript{31} Decision No. C19-0756, ¶ 39(c).
Sustainable FERC Project recommends that the Commission ensure that the governance structure of any organized market in which Colorado’s utilities participate provides for meaningful stakeholder participation, protects stakeholder voting rights (if the market is governed by stakeholder voting), and protects against dominance by any particular interest group.

A. A market’s governance should ensure that a wide variety of stakeholders may meaningfully participate in all meetings and governance decisions.

Good governance requires that all stakeholders have a seat at the table and a broad definition of “stakeholder.” In the case of electricity markets, stakeholders include more than the utilities, generators, transmission owners, and end users that participate directly in the market. Government agencies such as this Commission have stakeholder interests in the functioning of organized markets to ensure that market rules facilitate rather than impede state and local energy policies. Public interest organizations such as environmental advocacy organizations likewise have a stakeholder interest in ensuring that clean energy technologies are treated fairly in the market. Consumer groups have stakeholder interests in ensuring that customers enjoy the economic benefits of markets. These are just examples; the specific interest of each stakeholder will, of course, be unique to that stakeholder.

Stakeholders can only protect their interests through meaningful participation in the governance of the organized market. From a practical perspective, meaningful stakeholder participation requires that all stakeholders be permitted to attend all meetings of the market’s governing body, including committee and sub-committee meetings and “closed door” meetings, and that stakeholders be permitted to speak and present to decisionmakers at such meetings. If governance decisions are made by voting, as they are in Southwest Power Pool (SPP), for example, meaningful stakeholder participation also requires that all stakeholders be given a vote on all issues affecting market policies, operations, and governance changes. The right to vote is key in markets
governed by voting: without it, voting stakeholders can ignore the positions and proposals of non-voting stakeholders without consequence.

The FERC recognized the importance of meaningful stakeholder participation in organized markets in a recent decision regarding SPP’s exit fee.\(^{32}\) In that proceeding the American Wind Energy Association and the Advanced Power Alliance brought a complaint to the FERC arguing that SPP’s “exit fee” – a requirement that any member wanting to end its membership pay a fee in excess of $600,000 – was unjust and unreasonable.\(^{33}\) The FERC concluded that SPP’s exit fee imposed an unreasonable barrier on entities that did not own transmission from joining SPP as members.\(^{34}\) In so concluding, the FERC found:

> The exit fee acting as a barrier to membership creates actual harm because becoming an SPP member provides an entity with the opportunity for increased participation in the SPP stakeholder process and influence over the direction of SPP initiatives. By preventing many non-transmission owning entities from becoming members, the exit fee deprives them of the ability to vote on SPP initiatives and otherwise participate as members in the SPP stakeholder process.\(^{35}\)

The FERC therefore ordered SPP to eliminate the exit fee provisions for non-transmission owners, stating that this remedy could be expected to:

> result in a more diverse membership and a stakeholder process that considers the interests of a wider spectrum of entities, including smaller entities and new market entrants that were previously discouraged from membership by the high exit fee.\(^{36}\)

Sustainable FERC Project strongly encourages the Commission to adopt these same goals and principles. The Commission should ensure that the governance structure of any organized

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\(^{32}\) FERC Docket No. EL19-11-000.

\(^{33}\) FERC Docket No. EL19-11-000, Complaint to Revise the Membership Exit Fees in the Southwest Power Pool, Inc.; FERC Order on Complaint, issued April 18, 2019 (FERC April Order), ¶ 53.

\(^{34}\) FERC April Order, ¶¶ 52-54.

\(^{35}\) Id. at 58.

\(^{36}\) Id. at 63-65.
market that Colorado’s utilities join gives all stakeholders the ability to fully participate in all stakeholder processes without limitation. The governance structure should also consider the interests and perspective of a wide spectrum of entities, including smaller entities.

B. **A market’s governance structure should value diversity and not be dominated by any particular interest or industry.**

When the FERC first started down the path of encouraging organized markets, it recognized the importance of ensuring that a market’s governance recognized a diversity of stakeholder perspectives. In Order No. 888, the FERC stated:

> A governance structure that includes fair representation of all types of users of the system would help ensure that the ISO formulates policies, operates the system, and resolves disputes in a fair and nondiscriminatory manner. The ISO’s rules of governance, however, should prevent control, and appearance of control, of decision-making by any class of participants.\(^{37}\)

Similarly, in Order No. 2000, the FERC observed that it had consistently:

> required that no one constituency in any group or committee be allowed to dominate the recommendation or decision-making process over the objection of the other classes, and that no one class holds veto power over the will of the remaining classes.\(^{38}\)

These values are as important today as they were over twenty years ago when the FERC made the above statements. Sustainable FERC Project encourages the Commission to ensure that the governance of any organized market that Colorado’s utilities join is not dominated by any particular interest group and that governance processes protects diversity and minority voices.\(^ {39}\)


This could mean, for example, ensuring that voting structures do not give excessive weight to one sector.

C. Colorado should play a strong role in market governance.

States play a unique role in the governance of organized markets, whether it is an RTO, EIM, or other structure. As noted above, their regulation of and jurisdiction over resource adequacy intersects directly with an RTO’s market design and duty to ensure reliability over the footprint. RTO planning decisions directly affect the ability of states, utilities, and others to access and purchase renewable energy. States also exert significant control over the ability of distributed energy resources to access markets. For these and other reasons, it is important for states to have a strong voice in market design and decision-making.

States have a wide range of influence in the current RTOs, ranging from significant (SPP) to relatively powerless (PJM). For a recent survey of various state rules, see *State Participation in Resource Adequacy Decisions in Multistate Regional Transmission Organizations*, by Jennifer Chen and Gabrielle Murnan at Duke University’s Nicholas Institute. We strongly urge the Commission to ensure that any market design option includes a strong voice for Colorado and other states. Attributes ensuring a strong state voice should include:

- Formal and informal opportunities for communication and collaboration between the market operator and the states, embedded in the governing documents of the RTO or system operator.

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• The ability to determine a state’s own capacity needs. As in MISO, for example, states should be able to set their own targets for capacity reserves — rather than relying on a single target set by the grid operator — to better reflect state needs and energy goals.

• The ability to make Federal Power Act Section 205 filings on planning, cost allocation, and other market issues.

• A role for selecting members of the board of directors. In MISO, for example, the state committee is often represented on the search committee for the RTO’s board members.

These and other solutions are discussed in a recent paper by three former state utility commissioners with experience in PJM. While their solutions are targeted to the Organization of PJM States, they are applicable to any market region in the country.41

V. Commission Authority.

If the Commission finds through this proceeding that utility participation in an organized market is in the public interest, the Commission has authority under existing law to order the utilities under its jurisdiction to take the steps necessary to join the preferred organized market option. Sustainable FERC Project is hopeful that the regulated utilities will want to participate in an organized market in order to realize the many benefits for ratepayers, the environment, and the state as a whole. If the utilities are willing participants, implementing the CTCA is more straightforward than if the utilities prefer not to participate in a market. If the utilities resist joining a market despite a Commission finding that doing so would be in the public interest, the Commission should find that it has the power and authority to direct the regulated utilities to participate in a market.

A. The Commission has broad plenary authority over the utilities under its jurisdiction, which is rooted in its duty to set rates.

The Colorado Constitution vests the Commission with “all power to regulate the facilities, service and rates and charges” of public utilities in Colorado.\(^{42}\) Colorado statute likewise reflects this broad grant of regulatory authority. The Commission has not only the authority but a duty to:

- “adopt all necessary rates, charges, and regulations to govern and regulate all rates, charges, and tariffs of every public utility of this state to correct abuses; …
- “generally supervise and regulate every public utility in this state; and
- “do all things … which are necessary or convenient in the exercise of such power.”\(^{43}\)

Colorado statute further requires public utilities to charge rates that are “just and reasonable” and to provide service and facilities that “in all respects [are] adequate, efficient, just, and reasonable.”\(^{44}\)

Except where specifically limited by statute, the Commission’s authority over Colorado utilities is plenary. The Commission also has “wide discretion to govern and regulate the rates of public utilities” in Colorado.\(^{45}\) As discussed earlier, participation in an organized market can be expected to reduce the wholesale cost of power, which will flow through to retail customers in the form of lower retail rates. The Commission’s authority over retail rates therefore provides a jurisdictional hook to order the utilities to join an organized market. Specifically, if the Commission finds that joining an organized market would reduce rates for ratepayers, it can make the corollary finding that not joining a market would result in rates no longer being just and

\(^{42}\) Colo. Const. Art. XXV.

\(^{43}\) CRS § 40-3-102.

\(^{44}\) CRS § 40-3-101(2).

\(^{45}\) Public Service Co. v. Public Utilities Com., 644 P.2d 933, 942, FN 2 (Colo. 1982).
reasonable. Once the Commission has found that rates are not just and reasonable, the Commission can direct the utilities to take the action that it has found is necessary for rates to be just and reasonable, i.e., join an organized market.

B. **The Colorado Transmission Coordination Act implicitly grants the Commission the necessary authority to order the utilities to join an organized market.**

    The Commission asks whether the General Assembly should “clarify or amplify the jurisdiction of the PUC to order [the utilities] to participate in a market.” The Commission should find that it has jurisdiction to carry out the directive of the CTCA.

    The Commission’s power and jurisdiction come from the Colorado Constitution and from the General Assembly’s delegation of its own legislative powers to the Commission. The CTCA directs the Commission “to direct electric utilities to take appropriate actions and conduct such proceedings as the Commission deems appropriate to pursue participation” in whichever market option the Commission has found is in the public interest. For this command to have any meaning, it must be the case that the Commission has the power to direct the utilities to take the actions necessary to join an organized market.

C. **Directing the utilities to participate in a market is consistent with the Commission’s resource planning authority.**

    The Commission already supervises the utilities’ resource planning activities and approves a resource plan to meet the utilities’ forecasted needs pursuant to the Commission’s Rules 3600 through 3619. As stated in Rule 3601, the purpose of the Commission’s resource planning rules “is to establish a process to determine the need for additional electric resources by electric utilities

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46 Decision No. C19-0756, ¶ 40.
47 CRS § 40-2.3-102(4).
48 4 CCR 723-3-3600 – 3619.
subject to the Commission’s jurisdiction and to develop cost-effective resource portfolios to meet such need reliably.\textsuperscript{49} An organized market provides a way for the utilities to access additional electric resources, as well as make more efficient use of their own existing resources. In other words, an organized market facilitates wholesale energy purchases and sales. The utilities already engage in wholesale energy purchases and sales on a bilateral basis and the Commission oversees these activities through the resource planning process. If the Commission finds that particular bilateral wholesale contracts (PPAs) are necessary to meet a utility’s resource need, the Commission can order the utilities to enter into those particular contracts. Using this same authority, the Commission can also order the utilities to make their wholesale purchases through an organized market, rather than on a bilateral basis. The Commission’s resource planning process therefore provides an additional jurisdictional basis upon which to direct the utilities to participate in a market.

If the utilities voluntarily choose to participate in an organized market, the Commission would reasonably expect that both market purchases and sales would be accounted for in the utilities’ resource plans. By the same token, if the utilities were not interested in participating in a market, the Commission could withhold its approval of the utilities’ resource plans until the plans included market participation.

The Commission’s task in the resource planning process is to ensure that a utility has or will have sufficient resources either under ownership or under contract (PPA) to meet its customer’s needs. At the end of the process, the Commission approves a resource portfolio that the utility must then pursue. If the Commission finds that utility participation in a market would be in the public interest, the Commission’s task in the resource planning process would still be to

\textsuperscript{49} 4 CCR 723-3-3601.
ensure that the utility can meet its customer needs. Consistent with its authority to approve a specific resource plan, the Commission could require that at least some portion of the utility’s need be met with economic market purchases.

Importantly, as of the 2019 legislative session, the Commission now has jurisdiction over the resource planning process of wholesale electric cooperatives. The above analysis therefore applies to Tri-State, as well as to Public Service and Black Hills.

D. Directing the utilities to pursue market participation is consistent with the Commission’s oversight of Public Service’s electric trading operations.

Because Public Service does not currently operate in an organized market, Public Service’s short-term electric trading activities currently take place on a bilateral basis. The Commission has historically exercised authority over Public Service’s short-term electric trading operations through its approval of Public Service’s Policy for Resource Management and Cost Assignment for Short-Term Electric Energy Transactions Business Rules, commonly known as the Trading Business Rules. The Trading Business Rules govern many aspects of Public Service’s short-term trading, including the manner in which profits from such activities must be shared with Public Service’s ratepayers. Through its approval of the Trading Business Rules, the Commission oversees the manner in which Public Service’s short-term trading affects retail rates.

An organized market is, in essence, a platform for facilitating short-term electric trading. Participating in an organized market would not be a new activity for Public Service, but rather a

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50 CRS § 40-2-134.

51 See Proceeding Nos. 04A-0505E and 13A-0689E.

52 Proceeding No. 13A-0689E, Decision No. R13-1544, Attachment A.

53 Proceeding No. 04A-0505E, Decision No. C04-1208, ¶¶ 1-4 (discussing “ratemaking treatment of the costs for conducting electric trading operations” and sharing margins from such trading with ratepayers.).
new way of conducting the short-term electric trading in which it is already engaged. Accordingly, the Commission can use the same authority it has historically used to govern Public Service’s trading activities - namely, its ratemaking authority – through its Trading Business Rules to direct the utilities to conduct their short-term trading in an organized market.

E. The Commission can impose conditions on utility market participation pursuant to its authority over the transfer or assignment of utility assets.

The above analyses have focused on the question of whether the Commission has sufficient authority to order the utilities to participate in a market if the utilities are not interested in doing so. Since it is possible that the utilities will want to join a market, it is important to remember that the Commission has authority to impose conditions on the manner in which they do so.

CRS § 40-5-105(1) requires the jurisdictional utilities to obtain Commission approval if they propose to sell, assign, or transfer utility assets. The Commission may impose conditions on such transfer or assignment. Participating in a market option involves the assignment of utility resources to the market, either in the form of bidding resources into an imbalance market or in the form of transferring operational control (but not ownership) of transmission infrastructure or generation to an RTO. Accordingly, to the extent the utilities propose to join a market option, this statutory provision provides a jurisdictional hook for the Commission to impose conditions on the utilities doing so.

For all of these reasons, the Commission should find that it has jurisdiction to direct the utilities to take the necessary steps to join a market, if it finds that doing so would be in the public interest.

54 CRS § 40-5-105(1).

55 For example, participation in the EIM requires generators to provide telemetry information to the CAISO, AGC (automatic generation control) must be controllable by CAISO, and generators agree to take actions at the direction of CAISO that are needed to maintain operational reliability.

The Commission requested comments on the regulatory processes that would be needed at the Commission if the regulated utilities decide to pursue participation in an imbalance market (or, in the case of SPP’s WEIS, to procure imbalance services). The comments below assume a scenario in which one or more regulated utility desires to participate in an imbalance market (rather than being directed to do so by the Commission pursuant to one of the processes discussed above).

The regulated utilities would require several authorizations from the Commission before they could participate in an imbalance market. As discussed, an imbalance market involves utilities bidding their generation resources into the market. Because the Commission approved these generation resources for the purpose of meeting the utilities’ native loads, Commission approval would be required for the utilities to use these resources for another purpose – i.e. to help balance the loads and resources of other imbalance market participants.\(^5^6\) A request for such approval might come in the form of a petition for waiver of previous Commission orders, in the form of approval of a resource plan that includes imbalance market participation, or some other form.

The utilities will also need to seek Commission authorization to recover the cost of joining the imbalance market. Such a request could come in the form of a request to recover the costs in rates in a rate case or, more likely, in the form of a request for a prudency finding prior to the costs being incurred. The Commission should consider reasonable requests for deferred accounting of such “startup” costs, if needed.

\(^{56}\) As discussed earlier, Public Service’s Trading Business Rules govern Public Service’s short-term energy transactions. The Trading Business Rules distinguish between Proprietary Book transactions and Generation Book transactions according to whether the generation resource primarily serves native load. For the sake of simplicity, this discussion assumes that at least some resources that were approved to serve native load would be bid into an imbalance market.
If the utilities propose to join an imbalance market, the Commission should require the utilities to explain and seek approval for the precise mechanism by which the benefits of market participation will flow through to ratepayers. As discussed earlier, Sustainable FERC is of the understanding that the reduced costs of wholesale power that an imbalance market can be expected to provide would flow to ratepayers via the PCCA and the TCA. However, given that creating ratepayer benefits is one of the primary reasons for imbalance market participation, the Commission should require the utilities to explain exactly how ratepayers will realize these benefits.

These various approvals could come in various forms, but it is likely most efficient for the utilities to file an application seeking all of the necessary Commission approvals. If more than one regulated utility plans to join an imbalance market, the Commission should encourage those utilities to consider filing a joint application. A joint application would reduce administrative costs for both the Commission and stakeholders, as well as ensure consistency of regulatory treatment (as appropriate) across the utilities.

As far as timing, the Commission should direct the utilities to file an application seeking the necessary approvals as early in the process as practical to ensure that the Commission and interested parties have a meaningful opportunity to weigh in and influence the process. At the latest, such an application should be filed prior to the time the utilities enter into an implementation agreement with the imbalance market (or imbalance service provider) because the Commission will need to approve both the intended timing of the utilities joining the market and any costs that the utilities will incur in joining the market.
Lastly, the Commission requested comments on the extent to which “decisions regarding imbalance market participation restrict future regional market options?” It is Sustainable FERC Project’s understanding that utility participation in an imbalance market would not restrict that utility’s ability to later change course and join a different market option. The EIM Implementation Agreement that CAISO EIM participants sign allows a participant to terminate its participation in the EIM at any time and for any reason as long as 30 days’ notice is provided. Similar termination rights may be available to participants in SPP’s WEIS, but SPP’s pro forma Western Joint Dispatch Agreement is not currently publicly available online. A utility is unlikely to recoup any fees it paid to join the imbalance market, but such costs are likely the only impediment to a utility leaving an imbalance market after joining.

VII. The Need to Avoid a Two-Market State.

There is no question that the existence of multiple organized wholesale markets in Colorado will increase retail and wholesale customer costs, impede integration of clean energy resources, affect reliability, and increase the regulatory and administrative burden on the Commission.

Seams between markets (and between markets and non-market regions) create different types of barriers. They can be physical, such as due to a lack of sufficient transmission capacity, and artificial, due to market and operational differences. These barriers have a significant cost to

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57 Decision No. C19-0756, ¶ 40(d).


consumers in the form of both higher market prices and increased reliability risks. Limitations to flows across the seams are obvious during extreme events, but there are also substantial savings that could be gained by reducing the barriers to moving power across the seams throughout the year. Differing regulatory structures, operating practices, planning assumptions, and other factors all create obstacles.

While “seamless” markets are desirable, they are extremely hard to achieve. Markets in any region are dynamic and fluid rather than static, and it is virtually impossible to ensure continuing alignment and “seamless” operation between markets over time. Although market-to-non-market seams issues might be less significant in some ways, these seams also create challenges, especially in ensuring reliability during stressed operations when real-time communication between regions is critical. For these reasons we strongly urge the Commission to minimize seams, both within the state and in larger market regions. A single market within the state is the better outcome (whether it is an EIM, EDAM, RTO, or another market structure). At the same time, the Commission should ensure that whichever market option is chosen facilitates planning between regions (interregional planning) to the extent possible.

The nature and magnitude of seams-related cost impacts depend on the size and extent of the seams, the system electrical topology, the market design in each of the markets, and other factors. If a seam is along a boundary across which transactions are not too frequent (or transmission capability is limited), the negative impacts would be less significant than along a seam that divides two market regions that would trade much more frequently with each other. Likewise, scheduling across RTO seams is less efficient than internal transactions, and substantial disconnects in prices and inefficient congestion management occur that harm customers near the seam.
Studies of the MISO-SPP seams and MISO-PJM seams, along with extensive FERC litigation on the allocation of seams costs, reveal that many issues are circumstance-specific and require extensive study to understand. Differences in energy and ancillary services market designs create barriers to efficient trading. Other differences can increase congestion and locational marginal prices. In general, seams are more problematic for competitive energy suppliers and generation than for regulated generation and generation under long-term contracts.

Seams also could limit the ability of both jurisdictional and non-jurisdictional Colorado utilities to access renewable energy resources. Market-based seams will increase their costs relative to a seamless market. Seams also will restrict the increase in transmission capacity across seams to access renewable energy and to reduce economic costs for customers. Interregional planning under FERC Order No. 1000 has been a near-complete failure; projects simply are not being built across seams because of significant differences in planning and cost allocation processes. This is true even though most RTOs and other planning regions have had interregional planning stakeholder and staff committees in place for at least the last 7 years.

Seams also can affect reliability. For example, transmission and generation outage coordination is critical for both market and non-markets along a seam, especially one with high flows. Outages significantly affect resource adequacy, which makes it imperative for seams neighbors to have processes in place to improve outage coordination.

Seams agreements are necessary to address issues such as outage coordination, congestion management, and planning. However, those agreements can take years to refine and implement, litigation often occurs over seams disputes, and it is near-impossible to achieve a “seamless”

60 See FERC, Notice of Technical Conference (Docket No. EL13-88-000, May 15, 2015) (MISO-PJM seams issues); also infra n. 62 for the report discussing studies of the MISO/SPP seams.

61 E.g., FERC, PJM Interconnection, LLC (Docket Nos. ER04-375-002 et al.) (April 27, 2004).
boundary for markets and operations purposes. Planning across a seam is even more difficult, as the experience with all RTOs and other planning regions have experienced under Order No. 1000. (The 2018 Seams White Paper\cite{62} by the Organization of MISO States and SPP’s Regional State Committee is a good example of the extensive work necessary to address markets, planning, and operations issues across seams.)

Finally, as any commissioner from a jurisdiction split between two markets can attest, multiple markets in Colorado will significantly increase the Commission’s costs and administrative burdens. Tracking activities in two different market regions (even non-RTO imbalance markets) is time-consuming and requires specialized staff and commissioner expertise. Especially in Colorado, which continues to regulate its utilities on a cost-of-service basis, the Commission will want to closely follow and influence the activities of FERC-jurisdictional market operators in the state. Two different markets with different structures and rules would nearly double the workload of the Commission.

**VIII. Conclusion.**

Sustainable FERC Project thanks the Commission for the opportunity to submit initial comments and looks forward to continued engagement in this proceeding.

\cite{62} Available at: https://www.misostates.org/images/stories/Filings/SPP_RSC_Documents/OMS_SPP_RSC_Seams_White_Paper_Final.pdf.
Respectfully submitted on November 15, 2019

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CERTIFICATE OF SERVICE

I hereby certify that I have on November 15, 2019, I have duly served a true and correct copy of the foregoing INITIAL COMMENTS, NOTICE OF PARTICIPATION, AND ENTRY OF APPEARANCE OF SUSTAINABLE FERC PROJECT upon all parties via the Public Utilities Commission’s E-Filing system and thereby to be served electronically and automatically on any persons for whom such automatic electronic filing is provided by the Commission’s e-filing system in this docket on this date.

/s/ Scott Dunbar
Scott Dunbar