



The State Energy &
Environmental Impact Center
NYU School of Law

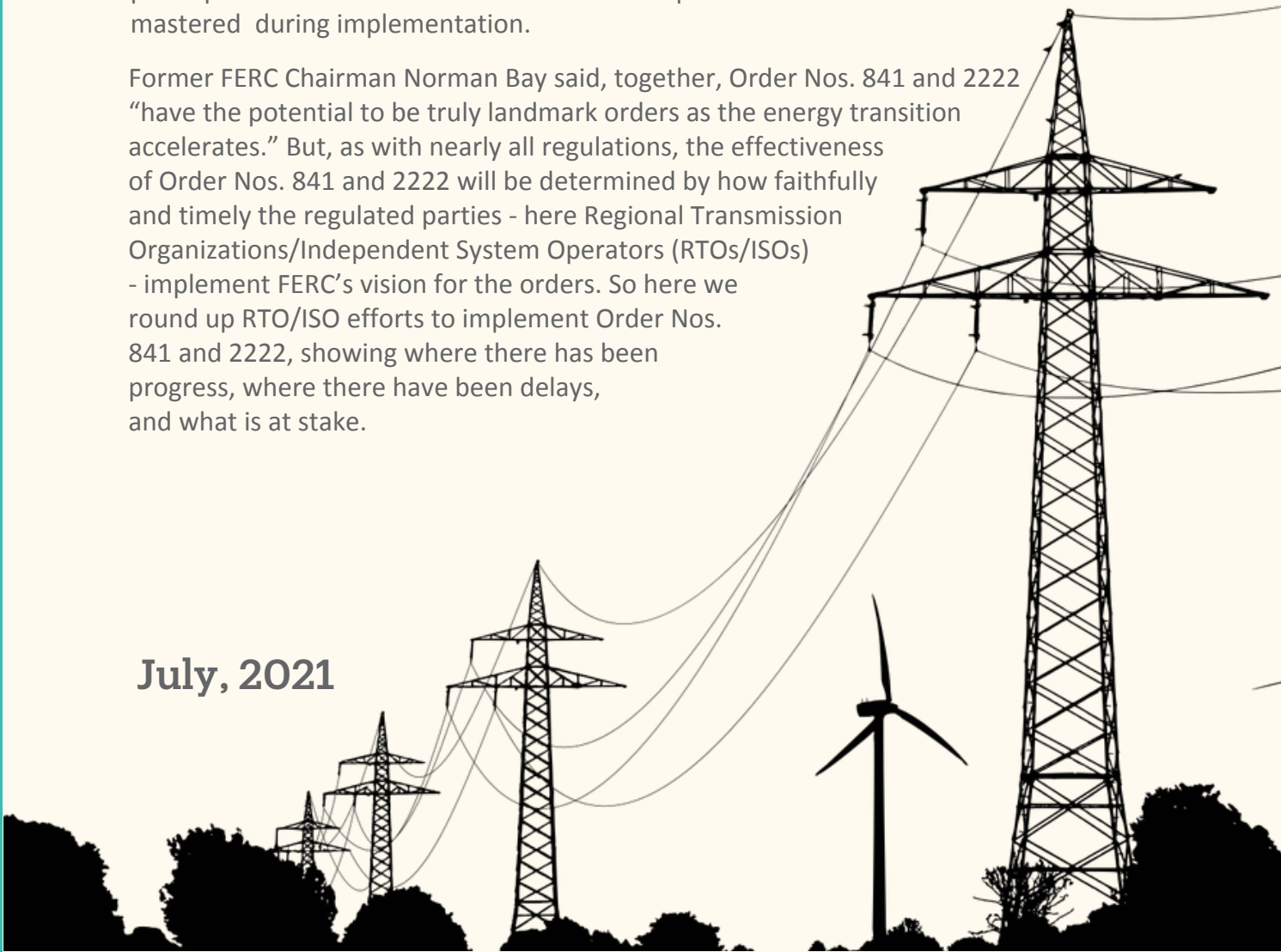
Are We There Yet?

Getting Distributed Energy Resources to Markets

Commenters and advocates [hailed](#) Federal Energy Regulatory Commission (FERC) [Order No. 841](#) and [Order No. 2222](#) as [landmark](#) orders in the transition to a clean energy future when they were issued in 2018 and last September, respectively. These orders aim to open organized wholesale markets to new technologies. Order No. 841 does this for energy storage resources, while Order No. 2222 does it for distributed energy resources. Of course, whether the orders live up to their billing as transformative and revolutionary efforts to demolish barriers to market participation will turn on whether the required details and intricacies can be mastered during implementation.

Former FERC Chairman Norman Bay said, together, Order Nos. 841 and 2222 “have the potential to be truly landmark orders as the energy transition accelerates.” But, as with nearly all regulations, the effectiveness of Order Nos. 841 and 2222 will be determined by how faithfully and timely the regulated parties - here Regional Transmission Organizations/Independent System Operators (RTOs/ISOs) - implement FERC’s vision for the orders. So here we round up RTO/ISO efforts to implement Order Nos. 841 and 2222, showing where there has been progress, where there have been delays, and what is at stake.

July, 2021

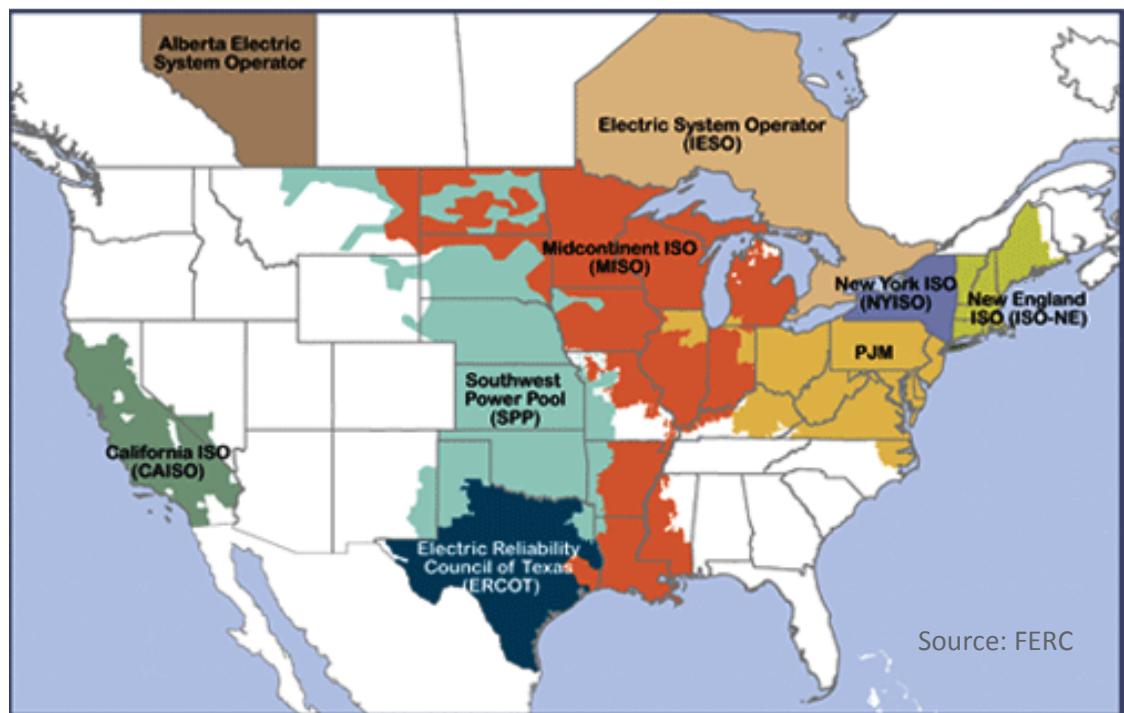


Background

[Energy storage resources](#), such as batteries, can help balance demand for and supply of electricity, facilitating the transition to cleaner energy sources. [Many states](#) have adopted energy storage programs and goals. However, the rules that govern organized wholesale electricity markets were designed for “traditional” resource types and do not always recognize the value of and fairly compensate storage resources. Order No. 841 requires the removal of these barriers to the participation of energy storage resources in the capacity, energy, and ancillary service markets operated by RTOs/ISOs.

[Distributed energy resources](#) (DERs) are a variety of types of resources that are typically close to the load they serve. Examples include wind turbines, photovoltaics, microturbines, energy storage systems, and demand response. Often distributed energy resources are too small to meet the minimum size requirements to participate in RTO/ISO-operated markets.

Order No. 2222 promotes the participation of distributed energy resources in RTO/ISO markets by allowing aggregators that pool these smaller resources to serve those markets by satisfying the minimum size threshold.

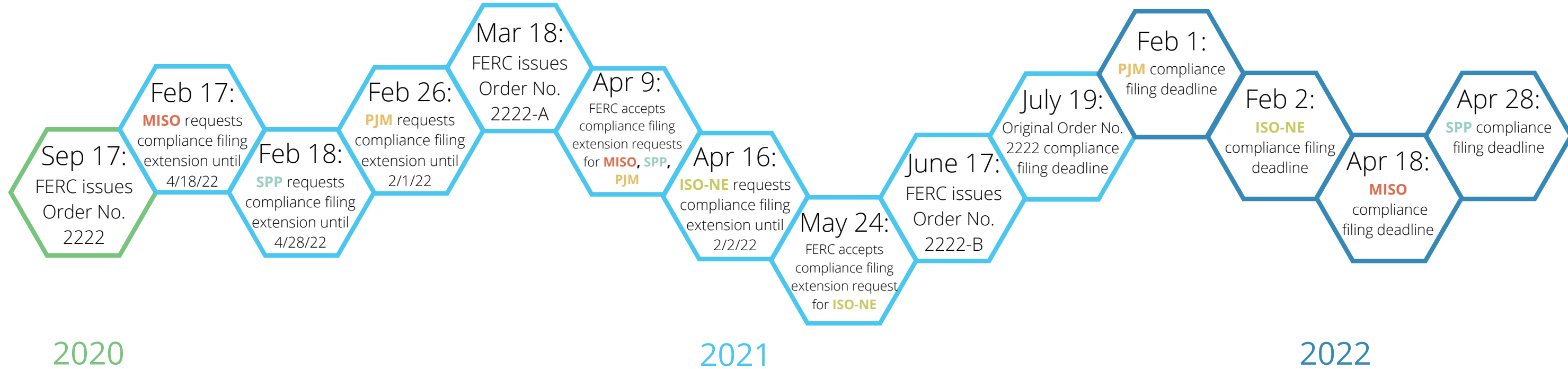


Map of RTOs/ISOs

Order No. 2222 Compliance and Litigation

FERC issued Order No. 2222 on September 17, 2020 to open up RTO/ISO markets to aggregators of distributed energy resources. Compliance filings to implement Order No. 2222 were originally due **July 19, 2021**. But delays sought by four RTOs/ISOs - [Midcontinent Independent System Operator](#) (MISO), [Southwest Power Pool](#) (SPP), [PJM Interconnection](#) (PJM), and [Independent System Operator New England](#) (ISO-NE) - have slowed the implementation process. This section will examine the steps they have taken. Explore the below timeline to get a quick understanding of where things stand with Order No. 2222 implementation.

Order No. 2222 Timeline



Order Nos. 2222-A and 2222-B

Over ten years ago in Order Nos. 719 and 719-A, FERC promoted the participation of demand response in RTO/ISO markets, but it [provided](#) state and other regulatory authorities with the ability to prevent demand response resources from such participation in wholesale markets - an option it did not include in Order No. 2222. [Demand response](#) programs incentivize customers to reduce their electricity usage. Because demand response is within the broad category of distributed energy resources, questions arose on rehearing of Order No. 2222 about whether a DER aggregation that includes demand response would be subject to the opt-out provision of Order No. 719.

In [Order No. 2222-A](#), issued in March 2021, FERC declined to extend Order No. 719's opt-out to heterogeneous distributed energy resource aggregations that included demand response, but applied it to distributed energy resource aggregations that are composed only of demand response resources. This prompted further requests for rehearing.

Three months later, FERC reversed course and [issued](#) Order No. 2222-B, ditching the part of Order No. 2222-A as it relates to the applicability of the opt-out provision to heterogeneous distributed energy resource aggregations. Rather, FERC will evaluate whether to permit demand response to participate as part of a distributed energy resource aggregation in its Notice of Inquiry (NOI) to consider the demand response opt-out established in Order Nos. 719 and 719-A.¹

MISO, SPP, and PJM

Extension Requests

On February 17, 2021, **MISO** [requested](#) an extension for submitting a compliance plan from July 19, 2021 to April 18, 2022, noting concerns about how Order No. 2222 compliance will interact with its new reliability initiative. On February 18, 2021, **SPP** [requested](#) an extension to April 28, 2022, raising some general reliability concerns. On February 26, 2021, **PJM** [filed](#) a request for an extension to February 1, 2022.

Letter Order Granting Requests

On April 9, FERC issued a [letter order](#) granting the requests from MISO, SPP, and PJM to extend their compliance filing deadlines until **April 18, 2022**, **April 28, 2022**, and **February 1, 2022**, respectively. Public Interest Organizations, Voltus, Inc., and Advanced Energy Economy (AEE) asked that MISO, SPP, and PJM file stakeholder process schedules and status reports with FERC.² FERC did agree and direct these updates, but declined to require a schedule for implementing Order No. 2222.

Commissioner Christie concurred with the April 9th letter order. Noting that he would not have voted for Order No. 2222 had he been on the Commission at the time and that he had dissented from Order No. 2222-A, he expressed concern about the cost and burden of implementing Order No. 2222 on states and smaller utilities.

Status Updates

As required by FERC's April 9 letter order, SPP, MISO, and PJM have each filed status reports, and will continue to file status reports every 90 days until submitting their compliance filing.

On May 7, [SPP](#) filed an informational report containing its **detailed stakeholder process schedule**. SPP's filing largely consisted of a list of all of the stakeholder meetings on Order No. 2222 compliance it has held or is planning to hold with a brief description of the meeting topic.

On May 10, [MISO](#) filed its status update, containing a narrative description of the Order No. 2222 stakeholder meetings it had held through April 2021; a section devoted to discussing the meetings it intends to hold over the first 90-day status report time period; and then a paragraph on additional compliance activities MISO is undertaking.

On May 10, [PJM](#) filed its status update, which contained a timeline associated with its Order No. 2222 stakeholder process, including developing a draft proposal for stakeholder consideration and refinement; and included a statement that PJM is examining its relationship with electric distribution companies in light of Order No. 2222 and "will require Commission support in this regard as this effort moves forward."

ISO-NE

Extension Request

On April 16, 2021, [ISO-NE filed](#) an extension request from July 19, 2021 to **February 2, 2022**. ISO-NE stated that the extension would provide additional time to work through the stakeholder process with electric distribution companies, regulatory authorities, transmission owners, meter readers, prospective distributed energy resource aggregators, and others to create a compliance proposal. In particular, ISO-NE identified three reasons additional time is needed: the scale of the coordination with stakeholders to comply with Order No. 2222 is challenging; compliance would be improved through the development of a meter reading process for distributed energy resource aggregations that is workable for all affected parties, which likely will need to be approved by state regulators; and additional time will also ensure the incorporation of [Order No. 745](#)-compliant demand response resources into the distributed energy resource aggregation participation model consistent with FERC's expectations in issuing Order No. 2222.

Responsive Comments

On April 21, AEE [filed](#) comments on ISO-NE's extension request. As it did with the extension requests of MISO, SPP, and PJM, AEE did not oppose ISO-NE's request. AEE noted that the extension would allow for an iterative stakeholder process with electric distribution utilities, regulatory authorities, transmission owners, meter readers, and prospective distributed energy resource aggregators to develop a filing that fully complies with Order No. 2222 and that ISO-NE has been engaged in stakeholder discussions for several months. Further, approval of ISO-NE's request would be consistent with the approval of MISO, SPP, and PJM's extension requests.

On April 28, the Massachusetts Department of Public Utilities, along with the Connecticut Public Utilities Regulatory Authority and the Vermont Public Utilities Commission, [filed](#) comments in support of ISO-NE's extension request. The New England Commissions supported the extension request because it will allow New England stakeholders to discuss more comprehensively an Order No. 2222 compliance approach, including the development of regulatory authorities' roles in the ISO-NE asset registration process.

Extension Granted

On May 24, in a letter order, FERC [granted](#) ISO-NE's request to extend until **February 2, 2022** the deadline for ISO-NE to submit a compliance filing. As with the Order No. 2222 compliance filing extensions granted to other RTOs/ISOs, ISO-NE will be required to submit an **informational filing on its stakeholder process schedule** within 30 days and to submit **status reports** every 90 days thereafter.

Once again, Commissioner Christie issued a separate concurrence. He again voiced his objection to Order Nos. 2222 and 2222-A, and noted the discussion in ISO-NE's motion about the complexity of meter reading related to Order No. 2222 as evidence for his conclusion that implementing Order Nos. 2222 and 2222-A will be more complicated, costly, and burdensome than supporters of the orders acknowledge.

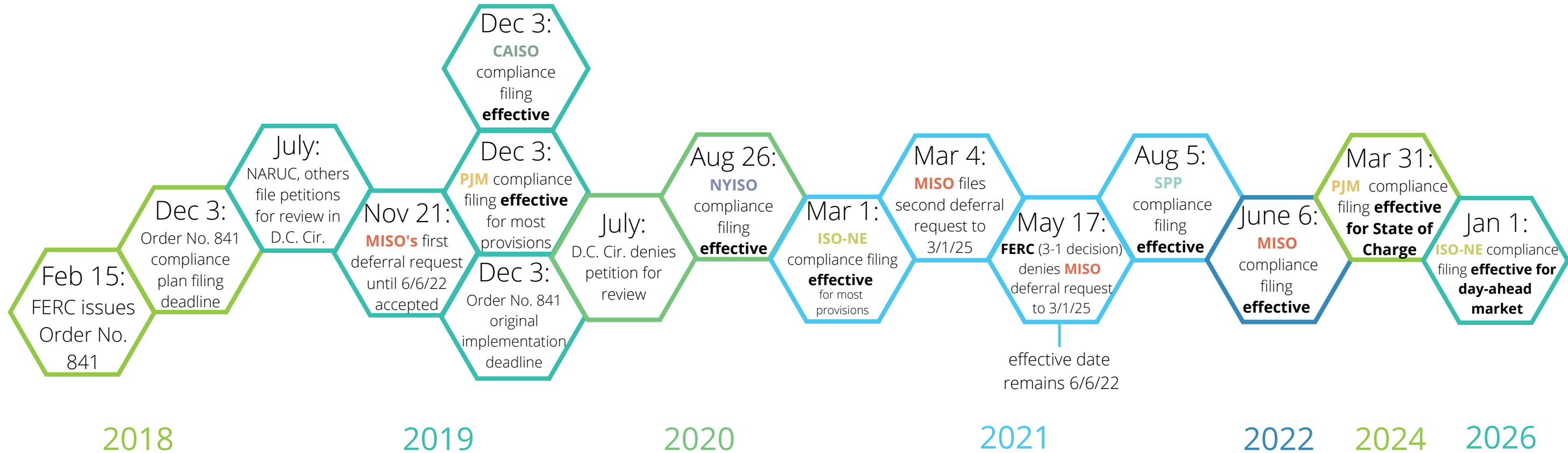
CAISO and NYISO

[California Independent System Operator](#) (CAISO) and [New York Independent System Operator](#) (NYISO) have not filed extension requests and have [indicated](#) that they do not plan on doing so. Both ISOs had [earlier](#) filed and won FERC approval of distributed energy resource aggregation programs and thus [anticipate](#) they will need to make a smaller number of modifications to their current programs in order to comply with Order No. 2222.

Order No. 841 Litigation, Compliance, and Implementation

RTOs have been implementing Order No. 841 since it was issued in February 2018. It was also subject to legal challenge - a petition for review that was ultimately denied. This section will provide an overview of the litigation surrounding Order No. 841 and the status of the implementation of Order No. 841 by the various RTOs/ISOs.

Order No. 841 Timeline



Litigation

In July 2019, the National Association of Regulatory Utility Commissioners (NARUC) and electric utility groups challenged the lawfulness of Order No. 841 in the D.C. Circuit, arguing that the order unlawfully treaded on state and other regulatory authority over the distribution system. But this was not representative of all state views of the order. In February 2020, **Massachusetts Attorney General Maura Healey** led a coalition of five attorneys general in an [amicus brief](#) in support of Order No. 841, arguing that the order lawfully regulated wholesale electricity rates while appropriately recognizing states' rights to regulate the electric distribution system. The attorneys general emphasized that FERC's order would allow the electricity grid and its users to benefit from the capabilities of storage resources in integrating greater levels of clean energy into the grid while preserving state authority.

The D.C. Circuit, in July 2020, sided with the attorneys general in issuing a [decision denying the petitions for review](#), concluding that FERC's regulation was consistent with its authority under the Federal Power Act.

Compliance and Implementation

The deadline for RTOs/ISOs to file compliance plans for Order No. 841 was December 3, 2018, and the implementation deadline was December 3, 2019. Over the last six months, FERC has issued a series of letter orders accepting most RTOs/ISOs' Order No. 841 compliance filings with an effective date³ of December 3, 2019 or, at least, relatively close to it.

- On October 23, 2020, in Docket No. ER19-467, FERC [issued](#) a letter order accepting **NYISO's [third \(and final\) compliance filing](#)** with an effective date of **August 26, 2020**. As part of its filing, NYISO had proposed, and FERC accepted, to apply NYISO's buyer-side market power mitigation rules to storage resources. The New York Public Service Commission (NYPSC) and the New York State Energy Research and Development Authority (NYSERDA) filed a complaint, alleging that applying these rules to storage resources interferes with federal and state policy objectives. FERC [denied](#) the complaint, and there is currently a petition for review pending.⁴
- On November 24, 2020, in Docket No. ER19-468, FERC [issued](#) a letter order accepting **CAISO's [third \(and final\) compliance filing](#)** with an effective date of **December 3, 2019**.
- On December 8, 2020, in Docket No. ER19-460, FERC [issued](#) a letter order accepting **SPP's [third \(and final\) compliance filing](#)** with an effective date of **August 5, 2021**.
- On December 8, 2020, in Docket No. ER19-469, FERC [accepted](#) by letter order **PJM's October 13, 2020 [final compliance filing](#)**. FERC had earlier [issued](#) an order accepting PJM's compliance filing with an effective date of **December 3, 2019** for most compliance mechanisms, but with an effective date of **March 31, 2024** for a provision to appropriately account for energy storage resources' State of Charge.
- On February 10, 2021, in Docket No. ER19-470, FERC issued a [letter order](#) accepting **ISO-NE's [third \(and final\) compliance filing](#)** with an effective date of **March 1, 2021** for most compliance mechanisms, but with a **January 1, 2026** effective date for a revision specific to the day-ahead market.

MISO is the exception. It has struggled to timely implement Order No. 841. On December 3, 2018, in Docket No. ER19-465, MISO submitted its initial Order No. 841 [compliance filing](#) to establish a market participation model for energy storage resources in line with the requirements of Order No. 841.

MISO's First Deferral Request

Nearly a full year later on November 1, 2019 with the original compliance filing still pending, MISO [notified](#) FERC that it needed to extend the effective date of the compliance filing from December 3, 2019 to **June 6, 2022** “to plan and complete the software and system changes and testing, and coordination with Market Participants, needed to properly implement the proposed energy storage resources market participation model.”

On November 21, 2019, FERC [granted](#) MISO’s deferral request, setting its effective date more than two-and-a-half years after the effective date of December 3, 2019 directed by Order No. 841. FERC accepted MISO’s explanation of the feasibility of implementing the necessary software and system changes and noted that the deferral request was not opposed, but directed MISO to file annual implementation reports, including on whether the implementation date could be accelerated. The order also accepted MISO’s December 3, 2018 compliance filing, subject to a second compliance filing.⁵

MISO's Second Deferral Request

On March 4, 2021 MISO [filed](#) another deferral request with FERC. The filing would have extended the effective date of its Order No. 841 implementation from June 6, 2022 to March 1, 2025. MISO explained that the deferral would enable it to accelerate the replacement of its existing market system platform with the Market System Enhancement (MSE) software platform in 2024, allowing it to more quickly and cost effectively prepare for and meet its reliability needs (including greater and rapid penetration of wind and solar resources). MISO also cited FERC’s acceptance of ISO-NE’s request to defer the effective date of a provision related to the day-ahead market in its compliance plan until January 1, 2026 as grounds for granting MISO’s deferral request. MISO asked FERC to act on the deferral request by May 4, 2021.

In response to the second deferral request, several organizations, industry associations, and companies filed comments.

- Comments in opposition to deferral request: [Public Interest Organizations](#) (environmental groups); [NextEra Energy](#); [clean energy trade groups](#); and [Alliant Energy](#).
- Comments concerned, but not opposed to deferral request: [MidAmerican Energy Company](#) and [WEC Utilities](#).
- Comments in support of deferral request: [Entergy Services](#) and [MISO Transmission Owners](#).

On May 10, with MISO's request still pending, MISO's CEO [filed](#) a letter with FERC asking that it issue an order accepting MISO's March 4 deferral request, noting that MISO was dealing with "growing complexity in meeting reliability and resilience demands."

MISO's Second Deferral Request Rejected

On May 17, 2021, in a 3-1 decision, FERC [denied](#) MISO's requested extension, finding that MISO failed to show good cause for its request. First, MISO had not convinced the Commission that accelerating completion of the MSE to 2024, instead of 2025, is needed for reliability and thus had not demonstrated that reliability impacts warranted further delay of energy storage resources implementation. Second, MISO's interim approach for energy storage resources to participate in MISO's markets should not remain in place until March 1, 2025. Third, MISO's request was not a limited deferral and would have delayed implementation of the entirety of its Order No. 841 compliance plan (distinguishing it from the extension that FERC had previously granted to ISO-NE).

The effective date of MISO's compliance filing to implement Order No. 841 thus remains **June 6, 2022**.

Commissioner Neil Chatterjee did not participate in the order. Commissioner Mark Christie dissented, saying he would have given MISO the time to replace its existing market system platform with the new MSE platform and to reduce risks to reliability and avoid unnecessarily higher costs to consumers.

On June 16, MISO [filed](#) a request for rehearing of FERC's May 17 order denying its extension request. That request remains pending.

Conclusion

Distributed energy resources and electric storage have the potential to benefit the grid in [numerous ways](#). FERC's Order Nos. 2222 and 841 are crucial to unlocking the value of these resources from participation in wholesale markets. But as RTO/ISO implementation has shown, changes will not happen overnight.

The different RTO/ISO experiences with implementing Order Nos. 2222 and 841 suggest that a few factors may be at play. Regions with experience with DER programs are able to take advantage of a more straightforward implementation path. For example, California and New York have had little significant trouble implementing the orders. Those [two regions](#) have had electricity storage resource targets and goals for some years. Another potential advantage for these regions is that CAISO and NYISO are single-state ISOs, and thus have fewer state laws and policies and stakeholders that they have to work with and consider in designing and executing compliance plans than their multi-state counterparts in PJM, ISO-NE, MISO, and SPP.

MISO and SPP, on the other hand, have experienced significant delays. They primarily [serve](#) vertically-integrated states, in which a monopolistic [utility](#) owns and controls generation, transmission, and distribution of electricity. The states in these regions are not necessarily [leaders](#) on integrated DERs. There is a lot of [work](#) to do with stakeholders as they implement the orders. MISO asked for a more than five-year delay - December 3, 2019 to March 1, 2025 - to implement Order No. 841 and secured a roughly six month extension on filing its Order No. 2222 compliance plan. SPP has gotten a similar extension for its Order No. 2222 compliance plan and joins MISO as the only RTO to have not already mostly implemented Order No. 841.

Order Nos. 2222 and 841 have prompted significant progress. Increased technological and staff resources, as well as active engagement with stakeholders, are key components of implementation. With speedier and improved implementation, DERs and storage should be able to contribute more and more to decarbonization efforts and increasing competition in electricity markets.

Endnotes

- 1 The NOI is Docket No. RM21-14, and comments are [due](#) on July 23, 2021, with reply comments due on August 23, 2021.
 - 2 Public Interest Organizations commented on the [MISO](#) and [SPP](#) requests; Voltus, Inc. commented on the [MISO](#), [SPP](#), and [PJM](#) requests; and AEE [commented](#) on the MISO and SPP requests.
 - 3 This document uses the phrase “effective date” and “implementation date” interchangeably.
 - 4 In December 2019, FERC [accepted](#) parts of NYISO’s first order No. 841 compliance filing, including the application of buyer-side mitigation rules to electric storage resources in NYISO. Buyer-side mitigation rules were designed to prevent price manipulation by entities who are both sellers and buyers of capacity. The NYPSC and NYSDORA [argued](#) that subjecting electric storage resources to buyer-side mitigation rules would impede state policy objectives, including energy storage deployment to cost-effectively reduce greenhouse gas (GHG) emissions, by erecting barriers to the participation of electric storage resources in wholesale and retail energy markets. FERC denied the complaint, and the complainants sought judicial review. In March 2021, the NYPSC [asked](#) FERC to reconsider the denial of its complaint in light of President Biden’s Executive Order 13990 directing federal agencies to assess the actions of the prior administration against national policies in support of reducing GHG emissions.
 - 5 On December 2, 2020, FERC [accepted](#) MISO’s [third \(and final\) compliance filing](#). FERC had earlier accepted MISO’s second compliance filing, subject to a subsequent (third) compliance filing.
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The primary authors of this research product are Jessica R. Bell, Deputy Director of the State Energy and Environmental Impact Center, and Hampden T. Macbeth, Staff Attorney at the State Energy and Environmental Impact Center. The authors and the Center are grateful to Rao Konidena for his valuable feedback. Report designed by Tiernaur Anderson.

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