### ORAL ARGUMENT SCHEDULED FOR MAY 5, 2020

Nos. 19-1142 and 19-1147 (consolidated)

## IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

## NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, ET AL.,

Petitioners,

v.

#### FEDERAL ENERGY REGULATORY COMMISSION,

Respondent.

On Petitions for Review of Orders of the Federal Energy Regulatory Commission

# FINAL BRIEF OF SUNRUN INC., TESLA, INC., VIVINT SOLAR DEVELOPER, LLC, AND ENGIE STORAGE SERVICES NA LLC AS AMICI CURIAE IN SUPPORT OF RESPONDENT

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March 11, 2020

### CERTIFICATE AS TO PARTIES, ORDERS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), Sunrun Inc., Tesla, Inc., Vivint Solar Developer, LLC, and ENGIE Storage Services NA LLC certify:

### A. Parties and Amici

To counsel's knowledge, all other parties, intervenors, and amici appearing before this Court are as stated in the Brief of Respondent, with the exception of *amici curiae* Massachusetts, California, District of Columbia, Michigan, and Rhode Island.

### B. Order under Review

References to the rulings at issue appear in the Brief of Respondent.

#### C. Related Cases

The list of related cases is set forth in the Brief of Respondent.

March 11, 2020

/s/ Samuel T. Walsh

#### CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule 26.1, *amici curiae* Sunrun Inc., Tesla, Inc., Vivint Solar Developer, LLC, and ENGIE Storage Services NA LLC make the following disclosures:

Sunrun Inc. is a company dedicated to residential solar, battery storage, and energy services. Sunrun Inc. has no parent corporation and no publicly held corporation holds 10% or more of its stock.

Tesla, Inc. is an American manufacturer of electric vehicles, battery energy storage systems, and solar photovoltaic systems. Tesla, Inc. has no parent corporation and no publicly held corporation holds 10% or more of its stock.

Vivint Solar Developer, LLC, offers distributed solar energy—electricity generated by a solar energy system installed at or near customers' locations—to residential customers primarily through a customer-focused and neighborhood-driven direct-to-home sales model. Vivint Solar Developer, LLC is wholly-owned by Vivint Solar Operations, LLC. Vivint Solar Operations, LLC is wholly-owned by Vivint Solar Holdings, Inc. Vivint Solar Holdings, Inc. is wholly-owned by Vivint Solar, Inc. Vivint Solar, Inc. is publicly traded on the NYSE. 313

Acquisition LLC and FMR LLC each own more than 10% of Vivint Solar, Inc.'s stock, and investment vehicles affiliated with The Blackstone Group Inc. indirectly own more than 10% of Vivint Solar, Inc.'s stock.

ENGIE Storage Services NA LLC is the energy storage arm of ENGIE, the world's largest provider of energy and energy-efficiency services. ENGIE Storage Services NA LLC is wholly-owned by ENGIE Storage, LLC. ENGIE Storage, LLC is wholly-owned by ENGIE Holdings, Inc. ENGIE Holdings, Inc. is controlled by ENGIE Énergy Services International S.A. (Belgium). ENGIE Énergy Services International S.A. (Belgium) is wholly-owned by ENGIE S.A., a French société anonyme.

March 11, 2020

/s/ Samuel T. Walsh

Filed: 03/11/2020

## CERTIFICATE OF COUNSEL REGARDING NECESSITY OF SEPARATE AMICUS CURIAE BRIEF

Pursuant to D.C. Circuit Rule 29(d), *amici curiae* Sunrun Inc., Tesla, Inc., Vivint Solar Developer, LLC, and ENGIE Storage Services NA LLC hereby certify that this brief is necessary. To the best of our knowledge, *amici* are the only non-governmental parties filing a brief *amicus curiae* in this case, and they have "join[ed] in a single brief" as required by D.C. Circuit Rule 29(d).

Amici submit that this brief is necessary because of our unique ability to present the direct perspective of businesses currently deploying energy storage resources connected to distribution systems, and the impact of the FERC Orders on that business. Our experiences provide important context that will help the Court understand both the federal regulatory scheme at issue and the States' relevant spheres of authority.

March 11, 2020

/s/ Samuel T. Walsh

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## STATUTES AND FEDERAL REGULATIONS

Authorities upon which we principally rely are marked with asterisks.

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#### **GLOSSARY**

Commission or FERC Federal Energy Regulatory Commission

Distributed Storage Companies Engie Storage Services NA LLC,

Sunrun Inc., Tesla, Inc., and Vivint

Filed: 03/11/2020

Solar Developer, LLC

Petitioners National Association of Regulatory

Utility Commissioners, American Public

Power Association, National Rural Electric Cooperative Association,

Edison Electric Institute, and American

Municipal Power, Inc.

Order No. 841 *Elec. Storage Participation in Mkts.* 

Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators, Order No. 841,

162 FERC ¶ 61,127 (2018)

Order No. 841-A *Elec. Storage Participation in Mkts.* 

Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators, Order No. 841-

A, 167 FERC ¶ 61,154 (2019)

Utility Brief Brief of Petitioners American Public

Power Association, National Rural Electric Cooperative Association,

Edison Electric Institute, and American

Municipal Power, Inc.

The text of relevant statutes and regulations is set forth in the addendum to the brief of Respondent.

#### STATEMENT OF INTEREST, IDENTITY, AND AUTHORITY TO FILE

Amici curiae Engie Storage Services NA LLC, Sunrun Inc., Tesla, Inc., and Vivint Solar Developer, LLC ("Distributed Storage Companies") are leading companies that sell, install, and operate energy storage resources that interconnect to distribution facilities and behind the customer meter. As the Federal Energy Regulatory Commission ("FERC" or "Commission") has recognized, energy storage resources have great potential to provide services in the organized wholesale electric markets administered by regional transmission organizations and independent system operators. Amici curiae Distributed Storage Companies have an interest in this case because they wish to compete in those markets in the manner enabled by the orders under review. Petitioners' jurisdictional theory, if accepted, would have negative consequences for FERC's ability to maintain competitive wholesale markets. It would also, more specifically, harm amici curiae by allowing State

All petitioners, respondents, and intervenors have stated they consent or do not object to the filing of this brief, as stated in the Distributed Storage Companies'

notice of intent to file.

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regulators to prohibit sales from certain energy storage resources into wholesale markets.

### STATEMENT OF AUTHORSHIP AND FINANCIAL CONTRIBUTIONS

Pursuant to Federal Rule of Appellate Procedure 29(a)(4)(E), *amici curiae* state that their counsel, Harris, Wiltshire & Grannis LLP, authored this brief. No party or their counsel contributed money with the intention of funding this brief. No person or entity other than *amici curiae* contributed money intended to fund the brief's preparation or submission.

#### INTRODUCTION

A seemingly inescapable reality of the electric system since the days of Thomas Edison has been that electricity cannot be stored and, consequently, that generation from power plants must equal consumption on a constant, minute-tominute basis. FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 768 (2016). But this reality—which shaped the investment decisions and operational practices on the grid for generations—is now beginning to change. The same technological and economic forces that allow us to carry battery-powered computers in our pockets or to run a bus 350 miles on a single charge, also now allow energy to be stored anywhere on the grid when it is plentiful and released when it is scarce. The cost of adding energy storage resources to the grid has fallen dramatically in recent years more than 75% from 2012 to 2019,<sup>2</sup> with further declines projected.<sup>3</sup>

The transformative impact that energy storage resources may have on the grid over the next generation cannot be fully predicted today. For that simple reason, the future of energy storage resources should not be left to central planners at regulatory commissions or distribution utilities, as capable as they are. Rather, energy storage

Veronika Henze, Battery Power's Latest Plunge in Costs Threatens Coal, BLOOMBERG ENERGY FINANCE NEW (March 26, 2019), Gas. http://about.bnef.com/blog/battery-powers-latest-plunge-costs-threatens-coal-

gas/#\_ftn1.

See National Renewable Energy Laboratory, Annual Technology Baseline: Electricity: Battery Storage, http://atb.nrel.gov/electricity/2019/index.html?t=st.

can reach its full potential only if it is allowed to develop in the context of a free market—a market where innovative companies are free to participate without barriers to entry, to experiment with new technologies and business models, and, ultimately, to sink or swim based on the cost and performance of the services they provide. That is what the Commission recognized in Order No. 841, and that is what is at stake in this case.

In Order No. 841, the Commission removed regulatory barriers that prevented energy storage resources from participating in organized wholesale markets, including those resources that interconnect to distribution systems and behind the customer meter. In doing so, the Commission stayed well within its authority under the Federal Power Act. This Court has held that the Commission has exclusive authority to regulate wholesale sales of energy, including wholesale sales made using distribution facilities. *See Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277, 1280-82 (D.C. Cir. 2007); *Detroit Edison Co. v. FERC*, 334 F.3d 48, 51 (D.C. Cir. 2003).

Petitioners do not argue that FERC exceeded its authority by regulating the wholesale market participation of distribution-connected resources. Instead, they advance the novel theory that, because Section 201(b) of the Federal Power Act preserves State authority to regulate distribution facilities, FERC may only regulate

how distribution-connected resources participate in wholesale markets, while States regulate whether those resources participate in wholesale markets.

Petitioners' theory finds no basis in the text of the Federal Power Act. The first sentence of Section 201(b) gives FERC exclusive authority over wholesale sales of electric energy in interstate commerce, subject only to certain statutory exemptions not at issue here. 16 U.S.C. § 824(b)(1). The second sentence preserves State authority over "facilities used for the generation of electric energy" and "facilities used in local distribution." *Id.* But this second sentence of Section 201(b)(1) does not permit States to prohibit interstate wholesale sales simply because they involve generation or distribution facilities subject to State regulation.

Indeed, the Supreme Court has long held that the authority reserved to States in Section 201(b) to regulate facilities does not confer the authority to directly burden interstate commerce by prohibiting interstate sales of electricity at wholesale. *See, e.g., New England Power Co. v. New Hampshire*, 455 U.S. 331, 341 (1982). Unquestionably, States' exercise of their jurisdiction over distribution and generation facilities may result in profound *indirect* effects on FERC-jurisdictional wholesale markets. But States lack the authority that Petitioners claim FERC has invaded: to decide directly whether resources may participate in interstate wholesale markets.

Contrary to the protests of Petitioners and Intervenors, Order No. 841 leaves States' authority to regulate the safety, reliability, and cost of distribution facilities wholly intact. Indeed, Order No. 841 explicitly excludes from its scope any energy storage resource that is not "contractually permitted" to "inject electric energy back Electric Storage Participation in Mkts. Operated by Reg'l onto the grid." Transmission Orgs. & Indep. Sys. Operators, Order No. 841, 162 FERC ¶ 61,127, at P 33 (2018) ("Order No. 841") (J.A. 235). For the vast majority of distributionconnected and behind-the-meter resources that are the subject of this case, the relevant contractual permission would come from an interconnection agreement that is subject to the jurisdiction of State regulators. Id. at P 33 (J.A. 235). To understand why this requirement preserves all the authority States need to maintain the reliability of distribution systems requires some background that is well understood in the industry. Interconnection agreements represent the culmination of a review process designed by regulators and implemented by utilities. These agreements ensure that interconnecting resources are constructed, operated, and maintained in ways that meet the State's safety and reliability requirements, and that the costs of the interconnection and of necessary distribution system upgrades are borne by resource owners. Given these regulatory tools, Petitioners have failed to explain why a blanket ban on wholesale market participation, even were it within States' jurisdiction, would be necessary to preserve the reliability of distribution systems.

#### **ARGUMENT**

## I. An Open and Free Market for Electricity Storage Will Benefit Consumers and Spur Innovation

Twenty-four years ago, in its landmark Order No. 888, the Commission threw open the doors to market competition in the electric power sector. That order, initially resisted by many in the industry, *see Transmission Access Policy Study Group v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), gave non-utility electric power generators the right to open access transmission service, and thereby offered them the opportunity to sell their product in wholesale markets without discriminatory treatment from transmission-owning utilities.<sup>4</sup> At the time it was promulgated, no one knew exactly what the effect of Order No. 888 would be. Years later, it is clear that Order No. 888 was a powerful engine for innovation. A new independent power producer industry has emerged, with new business models, new sources of financing, and a relentless appetite for technological innovation that has provided better service at lower costs.

Over the ensuing decades, across presidential administrations of both parties, a bipartisan and nearly unanimous roster of Commissioners has continued to advance the project of breaking down the "regulatory and economic barriers that

Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540, 21,545 (1996).

hinder a free market in wholesale electricity." Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty., Wash., 554 U.S. 527, 536 (2008). They have done so by fostering the development of organized wholesale markets,<sup>5</sup> by streamlining and standardizing the process for interconnecting new resources, by expanding competition in the arena of transmission development and construction,<sup>7</sup> and by removing barriers to entry for new resource types, such as generators that produce energy at variable levels like wind and solar,8 and demand response resources.9

Order No. 841 is the latest chapter in this story. Order No. 841 requires the organized wholesale markets to eliminate barriers to entry for energy storage resources. Order No. 841 does not give energy storage resources any type of advantage or subsidy. Rather, in Order No. 841 the Commission seeks to create a

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Regional Transmission Organizations, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999), aff'd sub nom. Pub. Util. Dist. No. 1 of Snohomish Cty., Wash. v. FERC, 272 F.3d 607 (D.C. Cir. 2001).

Standardization of Generator Interconnection Agreements and Procedures, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), aff'd sub. nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC, 475 F.3d 1277 (D.C. Cir. 2007), cert. denied 552 U.S. 1230 (2008).

Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011), aff'd sub nom. S. C. Pub. Serv. Auth. v. FERC, 762 F.3d 41 (D.C. Cir. 2014).

Integration of Variable Energy Resources, Order No. 764, FERC Stats. & Regs. ¶ 31,331 (2012).

See FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760 (2016).

level playing field between energy storage resources and conventional generators by requiring the regional transmission organizations and independent system operators to ensure, through their tariff-setting processes, that energy storage resources can participate in the market for any service that they are technically capable of providing. Order No. 841 at P 76 (J.A. 260).

## II. Distribution-Connected Resources Are a Critical Segment of the Competitive Marketplace Now Taking Shape

Order No. 841 applies both to larger energy storage resources that interconnect to the transmission system, and to smaller energy storage resources that interconnect to the distribution system or behind the customer meter. These smaller resources, which are the subject of Petitioners' jurisdictional argument, <sup>10</sup> are an outsized part of the nascent storage industry. In 2018, energy storage resources located behind the meter (which are themselves just a subset of the distribution-

Order No. 841 prohibits regional transmission organizations and independent system operators from imposing minimum size requirements for energy storage resources greater than 100 kilowatts. Order No. 841 at P 265 (J.A. 374); 18 C.F.R. § 35.28(g)(9)(i)(D). For energy storage resources smaller than 100 kilowatts, such as those installed behind the meter in single-family residences, Order No. 841 does not guarantee market access, but it leaves that possibility open because the regional transmission organizations and independent system operators are free to set minimum size requirements below 100 kilowatts and/or to allow small resources to meet the minimum size threshold on an aggregated basis, as some regional transmission organizations and independent system operators have begun to do. Petitioners' jurisdictional theory, however, directly implicates resources smaller than 100 kilowatts, regardless of whether such resources are covered by Order No. 841, because it would foreclose those resources' ability to make interstate wholesale sales without permission from the State where they are located.

connected resources at issue in this case) comprised over half of all storage capacity deployed in the United States.<sup>11</sup>

Behind-the-meter energy storage resources are an essential part of this new industry because they provide a source of back-up power alongside other functions. Extreme weather events have left tens of millions of utility customers without power in recent years. Outages driven by wildfires in the West, and storms and floods in the East, have prompted increasing numbers of customers to install battery storage in their homes. These devices are often paired with rooftop solar panels, allowing customers to maintain power indefinitely and without the need to obtain diesel or gasoline, which may be unavailable if local service stations are also without power. *Amicus curiae* Sunrun, a leading installer of residential solar systems, has recently reported that 15% of its new customers elect to pair their solar panels with a storage device, and that this number is rising.<sup>12</sup>

See Gavin Bade, US Energy Storage Market Expected to More Than Double in 2019, Report Says, UTILITY DIVE (March 6, 2019), http://www.utilitydive.com/news/us-energy-storage-market-expected-to-more-than-double-in-2019-report-says/549890/.

See Julian Spector, Sunrun Sales Outpace Installations in Q3 as Labor Crunch Hits Home Greentech Media (Nov. 12, 2019), https://www.greentechmedia.com/articles/read/sunrun-sale-outpace-installations-labor-shortage.

For similar reasons, corporations that need resilient power supplies—such as data center operators—are deploying behind-the-meter storage for backup power. Energy storage resources installed for backup power—whether in commercial facilities or in people's homes—remain dormant for much of the day and much of the year. These are times they could be charging and discharging to support wholesale markets, and generating revenue in return. Without access to those markets, they will remain underutilized, and will lack the right price signal to encourage efficient levels of new investment.

Energy storage resources can provide important services for the wholesale market at the same time that they provide a source of backup power for their host. Most obviously, energy storage resources can charge when energy is plentiful and inexpensive and discharge when it is scarce and expensive. This practice, called "energy arbitrage," benefits consumers by reducing overall prices. It also stabilizes the grid by smoothing out peaks and valleys associated with unpredictable swings in demand or in the output of wind and solar facilities. Further, because energy storage

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<sup>13</sup> See Jeff Kessen, Why Li-ion Batteries Are the Progressive Option for Data **DYNAMICS** (May DATA CENTER 2019), https://www.datacenterdynamics.com/opinions/why-li-ion-batteries-areprogressive-option-data-centers/; Patrick Nelson, Data Centers Should Sell Spare **NETWORKWORLD** 2019), UPS Capacity to the *Grid*, (June 13, http://www.networkworld.com/article/3402039/data-centers-should-sell-spare-upscapacity-to-the-grid.html.

resources can provide energy to the grid, they can also provide "capacity" in wholesale markets. Capacity is a separately-compensated service that "is not electricity itself but the ability to produce it when necessary." *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 479 (D.C. Cir. 2009).

Energy storage resources can also provide what the industry labels "ancillary services"—services necessary to maintain the reliability of the transmission system, and for which the regional transmission organizations and independent system operators run competitive markets or otherwise provide compensation. One such service, "frequency regulation," involves quick injections and withdrawals of power in order to ensure the system stays in balance (and thus that the frequency of alternating current on the grid remains at 60 hertz). Other ancillary services that energy storage resources can provide include: "spinning reserves" and "nonspinning reserves," which are quantities of electric generation that can be drawn on at short notice; "voltage support," which entails the injection of power at certain points on the grid to maintain voltage at required levels; and "black start" capability, which involves providing energy needed to begin operating after a system-wide blackout. To bar distribution-connected resources from providing these services, as Petitioners seek the right to do, would harm consumers by reducing competition and stifling innovation. It was for that reason the Commission rightly concluded under

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Section 206 of the Federal Power Act that it would be unjust and unreasonable to exclude them. Order No. 841 at P 19 (J.A. 225-26).

## III. Order No. 841 Preserves the Balance of Federal and State Jurisdiction Delineated in the Federal Power Act and in Controlling Precedent

To understand the novelty of Petitioners' jurisdictional argument, it is helpful to begin with what they are conceding implicitly. Petitioners do not claim that the Commission lacks authority to regulate wholesale sales made using distribution facilities. Nor could they. This Court has held repeatedly that FERC has jurisdiction over all wholesale sales, regardless of what facilities are used. In Transmission Access Policy Study Group v. FERC, 225 F.3d 667, 696 (D.C. Cir. 2000), this Court upheld Order No. 888—the foundational order opening the electric power sector to widespread wholesale competition—and concluded that "all aspects of wholesale sales are subject to federal regulation, regardless of the facilities used." See also Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC, 475 F.3d 1277, 1282 (D.C. Cir. 2007) (holding that when FERC was "exerting jurisdiction over transactions" it "had no occasion to decide whether a facility as such should be classified as jurisdictional or not" and that "assertion of jurisdiction over specified transactions, even though affecting the conduct of the owner(s) with respect to its facilities, is not per se an exercise of jurisdiction over the facility"). Later in *Detroit Edison Co. v. FERC*, 334 F.3d 48, 51 (D.C. Cir. 2003), this Court explained more specifically that "when a

local distribution facility is used in a wholesale transaction, FERC has jurisdiction over that transaction pursuant to its wholesale jurisdiction."

Petitioners thus do not claim that FERC exceeded its authority by including distribution-connected resources within the scope of Order No. 841. Instead, they advance a novel theory that, when it comes to sales from distribution-connected resources, FERC's jurisdiction is incomplete: FERC may only regulate how the sales are made, while States regulate whether such sales are allowed at all. And Order No. 841, they say, exceeds FERC's jurisdiction when it concludes that States may not "broadly prohibit[]" distribution-connected resources from participating in wholesale markets. Electric Storage Participation in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators, Order No. 841-A, 167 FERC ¶ 61,154 at P 41 (2019) ("Order No. 841-A") (J.A. 535-36). This argument fails for two independent reasons: First, Section 201(b)(1) of the Federal Power Act, on which Petitioners base their argument, gives States authority to regulate distribution and generation facilities, but *not* to prohibit interstate wholesale sales made using those facilities. Second, Order No. 841 acknowledges States' legitimate authority to regulate the reliability, safety, and cost of distribution systems, and leaves that authority wholly intact.

# A. The Authority Reserved to States to Regulate Facilities Under Section 201(b) Does Not Include the Authority to Prohibit Interstate Wholesale Sales

Petitioners' theory that States may regulate whether distribution-connected resources make wholesale sales in interstate commerce has no basis in the text of the Federal Power Act. The first sentence of Section 201(b)(1) addresses jurisdiction over transactions and gives FERC jurisdiction over sales of electric energy at wholesale in interstate commerce. Congress crafted certain exemptions to the Commission's exclusive authority over wholesale sales, but did not exempt sales made using distribution facilities. See 16 U.S.C. § 824(b)(1); Fed. Power Comm'n v. Southern Cal. Edison Co., 376 U.S. 205, 210 (1964) ("\s 201(b) grants the [Commission] jurisdiction of all sales of electric energy at wholesale in interstate commerce not expressly exempted by the Act itself"). The second sentence addresses jurisdiction over facilities. It reserves to the States jurisdiction over, *inter* alia, "facilities used for the generation of electric energy or over facilities used in local distribution." 16 U.S.C. § 824(b)(1). Nothing in the second sentence of Section 201(b)(1) can be read to empower States to exercise any form of jurisdiction over the wholesale transactions addressed in the first sentence, much less to prohibit them entirely.

Petitioners' extra-textual theory thus runs headlong into Supreme Court precedent holding that Section 201(b) does not give States authority to directly

burden wholesale sales in interstate commerce, including through the prohibition of such sales. In Pub. Util. Comm'n of R.I. v. Attleboro Steam & Elec. Co., 273 U.S. 83, 89 (1927), the Supreme Court invalidated under the Commerce Clause an attempt by Rhode Island to regulate sales from a Rhode Island power plant into Massachusetts because it imposed a "direct burden upon interstate commerce." Because there was then no federal statutory basis to regulate such sales, Congress filled the "Attleboro gap" by enacting Part II of the Federal Power Act, which includes Section 201(b). The Supreme Court has subsequently construed Section 201(b) on several occasions and concluded that its meaning is to preserve the forms of State regulation that existed at the time of enactment, but not to give States authority to burden interstate commerce in ways they could not under Attleboro. In New England Power Co. v. New Hampshire, the Supreme Court explained that "Nothing in the legislative history or language of the statute [§ 201(b)] evinces a congressional intent 'to alter the limits of the state power otherwise imposed by the Commerce Clause,' or to modify the earlier holdings of this Court concerning the limits of state authority to restrain interstate trade." 14 New England Power Co.

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New England Power Co. v. New Hampshire, 455 U.S. 331, 341 (1982) (internal citations and quotations omitted); see also U.S. v. Pub. Util. Comm'n of Cal., 345 U.S. 295, 311 (1953) ("Part II is a direct result of Attleboro. They are to be read together. The latter left no power in the states to regulate licensees' sales for resale in interstate commerce, while the former established federal jurisdiction over such sales.").

involved an attempt by New Hampshire to prohibit sales out-of-state from an instate generator—that is, a State law purporting to control *whether* a facility could engage in interstate sales of energy at wholesale.<sup>15</sup> The Supreme Court unanimously concluded that the State law "places direct and substantial burdens on transactions in interstate commerce," *id.* at 339, and thus fell outside the authority reserved to States by Section 201(b). *Id.* at 344.

If Petitioners' reading of Section 201(b) were correct, it would also mean that States may dictate *whether* generation facilities within their borders participate in FERC-jurisdictional wholesale markets. After all, Section 201(b)(1) also preserves State jurisdiction over generation facilities. 16 U.S.C. § 824(b)(1). But the notion that the participation of generators in wholesale markets is uniquely within the province of State authority cannot be reconciled with the Supreme Court's holding in *Hughes v. Talen Energy Marketing, LLC*, 136 S. Ct. 1288, 1299 (2016). *Hughes* concerned a Maryland program to subsidize an in-state natural gas plant in a way that made the subsidy contingent on the plant selling its capacity (*i.e.*, "clearing") in the wholesale market. The Supreme Court acknowledged the broad authority of

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It is immaterial that the generator in *New England Power Co*. was a hydroelectric facility licensed under Part I of the Federal Power Act. The Supreme Court characterized the limits of Section 201(b) in general terms, which is why courts have not read its holding as applying only to the sentence in Section 201(b) directed to hydroelectric facilities. *See, e.g., Wyoming v. Oklahoma*, 502 U.S. 437, 457-58 (1992).

States to regulate generation facilities in ways "untethered to a generator's wholesale market participation," but invalidated the Maryland program because it had the "fatal defect" of conditioning funds on the plant "clearing" in the wholesale market. *Id.* In other words, the Maryland program's link to *whether* a generator participated in the wholesale market was the very thing that rendered it unlawful.

Hughes cannot be harmonized with Petitioners' view of Section 201(b). If Maryland had unfettered authority to control whether in-state generators participate in the wholesale market, the fact that its subsidy was linked to wholesale market participation would have barely rated mention, and certainly would not have been identified as the dispositive "fatal defect" that doomed the program.

Petitioners attempt to dismiss *Hughes* as a case about "specific numeric rates," Utility Brief at 20 n.9, by which they presumably mean that *Hughes* was solely about the Maryland program's connection to wholesale prices (*i.e.*, the *how* rather than the *whether* of wholesale market participation). But as the Second Circuit put it succinctly, "the tether in *Hughes* is tied to 'wholesale market *participation*,' not prices." *Coal. for Competitive Elec. v. Zibelman*, 906 F.3d 41, 51 (2d Cir. 2018) (emphasis in original).

Make no mistake, States have broad authority to regulate generation facilities. *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 481 (D.C. Cir. 2009). States have authority to grant, deny and withdraw permits that power plants need to

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operate, to regulate their environmental performance more stringently than is required by federal law, and to subsidize or penalize power plants based on the type of energy they use. States also have authority over retail sales, and over the procurement practices of utilities that make retail sales in-state. The exercise of these authorities by State regulators will inevitably determine what types of power plants operate in the State, which in turn will exert a profound, *albeit indirect*, effect on the wholesale market. The same is true with respect to facilities for local distribution—States have broad authority within their realm of responsibility, which may exert an *indirect* effect on wholesale markets. But the teaching of the Supreme Court's case law interpreting Section 201(b) is that State authority does not extend to direct regulation of whether resources participate in wholesale markets.

The Natural Gas Act case Petitioners rely upon, Northwest Central Pipeline Corp. v. State Corp. Comm'n of Kansas, 489 U.S. 493 (1989), likewise fails to support their position. Northwest Central held simply that when a State regulates gas production—a field reserved to State authority by Section 1(b) of the Natural Gas Act, 15 U.S.C. § 717(b)—those regulations are not preempted by virtue of indirect impacts on FERC-jurisdictional interstate sales. 16

<sup>16</sup> Northwest Central, 489 U.S. at 514. Northwest Central involved a challenge to a State regulation aimed squarely at the production of natural gas: the State sought to accelerate production in a particular gas field "by providing that the right to extract assigned amounts of gas will be permanently lost if production is too long delayed." Id. at 497. The Supreme Court unanimously, and with the backing of FERC as

A more accurate extrapolation of Petitioners' argument to the Natural Gas Act context would be for a State to claim that, because Section 1(b) preserves State authority over production and gathering, States may decide whether gas produced in-state is sold in the interstate wholesale markets overseen by FERC, notwithstanding the seller's own decision to allocate the gas to the interstate market. In Pub. Serv. Comm'n of Ky. v. FERC, 610 F.2d 439 (6th Cir. 1979), the Sixth circuit rejected just such an argument. That case involved a Kentucky law that gave owners of property near wellheads and gathering pipelines the right to demand natural gas service from those facilities, subject to terms prescribed by the Kentucky Public Service Commission. Id. The law had the result of keeping gas that the seller had allocated to the FERC-jurisdictional interstate market out of that market. Kentucky justified its law on the grounds that the gas was delivered on gathering lines and therefore part of the production and gathering process that is exempt from FERC jurisdiction. Id. The court rejected that argument. Reading Section 1(b), the court concluded that "the production and gathering exemption . . . pertains only to the

amicus curiae, upheld the State action. The Court rejected the argument that the State action was preempted because the acceleration of production would indirectly impact the purchasing decisions of FERC-jurisdictional interstate pipelines. *Id.* at 514. The Court noted, however, that the case would have come out differently had the State sought to "regulate pipelines" purchasing decisions in the mere guise of regulating production." *Id.* at 518 (citation omitted).

operation of properties involved in the extraction and collection of natural gas. States have no power under the proviso to control allocation of natural gas." *Id.* at 444. The court held therefore that States "may not, without federal authorization, divert from the interstate market supplies of natural gas for the use of state residents only." *Id.* In short, States' jurisdiction over production and gathering facilities did not give them authority to decide *whether* gas produced and transported using those facilities was sold at wholesale in interstate commerce. The same principle applies with equal force in this context.

## B. Order No. 841 Leaves State Authority to Regulate the Safety, Reliability, and Cost of Local Distribution Facilities Wholly Intact

States retain significant authority under the Federal Power Act to regulate the safety, reliability, and cost of distribution systems. Order No. 841 expressly recognizes that authority, leaving to States their "right to regulate the safety and reliability of the distribution system," including by requiring "electric storage resources [to] comply with any applicable interconnection and operating requirements." Order No. 841-A at P 46 (J.A. 540). While States may not use that power to "broadly prohibit" electric storage resources from participating in wholesale markets, they remain able to perform their normal regulatory role without obstruction, and Petitioners' arguments to the contrary are unfounded.

To understand how Order No. 841 leaves existing State authority to regulate the safety, reliability, and cost of distribution systems intact, it is helpful to understand how States exercise that authority. When new resources, including new energy storage resources, request to interconnect to distribution systems, <sup>17</sup> States require adherence to a standardized interconnection process. For successful applicants, the interconnection process culminates in the execution of an interconnection agreement, which defines the technical, operational, and financial terms of the interconnection.

The interconnection process begins with an application detailing the technical specifications of the interconnecting resource, along with an application fee based on the size of the resource. Once an application is deemed complete, engineers at the distribution utility analyze its likely impact to the distribution system using criteria established by State regulators.<sup>18</sup> The complexity of this analysis may

Some energy storage resources, including some that interconnect on distribution facilities, go through federal rather than state-jurisdictional interconnection procedures. However, as Petitioners noted before FERC, the "vast majority" of distribution-connected and behind-the-meter energy storage resources will be interconnected pursuant to State law. Order No. 841-A at P 13 (J.A. 510).

Recognizing that each State's interconnection process differs, the above characterizes features common to most State processes, with illustrative citations to regulations in three States. Further, two organizations, The Interstate Renewable Energy Council and the National Association of Regulatory Utility Commissioners, have published model interconnection procedures that illustrate many of these common features. *See* Interstate Renewable Energy Council, Inc., *Model Interconnection Procedures* (2019), https://irecusa.org/publications/irec-model-interconnection-procedures-2019; National Association of Regulatory Utility Commissioners, *Model Interconnection Procedures and Agreement for Small Distributed Resources* (2003), https://pubs.naruc.org/pub.cfm?id=536DBB8C-2354-D714-519F-7869624489AE.

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depend on the size of the interconnecting resource, its physical and technical characteristics, the characteristics of the distribution facilities at the point of interconnection, whether the resource intends to export energy to the grid and, in some cases, whether the resource will limit its injections to the grid to less than its maximum capability and by what means. 19 Very small resources may proceed through this step quickly if they fall below certain threshold limits, referred to as "screens," that establish that their interconnection and operation would have no adverse impacts to the distribution system.<sup>20</sup> Other resources may require additional study and may be studied in groups when multiple pending applications could affect the same distribution facilities. For these resources, the distribution utility typically conducts a detailed "system impact study" to determine the full extent of impacts to

<sup>19</sup> See, e.g., New York State Pub. Serv. Comm'n, Case 19-E-0566 (Dec. 13, 2019), New York State Standardized Interconnection Requirements and Application Process For New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems ("New York State Standardized Interconnection Requirements") at §§ I.B, C & E; Minnesota Pub. Util. Comm'n, Distributed Energy Resources Interconnection Process ("Minnesota Distributed Energy Resources Interconnection Process") and Distributed Energy Resource Interconnection Agreement ("Minnesota Distributed Energy Resource Interconnection Agreement"), available at https://mn.gov/puc/assets/Minnesota%20 Distributed%20Energy%20Resource%20Interconnection%20Process%20and%20 Agreement%20%28MN%20DIP%20and%20DIA%29 tcm14-381183.pdf, at 10-20; Ohio Admin. Code §§ 4901:1-22-06, -07 & -08.

See, e.g., New York State Standardized Interconnection Requirements, supra n.19 at Appx. G; Minnesota Distributed Energy Resources Interconnection Process, supra n.19 at 12-15; Ohio Admin. Code § 4901:1-22-06.

to accommodate the interconnection.<sup>21</sup> Both studies typically come at the applicant's expense.<sup>22</sup> Ultimately, the distribution utility may determine that the resource can interconnect without further action. Or, the utility may determine that the resource itself must be modified or that upgrades to the distribution system are necessary before the resource can interconnect and begin operating.

When the studies are complete, the distribution utility and the applicant enter an interconnection agreement. A *pro forma* version of the interconnection agreement is typically part of the distribution utility's tariff. The interconnection agreement, among other things, typically: (1) gives the applicant the right to construct and operate the facility subject to pre-conditions such as operational testing, inspection by the utility, and completion of network upgrades, (2) allocates the costs of the interconnection and associated network upgrades (typically to the applicant), (3) gives the distribution utility ongoing rights to access and inspect the resource, (4) requires that the resource be constructed, operated and maintained consistent with certain technical protocols and the specifications in the application

See, e.g., New York State Standardized Interconnection Requirements, supra n.19 at 12-14 (studies referred to as "Coordinated Electric System Interconnection Review"); Minnesota Distributed Energy Resources Interconnection Process, supra n.19 at 18-21; Ohio Admin. Code § 4901:1-22-09.

<sup>&</sup>lt;sup>22</sup> *Id*.

(which may include any limitations on the resource's right to inject energy to the grid), (5) gives the utility the right to curtail operation of the resource under certain circumstances, and (6) requires the resource owner to obtain insurance and to indemnify the distribution utility.<sup>23</sup>

It was with this familiar State regulatory background in mind that the Commission limited the application of Order No. 841 to energy storage resources that are "contractually permitted" to inject energy to the grid through an interconnection agreement. Order No. 841 at P 33 (J.A. 235); Order No. 841-A at P 8 (J.A. 506-07). As the Commission explained on rehearing, this "contractually permitted" requirement ensures that States may continue to regulate the safety and reliability of distribution systems without interference:

We acknowledge that states have jurisdiction over the interconnections of certain resources to the distribution system and the requirements reasonably related to those interconnections, such as a requirement to upgrade the distribution system to facilitate the injection of electric energy back to the grid, a requirement to install certain technologies to mitigate a reliability or safety concern, or a charge for wholesale distribution service. We further understand that interconnection agreements may include technical requirements to safeguard against reliability or safety concerns, such as utility curtailment and anti-islanding provisions, or requirements to install equipment that forces resources to trip offline during extreme

See, e.g., New York State Standardized Interconnection Requirements, supra n.19 at Appx. A; Minnesota Distributed Energy Resource Interconnection Agreement, supra n.19 at Arts. 2, 4, 7 & 8; Ohio Admin. Code § 4901:1-22-10.

frequency, voltage, or fault current incidents. Indeed, such requirements could address the concerns raised by petitioners regarding the physical and operational impacts of electric storage resources on the distribution system.

Order No. 841-A at P 42 (J.A. 537).

By limiting its rule to resources that are contractually permitted to inject energy to the grid, the Commission left State regulatory authority over distribution facilities wholly intact. State regulators (and distribution utilities acting pursuant to State law) may continue to perform exactly the same type of analyses and impose exactly the same type of requirements that they always have to ensure the safety and reliability of distribution facilities under their jurisdiction. Ultimately, the safety, reliability and cost considerations of State regulators have a decisive impact: resources that do not have the right to inject energy to the grid through an interconnection agreement do not fall within the scope of the Order.

Those untouched State regulatory powers more than suffice to ensure that the participation of energy storage resources in wholesale markets can be undertaken consistent with distribution system reliability. If a State were to conclude that injections to the distribution system by energy storage resources posed risks to reliability—either in a particular case or in aggregate—it could address that concern through its rules governing the interconnection and operation of resources that inject energy to the grid. What it cannot do, however, is determine that an energy storage resource may reliably interconnect and inject energy to the grid, but then dictate

which wholesale counterparties the resource may sell to and which it may not. Nor would there be any need to do so. When an energy storage resource injects energy to the grid, it makes no physical difference to the electric system whether the sale associated with that injection is to an organized wholesale market, to the local utility, or to someone else.

Intervenors argue the contrary by suggesting that sales into wholesale markets have unique electromagnetic properties resulting from a need to follow a path to the wholesale marketplace. They claim that distribution-connected resources must "reach the FERC-jurisdictional transmission grid . . . [to] . . . participate in organized wholesale markets" and that when these resources inject energy to the grid it "pushes energy from local distribution facilities to the transmission grid for re-sale." Brief of Intervenor Transmission Access Policy Study Group at 10, 18.

That is not how the electric system works. Once injected to the grid, energy cannot be directed to a particular location. "[E]nergy flowing onto a power network or grid energizes the entire grid, and consumers then draw undifferentiated energy from that grid." New York v. FERC, 535 U.S. 1, 7 n.5 (2002) (quoting and crediting brief of *amici* Electrical Engineers and discrediting contentions that electricity flows "can be controlled, directed and traced"). Moreover, the wholesale market is not confined to any particular place on the electric grid. There is no need for an injection of energy to "reach" any particular location electromagnetically to effectuate a

wholesale sale, even if that were possible. Injections and withdrawals from the grid can be accounted for and settled by the wholesale market administrator anywhere on the transmission or distribution system provided that adequate metering infrastructure exists. *See* Order No. 841 at PP 317-19 (J.A. 406-08).

Nor has Order No. 841 forced costs on State regulators or State-jurisdictional distribution utilities. As explained above, States may require interconnecting resources to pay the costs of processing their applications and then also to pay for the construction, operation, and maintenance of upgrades necessary to accommodate their interconnection and operation. The recovery and allocation of these costs remain under State jurisdiction and are unaffected by Order No. 841. *See* Order No. 841-A at P 45 (J.A. 539-40). If State regulators or State-regulated utilities do not recover the costs of interconnecting new resources, that deficit will result from choices made by State officials, not by FERC.

### **CONCLUSION**

For the foregoing reasons, the Court should deny the petitions for review.

Dated: March 11, 2020 Respectfully submitted,

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