



Calpine Corporation

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VIA ELECTRONIC MAIL

Aida Camacho-Welch
Secretary of the Board
State of New Jersey
Board of Public Utilities
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Re: Investigation of Resource Adequacy Alternatives
Docket No. EO20030203

Dear Secretary Camacho-Welch:

Calpine Corporation (“Calpine”) hereby respectfully submits these comments in response to the notices issued by the New Jersey Board of Public Utilities (the “Board”) on March 27, 2020,¹ and April 17, 2020,² regarding the State of New Jersey’s potential use of the Fixed Resource Requirement (“FRR”) Alternative under the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region (“RAA”) and Open Access Transmission Tariff of PJM Interconnection, L.L.C. (“PJM”).³

Calpine fully understands that the Board has concerns regarding PJM’s capacity market rules that may make the FRR Alternative appear appealing at first glance; however, as explained herein, there are substantial uncertainties and risks, and few benefits, associated with choosing the FRR Alternative at this time. Moreover, there are a number of complex issues that the Board must consider before it can determine if the FRR Alternative is a viable option for New Jersey.

¹ *Investigation of Resource Adequacy Alternatives*, Request for Written Comments, Docket No. EO20030203 (Mar. 27, 2020) (the “Request for Comments”).

² *Investigation of Resource Adequacy Alternatives*, Supplemental Notice for Written Comments, Docket No. EO20030203 (Apr. 17, 2020).

³ These comments primarily focus on the issues raised in Question 1 of the Request for Comments.

I. DESCRIPTION OF CALPINE

Calpine is a Delaware corporation engaged, through various subsidiaries, in the development, financing, acquisition, ownership, and operation of independent power production facilities and the wholesale marketing of electricity in the United States and Canada. Through its various subsidiaries, Calpine has a fleet of 77 power plants in operation or under construction, representing nearly 26,000 MW of generating capacity. Through wholesale operations and its retail business, Calpine subsidiaries serve customers in 23 states and Canada.⁴

II. COMMENTS

A. Selection of the FRR Alternative Would Subject New Jersey Ratepayers to Substantial Risks with Few Offsetting Benefits

Since its inception, PJM's Reliability Pricing Model ("RPM") market has successfully maintained reliability at a reasonable cost. For example, PJM has explained that the RPM results in savings of \$1.2 billion to \$1.8 billion because of "competition between traditional generation and alternative supply resources such as demand response."⁵ Notwithstanding the benefits historically provided by the competitive RPM market, however, the Board's order initiating this proceeding expressed concern that the recent December 19, 2019 order⁶ issued by the Federal Energy Regulatory Commission ("FERC") required PJM to expand its Minimum Offer Price Rule ("MOPR") and therefore "potentially disrupts a number of New Jersey's efforts to shape its electric generation resource base."⁷ These concerns do not justify switching to the FRR at this time.

As an initial matter, it is important to note that Monitoring Analytics, LLC, the Independent Market Monitor for PJM (the "IMM") has found that the use of the FRR Alternative could expose New Jersey ratepayers to the risk of substantially higher prices. The IMM analyzed six different scenarios involving the use of the FRR Alternative in New Jersey.⁸ Each of these scenarios

⁴ Calpine's retail subsidiary, Calpine Retail, is filing separate comments in this proceeding given its long history of supporting retail choice and its benefits for New Jersey customers.

⁵ PJM, *PJM Value Proposition*, at 2, <https://www.pjm.com/~media/about-pjm/pjm-value-proposition.ashx>.

⁶ See *Calpine Corp. v. PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,239 (2019) (the "FERC December 19 Order"), *on reh'g*, 171 FERC ¶ 61,035 (2020) (the "FERC Rehearing Order").

⁷ *Investigation of Resource Adequacy Alternatives*, Order Initiating Proceeding at 2, Docket No. EO20030203 (Mar. 27, 2020) (the "March 27 Order").

⁸ Monitoring Analytics, *Potential Impacts of the Creation of New Jersey FRRs* (May 13, 2020) (the "IMM FRR Analysis"), https://www.monitoringanalytics.com/reports/Reports/2020/IMM_Potential_Impacts_of_the_Creation_of_New_Jersey_FRRS_20200513.pdf.

resulted in increased costs for the State as a whole, ranging from increases of \$4.4 million per year⁹ to \$386.4 million per year,¹⁰ compared to the results of the RPM Base Residual Auction (“BRA”) for the 2021/2022 Delivery Year. Notably, certain of these scenarios assume that FRR Entities (*i.e.*, load-serving entities (“LSEs”) that use the FRR Alternative to satisfy their capacity obligations) will be able to obtain the capacity they will need to satisfy their FRR obligations at a price that is equal to the clearing price in past BRAs. However, the IMM cautions that, for FRR Entities, “[t]he price for capacity resources could substantially exceed the capacity market clearing price and the capacity market offer cap.”¹¹ The IMM also explains that the use of the FRR Alternative raises market power concerns, which could further increase costs as compared to the competitive RPM market.¹² By contrast, the IMM found that the FERC December 19 Order “is not expected to have an impact on the clearing prices and auction revenues” in the next RPM BRA for the 2022/2023 Delivery Year.¹³ Accordingly, the IMM’s analyses demonstrate that there are clear risks of increased costs associated with the use of the FRR Alternative as opposed to continuing to rely on PJM’s RPM market. This is particularly true because, under PJM’s FRR rules, an entity that chooses the FRR Alternative is generally “locked in” to that election for at least five consecutive years.¹⁴ Accordingly, even if prices drop substantially or there are other changes in the RPM market during the five year period, the FRR Entity would remain bound to the FRR election.

While the FRR Alternative could expose New Jersey ratepayers to substantially higher rates and lower reliability,¹⁵ the benefits that would be provided by the use of the FRR are far from clear. In its March 27 Order, the Board suggested that the expanded MOPR required under the

⁹ *See id.* at 2 (discussing the net load charges for New Jersey under “Scenario 4,” where “an FRR is established for the [Public Service Electric and Gas Company (“PSEG”) Locational Deliverability Area (“LDA”)] and . . . the FRR procures the entire PSEG capacity obligation at a rate equal to the clearing price in the 2021/2022 RPM BRA (\$204.29 per MW-day”).

¹⁰ *See id.* at 1 (discussing the net load charges for New Jersey under “Scenario 1,” where “an FRR is established that includes all of New Jersey and . . . the FRR procures the entire New Jersey capacity obligation at a rate equal to the weighted average net Cost of New Entry (CONE) times B offer caps applicable to the LDAs in New Jersey (\$235.42 per MW-day) for the 2021/2022 [BRA]”).

¹¹ *Id.* at 4.

¹² *See id.*

¹³ Monitoring Analytics, *Potential Impacts of the MOPR Order*, at 1 (Mar. 20, 2020) (the “MOPR Impact Analysis”), https://www.monitoringanalytics.com/reports/Reports/2020/IMM_Potential_Impacts_of_the_MOPR_Order_20200320.pdf. *See also id.* at 2 (same).

¹⁴ *See* RAA, Schedule 8.1, § C.1.

¹⁵ *See* IMM FRR Analysis at 13 (explaining that the use of the FRR Alternative would result in “a less stringent reliability standard than the 1 day in 25 years that would apply if New Jersey remained in the PJM Capacity Market”) (footnote omitted).

FERC December 19 Order will adversely impact the State's Renewable Portfolio Standard ("RPS") and Zero Emission Certificate ("ZEC") programs, which are intended to help support renewable resources and nuclear resources, respectively.¹⁶ The IMM's analyses, however, indicate that this will not be the case. Specifically, the IMM analyzed the Avoidable Cost Rates ("ACRs") and projected energy and ancillary service revenues for each technology type, and found that "[b]ased on the net ACR values and the clearing prices in recent capacity auctions, all existing technologies except single unit nuclear plants would be expected to clear if subject to a net ACR MOPR price floor."¹⁷

The IMM also conducted a more detailed analysis of existing nuclear facilities, including the Salem and Hope Creek plants operated by PSEG Nuclear LLC, an affiliate of PSEG. The IMM determined that the Hope Creek plant would require a capacity price of \$102.72/MW-day, and the Salem plant would require a capacity price of \$109.40/MW-day, in order to "break even" in 2022.¹⁸ At the same time, the clearing prices in the 2021/2022 BRA were \$204.29/MW-day in the PSEG LDA, \$165.73/MW-day for the EMAAC LDA, and \$140.00/MW-day for the Rest of RTO.¹⁹ This means that revenues from PJM's markets are sufficient to cover the costs of nuclear facilities even without additional ZEC payments, and again indicates that the ACRs for the Hope Creek and Salem plants will be low enough to permit them to clear in future BRAs. PSEG itself has therefore announced that its nuclear units "retain full flexibility to bid into the upcoming capacity auction based on proposed PJM compliance filing floor prices[.]"²⁰ Accordingly, the MOPR changes required by the FERC December 19 Order should not impact existing nuclear facilities in New Jersey.

The December 19 Order will also not impact the State's efforts to promote renewable resources through its RPS program in the near future. Under the December 19 Order and FERC Rehearing Order, existing renewable resources that participate in an RPS program are categorically

¹⁶ March 27 Order at 2.

¹⁷ Monitoring Analytics, *CONE and ACR Values – Preliminary*, at 7 (Jan. 28, 2020), <https://www.pjm.com/-/media/committees-groups/committees/mic/2020/20200128-special/20200128-item-04b-cone-and-acr-values-preliminary.ashx>.

¹⁸ Monitoring Analytics, *Unit Specific Nuclear ACR Information*, at 7 (Feb. 19, 2020) (table showing the "Implied Net ACR for Nuclear Plants Including CapEx"), https://www.monitoringanalytics.com/reports/Presentations/2020/IMM_MIC_MOPR_Unit_Specific_Nuclear_ACR_Information_20200219.pdf.

¹⁹ PJM, *2021/2022 RPM Base Residual Auction Results*, at 1, <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2021-2022/2021-2022-base-residual-auction-report.ashx?la=en>.

²⁰ Public Service Enterprise Group, *PSEG Earnings Conference Call, 1st Quarter 2020*, at 22 (May 4, 2020), https://s24.q4cdn.com/601515617/files/doc_presentations/2020/05/WEBCAST-SLIDES-1Q-2020-Earnings-Release-FINAL-050420-715AM.pdf.

exempt from the MOPR.²¹ As a result, the first RPS resource that would likely be impacted by the expanded MOPR is the 1,100 MW Ocean Wind Project, which is anticipated to come on line in 2024.²² In determining the installed capacity of an offshore wind generator, PJM reduces the nameplate capacity to 26 percent.²³ Accordingly, assuming that the December 19 Order results in the capacity from the Ocean Wind Project not clearing in a BRA, this would only affect 286 MW of the capacity attributed to the Ocean Wind Project.²⁴ Moreover, assuming a BRA price of \$186.16/MW-day,²⁵ this means that the Ocean Wind Project would be foregoing approximately \$19.4 million of RPM capacity revenues per year, which is less than the potential increase in costs that New Jersey ratepayers could see from using the FRR Alternative.²⁶ The same is true with respect to the 1,200 MW of offshore wind capacity that the State intends to solicit later this year for commercial operation in 2027,²⁷ which would only have an attributed installed capacity of approximately 312 MW.

The impact of the expanded MOPR on renewable resources in New Jersey is also questionable because, as the IMM has pointed out—

The possibility of impacts on the inclusion of renewable resources in the capacity market in the longer term is a function of the competitiveness of renewables. If renewables are competitive, they will be included in the capacity market at appropriate MW levels. Although preliminary estimates of the default MOPR floor prices for new renewables are relatively high, those estimates are based on

²¹ See FERC December 19 Order, 169 FERC ¶ 61,239 at P 14; FERC Rehearing Order, 171 FERC ¶ 61,035 at P 279 (2020).

²² See IMM FRR Analysis at 9 n.20.

²³ See *Calpine Corp. v. PJM Interconnection, L.L.C.*, Compliance Filing Concerning the Minimum Offer Price Rule, Request for Waiver of RPM Auction Deadlines, and Request for an Extended Comment Period of at Least 35 Days, at 65, FERC Docket Nos. ER18-1314-003, *et al.* (filed Mar. 18, 2020). See *also id.* at 65 n.190 (stating that sellers “may request resource-specific capacity factors to determine the Installed Capacity of their solar or wind resource”).

²⁴ While new onshore wind and solar resources could have difficulty clearing the RPM auction using PJM’s illustrative default MOPR floor prices for these technologies, these resources very possibly could obtain authorization to submit lower floor prices for their offers through PJM’s unit-specific review process. See FERC December 19 Order, 169 FERC ¶ 61,239 at P 16.

²⁵ See IMM FRR Analysis at 1 (stating that “the weighted average clearing prices in the 2021/2022 RPM BRA applicable to the LDAs in New Jersey” was \$186.16/MW-day).

²⁶ See *id.* at 1-4 (discussing results of Scenarios 1 through 6).

²⁷ See State of New Jersey, *Governor Murphy Announces Offshore Wind Solicitation Schedule of 7,500 MW through 2035* (Feb. 28, 2020), <https://www.nj.gov/governor/news/news/562020/20200228a.shtml>.

existing renewable facilities in PJM and based on standard assumptions about technologies, financing costs, capacity factors and revenues. Renewables suppliers assert convincingly that many new renewables are competitive now and will demonstrate that fact through requests for unit specific exceptions to default MOPR floor prices. Renewables suppliers also assert that they will become even more competitive in the future and for the 2024/2025 RPM BRA.²⁸

It is therefore far from clear that New Jersey needs to or should switch to the FRR Alternative at this time in order to safeguard its RPS or ZEC programs. Similarly, while the March 27 Order raised questions regarding the impact of the December 19 Order on the Regional Greenhouse Gas Initiative (“RGGI”),²⁹ the FERC Rehearing Order specifically clarified that RGGI payments will not subject any resources to the PJM MOPR.³⁰

In short, selecting the FRR Alternative exposes New Jersey ratepayers to very real and immediate risks, but does not provide tangible benefits in the foreseeable future. Accordingly, the Board should determine that the FRR Alternative is not an appropriate choice for New Jersey at this time. To the extent it deems necessary, the Board could reassess this issue when there are additional renewable or other resources in the State that could be subject to the MOPR and when there is additional information regarding the impact of the December 19 Order on the RPM BRAs.

B. Other Issues that the Board Should Consider in Light of PJM’s FRR Rules

As recognized in the Board’s Request for Comments, a slew of issues will have to be addressed before the Board can properly determine whether the use of the FRR Alternative is appropriate for New Jersey.

One of the most critical issues the Board will have to consider was identified by the IMM in its report. As the IMM explains, PJM’s rules require an FRR Entity to obtain adequate capacity for all load in an FRR Service Area, including all expected load growth in such area.³¹ In addition,

²⁸ MOPR Impact Analysis at 3 (footnote omitted).

²⁹ See March 27 Order at 2.

³⁰ See FERC Rehearing Order, 171 FERC ¶ 61,035 at P 390.

³¹ See IMM FRR Analysis at 6; RAA, Schedule 8.1, § B.1. For these purposes an “FRR Service Area” is defined as—

- (a) the service territory of an IOU as recognized by state law, rule or order;
- (b) the service area of a Public Power Entity or Electric Cooperative as recognized by franchise or other state law, rule, or order; or (c) a separately identifiable geographic area that is: (i) bounded by wholesale metering, or similar appropriate multi-site aggregate metering, that is visible to, and regularly reported to, the Office of the Interconnection, or that is visible

for any LDA with a separate Variable Resource Requirement Curve, PJM also requires the FRR Entity to obtain a percentage of its capacity from within the LDA.³² Accordingly, the “[c]reation of an FRR creates market power for the small number of local generation owners from whom generation must be purchased in order to meet the reliability requirements of the FRR entities.”³³ This is of particular concern because “[t]here are shortfalls in internal capacity for a New Jersey FRR, a PSEG FRR and a JCPL FRR.”³⁴ The Board will therefore need to determine how it will ensure that FRR procurement prices do not spiral out of control as a result of potential anti-competitive behavior that is currently held in check by the structure of PJM’s markets, which are all overseen and monitored by the IMM.³⁵

At the same time, market power concerns could also have implications with respect to the need for FERC review of FRR procurement contracts, which involve wholesale sales of capacity subject to FERC’s jurisdiction. Because the FRR procurement process will not be governed by PJM’s market power mitigation rules, it is not clear if capacity sellers will be able to rely on their market-based rate authorization from FERC in order to make sales to the FRR Entities,³⁶ or if

to, and regularly reported to an Electric Distributor and such Electric Distributor agrees to aggregate the load data from such meters for such FRR Service Area and regularly report such aggregated information, by FRR Service Area, to the Office of the Interconnection; and (ii) for which the FRR Entity has or assumes the obligation to provide capacity for all load (including load growth) within such area.

RAA, § 1.

³² *Id.*, § D.5.

³³ IMM FRR Analysis at 4 (also stating that, in the scenarios examined by the IMM, “[a]ll participants in the New Jersey, JCPL, and PSEG FRRs fail the one and three pivotal supplier test which reinforces the conclusion that there is structural market power in each case”).

³⁴ *Id.* at 6. *See also id.* at 14 & Table 8 (identifying shortfall in each LDA).

³⁵ *See id.* at 4.

³⁶ In order to obtain market-based rate authorization from FERC, sellers must show that they and their affiliates lack market power in the relevant markets. FERC’s Order No. 861 relieved sellers of the obligation to submit indicative market power screens for regional transmission organization (“RTO”) and independent system operator (“ISO”) markets to the extent the relevant RTO/ISO administers organized energy, ancillary services, and capacity markets with Commission-approved RTO/ISO monitoring and mitigation. *See generally Refinements to Horizontal Market Power Analysis for Sellers in Certain Regional Transmission Organization and Independent System Operator Markets*, Order No. 861, 168 FERC ¶ 61,040 (2019). In that order, FERC also eliminated the rebuttable presumption that RTO/ISO market monitoring and mitigation is sufficient to address any horizontal market power concerns regarding sales of capacity in RTO/ISO markets that do not have centralized capacity markets and, correspondingly, lack the associated capacity market monitoring and mitigation. *See id.* at PP 38, 46. It is therefore not clear whether sellers would be able to rely on their market-based rate authorization for sales of capacity to an FRR Entity.

capacity contracts would have to be individually reviewed by FERC to ensure that they are just and reasonable under Section 205 of the Federal Power Act, and do not violate any of FERC's affiliate sales restrictions.³⁷

There are numerous other considerations that the Board will have to take into account in determining whether the FRR may or should be used in New Jersey. Among other things, in States that have retail choice, such as New Jersey, the FRR rules provide that the relevant FRR Entity must cover "all load, including expected load growth, in the FRR Service Area, notwithstanding the loss of any such load to or among alternative retail LSEs," and the alternative retail LSE is required to compensate the FRR Entity for the capacity or provide capacity to cover its load.³⁸ The Board will therefore have to allocate responsibility for procuring capacity, as well as devise some mechanism to allocate procurement costs among electric utilities and third-party suppliers. The task of devising a compensation mechanism could be additionally complicated if, for example, the State wishes to support renewable and nuclear resources, but third-party suppliers are able to procure capacity from other types of resources at a lower cost. In particular, requiring third-party suppliers to bear a share of the higher costs associated with the use of the FRR Alternative, when they could obtain the same amount of capacity at a lower price through the RPM market, could stifle retail competition, and which, in turn, could jeopardize the benefits of retail competition that are currently enjoyed by New Jersey's commercial and residential consumers. This is yet another of the many complex issues that the Board will have to consider in assessing the potential use of the FRR Alternative.

³⁷ Cf. *Electric Power Supply Ass'n v. FirstEnergy Solutions Corp.*, 155 FERC ¶ 61,101 (2016); *Electric Power Supply Ass'n v. AEP Generation Res., Inc.*, 155 FERC ¶ 61,102 (2016).

³⁸ RAA, Schedule 8.1, §§ D.8, D.9.

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III. CONCLUSION

For the reasons set forth herein, Calpine respectfully requests that the Board find that it would not be appropriate to use the FRR Alternative at this time, and to otherwise take these comments under consideration.

Respectfully submitted,

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