

Comments of The PSEG Companies Proposing A “Carbon Adjusted Minimum Offer Price Rule”

The PSEG Companies (“PSEG”) support the emerging consensus among most PJM stakeholders that the expansion of the Minimum Offer Price Rule (“MOPR”) to resources supported by a state or a local governmental agency to achieve environmental goals is inappropriate. As PSEG has argued before the Federal Energy Regulatory Commission (“FERC” or “Commission”) and in other venues, it believes that the MOPR should not extend to support payments designed to promote or preserve zero carbon resources. In fact, PSEG is seeking reversal or remand of FERC’s decision expanding the MOPR at this time before the United States Court of Appeals for the Seventh Circuit (“Court”). However, in the spirit of compromise and in an effort to reach a quick resolution that would remove most state-supported and local-government supported resources from the ambit of the MOPR in a manner that is consistent with Federal policy, PSEG makes the proposal described below. PSEG believes that FERC could implement this approach – which it is calling the “Carbon Adjusted Minimum Offer Price Rule” (“CAMOPR”) – without abandoning the key findings underlying its MOPR expansion orders.

PSEG’s proposal would distinguish among support programs based on whether the level of support provided by the program is consistent with the Social Cost of Carbon as determined by the federal government.¹ When the level of support does not exceed the federally determined Social Cost of Carbon plus an uncertainty factor it will not be considered to be receiving an “Actionable Subsidy.” Further, this proposal includes a limited carve-out for units that are deemed to be receiving Actionable Subsidies. This limited carve-out would not have a material impact on competitive clearing prices and could provide an incentive and a transitional path for states or others to make their programs consistent with the federal standard.

A. The Federally Established Social Cost of Carbon Provides a Reasonable Benchmark for Evaluating When The MOPR Should Apply

The Commission’s orders expanding the MOPR were concerned with “price distortions” in the capacity market based “on the economic theory that resources receiving subsidies will be able to offer below their costs.”² Thus, “subsidized resources can suppress capacity market clearing prices below competitive outcomes by offering below their costs.”³ However, the failure of the designs for either the PJM capacity market or the PJM energy market to consider the societal impacts of carbon emissions also distorts efficient price formation. Because the

¹ The most current valuation by the federal government is the “Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990,” issued February 2021 (https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf?source=email)

² *Calpine Corp., Dynegy Inc., E. Generation, LLC, Homer City Generation, L.P., NRG Power Mktg. LLC, Genon Energy Mgmt., LLC, Carroll Cty. Energy LLC, C.P. Crane LLC, Essential Power, LLC, Essential Power Opp, LLC, Essential Power Rock Springs, LLC, Lakewood Cogeneration, L.P., Gdf Suez Energy Mktg. Na, Inc., Oregon Clean Energy, LLC & Panda Power Generation Infrastructure Fund, LLC*, 171 FERC ¶ 61,034, P 34 (2020) (“*Calpine*”).

³ *Id.*, at P 26.

Social Cost of Carbon is not included in generation bids, the costs of emitting generators are understated. The result is that these plants “will be able to offer below their costs” effectively suppressing prices to non-emitting generators. Accordingly, actions of states and local governments to provide support for zero-carbon resources, at least to the extent that such payments are below the federal government’s determination of the Social Cost of Carbon, actually counteract the “price distortions” inherent in the current market designs. Payments for the purpose of achieving carbon reductions or preventing increases in carbon emissions therefore should not be considered to be suppressing prices below competitive levels when they are in line with federally determined valuations.

FERC’s acceptance of a PJM filing under Federal Power Act (“FPA”) Section 205 that incorporates this approach therefore would not require FERC to repudiate its earlier findings regarding the expected impacts of subsidies designed to address the achievement of environmental goals. As discussed *supra*, the Commission’s key finding in *Calpine* was that subsidies could result in prices below “competitive” levels. However, the context of that determination was a capacity market design that did not consider the Social Cost of Carbon as a cost of generation associated with production from fossil-burning plants. When the Social Cost of Carbon is recognized as a cost of producing electric power, the framework for evaluating what is a “competitive” outcome changes. Provided that the value for the Social Cost of Carbon is reasonable – such as in this proposal that uses the federally determined value – the outcome is “competitive” as it takes valid costs into account.

Further, the MOPR was originally designed to prevent the exercise of “buyer side” market power.⁴ However, when the actions of a state or local governmental entity are reasonably related to the achievement of environmental goals at a cost that does not exceed the value of those efforts as determined by a federally established standard, it would not be fair to infer that the support payments are intended to suppress prices below competitive levels. In recognition that States and other governmental agencies should be given the benefit of the doubt in determining whether their policy choices are reasonable, a 10% uncertainty adder⁵ should be applied to the Social Cost of Carbon values when determining MOPR applicability.

Finally, this approach would be consistent with the principle of “cooperative federalism.” The Commission would be allowing programs supported by states and local governmental agencies to operate as designed when those programs are consistent with federal policy as expressed through the Social Cost of Carbon value. The Commission thus would be accommodating state policies regarding zero carbon resources but would place limits on the

⁴ See, e.g., *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,022, P 6 (2011) (“The MOPR was established in the 2006 RPM Settlement in order to address the concern that some market participants might have an incentive to depress market clearing prices by offering supply at less than a competitive level.”)

⁵ This would be similar to the 10% uncertainty adder allowed in other contexts. For example, the PJM tariff includes a 10% adder for cost-based capacity and energy market bids. PJM has also used a 10% uncertainty factor in determining the reasonableness of the risks associated with increasing the system-wide loss of load expectation resulting from allowing certain types of demand response resources to participate in capacity markets. See *PJM Interconnection, L.L.C.*, 134 FERC ¶ 61,066, P 72 (2011) (PJM explaining that the 10% uncertainty factor was “consistent with the common use of a 10 percent statistical confidence level in probabilistic models.”)

implementation of those policies through application of a federal standard to assure that no abuses are occurring that are really attempts to exercise market power.

B. A Limited Carve-out for Resources That Have Actionable Studies Could Provide Incentives to Encourage Support Programs That Are Consistent with The Federal Standard

PSEG also proposes a limited carve-out for resources that are deemed to have Actionable Subsidies. We propose that a quantity of resources equal to a single year’s projected long-term load growth should be allowed to bid without restriction in PJM capacity auctions. To the extent that the total quantities submitted exceed the threshold level in any given Base Residual Auction (“BRA”), each bid would be pro-rated to the extent necessary to assure that the quantity restriction is met. Further, resources would be eligible to participate in the carve-out for no more than three consecutive years. PSEG believes that this limited carve out should not have a material impact on competitive clearing prices and could provide an incentive and a transitional path for states and local governments to make their programs consistent with the federal valuation.

The Commission has previously allowed a limited carve-out for renewables under ISO New England Inc.’s capacity market mechanism for addressing buyer-side market power. This approach was upheld in the Court of Appeals based on the Commission’s determination that the carve-out “had only a limited potential for price suppression.”⁶ By limiting the amount of the carve-out to projected load growth levels and limiting the period of time for a resource to use the carve-out, PSEG believes that the same conclusion would apply here.

C. Elements of the “Capacity Adjusted Minimum Offer Price Rule”

The basic elements of the CAMOPR are as follows:

1. Units that receive “Actionable Subsidies” from a state or local government are subject to the MOPR. However, not all support payments are included, as explained below.
2. “Actionable Subsidies” are payments made by states, or through programs administered or mandated by states, cooperatives/municipalities or other governmental agencies, designed to promote the development or preservation of the environmental characteristics of zero-carbon generating resources when such payments exceed the Social Cost of Carbon plus 10% as determined by the federal government. For clarity, self-supply arrangements undertaken by load serving entities through proceedings before state commissions or by load serving entities that are coops or municipalities would be included within the scope of this definition when the development of those resources is to further environmental goals.

⁶ *NextEra Energy Res., LLC v. Fed. Energy Reg. Comm’n*, 898 F.3d 14, 25 (D.C. Cir. 2018) (“[W]e defer to the Commission’s conclusion that the renewable energy exemption had only a limited potential for price suppression because of the implementation of the sloped demand curve, the prediction of a flatter supply curve, and predicted load growth and retirements.”)

- a. The exact methodologies for determining whether the support payments are more than the \$/MWh equivalent of the Social Cost of Carbon would need to be developed and would need to vary based on how the payment is made. One approach that could be used for explicit subsidies would be to average the subsidy over a period of time and convert the subsidy value to the equivalent value for the Social Cost of Carbon impact in PJM over the same period. If the derived value of the Social Cost of Carbon were greater than the federal Social Cost of Carbon plus 10%, over the same period, it would be considered an “Actionable Subsidy.” In the case of self-supply resources intended to serve environmental goals that are funded through cost of service rates or long-term contracts, a possible methodology for determining the amount of the subsidy might be to compare the costs of the resources (including any return) with the costs of the reference capacity unit. The difference would be the considered to be the subsidy amount which would then be compared with the Social Cost of Carbon.
 - b. Illustrative calculation for explicit subsidy: The average “All-in” payment for the New Jersey offshore wind program is about \$102.10/MWh over the first five years of the arrangement.⁷ To determine the amount of the subsidy under this proposal, it is necessary to subtract both an expected energy revenue payment and capacity payment.⁸ For illustrative purposes, assume an energy payment of \$25/MWh and a capacity payment equivalent of \$2.00/MWh for the same five year period; the result would be an expected subsidy of \$75.10/MWh which would equate to an average Social Cost of Carbon equal to about \$124/ton.⁹ This would be about \$113/ton applying the 10% uncertainty adder.¹⁰ Accordingly, if the federally determined Social Cost of Carbon for the same period was \$113/ton or more, the unit would not be considered to be receiving an Actionable Subsidy.
3. Units that receive “Actionable Subsidies” would have a Gross Cost of New Entry (“CONE”) or Gross Avoidable Cost Rate (“ACR”) default floor price similar to the current tariff. Units may also seek “unit specific” CONE or ACR floors price determinations as they do at present.

⁷ See *In The Matter Of The Board Of Public Utilities Offshore Wind Solicitation For 1,100 MS -- Evaluation Of The Offshore Wind Applications*, BPU Docket No. Q018121289, at 26 (Attachment A) (June 21, 2019).

⁸ Ancillary service revenues would also need to be considered but they would be small and were excluded here for simplicity.

⁹ The implied carbon abatement cost for a particular program can be determining by dividing the \$/MWh attributes payment amount by the weighted average around-the-clock PJM 2019 marginal CO2 intensity rate of 1,216 lbs./MWh (0.608 short tons/MWh), or 0.552 metric tons/MWh. Accordingly, \$75.10/MWh divided by 0.608 short tons/MWh equals about \$124/short ton. Also, the carbon intensify rate will change over time but was considered to be fixed for the purpose of the five year study here.

¹⁰ 1.1 times \$113/ton equals approximately \$124/ton.

4. Units that are subject to the MOPR will be entitled to make an election to bid at the calculated CONE or ACR floor level restriction or to bid below the applicable CONE or ACR floor price subject to the conditions and requirements described below:
 - a. In any BRA, there will be a MW quantity limit in the amount of bids permitted below the ACR or CONE floor price equal to a single year's projected long-term load growth for the BRA delivery year based on PJM's most current study for the 10-year projection of Summer peak load growth;¹¹
 - b. To the extent that the MW quantity bid by resources below their CONE or ACR floor price exceeds the allowed carve-out, PJM shall reduce the quantity of each such bid on a pro rata basis to achieve the target quantity;
 - c. A resource that submitted a bid below its applicable CONE or ACR floor price and is subject to proration, may not bid the excess MW quantity above the prorated amount into the capacity market for that delivery year;
 - d. Units may not utilize the carve-out for more than three consecutive auctions.
 - e. Units that clear under the carve-out remain subject to the MOPR in future years.
5. Once a subsidy is determined not to be an "Actionable Subsidy" or a unit receiving an "Actionable Subsidy" clears the market (other than through the carve-out), it shall not be subject to review as a potential "Actionable Subsidy" in any future BRA unless the state or other governmental agency providing the subsidy takes some action to increase the subsidy amount.

In closing, PSEG wants to be clear that it regards the reform of the MOPR only to be a necessary first step. Ultimately, we believe that capacity and energy markets need to be designed to achieve clean energy goals in the most efficient manner possible. PSEG's preference would be for the energy market to include a cost on carbon that would be realized in energy market prices. However, we also believe that capacity markets could and should be designed to accommodate clean energy goals. Significant structural changes however will likely take years to bring to fruition. We therefore support changing the current scope of the MOPR as soon as possible.

PSEG welcomes comments on this proposal and looks forward to future discussion in the PJM stakeholder group.

¹¹ This value is currently 0.3%, which would result in about 450 MWs of capacity. See PJM Load Forecast Report, January 2021 ("Summer peak load growth for the PJM RTO is projected to average 0.3% per year over the next 10 years") (<https://www.pjm.com/-/media/library/reports-notice/load-forecast/2021-load-report.ashx>).