

134 FERC ¶ 61,048
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Marc Spitzer, Philip D. Moeller,
John R. Norris, and Cheryl A. LaFleur.

PJM Interconnection, L.L.C. and
Carolina Power & Light Company

Docket Nos. ER10-713-001
ER10-713-002

ORDER CONDITIONALLY ACCEPTING COMPLIANCE FILING AND GRANTING
REQUEST FOR CLARIFICATION

(Issued January 20, 2011)

1. In this order, as discussed below, the Commission conditionally accepts the compliance filing made in Docket No. ER10-713-002 by PJM Interconnection, L.L.C. (PJM) and Carolina Power & Light Company (Carolina Power) (collectively, PJM/Carolina) concerning the Joint Operating Agreement (Joint Operating Agreement) between PJM and Carolina Power, which the Commission conditionally approved in its May 28, 2010 Order.¹ This order also grants the clarification requested by the North Carolina Electric Membership Corporation (NCEMC) in Docket No. ER10-713-001.

I. Background

2. On February 2, 2010, PJM/Carolina filed the Joint Operating Agreement, which governs the exchange of information and coordination of operations in matters that may affect congestion on either system. PJM/Carolina stated that the proposed Joint Operating Agreement was intended to replace an earlier one between PJM and Carolina Power that had been accepted by the Commission in 2005.² In the May 28, 2010 Order, the Commission conditionally accepted and suspended for a nominal period the Joint Operating Agreement, to become effective June 1, 2010, subject to refund. The Commission directed PJM/Carolina to respond within 30 days of the date of the order

¹ *PJM Interconnection, L.L.C., et al.*, 131 FERC ¶ 61,181 (2010) (May 28, 2010 Order).

² PJM/Carolina Compliance Filing at 1-2 (citing *PJM Interconnection, L.L.C.*, Docket No. ER05-1279-000 (Sept. 9, 2005) (unpublished letter order)).

with additional information to support certain provisions of the Joint Operating Agreement.

3. On June 28, 2010, PJM/Carolina filed a compliance filing to the Commission's May 28, 2010 Order. In the compliance filing, PJM/Carolina provides further information to address the questions raised by the Commission in the May 28, 2010 Order. PJM/Carolina's compliance filing clarifies aspects of the proposed Joint Operating Agreement relating to the exchange of energy through a dynamic schedule (PJM-Carolina Dynamic Schedule), pricing exports from PJM made through the PJM-Carolina Dynamic Schedule, and "make-whole" provisions that ensure that Carolina Power does not lose money by following the PJM-Carolina Dynamic Schedule.

II. Notice of Filing, Responsive Pleadings and Request for Rehearing

4. Notice of PJM/Carolina's compliance filing was published in the *Federal Register*, 75 Fed. Reg. 40,812 (2010), with interventions and protests due on or before July 19, 2010. Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (PJM Market Monitor) filed a protest and a motion for technical conference. On July 23, 2010, the Public Service Commission of Maryland (Maryland Commission) filed a motion to intervene out-of time in Docket Nos. ER10-713-000, ER10-713-001, and ER10-713-002. On August 3, 2010, PJM/Carolina filed an answer to PJM Market Monitor's comments that addressed the PJM-Carolina Dynamic Schedule provisions and opposed PJM Market Monitor's motion for a technical conference.

5. On June, 28, 2010, NCEMC filed a request for clarification or, in the alternative, for rehearing of the May 28, 2010 Order.

III. Discussion

A. Procedural Matters

6. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2010), the Commission will grant the Maryland Commission's late-filed motion to intervene in the compliance proceeding in Docket No. ER10-713-002 given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay. But that intervention is limited to the compliance subdocket and all future subdockets and does not provide party status with respect to the root docket.³

7. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2010), prohibits an answer to a protest unless otherwise ordered by the

³ See *PJM Interconnection, L.L.C.*, 132 FERC ¶ 61,265, at P 22 (2010).

decisional authority. We will accept PJM/Carolina's answer because it has provided information that assisted us in our decision-making process.

B. Substantive Matters

1. Request for Clarification

8. In response to a request by PJM Market Monitor to clarify that third parties have access to the same import and export prices as Carolina Power, the Commission stated in the May 28, 2010 Order that "prices are calculated for the balancing authority area, not only for Carolina Power."⁴

9. NCEMC seeks clarification that by this statement the Commission is not rescinding the Commission's prior authorization of tariff language that allows a sub-area within a balancing authority area to elect an interface pricing option that is different from that elected by the balancing authority.⁵ NCEMC states that, in the event the Commission denies this requested clarification, it seeks rehearing of the May 28, 2010 Order's statement that "prices are calculated for the balancing authority area, not only for Carolina Power."⁶

a. Comments

10. PJM Market Monitor states that its request for clarification regarding the effect of the pricing methodology on other parties was not intended to prevent sub-areas of the balancing authority to seek alternative methods of congestion management.⁷ PJM Market Monitor agrees with NCEMC's requested clarification that a sub-area can request other methods.

b. Commission Determination

11. NCEMC's request for clarification is granted. The language NCEMC quotes in the May 28, 2010 Order establishes that Carolina Power's import and export prices are available to all third parties, but does not preclude a sub-area within a balancing authority

⁴ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 40.

⁵ NCEMC Request for Clarification at 5 (citing *PJM Interconnection, L.L.C.*, 127 FERC ¶ 61,101, at P 44 (2009) (May 1, 2009 Order)).

⁶ *Id.* at 6.

⁷ PJM Market Monitor Comments at 23.

area from electing a different interface pricing option as permitted by the PJM Open Access Transmission Tariff (OATT).⁸

2. Compliance Filing

12. As discussed below, the Commission conditionally accepts the compliance filing of PJM/Carolina regarding the Joint Operating Agreement. The questions set forth in the May 28, 2010 Order and addressed in the compliance filing were designed to elicit additional information regarding the use of the PJM-Carolina Dynamic Schedule for exchange between PJM and Carolina Power, pricing provisions, and the make-whole provisions.

13. With respect to PJM Market Monitor's request for a technical conference, we find that PJM/Carolina have provided sufficient information for us to conclude that the Joint Operating Agreement is just and reasonable. Accordingly, we find that a technical conference is unnecessary.

14. The following discussion addresses the issues raised by PJM Market Monitor regarding the compliance filing.

a. Dynamic Scheduling

15. Section 14.4.1 of the Joint Operating Agreement provides that for deliveries from Carolina Power to PJM, the transmission service used on the Carolina Power transmission system to support the dynamic schedule will be a non-firm point-to-point reservation from Carolina Power to PJM made by Carolina Power, and the transmission service used on PJM will be network secondary service. Section 14.4.2 of the agreement provides that for deliveries from PJM to Carolina Power the transmission service used on the PJM transmission system to support the dynamic schedule will be a non-firm point-to-point reservation from PJM to Carolina Power and PJM, on behalf of Carolina Power, will make the non-firm reservation for the transmission on the PJM system on PJM's Open Access Same-Time Information System (OASIS) after the hour to match the actual MWh delivery. Section 14.4.2 also provides that the transmission service used on the Carolina Power system will be network secondary service with verification that Available Transfer Capability (ATC) is available.

16. In the May 28, 2010 Order, we required PJM/Carolina to provide further information regarding the after-the-fact schedule that PJM submits to the PJM OASIS on Carolina Power's behalf under sections 14.4.1 and 14.4.2 of the Joint Operating Agreement. We directed PJM/Carolina to: (a) describe the relationship between after-the-fact transmission reservations and North American Electric Reliability Corporation

⁸ See PJM OATT, Section 2.6A of the Appendix to Attachment K.

(NERC) reliability standards; (b) why it would be appropriate to allow after-the-fact transmission reservations to accommodate the PJM-Carolina Dynamic Schedule to some, but not all, PJM market participants; (c) what occurs when there is no ATC to support the transmission service; and (d) the details of how after-the-fact transmission reservations would be accounted for in OASIS and what occurs when there is no ATC to support the transmission service.⁹

i. PJM/Carolina Compliance Filing

17. PJM/Carolina state that Carolina Power generation that has committed to follow a five-minute PJM price signal behaves more like internal generation following PJM dispatch than a normal, block-scheduled transaction. PJM/Carolina state that the forecast interchange schedule will be included in the ATC calculation in the schedule horizon (as it will not be scheduled further out), i.e., within hours of real-time, while the actual schedule will be set after the Available Flowgate Capacity (AFC) calculation is complete and minutes prior real-time. PJM/Carolina state that the reservations will be posted on the PJM OASIS node after the fact for transparency. PJM/Carolina explain that the requirement for after-the-fact reservations is grounded in the recognition that the parties need to be able to calculate the appropriate point-to-point transmission charges to apply to the actual interchange that occurs. PJM/Carolina maintain that the requirement that after-the-fact transmission reservations be made to accommodate the PJM-Carolina Dynamic Schedule does not implicate any NERC Reliability Standards and is consistent with the guidance provided to the industry by NERC.¹⁰

18. On the issue of the appropriateness of allowing Carolina Power, but not other PJM market participants, to make after-the-fact transmission reservations, PJM/Carolina state that the PJM/Carolina transactions are contemplated as actual interchanges, as opposed to scheduled interchanges, and such actual interchanges do not require reservations.¹¹ Thus, PJM/Carolina argue that their agreement to record after-the-fact reservations actually exceeds established requirements and provides increased transparency compared to

⁹ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 32 & Appendix.

¹⁰ PJM/Carolina Compliance Filing at 4 (citing North American Electric Reliability Corporation, *Dynamic Transfer White Paper*, available at: http://www.nerc.com/docs/oc/is/Dynamic_Transfer_White_Paper_Draft_4.pdf).

¹¹ PJM/Carolina state that actual interchange refers to inadvertent (unscheduled) interchange and transmission losses, neither of which can be accurately calculated in advance or anticipated. Reservations, they assert, are not required because actual interchange is determined by the real-time conditions of the system.

similar dynamic energy transfers, such as pseudo-ties.¹² PJM/Carolina state that Carolina Power is in no better position in this regard than any other market participant, since all similarly situated parties have the ability to schedule transactions (like a pseudo-tie) and be compensated similarly. They also state that the ability to schedule after-the-fact reservations does not yield any market advantage to Carolina Power. PJM/Carolina assert that the congestion management approach in the Joint Operating Agreement relies upon the market to cause Carolina Power to vary generation dispatch, and after-the-fact reservations merely represent the accounting methodology used to verify that the change in dispatch has occurred.¹³

19. With respect to power interchange impacts where no ATC exists, PJM/Carolina state that on the Carolina Power side, a reservation will have to be requested and approved for the PJM-Carolina Dynamic Schedule to be used. If ATC is not available, they state that the reservation cannot be approved. PJM/Carolina state that the PJM-Carolina Dynamic Schedule will be capped at the reservation amount on the Carolina Power transmission system.¹⁴ As for constraints on the PJM side, PJM/Carolina state that given the dynamic nature of the energy transfer and the fact that minute-to-minute changes in the transfer will always be in the direction that relieves PJM transmission constraints, it is appropriate that ATC values calculated well ahead of time not limit the transfer. Therefore, according to PJM/Carolina, by relieving transmission constraints, the effect of the PJM-Carolina Dynamic Schedule will consistently be to increase ATC that may be utilized by market participants to reserve transmission service on the PJM system.¹⁵

20. Regarding the posting or modification of reservations, PJM/Carolina state that the transfer capability used to support the interchange is handled consistently as an actual interchange. PJM/Carolina maintain that the reservations are made after the fact for purposes of verification and not included as interchange in the Area Control Error

¹² A pseudo-tie is a “telemetered reading or value that is updated in real time and used as a tie line flow in the ACE equation but for which no physical tie or energy metering actually exists. The integrated value is used as a metered MWh value for interchange accounting purposes.” North American Energy Standards Board, *Wholesale Electric Quadrant Business Practice Standards* Version 002.1, March 11, 2009 at 238 (NAESB WEQ Standards).

¹³ PJM/Carolina Compliance Filing at 4.

¹⁴ *Id.* at 5.

¹⁵ *Id.*

(ACE)¹⁶ calculation, similar to internal generation dispatch.¹⁷ Regarding whether the point-to-point reservations are verified using OASIS ATC values or verified by ATC values calculated by PJM, PJM/Carolina state that, on the Carolina Power transmission system, the reservations made for use by the dynamic schedule will use the normal Carolina Power OATT process for evaluating reservations using ATC. On the PJM side, they state that the transactions will be posted on the OASIS node after the fact for transparency. PJM/Carolina state that the dynamic schedule will not be limited by the hour-ahead ATC calculation, but instead will be set by the security constrained economic dispatch software as is the case for internal generation and PJM-Midwest ISO Market-to-Market coordination.

ii. Comments

21. PJM Market Monitor states that the acquisition of transmission after the fact is neither compliant with an open-access approach to transmission as required under Order No. 888 nor does it ensure that transfer capabilities are held within calculated limits.¹⁸ PJM Market Monitor argues that the purpose of this NERC Standard INT-006-2 is “[t]o ensure that each Arranged Interchange is checked for reliability before it is implemented.”¹⁹ PJM Market Monitor maintains that Order No. 888 offers no precedent for permitting after-the-fact reservations in conditions where the PJM-Carolina Dynamic Schedule responds to real-time market signals.²⁰

22. In response to the argument that after-the-fact reservations are needed to relieve congestion, PJM Market Monitor states that this argument ignores the fact that while any transaction flowing against the constraint alleviates congestion on the transmission system, market participants other than Carolina Power are not permitted to make reservations after the fact. Moreover, PJM Market Monitor states that all other market participants must assume the risks of acquiring transmission in advance, not knowing if the reservation will be used or not. Thus, according to PJM Market Monitor, the preferential treatment of after-the-fact transmission offered to Carolina Power is unwarranted, unjustified and only provides economical benefits that other market

¹⁶ Area Control Error is the instantaneous difference between net actual and scheduled interchange, taking into account the effects of frequency bias including a correction for meter error. *See* NAESB WEQ Standards at 237.

¹⁷ *Id.*

¹⁸ PJM Market Monitor Comments at 4.

¹⁹ *Id.* at 5.

²⁰ *Id.*

participants are not offered.²¹ PJM Market Monitor maintains that Carolina Power's minute-to-minute response to the PJM-Carolina Dynamic Schedule would not provide adequate timing for other market participants to take advantage of any increase in ATC on the PJM side; for these entities, transmission must be reserved in advance.²²

23. PJM Market Monitor states that market transparency requires posting reservations in advance on OASIS, and posting transmission reservations after the fact is inconsistent with the purpose of OASIS.²³ PJM Market Monitor also states that not requiring an advance transmission reservation is inconsistent with PJM's past practice and explains that the situation is analogous to the PJM - Commonwealth Edison Pathway transaction (Pathway Dynamic Transfer)²⁴ that always followed PJM dispatch to provide a least-cost economic dispatch and control for constraints,²⁵ and which did not provide for or require use of after-the-fact transmission reservations.²⁶

24. Further, PJM Market Monitor states that if Carolina Power generation is to be treated as internal PJM generation for some purposes, it should be treated as such for all purposes. Carolina Power, PJM Market Monitor argues, should not receive benefits without commensurate responsibilities. PJM Market Monitor maintains that the PJM-Carolina Dynamic Schedule makes no such provisions for the requirements applicable for deliverability of export transactions and other financial support for the transmission system.²⁷ PJM Market Monitor contends that the Joint Operating Agreement preferentially treats Carolina Power generation, as compared to internal PJM generation resources, and thus creates an unjust and unreasonable economic incentive for Carolina Power to remain outside of organized wholesale markets. PJM Market Monitor concludes that such treatment weakens PJM and similar institutions by depriving them of the ability to demonstrate the merits of membership that are consistent with beneficial public policy.

²¹ *Id.*

²² *Id.* at 11-12.

²³ *Id.* 11-12.

²⁴ *Id.* at 7 (citing *PJM Interconnection, L.L.C.*, 106 FERC ¶ 61,253 (2004) (ComEd Integration Order)).

²⁵ *Id.*

²⁶ *Id.* at 8.

²⁷ *Id.* at 12.

25. PJM Market Monitor contends that allowing after-the-fact transmission reservations violates the premise on which ATC is calculated because a congestion management agreement should account for constraints on all parties' systems and price the resulting dispatch of generation to account for the relief of all constraints.

iii. PJM/Carolina Answer

26. PJM/Carolina state that Carolina Power's obligation to make after-the-fact reservations does not alter the character of these transactions, but merely accounts for Carolina Power's response while providing a basis upon which to calculate appropriate point-to-point transmission service charges. PJM/Carolina maintain that the INT Reliability Standards are not applicable to PJM-Carolina Dynamic Schedule transactions and that the schedule will continue to be set, as it has been done in the past, in accordance with all applicable NERC Reliability Standards.²⁸

iv. Commission Determination

27. The Commission, subject to the condition discussed below, finds that PJM/Carolina have provided sufficient information in their compliance filing for us to find that the dynamic schedule provisions of the Joint Operating Agreement are just and reasonable. As stated by PJM/Carolina, the Joint Operating Agreement represents a market-based approach to congestion management that occurs without advance schedules and the so-called "after-the-fact reservation" is an accounting device for the actual interchange. PJM/Carolina have reasonably: (a) shown that the PJM-Carolina Dynamic Schedule, which is a real-time schedule, respects NERC reliability standards; (b) shown that there is not unduly discriminatory access to non-firm transmission service, upon which the PJM-Carolina Dynamic Schedule relies; (c) explained what occurs when no ATC is available on either the PJM or Carolina Power side; and (d) explained how transactions are scheduled in OASIS.

28. Congestion management agreements such as the Joint Operating Agreement are useful means for addressing loop flow and other issues between Regional Transmission Organizations (RTOs) and other systems. By providing continuous congestion management on PJM's southern interface, the Joint Operating Agreement benefits both parties by providing rapid response to system conditions, an interface pricing methodology where interface prices are based on Locational Marginal Prices (LMPs), and a reduction of the potential for adverse loop flow that can create congestion and distort price signals.

29. PJM Market Monitor argues that the Joint Operating Agreement bestows upon Carolina Power generators the benefits of internal generation but not the costs, and this

²⁸ PJM/Carolina Answer at 3.

provides a disincentive for external PJM members to become part of the PJM footprint. As we discuss below, Carolina Power generators are in most respects external to the PJM market and are not similarly situated to PJM internal generators.²⁹ Moreover, this contention goes beyond the scope of this proceeding by challenging the existing provisions of PJM's OATT. The PJM OATT already recognizes that certain balancing authorities will not join an RTO and that congestion management agreements³⁰ such as the Joint Operating Agreement are useful means for addressing loop flow and other issues between RTOs and other systems. We also note that Commission policy, as described in Order No. 2000, is that RTO participation is voluntary.³¹

30. We find that PJM/Carolina's compliance filing reasonably addresses PJM Market Monitor's reliability concerns. Concerning reliability standard INT-006-002, PJM/Carolina correctly note that these standards are for firm transmission and do not apply to the non-firm transmission that the PJM-Carolina Dynamic Schedule uses. In addition, for firm transactions scheduled in advance, section 5.1.2 of the Joint Operating Agreement limits approvals of transmission service reservations to available capacity, and section 10.1.3 ensures that transactions scheduled in advance will follow NERC's Reliability Standards. Accordingly, the Joint Operating Agreement will respect reliability rules and, therefore, we reject PJM Market Monitor's protest on this point.

31. PJM Market Monitor also states that the Joint Operating Agreement is inconsistent with the ComEd Integration Order³² and Order No. 888. We disagree with this statement. The ComEd Integration Order concerned firm, dynamically scheduled transactions between PJM and ComEd over AEP's transmission lines, while the PJM-Carolina Dynamic Schedule in the Joint Operating Agreement concerns non-firm,

²⁹ *Infra* P 34.

³⁰ *See, e.g.* PJM OATT, Appendix to Attachment K, section 2.6A(b)(2).

³¹ *Regional Transmission Organizations*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), *aff'd sub nom. Pub. Util. Dist. No. 1 of Snohomish County, Washington v. FERC*, 272 F.3d 607 (D.C. Cir. 2001). "The Commission has made a judgment that the most efficient and effective means is one that involves establishing clear standards, removing obstacles, and fostering cooperation and creativity, rather than one that imposes strict mandates that could polarize parties and generate resistance. That we have not chosen to mandate RTO participation does not mean that we have avoided our obligations to address the impediments to competition that we identified; it merely means that we have chosen a method to address those impediments that we believe will efficiently achieve the result we desire." Order No. 2000-A, FERC Stats. and Regs., at 31,092-93.

³² ComEd Integration Order, 106 FERC ¶ 61,253.

dynamically scheduled transactions directly between PJM and Carolina Power. Dynamic transfers between PJM and Carolina Power will use non-firm point-to-point service, and the receiving party's system will use secondary network service to effect the transfer. Therefore, Carolina's use of non-firm transmission will occur only on an as-available, non-discriminatory basis and will not provide it an advantage over other customers which submit reservations. In these circumstances, we find that allowing Carolina Power an after-the-fact reservation of non-firm transmission service is just and reasonable.

32. The Commission has recognized that ISOs and RTOs, due to their real-time dispatch may need waiver of the Order Nos. 888 and 890 requirements regarding the timing of scheduling.³³ In these cases, after-the-fact scheduling is deemed superior to the OATT service. We find that in the circumstances here, allowing Carolina Power an after the fact reservation of non-firm transmission service is just and reasonable. As compared to the use of high low pricing under the PJM OATT, the Joint Operating Agreement provides for a superior method of congestion management between PJM and Carolina to the benefit of both parties. As PJM/Carolina have stated, the Joint Operating Agreement is a market based approach to congestion management that features rapid response to changing conditions on the PJM-Carolina Power interface and also provides for enhanced reliability.³⁴ In addition, we accepted the general approach of using a dynamic schedule for congestion management when we conditionally approved the Joint Operating Agreement in the May 28, 2010 Order as just and reasonable.³⁵

33. After-the-fact scheduling is necessary because at the time reservations are required to be made, PJM/Carolina do not know how much transmission service will ultimately be required in real-time to manage congestion on the PJM-Carolina Power interface.³⁶ After-the-fact reservations account for actual transfers between PJM and Carolina Power that are possible as system conditions change and are merely an accounting convention that enables PJM to bill appropriately for the transmission service used.³⁷ Moreover, as

³³ See, e.g., Section 2 of Attachment C of the ISO New England Inc. Transmission, Markets and Services Tariff, Section II.

³⁴ PJM/Carolina Compliance Filing at 3.

³⁵ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 20.

³⁶ PJM/Carolina Compliance Filing at 3.

³⁷ Within an RTO or ISO that has an LMP system, internal congestion is managed by finding the LMPs that provide the least cost way to satisfy demand that still respects operational and reliability constraints. The process of finding LMPs also determines optimal internal transmission flows. Consequently, internal generators within RTOs or ISOs with LMP systems are not required to submit transmission reservations.

PJM/Carolina point out, such after-the-fact scheduling does not provide Carolina Power with an advantage over other parties scheduling non-firm service, because the after-the-fact schedule can be used only when ATC is available. If we were to require Carolina and PJM to make reservations ahead of time based on their anticipated maximum value of the dynamic schedule, as the PJM Market Monitor seemingly suggests, the requirement could well result in less transmission being available to other participants as Carolina Power would reserve transmission it actually would not use. Further, as PJM/Carolina note, because changes in the dynamic schedule value will have the effect of relieving congestion on the transmission system, such changes will, by definition result in an increase in power transfer capability that may be used by market participants to reserve transmission service on the PJM system.

34. PJM Market Monitor states that Carolina Power generation should be treated as internal generation in all respects if it is to be treated as internal generation in one respect. We disagree. As we stated earlier, Carolina cannot be required to join an RTO and the PJM OATT specifically contemplates that congestion management agreements could be used to increase the efficiency of dispatch between systems. Although Carolina Power generators following the PJM-Carolina Dynamic Schedule may be dispatched similarly to internal generation in real time, such generators are not similarly situated to PJM internal generators. Each Carolina Power generator that supplies energy to PJM through the PJM-Carolina Dynamic Schedule receives a price based on the real time LMPs as determined in the Joint Operating Agreement by PJM within the Carolina Power balancing authority area, not the real time LMP at the generator's bus that PJM internal generators receive. In particular, the price that a Carolina Power generator receives for energy sales may be lower than the real time LMP at its bus. The sale price for imports to PJM will also revert to SOUTHIMP³⁸ when Carolina Power is simultaneously importing power, while internal generators will receive their LMP. Moreover, generators of the Carolina Power balancing authority area are external with respect to other markets that PJM administers, such as the Day-Ahead energy market and capacity market. In addition, the Joint Operating Agreement does not provide one-sided benefits to Carolina; it also bestows benefits upon PJM and its customers by providing continuous congestion management, interface pricing, and a means to resolve loop flow problems. More specifically, these benefits include lowered congestion costs as result of relieving congestion at PJM's southern interface by importing power from Carolina Power and

³⁸ SOUTHIMP is a default import (to PJM) price, and SOUTHEXP is a default export (from PJM) price on the PJM southern interface. A description can be found in the May 1, 2009 Order, 127 FERC ¶ 61,101 at n.6: "SOUTHIMP/SOUTHEXP external proxy prices were introduced in 2006 so that PJM's southern interface would receive one import price and one export price. This pricing method is a consolidation of 12 pricing nodes stretching from the Great Lakes in the Midwest ISO through Kentucky, Tennessee and the North Carolina coast."

managing more effectively loop flow, which also contributes to congestion costs. The Joint Operating Agreement also confers significant reliability benefits to PJM and other parties in the region by reducing the need to use transmission loading relief procedures (TLRs) to manage regional congestion.³⁹

35. As for PJM Market Monitor's request that a more comprehensive solution be implemented, such as PJM/MISO congestion management agreement, the Commission previously rejected PJM Market Monitor's contention that the Joint Operating Agreement should be rejected on this ground.⁴⁰ PJM Market Monitor did not seek rehearing of that determination, and therefore, we will not revisit that decision here.

36. However, while we find that after-the-fact scheduling is permissible in an RTO when used in real-time scheduling, PJM needs to revise its OATT to make such scheduling generally available to all similarly situated parties seeking to dynamically schedule to coordinate operations and beneficially manage congestion in real time with PJM. Other RTOs have indicated in their OATTs the circumstances under which after-the-fact scheduling will be permitted.⁴¹ We, therefore, will accept the Joint Operating Agreement subject to the condition that PJM file a revised provision to its OATT within thirty days that details how similarly situated parties can elect to use such a dynamic scheduling arrangement, including the after-the-fact transmission reservations provisions. The dynamic scheduling arrangement will be available on a not unduly discriminatory basis to all similarly situated parties that wish to use them.

b. PJM Export Pricing

37. Section 2.6A(b)(2)(A) of the Attachment to Appendix K of the PJM OATT, provides that, upon execution of a congestion management agreement, pricing for exports from PJM to a directly connected balancing authority area or sub-area will be determined every five minutes as follows: 1) the export price will be the highest LMP of any operating generator that has an LMP greater than its marginal cost; and 2) if no such generator exists, then the export price shall be the average of the bus LMPs for the

³⁹ See, e.g., PJM/Carolina, Transmittal, Docket No. ER10-713-000, at 5 (filed Feb. 2, 2010); PJM/Carolina, Answer, Docket No. ER10-713-000, at 4-5 (filed Mar. 10, 2010).

⁴⁰ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 20-21 (citing May 1, 2009 Order at 127 FERC ¶ 61,101 at P 23, 33, and 35 (Congestion management agreements for balancing authority areas directly connected to PJM are just and reasonable if such agreements allow PJM to identify loop flows and otherwise account for the effect of neighboring balancing authorities' dispatch on PJM)).

⁴¹ *Id.*

operating generators that PJM determines to be the marginal units.⁴² In the Joint Operating Agreement, PJM/Carolina agreed that step one of this formula would not be applied to nuclear and hydro units; in other words, the export price would not be set to the LMP at a nuclear or hydro unit if the LMP at that unit is the highest LMP that is greater than the unit's marginal cost.

38. In the May 28, 2010 Order, we conditionally accepted the Joint Operating Agreement's exclusion of nuclear and hydro units in the calculation of export prices from PJM. We directed PJM/Carolina to explain in detail the rationale for excluding Carolina Power's hydro and nuclear units from the calculation of PJM export prices and how this exclusion affected Carolina Power's dispatch. In addition, we directed PJM/Carolina to explain why Carolina Power's nuclear and hydro units are unable to respond to constraints. Finally, we directed PJM/Carolina to explain how excluding Carolina Power's nuclear and hydro units from the calculation of export prices will provide the proper incentive for Carolina Power's plants to decrease generation in order to receive an export from PJM and why the price signal is accurate.⁴³

i. PJM/Carolina Compliance Filing

39. PJM/Carolina state that the intent of the interface pricing calculation is to price the energy transfer between PJM and Carolina Power based on the units that are actually increasing or decreasing generation to support the energy transfer. Because hydro and nuclear units are not dispatched economically,⁴⁴ PJM/Carolina reason that it is appropriate to exclude such units from this price calculation. More specifically, PJM/Carolina state that hydro and nuclear units are reserved for Carolina Power's retail native load obligations in North and South Carolina and the nuclear units run at maximum available output and therefore cannot increase or decrease MW output effectively to help relieve congestion.⁴⁵ PJM/Carolina state that Carolina Power has

⁴² PJM will determine the marginal units by summing the output of the units serving load in that area in ascending order of the units' marginal costs until such sum equals the real time load in such external area. Units in the external area with marginal costs at or above that of the last unit included in the sum shall be the marginal units for that area for that interval.

⁴³ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 41.

⁴⁴ PJM/Carolina Compliance Filing at 6.

⁴⁵ *Id.* at 6-7.

fossil units located in the same geographic area as its nuclear units that can respond to the PJM flowgate needs in the most cost effective and efficient manner.⁴⁶

40. PJM/Carolina maintain that including non-dispatchable units, as is done under Marginal Cost Proxy Pricing in the PJM OATT, will pollute the pricing signal being sent to the remainder of the Carolina Power generation fleet that responds to PJM price signals. PJM/Carolina present an example to illustrate this point. In the example, PJM/Carolina state that a low marginal cost nuclear or hydro unit will more than likely always be used to set the export interface price because it will more than likely always have an LMP above its low marginal cost unless it is constrained off.⁴⁷ PJM/Carolina note that when a hydro or nuclear unit sets the price, that price is somewhat meaningless because it does not reflect the value to PJM of the units that are able to reduce their output to receive a purchase from PJM.⁴⁸ PJM/Carolina state that, by excluding nonresponsive nuclear and hydro units, the resulting interface price clearly articulates the fact that an export price reflects only those units that can and will reduce their output, and that the resulting lower price may indicate that it is optimal for Carolina Power generators to reduce the output of their highest cost unit.⁴⁹

41. PJM/Carolina state that the Carolina Power import and export pricing points will be applied to all transactions equally.⁵⁰

ii. Comments

42. PJM Market Monitor states that excluding Carolina Power's nuclear and hydro units from the calculation of export prices will not consistently incent Carolina Power generation to back down in order to receive an export from PJM. It contends that the calculation of the interface prices should include these units, as is the case with all other implementations of LMP.⁵¹ PJM Market Monitor contends that the intent of the interface pricing calculation should not be based on the definition in the Joint Operating Agreement and instead, the price calculation should reflect the effects of Carolina Power's generation on system constraints in order to elicit an appropriate response from

⁴⁶ *Id.* at 7.

⁴⁷ *Id.* at Appendix A.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at 7.

⁵¹ PJM Market Monitor Comments at 14.

generation, which is the basis of LMP. PJM Market Monitor argues that modification of this by the Joint Operating Agreement is not justified.⁵²

43. PJM Market Monitor maintains that the dispatchability, or the lack thereof, of a unit is irrelevant to the effect the pricing signals have on Carolina Power dispatch. PJM Market Monitor states that Carolina Power would not be incented to back down its generators even if all the units in question were flexible and dispatchable.⁵³ Further, PJM Market Monitor also states that export relief may be limited using the Joint Operating Agreement pricing rules. PJM Market Monitor maintains that Carolina Power is given an incentive to limit the potential relief that it is capable of providing, as only the marginal unit would reduce generation.⁵⁴

44. PJM Market Monitor also argues that the fact Carolina Power can reserve output from the nuclear and hydro units for its own purposes illustrates the inconsistency of the PJM/Carolina approach to interface pricing with LMP.⁵⁵ PJM Market Monitor states that LMPs reflect the actual incremental cost to generate power to meet actual loads. It argues that these calculations do not and should not account for the designation of certain megawatt-hours for certain customers. This argument, according to PJM Market Monitor, requires that PJM/Carolina control the physics of the system to direct the output of those units specifically for retail native load, which is impossible and contrary to the premise on which an LMP market is designed.⁵⁶

iii. Commission Determination

45. PJM/Carolina have provided sufficient information in their compliance filing for the Commission to find that the Joint Operating Agreement's exclusion of nuclear and hydro units in the calculation of export prices to the Carolina Power balancing authority area is just and reasonable. Carolina Power's nuclear and hydro generators do not respond to price signals and therefore will not respond to the PJM-Carolina Dynamic Schedule. The nuclear and hydro capacity is reserved for Carolina's native load

⁵² *Id.*

⁵³ *Id.* at 18.

⁵⁴ *Id.* at 20-21.

⁵⁵ *Id.* at 21.

⁵⁶ *Id.* at 21-22.

requirements.⁵⁷ As a result, Carolina Power generators following the PJM-Carolina Dynamic Schedule will be dispatched properly as discussed below.

46. As described above, Marginal Cost Proxy Pricing for exports from PJM is a two-step process. Step one sets the export price at the highest LMP in the balancing authority area that is greater than a unit's marginal cost. If there is no unit that has an LMP greater than its marginal cost, the export price is set in step two by the average of the LMPs for all external generators determined to be marginal for the external balancing authority area. These provisions allow for more accurate pricing than was previously available and are designed to protect PJM from loop flow.⁵⁸ The pricing for PJM exports in the Joint Operating Agreement is generally the same as Marginal Cost Proxy Pricing, except that the step one export price excludes nuclear and hydro units.

47. The step one export price in the Joint Operating Agreement still provides the correct price signal as long as the nuclear and hydro units are non-dispatchable. The step one price is designed to ensure that a unit whose LMP exceeds its marginal cost will not decrease generation when it is providing benefit to PJM. When a generating unit's marginal cost is lower than the LMP at its location, the operation of such a unit provides benefit to PJM since any reduction in output from that unit will increase the LMP. PJM, therefore, does not want to sell power to Carolina Power at a price that might create an incentive for Carolina Power to reduce the output of a generating unit that is reducing PJM's LMP. If such a unit is non-dispatchable, and therefore would not respond to a price signal, however, PJM has no need to set the step one export price at a high enough price to discourage Carolina Power from decreasing generation of that non-dispatchable unit. Since nuclear and hydro units from Carolina Power's system do not raise or lower output in response to price, the LMP at a nuclear or hydro unit can be ignored in step one without risk to PJM.

48. PJM Market Monitor argues that the entire set of pricing provisions in the Joint Operating Agreement could be improved by replacing the interface pricing and basing that calculation instead on "setting the appropriate price to reflect the effects of [Carolina

⁵⁷ The Commission notes that the North Carolina Commission's order states, in part: "[Carolina Power] shall continue to serve its retail native load customers in North Carolina with the lowest-cost power it can reasonably generate or purchase from other sources before making power available for off-system sales." Because hydro and nuclear resources typically have the lowest marginal cost, these resources will serve native load. North Carolina Public Utilities Commission, *In the Matter of Petition of Progress Energy Carolinas, Inc. to Revise its Code of Conduct and Eliminate or Revise Regulatory Conditions*, Docket No. E-2, Sub 844 and Sub 844A, October 27, 2004.

⁵⁸ May 1, 2009 Order, 127 FERC ¶ 61,101 at P 23.

Power] generation on constraints and thereby elicit an appropriate response.”⁵⁹ As PJM Market Monitor recognizes, this argument is essentially one that would be equivalent to pricing that would be obtained if Carolina Power fully integrated into PJM’s footprint and became subject to PJM internal LMP pricing.⁶⁰ Making such a revision is beyond the scope of this proceeding, since it is not limited to this agreement, but would require revision of the Marginal Cost Proxy Pricing methodology previously accepted in the PJM OATT. The only question at issue here is whether PJM/Carolina have justified their exception for the nuclear and hydro units. PJM Market Monitor has not convinced us the exception of nuclear and hydro units is unjust and unreasonable or unduly discriminatory for these non-dispatchable units. Therefore, we find that such an exception is just and reasonable for these non-dispatchable units.⁶¹

49. While PJM Market Monitor would prefer changes in the pricing formula, it does not disagree that in the particular circumstance described above the exclusion of nuclear and hydro units encourages an “appropriate response.”⁶² PJM Market Monitor’s objection is not to the exclusion of nuclear and hydro units in calculating the export price under the Joint Operating Agreement’s pricing formula, but rather to the pricing formula already a part of the PJM OATT.

⁵⁹ PJM Market Monitor Comments at 14.

⁶⁰ *Id.* at 20-21.

⁶¹ PJM Market Monitor is merely repeating its argument that a better result could be obtained if Carolina Power joined PJM and was dispatched in the same fashion as other internal PJM generators. As noted above, Carolina Power is not required to become part of the PJM footprint; therefore, the perfect rate desired by PJM Market Monitor may not be attainable. Pricing provisions do not have to be perfect, only just and reasonable and not unduly discriminatory or preferential. *See, e.g., Sithe/Independence Power Partners, L.P. v. FERC*, 285 F.3d 1, 5 (D.C. Cir. 2002) (“feasibility concerns play a role in approving rates, indicating that FERC is not bound to reject any rate mechanism that tracks the cost-causation principle less than perfectly”); *Batavia v. FERC*, 672 F.2d 64, 84 (D.C. Cir. 1982) (“billing design need only be reasonable, not theoretically perfect”); *American Elec. Power Serv. Corp. v. FERC*, 116 FERC ¶ 61,179, at P 25 (2006) (provisions “need be neither perfect nor even the most desirable; they need only be just and reasonable and not unduly discriminatory or preferential”); *New England Power Co.*, 52 FERC ¶ 61,090, at 61,336 (1990) (rate design proposed need not be perfect, it merely needs to be just and reasonable), *aff’d, Town of Norwood v. FERC*, 962 F.2d 20, 295 U.S. App. D.C. 211 (D.C. Cir. 1992).

⁶² PJM Market Monitor Comments at 20-21.

50. PJM Market Monitor also argues that reserving generator output for native load is inconsistent with an LMP system. However, since Carolina Power has not joined PJM, it has not agreed to enter into a full LMP market. It therefore is also not receiving all of the benefits of LMP markets. Generally, border issues for a large ISO/RTO are inherently complex and we find that this proposal is a just and reasonable solution to one such issue. Moreover, PJM Market Monitor has not convinced us that the pricing methodologies adopted in the Joint Operating Agreement are unjust, unreasonable, or unduly discriminatory.

c. Make-Whole Determination Issues

51. Under the make-whole provision, PJM commits to paying Carolina Power in situations in which transactions do not fully cover Carolina Power's costs. For import transactions, PJM will compensate Carolina Power through Balancing Operating reserves when the total cost to Carolina Power for all hours exceeds the total revenue Carolina Power receives for all hours. For export transactions, PJM will compensate Carolina Power if the total cost incurred by Carolina Power exceeds the total avoided cost for the entire 24-hour period.

52. In the May 28, 2010 Order, we conditionally accepted the make-whole provisions of the Joint Operating Agreement, subject to a compliance filing by PJM/Carolina. We directed PJM/Carolina to address the impact of creating an export make-whole payment for Carolina Power, but not for other market participants. We directed PJM/Carolina to identify any precedent or source for the Joint Operating Agreement's use of the "eight five-minute periods in an hour" eligibility criterion for Carolina Power to receive make-whole payments. We also directed PJM/Carolina to explain why Carolina Power need not follow the dynamic signal for all five minute periods in an hour to be eligible for make-whole payments. Finally, we directed PJM/Carolina to clarify whether Carolina Power is eligible to receive make-whole payments if the interface price reverts to SOUTHIMP/SOUTHEXP and the reasons for doing so.⁶³

i. PJM/Carolina Compliance Filing

53. PJM/Carolina state that make-whole payments for exports are a measure to ensure proper compensation for Carolina Power for committing to follow the PJM-Carolina Dynamic Schedule. PJM/Carolina note that such commitment is a justification to treat export transactions under the PJM-Carolina Dynamic Schedule differently from other export transactions. PJM/Carolina state that these payments provide an incentive for Carolina Power to follow PJM's LMP signals which, in turn, optimizes transfers between the two regions providing the proper incentive to alleviate congestion and maximizing the

⁶³ May 28, 2010 Order, 131 FERC ¶ 61,181 at P 49.

transfer capability.⁶⁴ Without the make-whole payments, PJM/Carolina maintain that Carolina Power would have a reduced incentive to follow the PJM-Carolina Dynamic Schedule.

54. PJM/Carolina state that the make-whole payments do not impact other market participants beyond those impacts already observed due to make-whole payments to other resources on the PJM system. PJM/Carolina maintain that PJM provides a bid production cost guarantee to resources that follow its dispatch instructions. PJM/Carolina maintain that make-whole payments are allocated as Operating Reserve charges⁶⁵ and payments resulting from the PJM-Carolina Dynamic Schedule will be allocated the same way. PJM/Carolina state that make-whole payments increase the efficiency with which the system is operated by solidifying the incentive for resources to follow PJM dispatch instructions, just as they will solidify the incentive for Carolina Power to follow the price signals associated with the actual interchange.⁶⁶

55. PJM/Carolina state that there is no absolute precedent for the “eight five-minute periods in an hour” criterion. PJM/Carolina explain that in structuring the congestion management process, the parties agreed that an appropriate metric was needed and this metric was determined to be analogous to how PJM determines whether internal generators are following dispatch.⁶⁷ PJM/Carolina state that it is unreasonable to require Carolina Power to follow dispatch perfectly when internal generators are not required to do so. PJM/Carolina further state that the criterion was crafted as a reasonable and defined metric for determining whether Carolina Power is following PJM LMP signals.⁶⁸

56. PJM/Carolina maintain that PJM does not hold its own internal generators to a more stringent standard. PJM/Carolina state that holding Carolina Power to a higher standard than is required for internal generators is unreasonable and fails to provide the proper incentives for Carolina Power to respond appropriately.⁶⁹

57. With respect to the SOUTHIMP/SOUTHEXP, the PJM default interface prices, PJM/Carolina state that if the applicable price Carolina Power is responding to, and being

⁶⁴ PJM/Carolina Compliance Filing at 7.

⁶⁵ PJM OATT, Appendix to Attachment K, Section 3.2.3(b).

⁶⁶ PJM/Carolina Compliance Filing at 7-8.

⁶⁷ PJM OATT, Appendix to Attachment K, Section 3.2.3(o).

⁶⁸ PJM/Carolina Compliance Filing at 8.

⁶⁹ *Id.*

compensated for, is the SOUTHIMP/SOUTHEXP price, then Carolina Power will be made whole if it meets the eligibility criterion. Regardless of the price followed, PJM/Carolina maintain that the more closely Carolina Power can follow that LMP signal, the more optimal the dispatch will be.⁷⁰

ii. Comments

58. PJM Market Monitor states the Commission should reject make-whole payments for exports from PJM to Carolina Power on the grounds that they are inconsistent with the way PJM treats other export transactions. It states that PJM does not currently have make-whole provisions for export transactions and creating one specifically for Carolina Power's export transaction is granting preferential treatment.⁷¹ This, according to PJM Market Monitor, will affect the pool of Balancing Operating Reserves that can be allocated to other market participants.

59. PJM Market Monitor asserts that while PJM/Carolina justify the make-whole payments to Carolina Power, they do not adequately quantify the effect of not granting make-whole payments to other participants' export transactions. The significance, according to PJM Market Monitor, is that the funding for the make-whole payments will come from operating reserves which are not collected from export transactions. PJM Market Monitor concludes that the allocation of make-whole payments could potentially increase the Operating Reserve charges to all other market participants to fund the make-whole payments, resulting in preferential treatment.⁷²

60. PJM Market Monitor also contends that PJM/Carolina should state whether the PJM-Carolina Dynamic Schedule should be treated as an internal generator, to which all relevant PJM business rules would apply, and that the application of the rules should not discriminate among different parties. PJM Market Monitor states that the PJM/Carolina response does not quantify how their metric compares to the requirements internal PJM resources are measured against, nor do they qualify how their choice of a metric is reasonable.⁷³

61. PJM Market Monitor maintains that it does not oppose applying a bandwidth within which the PJM-Carolina Dynamic Schedule must follow the PJM dispatch signal in qualifying for make-whole payments, so long as the same metrics are applied to all

⁷⁰ *Id.* at 8-9.

⁷¹ PJM Market Monitor Comments at 24.

⁷² PJM Market Monitor Comments at 24-25.

⁷³ *Id.* at 26.

market participants. PJM Market Monitor states that not requiring Carolina Power to follow the PJM dispatch signal for all intervals within an hour does not hold Carolina Power to a higher standard than internal PJM generation, as there is no less a requirement for internal generation following a ramp limited desired signal.⁷⁴ PJM Market Monitor agrees the bandwidth, described in the Joint Operating Agreement, is similar to that of the ramp limited desired bandwidth of internal PJM generators. PJM Market Monitor maintains that the requirement to follow the dispatch signal in all five-minute intervals is not unreasonable, nor would it fail to provide the proper incentive for Carolina Power to respond appropriately.

62. PJM Market Monitor states that it strongly disagrees with the PJM/Carolina response that would allow Carolina Power to remain eligible to receive make-whole payments if the price reverts to the SOUTHIMP/SOUTHEXP price because the intent of the Joint Operating Agreement is to incent Carolina Power to respond to PJM price signals to help control transmission constraints.⁷⁵ PJM Market Monitor contends that if Carolina Power chooses to export the energy it is receiving from PJM to another balancing authority area, a wheeling transaction would be created; generation within the Carolina Power balancing authority area would not change. According to PJM Market Monitor, a similar situation would occur if Carolina Power chose to import energy from another balancing authority at the same time that PJM is importing from the Carolina Power balancing authority area; a wheeling transaction occurs whereby generation within the Carolina Power balancing authority area would not change. PJM Market Monitor asserts the benefits obtained from the redispatch of Carolina Power's generation on transmission constraints would not be realized, and therefore, Carolina Power should not be made whole when the interface price reverts to the SOUTHIMP/SOUTHEXP price.⁷⁶

iii. Commission Determination

63. PJM/Carolina have provided sufficient information in their compliance filing for the Commission to find that the make-whole provisions in the proposed Joint Operating Agreement are just and reasonable. The Joint Operating Agreement benefits both the PJM market and Carolina Power by providing rapid response to system conditions, an interface pricing methodology where prices are advantageous to both parties, and a reduction of the potential for adverse loop flow that can create congestion and distort pricing signals. We agree with PJM/Carolina that the make-whole payments ensure the success of the Joint Operating Agreement because Carolina Power will not lose money for committing to follow the PJM-Carolina Dynamic Schedule, nor would Carolina

⁷⁴ *Id.* at 27.

⁷⁵ *Id.* at 28.

⁷⁶ *Id.*

Power have agreed to follow the PJM-Carolina Dynamic Schedule if it could not be assured that it will cover its costs.

64. PJM Market Monitor objects to make-whole payments for exports to Carolina Power on the grounds that they are preferential and may increase operating reserve charges. We disagree. The generators that Carolina Power commits to follow the PJM-Carolina Dynamic Schedule to manage congestion at the PJM/Carolina Power interface are not similarly situated to other external generators.⁷⁷ No other external generators have been committed to continuously follow a dynamic schedule and increase or reduce generation in real time when needed. Moreover, nothing in the Joint Operating Agreement precludes similar agreements between PJM and other parties, and no parties similarly situated to Carolina Power have protested the make-whole provisions. PJM Market Monitor does not quantify how much operating reserve charges may be increased to allow make-whole payments to PJM/Carolina, nor does PJM Market Monitor compare the benefits of ensuring that Carolina Power follow PJM's pricing instructions with the potential costs.

65. We disagree with PJM Market Monitor's objection to the Joint Operating Agreement's proposed "eight five minute periods in an hour" eligibility criterion for make-whole payments to Carolina Power. An internal PJM generator need not follow dispatch for the entire hour to be considered on dispatch. According to the PJM OATT, a PJM internal unit can be on dispatch for the hour if it produces within five percent of desired megawatt-hours for the hour.⁷⁸ It is possible for a PJM generator to deviate slightly⁷⁹ from the desired dispatch for all five minute periods in an hour and still be considered on dispatch for the hour, and therefore be eligible for balancing operating reserve, or make-whole payments. A Carolina Power generator with identical output, by contrast, would not be eligible for make-whole payments under the Joint Operating Agreement criterion. We note that PJM Market Monitor has agreed that the bandwidth the Joint Operating Agreement uses to determine whether a unit is following dispatch within a five minute period is similar to the PJM OATT. Therefore, the Joint Operating Agreement "eight five minutes an hour" dispatch criterion is not less strict than the criterion in the PJM OATT. Accordingly, we accept the "eight five minute periods in an hour" criterion as just and reasonable.

66. PJM Market Monitor disagrees with make-whole payments to Carolina Power when the interchange price is SOUTHIMP/SOUTHEXP, which occurs when PJM and

⁷⁷ See *supra* P 35.

⁷⁸ PJM OATT, Attachment to Appendix K, Section 3.2.3(o).

⁷⁹ For example, the generator could generate slightly more than desired for half of the hour and slightly less than desired for the remainder of the hour.

Carolina Power are both simultaneously importing or simultaneously exporting power. PJM Market Monitor reasons that the benefit of congestion relief is lost in these situations. However, Carolina Power has committed to follow the PJM-Carolina Dynamic Schedule, responding to prices on its interface with PJM. That commitment does not cease when simultaneous imports and exports are occurring. Therefore, Carolina Power should still not lose money for following the PJM-Carolina Dynamic Schedule. Accordingly, we find that the make-whole payments when the interchange price is SOUTHIMP/SOUTHEXP are just and reasonable.

The Commission orders:

(A) PJM/Carolina's compliance filing is hereby accepted, as discussed in the body of this order, and the Joint Operating Agreement is accepted subject to further condition, as set forth in the body of this order.

(B) The clarification requested by NCEMC is granted, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.