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103 FERC ¶ 63,047

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Consolidated Edison Company of New York, Inc.,
Complainant

v. **Docket No. EL02-23-000 (Phase II)**

Public Service Electric and Gas Company,
PJM Interconnection, L.L.C. and
New York Independent System Operator, Inc.,
Respondents.

INITIAL DECISION ON PHASE II ISSUES
(Issued June 11, 2003)

APPEARANCES

Donald J. Stauber and Brent L. Brandenburg for Consolidated Edison Company of New York, Inc.

Kenneth G. Jaffe, Timothy A. Ngau, Richard P. Bonnifield and Kenneth R. Carretta for Public Service Electric and Gas Company.

Barry S. Spector and Paul M. Flynn for PJM Interconnection, L.L.C.

Arnold H. Quint and Ted J. Murphy for the New York Independent System Operator, Inc.

Steven A. Weiler for Arthur Kill Power LLC.

Michael D. Cotleur and Thomas J. Burgess for the Trial Staff of the Federal Energy Regulatory Commission

ISAAC D. BENKIN, Presiding Judge:

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INTRODUCTION

1. This is the second phase of a proceeding designed to resolve a number of disputes between two neighboring public utilities. The initial decision in Phase I, reported at 99 FERC ¶ 63,028 (2002), set out the essential facts in some detail. The facts are here recounted only as it is necessary to do so to address the questions presented in Phase II.

2. The two utilities at loggerheads are Consolidated Edison Company of New York, Inc. (Con Edison) and Public Service Electric and Gas Company (PSE&G). Con Edison's service territory includes most of New York City, as well as Westchester County, N.Y. PSE&G serves Northern New Jersey. Each of the protagonists is a member of a different Independent System Operator (ISO) organization, to which it has delegated most of its responsibility for providing transmission service, together with operational control of its bulk power transmission facilities. In PSE&G's case, the ISO is PJM Interconnection, L.L.C. (PJM). Con Edison belongs to the New York Independent System Operator (NYISO) organization. The two ISOs are abutting systems. The boundary between them, in part, is coterminous with the border separating Con Edison from PSE&G (and New York from New Jersey).

3. The disputes between Con Edison and PSE&G give rise to difficult and contentious issues. But the issues are not typical "seams" issues, that normally arise out of transactions spanning two or more ISOs. Even though everyone agrees that if the two utilities were members of the same ISO organization, these disputes would not be before the Commission for resolution, the problems before the Commission are sui generis. The key to resolving them is to develop a cooperative arrangement under which service to Con Edison under two contracts that predate the birth of open-access transmission and Regional Transmission Organizations can be equitably fitted into an environment that includes both of those phenomenon. In my judgment, given a little mutual trust and consideration, the task is not beyond the grasp of the parties and this Commission.

4. The disputes arise out of two contracts, signed in 1975 and 1978. In the 1975 contract, PSE&G agreed to transmit through its service territory and re-deliver to Con Edison up to 400 MW of electric power delivered to it by Con Edison in the northern portion of the PSE&G system. The 1978 contract called for PSE&G to wheel to Con Edison an additional 600 MW delivered to it by Con Edison. The redeliveries to Con Edison were to take place at three points: the so-called A feeder that ran between Linden, New Jersey and the Goethals Station located on Staten Island in New York City and the B and C feeders that traversed the Hudson River between Hudson, New Jersey and Con Edison's Farragut Substation on Manhattan Island. The contracts also called for Con Edison to contribute to the cost of the B feeder, another transmission line between Ramapo, New York and

Waldwick, New Jersey (the J Line) and substantial reinforcements to the PSE&G transmission system. In addition, Con Edison was obligated to make annual payments to PSE&G of amounts ranging from $650,000 to $500,000 for the wheeling service. Under the 1975 contract, the 400-MW transfer could be interrupted "when critical bulk-power system outages make it impossible for Public Service to transmit this power without exceeding the long term emergency ratings of its equipment or risking excessive loads on its facilities from possible subsequent contingencies." The 1978 contract allowed curtailment of the transfer "when critical bulk-power facility outages in the northern portion of the [PSE&G] system would, in the opinion of [PSE&G] reduce [PSE&G's] ability to provide such transfer." Under the 1978 contract, PSE&G also agreed to "plan, design, build and operate its system so as to supply its own load, meet its obligations to PJM and wheel 600 MW to [Con Edison]."

COMMISSION PROCEEDINGS

5. On November 15, 2001, Con Edison filed a complaint with the Commission, alleging that PSE&G had violated its contractual obligations under the 1975 and 1978 contracts. Also named as respondents were PJM and the NYISO. The gravamen of the complaint was that PSE&G had wrongfully curtailed delivery of the 1,000 MW of transmission service that Con Edison had acquired under the contracts. In addition, the complaint raised several other ongoing disputes, including a contention that PSE&G had failed to replace a failed transformer in a timely fashion and a claim that the New Jersey utility was unlawfully exercising market power to the detriment of Con Edison.

6. In an order issued April 10, 2002, 99 FERC ¶ 61,033 (2002), the Commission set the case for hearing. The order authorized division of the hearing process into two phases. The parties stipulated that, at the Phase I hearing, three issues would be considered. The stipulated Phase I issues included (1) whether the 1,000 MW of wheeling for Con Edison was a "firm" service; (2) whether curtailment of the transmission service must be pro rata with other firm transmission services rendered with PSE&G's facilities; and (3) whether PSE&G was remiss in not providing a spare transformer. In addition, since the Commission had ordered the Phase I issues to be the subject of an initial decision rendered before May 29, 2002, I instructed the parties to include as a Phase I issue the question of the remedy that should be applied before the summer peak season was at hand.

7. The Phase I initial decision issued on May 23, 2002, 99 FERC ¶ 63,028 (2002). The Commission's order reviewing it came out on December 9, 2002, 101 FERC ¶ 61,282 (2002). In its December 9 order, the Commission made a number of findings and conclusions. It also added several issues to the case.

8. On the issue of whether, and the extent to which, PSE&G is required to redispatch generation "out of merit" in order to support its wheeling service for Con Edison, the Commission concluded that "in the ambiguous circumstances of these contracts, as they must be interpreted in the post-Order No. 888 and post-Order No. 2000 world, the most persuasive evidence of what those contracts mean are the actual operating procedures for ConEd and PSE&G." 101 FERC ¶ 61,282 at P 33. Those operating procedures had been adopted in 1984 and were in force until 2001. "The gist of these procedures," the Commission ruled, "is that PSE&G will not redispatch and operate off-cost to support the 400 MW wheel, but will do so to support the 600 MW wheel if that is most economical given ConEd's other alternatives." Id.; See also P 62: "[W]e believe that the presiding judge correctly found that PSE&G must redispatch to support the service provided under the 600 MW contract."

9. The Commission went on to discuss a concern raised by PJM: If Con Edison has the absolute right to demand that 600 MW be wheeled to it, Con Edison might do so even in circumstances where it has less expensive alternatives, thereby imposing an unnecessary cost burden on PJM system. The Commission responded by noting that Con Edison's brief opposing exceptions had stated that Con Edison had made it a practice "not . . .to demand transfer of 1000 MW under the agreements without regard to the redispatch costs incurred by PSE&G and without regard to ConEd's need for the service." Id. at P 37. Con Edison's representations, said the Commission, would be regarded "as essentially a commitment to a comparison of options available to ConEd before redispatch by PSE&G and PJM is required." Id. at P 38. In a footnote (101 FERC at 62,144 n.38), the Commission stated that it "assumes that ConEd will not necessarily request the full 1000 MW under the contracts without comparing PSE&G's redispatch costs against the cost of other options available to ConEd."

10. Turning to the 400 MW contract, the Commission noted that the parties could agree to "firm it up" so that it would be supported by a redispatch obligation. P 39. However, it said that Con Edison might be required to pay the incremental costs of redispatch. In order to determine whether such costs should be paid by PJM (and socialized among the PJM members) or charged solely to Con Edison, the Commission asked that the record be further developed on remand concerning five specified issues: (1) What is the history of PSE&G redispatching generation to provide the service to Con Edison?; (2) What is the history of PSE&G or PJM redispatching generation to support grandfathered transmission for other non-members of PJM?; (3) Are PJM's practical and policy reasons for adopting its policy of recovering redispatch costs associated with other grandfathered service valid today, and should they be applied to service to Con Edison under the 400 MW contract?; (4) Does the operation of the Locational Marginal Pricing scheme adopted by PJM or the Commission's proposed rule on Standard Market Design influence the method of recovering redispatch

costs associated with grandfathered contracts; and (5) Does PJM's method of recovering redispatch costs under grandfathered transmission contracts (i.e. to socialize them among all PJM members) properly reflect "the fact that [such costs] may be incurred more by some grandfathered customers than others? Why shouldn't the policy be changed to require cost recovery from the specific customers causing the costs? How hard is to measure for whom the costs are incurred? Why?" Id.

11. The order then dealt with the question of PSE&G's obligation to maintain a spare transformer. The Commission remanded this issue for additional hearings and further examination. It found that the 1975 contract and its amendment in 1978 did not dispose of the question and reopened the question whether "good utility practice dictates an obligation on PSE&G's part to replace the spare transformer." Notwithstanding PSE&G's failure to adduce much evidence on this point, the Commission stated its belief "that it would be difficult to argue reasonable that 'firm' service (or the service at issue here) could be maintained without a spare transformer, unless there were alternative transmission paths . . . or other means to ensure service." P 50. The purpose of the remand, said the Commission, was to allow the parties to "address the question of what is a reasonable, economic means of ensuring service either with or without requiring a spare transformer, consistent with the meaning of good utility practice." P 51.

12. The Commission next turned to the subject of remedies. It determined that in the Phase II hearing, the parties should attempt to develop a protocol for the purpose of administering the contracts in accordance with the Commission's guidance. The Phase I initial decision would have required that, as a short-run solution, firm, scheduled transmission service be provided to Con Edison by PJM at PSE&G's expense. The Commission's December 9 order expressed some trepidation about this remedy in light of PJM's statements (in its Brief on Exceptions) that parties could "game" such an arrangement and that it would be difficult to match day-ahead nominations under the PJM tariff with Con Edison's contractual right to require transfer of a full 1000 MW in real time. So the Commission directed that these issues should be explored in Phase II. Other matters that the Commission directed to be heard in Phase II included "the fact that ConEd has impaired service." P 63.

13. Further guidance provided in the order included a finding that "PJM should be permitted to add or subtract other circulating flows" in using the "desired flow" calculation to determine whether Con Edison was securing the service to which it was entitled. P 65. PJM had suggested that the "desired flow" system that it and NYISO use to manage one of their main interchange lines could be adapted to the Con Edison-PSE&G transaction. The Commission responded by saying that "[i]n the absence of evidence that this would not

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provide service to Con Ed consistent with our finding, we believe this to be a reasonable solution." Id. As we shall see, this proved to be a useful though controversial solution.

14. Turning to another subject, the Commission found that it was "appropriate that third party tariff transactions be allowed to flow on the tielines." P 66. The use of the A, B and C feeders for third-party transmission evoked voluminous evidence and a strong adverse reaction from Con Edison. We discuss below the evidence and the validity of Con Edison's position that, aside from inadvertent flows, those feeders should be reserved for its exclusive use.

15. In response to PJM's inquiry about curtailment priority, as between tariff service and service to Con Edison under its contract with PJM, the Commission said that while it would ordinarily expect compliance with NERC's Transmission Line Loading rules, the Phase II hearing should "explore the question of under what circumstances such procedures are applicable, and why and under what circumstances the TLR procedures, or the unique nature of the contracts, may cause operational or reliability problems." P 67. In connection with the finding that PJM must redispatch generation to serve Con Edison under the 600- MW contract, the Commission invited both PJM and the NYISO to suggest alternatives to redispatch when that obligation could result in operation contrary to good utility practice or cause unnecessary additional costs. P 68. The Commission reiterated its desire to have the record supplemented on the subject of how redispatch costs should be recovered. P 69.

16. The Commission then returned to the question of impairments, a subject on which it had earlier found in PSE&G's favor. In Paragraph 70, the Commission said that "evidence was presented" in the form of a Con Edison interconnection study showing that Con Edison power purchases had caused the capacity of PSE&G's system to handle the 1,000 MW wheel to be reduced to approximately 650 MW in 2003 and by an additional 150 MW by another Con Edison project. The Commission cited to PSE&G's answer (which, of course, is not "evidence" of anything) and to Exhibit No. PS-6. But Exhibit PS-6 is not a study of anything. It is Attachment K to the NYISO's transmission tariff, which does not say anything about Con Edison's alleged impairment. There is a Con Edison interconnection study in the record as Exhibit PS-9. It is a study of the impact of "interconnecting an 1,100 MW generating plant to the Company [i.e. Con Edison]-owned Ramapo 345 kV Substation." The plant in question was apparently never built. Moreover, the study concludes that, "[o]ur studies have shown that the Customer power plant does not degrade the transfer capacity of the Central East, Total East, and N.Y. City cable interfaces." Ex. PS-9 at 7. The Commission nevertheless ruled that this and other like impairments should be accounted for and described as part of the protocol to be developed and filed with the Commission. P 70.

17. Finally, the Commission returned to the spare transformer issue, directing that it must be dealt with in the remedy to emerge from the Phase II hearing. It directed the parties to look at whether there are alternatives to maintaining a spare transformer, consistent with the principles of good utility practice. P 71.

18. The Phase II hearing. With this ambitious menu in hand, the parties turned to the Phase II hearing. It began on March 4, 2003 and concluded seven hearing days later on March 18, 2003. Some of the evidence submitted at the hearing fell under the Commission's rules on Critical Energy Infrastructure data; 18 C.F.R. § 388.113 (2003). It was received in closed session and is discussed in the non-public Appendix B to this initial decision. After the formal hearing concluded, the parties were able to arrive at a mutually acceptable stipulation outlining the issues in the cases (See Appendix A), and they followed the outline when they submitted their post-hearing briefs. This initial decision will also discuss the issues in approximately the same the order in which they appear in the stipulated outline.

19. Preliminary observations. Before launching out on the discussion of specific issues, one thing ought to be noted about the case as a whole. All parties are agreed that this case would not be before the Commission at all if the two competing utilities had belonged to the same RTO. If that were the case, the single power pool would simply dispatch its resources as necessary to provide Con Edison with the service for which it had contracted, and the cost of doing so -- whether the dispatch were in merit order or otherwise -- would simply be one of the costs to be borne by the pool members as a group. In other words, it is the existence of the "seam" between PJM and the NYISO which produces the current dispute and all of the resources that have been expended by public and private entities in an effort to resolve it. This suggests that it might be worthwhile for regulators, utilities and the RTOs/ISOs to devote some efforts to develop permanent institutions, which have as their mission the resolution of conflicts between utilities that are members of different transmission entities and must, nevertheless, do business with one another on a permanent basis.

RETROSPECTIVE ISSUES -- CURTAILMENT

20. Was there curtailment of service by PSE&G? If "curtailment" is deemed a code word for the failure to redeliver all of the power that PSE&G was obligated to deliver under the 1975 and 1978 contracts, the answer is that PSE&G probably has curtailed service to Con Edison on occasion. The problem, however, is that it is impossible to determine the extent to which curtailment has occurred or whether it was entirely justified. As the Commission found in its Phase I order, Con Edison's connection of a new generator located in PSE&G's service territory has limited its ability to import wheeled power under the contracts to some degree; but, again, it is not possible to ascertain with any exactitude the extent to which this impairment was responsible for PSE&G's curtailment of its service. Any impairment that

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took place could easily have been avoided if PSE&G had been cooperative in agreeing to PAR changes that would have routed the bulk of its deliveries over the B and C feeders to a greater extent than it did. PSE&G was under no legal obligation to be cooperative, however, and it was not. Finally, a more serious problem with respect to imports from New Jersey into the New York City load pocket has been inadequate transmission capability from Staten Island to the western end of Long Island. Now that the former Con Edison generating facilities on Staten Island are in the hands of independent generators who are striving to maximize their output, and the construction of additional Staten Island-based generation is planned, the need for increased transmission capacity linking Staten Island to the rest of New York City is becoming urgent. Both Con Edison and the NYISO need to deal with this issue promptly.

21. Con Edison's showing. Con Edison contends that PSE&G has "frequently" delivered less than 1,000 MW to Con Edison on days when Con Edison had delivered a full 1,000 MW at Waldwick, requested redelivery of that quantity of power across the A, B, and C feeders, and there was no outage of PSE&G generation or transmission facilities or other basis for excusing PSE&G from performing the wheeling service. This was the substance of the testimony of Con Edison witness Frank Lembo, Con Edison's General Manager of its System Operations Department. (Mr. Lembo filed testimony on his own behalf (Ex. CE-128) and adopted the pre-filed testimony of his predecessor, Vid Varneckas (Ex. CE-89).) PSE&G, said the witness, "has extensively curtailed its transmission service under the agreements. It has frequently delivered considerably less than 1,000 MW, even when all of the facilities constructed under the agreements have been in service." Ex. CE-89 at 6. In Ex. CE-97 (which is identical to Ex. CE-10), Mr. Lembo graphically analyzed both on-peak and off-peak hours between July 24, 2001 and September 13, 2001. The graph indicates that deliveries to Con Edison from PSE&G fell below 1,000 MW for a majority of the hours. The hour-by-hour data underlying the graph are found in Ex. CE-98. They show that during many of the hours the flow was in the 550 MW-700 MW range, and that at some times (e.g., August 17, 2001 from 1:00 P.M. to 4:00 P.M.) the combined flow across the A, B and C feeders dropped below 300 MW. During this period, according to the testimony, all of the transfer facilities were in service. There is no indication in the record that PSE&G was incurring an outage of its critical bulk power facilities during this time. The testimony (Ex. CE-89 at 6) shows, without contradiction, that Con Edison was delivering at least 1,000 MW to PSE&G at the Waldwick interface during all of these hours. During the week of August 6 to 12, 2001, when New York City experienced very high temperatures and Con Edison's load was at its all-time high, deliveries by PSE&G were consistently well below 1,000 MW on all days but one. Id. During 33 percent of the peak hours, PSE&G delivered less than 800 MW. Id. at 7. Ex. CE-100 includes a graph showing deliveries to PSE&G and redeliveries to Con Edison at 10-minute intervals from 8:00 A.M. to 4:20 P.M. on one day, April 18, 2002. From 9:00 A.M. to 4:20 P.M. Con Edison delivered to PSE&G more than

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1,000 MW at all times, with the deliveries ranging as high as 1,290 MW. During the same period, PSE&G never redelivered to Con Edison as much as 1,000 MW, and its deliveries across the A, B, and C feeders were below 800 MW for all of the middle of the day, dropping as low as 400 MW at 4:30 P.M.

22. PSE&G's response. PSE&G's response to this showing is rather curious. Its approach was not to show or attempt to show positively that it in fact fulfilled its obligations to Con Edison under the contracts. Instead, PSE&G took the position that Con Edison's evidence was insufficient to sustain its burden of proving that a curtailment had taken place. PSE&G faulted Con Edison for failure to take account of unscheduled flows that might have crossed the A, B and C feeders in the opposite (westward) direction, thereby causing the meters at those facilities to indicate a lower flow from PSE&G to Con Edison than actually occurred. (Everyone agrees that flows from Con Edison to PSE&G would cause the meters to run "backwards," thereby resulting in a lower reading for flows from PSE&G to Con Edison than would otherwise be the case.) According to Robert V. Snow, Director of Transmission Planning and Reliability in the Transmission Department of PSE&G, "PSE&G's deliveries, at least as measured by the meter readings for the New York City interconnections, are affected by third-party counterflows of power across these same interconnections." Ex. PS-53 at 6. "PSE&G cannot be considered to be 'curtailing' deliveries to Con Ed when these counterflows cause the meters measuring flows across the New York City interconnections to read less than 1,000 MW or different than the meter readings at Waldwick." Id. Mr. Snow also pointed out that it was Con Edison, not PSE&G, that controlled the phase-angle regulators (PARs) at the A, B and C feeders, and Con Edison did not request adjustment of the PAR taps on days when, it says, it needed increased deliveries from the PSE&G system. See Ex. PS-53 at 6-9. Mr. Snow argued that Con Edison had not established that on the days in question it actually delivered more power to Waldwick than PSE&G was redelivering over the A, B and C Feeders, had not shown that PSE&G did not suffer a major facility outage in its northern zone and did not prove that it was not impairing redeliveries by virtue of its purchases from third-party generators in New Jersey. In short, PSE&G's position was, essentially, that a curtailment had not been, and could not be, proven. (Indeed, if one adopts PSE&G's reasoning, a curtailment could never be proven under any circumstances.)

23. Mr. Snow also testified that "based on the best information available to PSE&G," he thought that PSE&G had in fact re-delivered to Con Edison in New York City as much power as it had received from Con Edison at Waldwick. Ex. PS-53, p. 11. In Ex. PS-84, he presented his own calculation for the period July 24 to September 13, 2001, and in Ex. PS-85 a separate chart for the date singled out in the Varneckas-Lembo testimony, April 18, 2002. These exhibits show what Mr. Snow said they do: over the relevant period, PSE&G

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had transferred to Con Edison virtually the same quantity of power that Con Edison had delivered to PSE&G.

24. Who is correct? The answer seems to be that they both are. Con Edison's evidence focused on contemporaneous transfers -- i.e., whether PSE&G transferred across the A, B and C feeders the same quantity of power as Con Edison was contemporaneously feeding into PSE&G's northern zone at Waldwick. On that score, Con Edison correctly pointed out that there were indeed times when PSE&G had failed to return as many megawatts as Con Edison was providing. By contrast, PSE&G looked at its performance over time. It asserted, quite accurately, that over the span of a month and a half (in the case of the July 24-September 13 period) or during the course of the peak day, April 18, 2002, it had fulfilled its obligation to transfer to Con Edison the full 1,000 MW flow. Does this represent a "curtailment" of Con Edison by PSE&G? I think it does, although the correct answer to that question is not self-evident.

25. Was curtailment consistent with the contracts? As both parties clearly understood, the 1975 and 1978 contracts were the product of Con Edison's urgent need to increase transmission service to the New York City "load pocket." By definition, a "load pocket" is an area of heavy demand for electricity in which there are insufficient generating resources to provide for the peak demand of that area. As both parties well knew, New York City suffered not only from a shortage of local generating resources but also from a highly constrained transmission system over which electricity to the City would necessarily be imported. (That is why, according to PSE&G witness Paul M. Cafone, an experienced hand at the New Jersey utility's transmission operations (and Manager of Operations in the Transmission Department) PSE&G closely monitored the status of Con Edison's Dunwoodie Interchange north of New York City. It did so, he said, because when that interchange becomes overloaded, PSE&G's transmission operators know that there is a good chance that the flow of power will shift to the west and come through the PSE&G transmission system. See Ex. PS-116 at 16-17; Tr. 1014.) In this context, it would make little sense for Con Edison to be satisfied with a flow of power that diminishes during peak periods but makes up the deficiency during non-peak periods. PSE&G must have known this. Hence, reducing deliveries below the 1,000-MW mark at 2:00 P.M. on a hot day represents a real "curtailment" of the service that was bargained-for in the two contracts. It cannot be made up for by increasing deliveries at 2:00 A.M. to serve load in a busy city. For this reason, it is my conclusion that PSE&G has at times curtailed transmission service to Con Edison in violation of the 1975 and 1978 contracts.

26. Did meters "run backwards"? It will not do to say, as PSE&G does, that Con Edison has not sustained a burden of proving that counterflows from New York to New Jersey did not mask adequate deliveries in the opposite direction. For one thing, the deficiencies were

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at times so severe as to make it apparent that they were not the result of inadvertent flows causing the meters to "run backwards." The record demonstrates that there were virtually no scheduled transfers from NYISO to PJM across the A, B and C feeders. During a period of four and one-half months, reverse flows were seen during only 14 hours on six days. See Ex. CE-137 at 5. The relative paucity of such transactions is to be expected in light of the fact that the price of electricity in New York City has always been higher than it was in New Jersey or elsewhere in the northeastern portion of PJM. Any utility in, say, New England with power to sell would choose to sell it in the New York market rather than pay the additional transmission costs of selling into PJM. For another thing, once Con Edison went forward with evidence of the kinds of deficiencies shown by the Varneckas-Lembo testimony, the burden of proof shifted to PSE&G on this issue. Merely arguing that some of the metered deficit might have been caused by transient flows in a westerly direction does not come close to sustaining that burden. It was PSE&G, not Con Edison, that was obligated to show that, during the times when service to Con Edison was curtailed, an outage or a combination of outages on its system gave PSE&G the contractual right to cut back on its wheeling for Con Edison. PSE&G failed to make such a showing. There were, to be sure, some outages on the PSE&G system during a few of the days cited by Con Edison. See Ex. PS-53 at 27-29. But they fall short of covering all, or even a majority, of the periods when PSE&G delivered less power than was called for by the agreements. Nor did Mr. Snow's testimony demonstrate that the nature of the outages prevented delivery of the full amount. Under the contracts, it is not enough for PSE&G to say that a bulk power facility was out of service. The outage must be of a nature that prevents the service from being rendered. This PSE&G has failed to demonstrate, through Mr. Snow's testimony or otherwise.

27 Did Con Edison impair service? A much stronger argument is PSE&G's claim that Con Edison's power purchases in New Jersey and from generators on Staten Island have caused an "impairment" of PSE&G's deliveries. Con Edison's purchases from Cogen Tech, a qualifying facility located in Linden, New Jersey in PSE&G's service territory, had the potential for significantly reducing the capacity of the A feeder to carry its share of the 1,000 MW of service that PSE&G was contractually obligated to furnish to Con Edison. It is true, as Con Edison points out, that the combined capacity of the three feeders is more than sufficient to carry the Cogen Tech traffic and the 1,000 MW maximum that is to be wheeled under the two contracts. Nevertheless, the contracts give PSE&G the preferential right to use all of the capacity of the A feeder, if that is what it elects to do. The 600-MW Cogen Tech power plant is electrically connected to the grid at Con Edison's Goethals Substation on Staten Island. A study of this interconnection showed that its connection reduced PSE&G's ability to make redeliveries over the A feeder by about 200 MW. See Ex. PS-53 at 32 and Ex. PS-93. Displacing PSE&G's use of that capacity must be deemed an "impairment," as the Commission found in its Phase I order.

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28. Deficiencies in the Con Edison-NYISO transmission system. It is also important to understand that the internal transmission system connecting Staten Island to the rest of New York City is becoming insufficient to transmit the power flowing through the A feeder (including both the Cogen Tech output and the PSE&G wheeling flow), as well as the generation produced by plants located on Staten Island, to other points in New York City. Con Edison produced the testimony of Charles Rusowicz, a Technical Specialist in its Transmission Planning Department, to prove that there was adequate transmission capacity in the ties between Staten Island and Brooklyn. Mr. Rusowicz's study can be seen in Ex. CE-141. It shows that the transmission capacity of the transmission facilities carrying power off Staten Island to other points in New York City totals 1,430 MW. The local generation on Staten Island plus the Cogen Tech output flowing onto Staten Island over the A feeder, plus 200 MW of wheeled power flowing over the A feeder totals 1,745 MW. Staten Island's local load, which has grown significantly in recent years, is said to be 630 MW. If we deduct this 630 MW of local load from the sum of the local generation and Cogen Tech output, we get a difference of 1,115 MW which must be transmitted to Brooklyn. This indicates that the 1,430 MW of capacity in the existing tie lines is adequate.
As PSE&G witness Snow pointed out, however, the Rusowicz study is based on some debatable assumptions. First, he has deducted the Staten Island peak load (630 MW) from the total that must be transferred. If we assume that the Con Edison average load factor of 51 percent is applied to local consumption on Staten Island, the entire 315 MW of surplus transmission capacity disappears. Second, the study assumes that only 200 MW of the 1,000 MW that PSE&G wheels for Con Edison is transferred over the A feeder. On average, however, PSE&G transmits approximately one-third of that flow, or 333 MW, over the A feeder. See Ex. PS-109. As Mr. Rusowicz's own Ex. CE-143 shows, moreover, deliveries over the A feeder frequently are in the range of 450 MW. Third, Mr. Rusowicz's study assumes that all of the tie lines from Staten Island to Brooklyn are in service at their full capacity. If a contingency occurs that reduces their capacity or removes one from service, Con Edison would be left with insufficient internal transmission ties to handle full deliveries under the contracts. This is why I find that PSE&G is correct in saying that Con Edison and the NYISO need to plan and build for an increase in transmission capacity between Staten Island and the rest of New York City.

29. Has NYISO contributed to impairments? The NYISO periodically performs System Reliability Impact Studies (SRIS) of the impact on its transmission system of new generator additions. PSE&G has criticized the NYISO SRIS criteria for not identifying and (presumably) recommending a remedy for, the transmission congestion that we find in the ties between Staten Island and Brooklyn. The SRIS criteria, said Mr. Snow, were imperfect because they did not look at the deliverability of the transmission system. The criticism is wide of the mark, however, because the purpose of the SRIS process is to maintain system reliability by identifying upgrades that will be necessary when new generation is added. As

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Mr. Calimano explained (Ex. NY-3 at 10-15), NYISO makes deliverability decisions in real time, not as the result of its SRIS. Congestion is managed by the Locational Marginal Pricing (LMP) system of requiring user to pay more for the right to transmit power through constrained interfaces and by allowing the hedging of congestion costs by the purchase of Transmission Congestion Contracts or Firm Transmission Rights. The SRIS is irrelevant to all this. In any event, the controversy is now moot. In its Reply Brief (at p. 8), PSE&G made it clear that it "is *not* challenging the sufficiency of the NYISO's planning process for purposes of meeting the NYISO's obligations as an independent system operator." (Emphasis in original and footnote omitted.) So this issue, though found in the outline developed by the parties, need not be decided.

30. Conclusions. When all is said and done, we are left with the conclusion that there have been occasions when service to Con Edison under the two contracts has, in fact been curtailed, in the sense that PSE&G did not redeliver the full 1,000 MW that Con Edison delivered at Waldwick. Some of that is due to the failure by PSE&G to provide the wheeling service it promised to provide under the 1975 and 1978 contracts; some of that is due to factors beyond PSE&G's control, such as the lack of sufficient transfer capability in the Con Edison internal transmission facilities. On this record, it is not possible to determine accurately the extent to which the service has been curtailed in the past or to lay blame for the curtailment at the door of PSE&G, Con Edison, PJM or the NYISO. In other words, there is no "smoking gun" so far as our record shows. In particular, the evidence does not establish that PSE&G has intentionally withheld wheeling service under the contracts for some base motive, such as a program of appropriating Con Edison's electricity to serve its own load.

31. Collateral issues. In addition, it seems to me that the questions whether there has been invidious treatment by PSE&G and whether Con Edison (or the NYISO) is itself at fault are collateral to the main issue that the Commission must resolve in this case. It is well-settled that the Federal Power Act does not confer on the Commission the authority to award damages or reparations for breach of contract. See Gulf States Utilities Co. v. Alabama Power Co., 824 F.2d 1465, 1491 (5th Cir. 1987); New England Power Pool, 98 FERC ¶ 61,299 at 62,290 n.6 (2002). See also Montana-Dakota Utilities Co. v. Northwestern Public Services Co., 341 U.S. 246, 257-58 (1951) (Frankfurter, J. dissenting). The Commission's main task is to require all parties to participate in arrangements to assure that, in the future, improper curtailment of the wheeling service will not take place, and that other steps will be taken to assure the reliability of New York City's electricity supply. To achieve that end will require a reordering of the arrangements under which these contracts are administered today.

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PROSPECTIVE ISSUES

32. General overview. As the record in both phases of this case clearly discloses, under the present arrangement there is no way to assure that curtailment of the service will not continue to be problematic. That is the case because service under the contracts is not scheduled by either of the RTOs that now have responsibility for transmission service. Both PJM and the NYISO treat this service as mere "circulation." It is not counted in or considered as part of the Desired Net Interchange (DNI) between the two RTOs. The DNI is a figure that is produced jointly by both RTOs on a day-ahead basis. It specifies the scheduled net flow from one RTO to the other, on an hourly basis, on the following day. See Ex. PS-53 at 17. It is the RTOs, not their member utilities, that are responsible for ensuring that transmission service is provided to utilities that are entitled to such service. This includes utilities that receive "grandfathered" service under contracts that pre-date the birth of the RTOs. The sole exception, so far as this record shows, is transmission service under the 1975 and 1978 contracts between Con Edison and PSE&G. Apparently, neither of the RTOs takes responsibility for providing this service, and they do not jointly take steps to assure that it is provided in accordance with the contracts. This is one of the reasons -- indeed it is the chief reason -- why the Commission has before it the dismal phenomenon of two mature and responsible public utilities squabbling about what must have seemed, at the time the contracts were signed, a set of garden-variety wheeling agreements. It is time to put an end to this Rube Goldberg-like arrangement.

33. Scheduling service and "desired flow." The wheeling service under these two contracts should be part of the scheduled transmission services that PJM and the NYISO provide. It should be part of the DNI that both RTOs calculate and for which they are both responsible. There is no reason why both RTOs, as well as the contending utilities, cannot develop and implement a "desired flow" calculation. That sort of system is currently used in connection with the so-called 5018 line that connects Con Edison's Ramapo Substation to PSE&G's Branchburg Station, located a few miles west of Waldwick. Both PJM and the NYISO agree in their briefs that they can administer a "desired flow" calculation for service under the 1975 and 1978 contracts. In his testimony, PJM's witness Kormos explained how the desired flow calculation on the 5018 line was calculated. See Ex. PJM-3 at 20. Both RTOs agree on transmission distribution factors to estimate how much of the flows on the line result from loop flow and third-party transactions and how to calculate the resulting expected net flow. They then attempt to maintain actual flows within a range close to the calculated expected desired flow. There is no reason why the same process cannot be used to develop the expected net flows on the J and K lines carrying power into New Jersey and the A, B and C lines transmitting power from New Jersey to New York. (The "desired flow" protocol would also have to take into account desired flows on the 5018, because the PAR settings on the other tie lines affect the 5018 line and vice versa.) In the interest of accuracy,

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Mr. Kormos recommended that the distribution factors should be recalculated periodically to reflect changes in system conditions and the addition or subtraction of new facilities. See Ex. PJM-3 at 23. That seems to be a good idea.

34. In its December 9 order and opinion in Phase I of this proceeding, the Commission indicated that the "desired flow" methodology proposed by PJM appeared to be a reasonable method of providing the service to Con Edison. The NYISO's witness Calimano expressed doubts about whether the "desired flow" method would be workable. See Ex. NY-3 at 3-4. Mr. Calimano pointed out that "[t]he 5018 interconnection and the associated Ramapo PARS were built for entirely different reasons, and now serve a different function, than were the facilities constructed under the 1975 and 1978 agreements." He called the procedure used in connection with the 5018 line "a poor foundation" for an operating protocol to administer the contracts between PSE&G and Con Edison. But according to the NYISO's Phase II Initial Brief (at pp. 11-12) discussions between Messrs. Calimano and Kormos have led to agreement that the Kormos recommendation would be a workable solution to the problem. The NYISO is now open to the possibility that "a desired flow calculation could be included in an Operating Protocol to govern operations when neither ISO would be required to re-dispatch." NYISO Initial Brief at 11-12. The NYISO cautions, however, that some details need to be worked out, and it is possible that Mr. Kormos's proposals will have to be modified. In light of the postures of the two RTOs and for the foregoing reasons, it is my conclusion that a protocol under which the RTOs manage a scheduled transmission service and use a form of desired-flow regime similar to the one that now governs flows over the 5018 line should be developed by Con Edison, PSE&G, PJM and the NYISO acting in concert.

35. Use of the PARs. The first step in the development of the protocols for transmission service around the Greater New York area must be compliance with the Commission's orders Nos. 888 and 2000. It appears from this record that although both Con Edison and PSE&G purport to be members of Order No. 2000-compliant Independent System Operator organizations, there is some doubt about whether both have transferred operational control of their transmission facilities to their respective ISOs. The issue arises most dramatically in the case of the Phase-Angle Regulators (PARs) that regulate the flow of power into northern New Jersey and then over the A, B and C Feeders back to New York. Con Edison purports to control the PARs at the A, B and C Feeders, and PSE&G appears to exercise control over the PARs at the Waldwick interconnections. The PARs are unquestionably transmission facilities. For this reason, they must be under the control of the ISOs in whose territory they are located. ISOs, not the individual utilities, must decide how the taps of the PARs are used to either facilitate or retard the flow of power through the interconnections. Hence, the Commission should decline to accept PSE&G's argument that the primary method of satisfying its obligations to Con Edison under the 1975 and 1978 contracts must be use of

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the PARs. Whether the PARs should be used or some other methodology should be employed to achieve the requisite transfer of power will be left up to the discretion of the two ISOs. It is their responsibility to fulfill the obligation to achieve the Desired Net Interchange of power called for under these contracts as well as all other relationships between their member utilities.

36. Reserving PARs and PAR taps. The Commission will reject Con Edison's contention that certain of the PAR taps should be reserved for its exclusive use. That contention emerges from the testimony of Con Edison witness William Longhi, Con Edison's Vice President of System and Transmission Operations, who suggested that the interests of reliability required that Con Edison have control of three or four of the tap positions on each of the PARs that it controls. See Ex. CE-126 at 20. (Each PAR has 16 tap positions.) There was little or no historical data offered in support of his view, only a general unease at being dependent on the abilities of the NYISO and PJM to ensure that the requisite supply of power is routed through PSE&G's territory and over the tie lines to New York City. But there is no evidence in this record that leads one to question the ability of these two transmission organizations to provide the service to which Con Edison is entitled and which it requires to assure that loads in New York City will be adequately served. Con Edison, just as other members of a Regional Transmission Organization, must divest itself of its transmission facilities, put them in the hands of the RTO and trust to the good offices of the RTO to ensure that it receives the needed service from those facilities. There is certainly no reason to expect that it will not. That is the fundamental requirement of Order No. 2000. Having accepted the Commission's invitation to join an RTO under the aegis of Order No. 2000, Con Edison must become a member without reserving certain transmission facilities, including up to a quarter of the taps, on the ground that it knows best how those facilities should be used.

37. In addition, PJM makes a good point when it says that the Commission traditionally has not attempted to micro-manage jurisdictional public utilities by dictating how individual items of utility equipment shall be utilized. See PJM's Initial Brief at 22. It is also noteworthy that both the witness for the NYISO (see Ex. NY-2 at 8) and for PJM (see Ex. PJM-5 at 11), both recommend that the NYISO, not Con Edison, should have operational control of the PARs on the A, B and C lines. So did witness Gantner of Arthur Kill Power LLC. (Arthur Kill) See Ex. AK-11 at 13. These parties all have a significant stake in the proper operation of the PARs. And they all believed that the RTO could operate the PARs with due regard to the reliable delivery of power and energy. By the same token, there is no valid reason to deny PJM operational control of the PARs controlling the flow of power from Ramapo to Waldwick. Consequently, the protocols to be developed for administering the 1975 and 1978 contracts must place operational control of the PARs in the hands of one of the RTOs.

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38. Third-party use of the A, B and C feeders. The protocols must also allow for third-party use of the A, B and C tie lines. As was the case with the proposal to allow the RTOs to control the PARs, Con Edison objects to third-party use of the tie lines on the ground that such use would degrade the reliability of transmission to serve the New York City load pocket. What Con Edison fears is that inclusion of the three ties on the NYISO OASIS as available facilities would cause generators in New England and upstate New York to sell power to loads in PJM. Some of that power would flow through the already-constrained Dunwoodie Interchange, further adding to its congestion and preventing power from north of New York City from reaching the City or requiring the payment of higher congestion charges for service to New York City to flow through the Interchange. See Ex. CE-128 at 4-5. There are two problems with Con Edison's hypothesis. First, it is speculative. There is no data to support it. Congestion at the Dunwoodie Interchange can be, and routinely is, relieved by the NYISO using its LMP-based congestion management system. See Ex. PJM-5 at 16. In short, whether Con Edison can secure sufficient capacity on the Westchester County transmission facilities to serve its load in New York City is primarily a matter of economics, not reliability. Indeed, PJM has committed to use its established emergency procedures to support reliability of service in New York City whenever that may be required. See Ex. PJM-5 at 16-17. Under Order No. 888, moreover, Con Edison is entitled to reserve sufficient transmission capacity for its own use to ensure that its native load will be reliably served. Accordingly, the ISOs should treat the 1978 and 1975 agreements as they treat other grandfathered firm transmission agreements. Under Schedule K of the NYISO's tariff, holders of grandfathered physical transmission rights that do not elect to convert them to financial rights under the LMP program are entitled to flow without being subject to curtailment for economic reasons. See Central Hudson Gas & Elec. Corp., 88 FERC ¶ 61,138 at 61,388-89 (1999). Hence, Con Edison can protect itself from the risk of being curtailed in favor of other potential transmission users of the Dunwoodie Interchange -- or any other NYISO-operated transmission facility for that matter. Furthermore, it is unlikely that there would be any significant demand for utilities in New England and upstate New York to serve loads in PJM when one realizes that prices of electricity in New York City are, and will remain in the foreseeable future, higher than prices in PJM. Prohibiting or restricting third-party use of the tie lines would be inconsistent with Commission Orders 888 and 2000. The three tie lines in question are transmission facilities. Under Order No. 888, they are required to be operated on an open-access basis. "Open Access," by its nature, requires that the facilities be available for third-party usage

39. Under Order No. 2000, the task of ensuring that open access use of the ties by third parties is compatible with Con Edison's need for dependable transmission capacity to serve New York City devolves upon the NYISO. There has been no showing on this record that the NYISO is incapable of doing that job while, at the same time, allowing third parties to utilize any remaining capacity in the A, B and C feeders. According to the NYISO's

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witness, Michael C. Calimano, "[t]he NYISO's scheduling practice has always been to reserve sufficient transfer capability across the NYISO-PJM interface to ensure operation of the 1975 and 1978 Agreements but this practice does not ordinarily preclude third party transactions." Ex. NY-3 at 8. Consequently, the protocol must provide for third-party use of those facilities.

40. Scheduling of wheeling service to Con Edison. Under the protocols for service to Con Edison, wheeling of power over PSE&G's facilities should be scheduled in much the same manner as any other firm transmission service. It has been argued that scheduling this service would be contrary to the contracts, which require that PSE&G provide the service at any time Con Edison requests it, so long as Con Edison has injected the requisite amount of power into the PSE&G system, and PSE&G is not suffering a major outage. In a sense, that is correct, because both RTOs make up their schedules on a day-ahead basis. But these are different times than those which prevailed when the contracts were executed. Transmission today is a scheduled service. As we have seen, the failure to treat this service as part and parcel of the general obligations of the two RTOs can produce chaotic and unsatisfactory results with resulting complaints of improper curtailment and impairment of the service. That is the case because individual utilities -- at least these individual utilities -- are no longer in charge of administering transmission service in their franchised territories. That task has been ceded to the RTOs. And the RTOs, in turn, operate through schedules, schedules which encompass both their domestic transmission service and their through-and-out transmission service. In order to receive adequate service as contemplated under the 1975 and 1978 contracts, Con Edison must become a part of this system. So it will have to announce to PJM and the NYISO a day in advance the service it desires under the contracts, so that such service can be included in the schedules of the two RTOs to the extent that Con Edison is entitled to receive it.

41. Advance notice will also allow PJM to determine whether, and the extent to which, providing service to Con Edison will probably require operation of generation facilities out of merit. That, it turn, will enable PJM to determine whether redispatch is the most economical method of providing the transmission service that Con Edison requires or whether Con Edison has less expensive alternative. If it does, the Commission has ruled, Con Edison must utilize the comparison-of-options approach. See the Commission's Phase I decision at P 38. In the absence of advance scheduling, there is no way that Con Edison could know what costs PSE&G (or PJM) might incur to redispatch generation to provide service under the 600-MW contract. Another benefit of advance-notice scheduling is that it will enable Con Edison to learn, in advance, when service under the 400-MW contract may be curtailed, in whole or in part, because out-of-merit dispatch will be required to provide the service. In the unlikely event that that is the case, Con Edison should be given the option to "buy through" the service by paying an additional charge that will compensate

PSE&G/PJM for the incremental cost of redispatch when necessary to avoid curtailment under the 400-MW contract. The protocol should provide for this option, as well as the rates (or a formula for determining the rates) for exercising the "buy-through" option. Pending an agreement on the rates for redispatch, or the Commission's final ruling on a PJM filing of such rates, the parties may agree to escrow Con Edison's payments of PJM's proposed rates, subject to refund, pending resolution of the issue. This was the Commission's suggestion in its Phase I decision (at P 39 n.38), and it is adopted here.

42. The proxy bus issue. Because both RTOs utilize a Locational Marginal Pricing regimen, it is necessary for them, when pricing transactions between the two systems, to make an assumption about the locational nodes between which the power will flow when it crosses the seam between NYISO and PJM. The location when the power is assumed to flow is called a "proxy bus." It is a "proxy" bus because, of course, the actual flow of energy between the two systems is determined by the laws of physics. The proxy bus, therefore, is merely a method of calculating the transmission rate; it has nothing to do with the reliability or adequacy of transmission service. PJM and the NYISO have a single proxy bus: power flowing between them in either direction is assumed to travel between Marcy, in upstate New York, and Keystone in Western Pennsylvania and vice versa. This arrangement creates perverse incentives, Con Edison complains, in that it tends to induce third-party use of the A, B and C feeders for east-to-west transactions, and tends to discourage flows into New York City. "Any protocol for administration of PSE&G's service to Con Edison should condition third party access to a seams-elimination remedy that neutralizes this perverse feature of the present arrangements, and reconciles transactional assumptions with actual flow patterns." Con Edison Initial Brief at 30.

43. As PJM witness Kormos explained, however, the use of more than one proxy bus gives rise to gaming opportunities. At one time, there were two proxy busses in PJM, one in the western part of the system and the other in the east. PJM's market monitor discovered that some parties were engaging in arbitrage between the lower-priced proxy bus and the higher-priced one. That is, they were buying power at the former and reselling it at the latter location without committing any generation or physical flows to the transactions. See Tr. 1261-62. In the belief that such "gaming" had no sound purpose and was simply an abuse of the system, the two proxy busses were collapsed into the single bus that we find today. There have been complaints about the use of the single proxy bus located in the western part of both the PJM and NYISO systems. Arthur Kill, an independent generating company that owns a three-unit generating station on Staten Island, resents the fact that the transmission support for its sales to nearby New Jersey is priced as if the power flowed north through New York City and into upstate New York, then south through Western Pennsylvania and back to New Jersey, rather than in a direct east-west direction across the few miles of Staten Island and Arthur Kill. This fictitious assumption produces a lower net revenue figure to

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Arthur Kill than it would otherwise be entitled to receive on a netback basis. PJM has made an effort to reduce the adverse effect of a single proxy bus by changing the method of deriving the proxy bus price. At one point, the price was a simple average of the prices in the western and eastern part of the system. More recently, the pricing method was changed so that the current proxy bus price is based on actual flows in the western and eastern part of the system and changes to reflect differences in the amount of flow for each part. Finally, PJM has committed to use actual locational marginal prices to derive congestion charges for transactions under the two contracts at issue here. PJM's witness Kormos testified that "the measure of congestion charges would be the difference between the LMP at the J and K lines and the LMP at the A, B, and C lines." Ex. PJM-3 at 24. So the proxy-bus convention that is generally applicable to flows across the seam between PJM and the NYISO will not affect the transmission charge paid for service under the 1975 and 1978 contracts. This persuades me that this case is not the appropriate forum for dealing with complaints about the proxy-bus methodology used by PJM and the NYISO with respect to transactions between the two systems. As everyone agrees, the RTOs' concern about improper "gaming" is a legitimate one, and they were quite correct in taking steps to put an end to those practices. While Arthur Kill may or may not have cause for grievance, depending on how many sales it actually makes to customers in nearby New Jersey, its problem is not relevant to the issues that the Commission set out to explore in this case. If it believes that PJM's and the NYISO's choice of a proxy bus causes unwarranted damage to its interests in a way that violates the Federal Power Act, Arthur Kill should file a separate complaint under section 206 of the Act addressing that subject. For purposes of this case, the Commission will leave the selection and use of the proxy-bus convention to the sound discretion of the two RTOs and will not require that the subject of proxy busses be addressed in the protocols governing future service to Con Edison under the contracts that are the subject of this investigation.

44. Measurement of flows. Under the contracts, Con Edison is entitled to receive "up to" 1,000 MW of service. Once this service is scheduled, it is the job of the two RTOs to provide it. To the extent that the meters on the A, B, C, J and K lines reflect loop flows and flows associated with other transactions, the RTOs would have to take such flows into account (adding them to, or subtracting them from, the meter readings as appropriate) to determine whether Con Edison has received the amount of service to which it is entitled. As the Commission noted in its December 9, 2002 order (at P 65), the two RTOs currently manage a "desired flow" regimen on the 5018 line, another inter-RTO tie line, and both have indicated that they can do so on the tie lines that Con Edison and PSE&G use for the circulation at issue here. The Commission concluded that "[i]n the absence of evidence that this would not provide service to ConEd consistent with our finding, we believe this to be a reasonable solution." In the Phase II hearing, Con Edison did not develop credible evidence that use of the techniques that had been used to manage desired flows over the 5018 tie

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would mulct it of service to which it is entitled. The details of how the service will be rendered must be left to the parties, including the RTOs.

45. Management of PARs. One of the issues that the parties disputed at the hearing and in their initial briefs is how the operating protocols should address PAR adjustments, control of PARs and PAR tap reservations on the inter-ties between Con Edison and PSE&G. As this decision has found, supra, control of the PARs should be vested in the ISOs, and they must adjust the taps in real time to produce the desired flow targets they have set. Mr. Kormos's testimony includes a description of a two-bandwidth methodology for triggering PAR adjustments. See Ex. PJM-3 at 21. When either RTO is operating off-cost, there would be a relatively narrow bandwidth, perhaps plus or minus 25 MW. If actual flow fell outside that bandwidth, the utility could request the other RTO to make such adjustments as may be necessary, including PAR tap adjustments, in order to bring the flow back to the desired flow level. When neither RTO is operating off-cost, however, a broader bandwidth, say 50-100 MW, would be applied. Under normal conditions, when off-cost operation is not threatened, an RTO would be required to make adjustments only when this larger bandwidth would otherwise be exceeded. This proposal recognizes that some flexibility is required under the protocol when no adverse financial consequences would result. While Mr. Kormos's suggestion is intriguing (and he may be correct), the detailed methodology for adjusting PAR taps and similar steps to achieve the desired flow is something that should be worked out by the two RTOs in consultation with the utilities. It should not be prescribed by the Commission. The Commission should become involved in this kind of issue only if the participants cannot resolve it using their own resources. Of course, their ultimate resolution, as propounded in the completed protocol, will have to be filed with the Commission under section 205 of the Federal Power Act. Any dispute that remains outstanding can be reviewed by the Commission at that time.

46. Redispatch. The dispute over the question whether PJM (erstwhile PSE&G) must redispatch generation in order to support wheeling service for Con Edison has been a long-running affair. As we have seen, the Commission believed it had resolved this question in its Phase I decision and order. In that decision, the Commission ruled that service under the 1978 contract must be supported by out-of-merit generation (a) if that were required to provide the service; (b) if an outage of the PSE&G facilities does not render such support impractical; and (c) if, and to the extent, that off-cost operations do not threaten loss of service to PSE&G's native-load customers. See Phase I decision at P 33. The Commission wen