99 FERC ¶ 63, 028
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Consolidated Edison Company
of New York, Inc.,
Complainant,

v.

Docket No. EL02-23-001
(Phase I)

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

INITIAL DECISION ON PHASE I ISSUES

(Issued May 23, 2002)

APPEARANCES

Donald J. Stauber and *Charles E. McTiernan, Jr.* for Consolidated Edison Company of New York, Inc.

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

Barry S. Spector, Arnold B. Podgorsky and *Paul M. Flynn* for PJM Interconnection, L.L.C.

Kenneth A. Barry and *Elizabeth Grisaru* for New York Independent System Operator, Inc.

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

Isaac D. Benkin, Presiding Administrative Law Judge

1. This case deals with a dispute between two neighboring investor-owned public utilities arising out of two contracts, made in 1975 and 1978. The contracts contemplated the transfer of 400 MW and 600 MW, respectively, on discrete paths through the service territory of one of the utilities, Public Service Electric and Gas Company (PSE&G) to specific delivery points in the service area of the other, Consolidated Edison Company of New York, Inc. (Con Edison).[1]

2. The controversy comes before the Commission on a complaint by Con Edison, alleging that PSE&G has not fulfilled its obligations under the contracts. PSE&G has denied the allegation. The issues are complex and difficult -- primarily because the contracts were negotiated and signed before the Commission issued, or even contemplated, its landmark Orders Nos. 888 and 2000, providing that inter-utility transfers of electricity would take place in an open-access regime administered by Independent System Operators and Regional Transmission Organizations. As a result of those two orders, the electrical transmission world of today, in which the agreements must be construed and administered, has changed dramatically from the world that the authors of the agreements contemplated when the contracts were drawn.

Interconnecting the Two Utilities

3. Con Edison serves virtually all of the City of New York as well as a large part of Westchester County, just north of the City. Across the Hudson River and Arthur Kill is the portion of Northern New Jersey served by PSE&G. The two utilities are members of two different regional electric utility transmission institutions. PSE&G is a member of the PJM Interconnection, L.L.C. (PJM), the successor to the giant PJM "tight" power pool, which has been recognized by the Commission as an organization that meets the tests for an Independent System Operator (ISO) under Order No. 888.[2] Con Edison is also a member of an ISO,

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[1] The two agreements were filed with the Federal Power Commission pursuant to section 205(c) of the Federal Power Act. They are PSE&G Rate Schedules Nos. 55 and 68.

[2] See Pennsylvania-New Jersey-Maryland Interconnection, 81 FERC ¶ 61,257

the New York Independent System Operator, Inc. (NYISO), which has also been recognized as a "conforming" ISO.[3]

(1997).

[3] See Central Hudson Gas & Electric Corp., 86 FERC ¶ 61,062 (1999); Central Hudson Gas & Electric Corp., 83 FERC ¶ 61, 352 (1998).

4. At the time the 1975 and 1978 contracts were made, several interconnections already existed between PSE&G's and Con Edison's systems. In 1963, the two utilities had installed the so-called "A Feeder," a 138kV connection between PSE&G's Linden switching station in New Jersey and Con Edison's Fresh Kills substation located on Staten Island.[4] The A Feeder was constructed pursuant to a contract the two utilities signed on August 6, 1963.[5] As the contract makes clear, the purpose of constructing the A Feeder under Arthur Kill was to allow the utilities to transmit emergency energy or capacity "at such times as it [was] advantageous to do so, in accordance with mutually agreeable operating procedures and coordinated plans of connections, as established from time to time by the Operating Departments of the parties . . . ."[6]

5. In the 1963 agreement, Con Edison and PSE&G had each agreed to furnish and install all equipment located in its service territory; each had agreed to pay for the maintenance, operation and carrying charges of the interconnection facilities located in its territory. In other words, no payment by one utility to the other was to change hands.

6. Four and one-half years later, Con Edison and PSE&G contracted to upgrade the existing Linden-Fresh Kills interconnection. In a contract dated May 10, 1968,[7] they agreed to convert the 138kV interconnection to 230kV and to tie it in to a new substation, called the Goethals Substation, that Con Edison had built on Staten Island, as well as a new PSE&G substation located on Arthur Kill opposite PSE&G's Linden Substation. The purpose of the May 10, 1968 agreement, however, was not to facilitate the exchange of power on a routine basis. As was the case under the earlier agreement, the May 10, 1968 contract provided for emergency transactions only: "Emergency energy or capacity shall

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[4] The Fresh Kills Substation was later replaced as the terminus for this line by a new facility, the Goethals Substation, which Con Edison built nearby.

[5] Ex. CE-2.

[6] Id. at 2, ¶1.2.

[7] Ex. CE-3.

be made available at such times as it is feasible to do so as has been heretofore."[8] Again, the utilities agreed to share the cost of the facilities equally. It was anticipated, however, that PSE&G would bear the lion's share of the initial expense; Con Edison agreed to reimburse PSE&G for the difference between the amount invested by the two utilities.

From Emergency Power to Transmission Service

[8] Id. at 2, § 1.2.

7. Towards the end of the decade of the 1960s, the two utilities decided to construct additional interconnections and to strengthen their existing interconnections. In addition, both utilities saw that mutual cooperation could enable them to resolve a potentially difficult and costly transmission-and-distribution problem. According to Con Edison's witness Balet, then a Systems Development Engineer, Con Ed had difficulty in supplying its load in New York City from generation sources that were located north of the City.[9] It was studying the possibility of constructing a High Voltage Direct Current (HVDC) line through the northern portion of PSE&G's service territory to bring electricity from Sprainbrook (in Westchester County) to New York City. In working on this project, Balet encountered Joseph Wruble, a PSE&G engineer who worked in the New Jersey utility's Planning Department. Wruble told Balet that PSE&G also had a high voltage transmission problem; it needed to transmit energy from PSE&G's generating plants located south of the Newark-Jersey City area to its growing load centers in the northern portion of PSE&G's service area in the vicinity of Bergen County. Wruble suggested that instead of both utilities constructing expensive and disruptive parallel transmission facilities, they should simply "swap generation."[10] Wruble's idea, testified Balet, was "Basically, that Con Edison would supply PSE&G's growing load in Bergen County and PSE&G would supply Con Edison's load in New York City."[11] The proposal also involved construction of a second 345kV overhead conductor between Ramapo and Waldwick and a second 345kV cable between Hudson and Farragut, thus doubling the capacity of those facilities.

8. And so it was done.

9. Under a letter contract dated May 27, 1969,[12] PSE&G and Con Edison agreed to build two new interconnections. One, the so-called, J Line, was to run via a 345kV transmission line between Con Edison's Ramapo Substation, across the New York-New Jersey state line, to a new PSE&G switching station to be constructed in the vicinity of Waldwick, New Jersey and thence, via a 230kV conductor, to a substation at New Milford, New Jersey. A second 345kV interconnection was to run under Upper New York Bay between Con Edison's Farragut switching station in Brooklyn and PSE&G's Hudson Generation Station in Jersey City, New Jersey. Again, the two utilities agreed on a more-or-less equal cost-sharing arrangement. It was anticipated that the most expensive work

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[9] Balet's prepared testimony is Ex. CE-67. Balet is now retired.

[10] Ex. CE-67 at 2.

[11] Id. at 3.

[12] Ex. CE-5.

would take place in New Jersey and would be done by PSE&G. Consequently, Con Edison agreed to pay PSE&G "carrying charges computed at 12 per cent per annum on the difference between one half of the total cost of the Ramapo-New Milford and Hudson-Farragut interconnections and the total cost of those portions of the interconnection facilities built by Consolidated Edison in New York State."[13]

[13] Id. at 3, ¶ II. The carrying charge payment was to remain level for eight years and then decline annually by 20% until it expired after the 12th year.

10. The purpose of these two new interconnections was more than merely the exchange of energy in emergencies; the 1969 agreement contemplated wheeling of power on a more-or-less continuous basis. Con Edison agreed to transmit "up to approximately 400 megawatts from Linden Generating Station to Hudson Generating Station of the Public Service System through Consolidated Edison's transmission facilities in the event that power supply to the Bergen-Hudson-Essex tri-county area has been impaired by the outage of major generating and/or transmission facilities in the northern portion of the Public Service system."[14] PSE&G, for its part, agreed to perform transmission service for Con Edison as follows:

> Public Service will transfer up to approximately 400 megawatts from Ramapo to Farragut utilizing the Ramapo-New Milford and Hudson-Farragut ties, and other Public Service transmission facilities under normal system conditions. The term normal conditions implies that there are no major generating and/or transmission facility outages in the northern portion of the Public Service system. This transfer can be expected to take place during a large number of hours during the year, but will not take place 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.[15]

11. The obligation of both parties to provide transmission service was due to expire on April 30, 1992. On May 22, 1975, however, the parties signed another agreement, which superseded their 1969 letter agreement and provided for upgraded transfer facilities between the two utilities. Article IV of the agreement deals with power transfers. Section 4.1 provides as follows:

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[14] Ex. CE-5 at 4, ¶III(2).

[15] Id. at 4, ¶III(4).

> Upon completion of the Ramapo-New Milford and Hudson-Farragut interconnections, PS agrees to transfer up to 400 megawatts of power from Ramapo to Farragut, utilizing said interconnections, as well as the existing Linden-Goethals 230-kV interconnection, and other PS and Con Edison internal transmission facilities, except that such transfer will be curtailed when critical bulk-power facility outages in the northern portion of the PS system would, in the opinion of PS, reduce PS's ability to provide such transfer.[16]

12. The succeeding section addresses an obligation on the part of Con Edison to transfer up to 400 MW from PSE&G's Linden Station to the Public Service Hudson Station "whenever major bulk -power facility outages in the northern portion of the [PSE&G] system impair the reliability of service in that area." Like PSE&G, Con Edison had the right to curtail the transfer service "when bulk-power facility outages on the Con Edison system would, in the opinion of Con Edison, reduce Con Edison's ability to provide such transfer."[17]

13. Con Edison was required to make annual payments to PSE&G for the power transfer service. Con Edison and PSE&G agreed that each would pay one-half of the cost of the new facilities and, after the facilities were placed in service, Con Edison was to pay PSE&G carrying charges at the rate of 12% per year on the net difference between the two utilities' investments. In an amendment executed three years later, in May 1978,[18] the utilities converted Con Edison's obligation to make periodic payments to a series of fixed charges. For the first year-and-one-half, Con Edison would pay $736,000 in equal monthly installments. The following year it was required to make a payment of $650,000. Thereafter, the annual payment would decline by $50,000 per year until it became $500,000. For the rest of the term of the agreement, Con Edison would pay $500,000 per year to PSE&G. These payments for the power transfer service, it should be noted, did not vary with the quantity of electricity actually transferred.

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[16] See Ex. CE-6 at 7, ¶4.1. The term "PS," of course, referred to PSE&G.

[17] Id. The original term of the agreement was to expire on May 22, 2015. However, a later agreement, dated as of May 9, 1978 extended the term to coincide with that of a later agreement, which expires in 2020. See Ex. CE-9 at 13, ¶IV(A).

[18] Ex. CE-7.

14. The 1975 contract had originally provided that it would terminate in 2015.[19] In 1978, coincident with their execution of the second of the two contracts at issue here, the parties amended the 1975 contract to extend its termination date so that it would be the same as the termination date in their later contract, *i.e.*, December 31, 2020.[20]

[19] See Ex. CE-6 at 11, §6.3(a). At the conclusion of the 40-year term, the agreement would "evergreen" upon five years' notice by either party.

[20] See Ex. CE-7 at 2, §6 for the amendment and Ex. CE-9 at 13, §IV(A) for the termination date of the later contract. The Step II facilities referred to therein were never built.

15. In 1975, Con Edison and PSE&G conducted a joint study of two alternative plans for providing Con Edison with the capacity to transmit additional amounts of electricity into New York City.[21] Con Edison at first considered the construction of an underground high voltage direct current (HVDC) line between its Ramapo Substation and New York City. The HVDC facility would have run to the southeast, crossing the Hudson River near the Sprainbrook switching station, and then swung south, following the course of the river through Westchester County, the Bronx and Manhattan, terminating at Con Edison's 15th Street Station.[22] The alternative to the HVDC line considered in the Joint Study involved the strengthening of PSE&G's bulk power transmission system so that additional amounts of power originating at Ramapo could be transmitted across the PSE&G system for Con Edison and redelivered to Con Edison through the Hudson-Farragut and Linden-Goethals interconnections. The first step of the so-called "AC Plan," according to the Joint Study, consisted of constructing "a second Ramapo-Waldwick 345-kV overhead/cable circuit, a Waldwick-Fair Lawn 238-kV cable circuit, a second Hudson-Farragut 345-kV circuit and associated autotransformers and phase angle regulators."[23] The Joint Study concluded that the AC Plan was preferable to the HVDC Plan, primarily on economic grounds. It estimated that the facilities for the AC Plan would cost $104,526,000 less to build than those needed to implement the HVDC Plan.[24]

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[21] See Ex. CE-8.

[22] See Id. at map labeled "Exhibit I."

[23] Id. at 7, ¶IV(B).

[24] Id. at 2, ¶II(2). The $104 million figure represented costs in present-day (1975) dollars escalated to the date of construction (assumed to be 1980 and 1985 for phases 1 and 2)

plus interest during construction.

16. Con Edison was impressed, impressed enough to undertake a series of negotiations with PSE&G for the implementation of the AC Plan. The negotiators were given impetus by the massive blackout that the Con Edison system experienced in 1977. The blackout was the result of a thunderstorm which caused simultaneous outages on transmission lines that brought upstate power through Con Edison's relatively narrow transmission-line corridor to New York City. The Federal Power Commission investigated this, the second major blackout Con Edison had experienced during the decade,[25] and issued a report recommending, *inter alia*, that key transmission facilities should not be located in such close propinquity.[26] The New York Public Service Commission chimed in with a similar conclusion.[27] So a greater sense of urgency attached to the problem of developing an alternative means of transmitting power from generation sources north of New York City without using Con Edison's narrow corridor through Westchester County. To the east was Long Island, a dead end, since there was not then (and still is not today) a transmission cable under Long Island Sound connecting New England to either Nassau or Suffolk County. To the south was the Atlantic Ocean. That left only one alternative, to go through PSE&G's territory which lay on the west side of the Hudson River and Arthur Kill.

17. The negotiations resulted in a letter agreement, dated May 8, 1978, between the two utilities. The agreement called for the construction of extensive new transmission facilities by both PSE&G and Con Edison. Con Edison was obligated to construct a second Hudson-Farragut interconnection with all appurtenant facilities on the New York side of the river. It was also to construct a second Ramapo-Waldwick interconnection, together with associated facilities on the New York side of the state line. PSE&G was to build the facilities located in New Jersey and needed for the second Hudson-Farragut and Ramapo-Waldwick interconnections. In addition, PSE&G undertook to strengthen the Waldwick-Fair Lawn Circuit, which was located entirely within its service territory. This included installation of a new 230kV cable from Waldwick Switching Station to the Fair Lawn Switching Station.

18. In the May 8, 1978 agreement, Con Edison agreed to make of number of payments to PSE&G. First, during the construction period, Con Edison was to

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[25] See Investigation of Major Power Outages on Entire System of Consolidated Edison Co. of N.Y., Inc. July 13-14, 1977, 59 F.P.C. 1611 (1977).

[26] Fed. Power Comm'n, Staff Report on July 13-14, 1977 Electric System Disturbance on the Consolidated Edison Company of New York Inc., System 6 (1977).

[27] Norman M. Clapp & Charles P. Almon, Jr., State of New York Investigation of the New York City Blackout July 13, 1977 31, 77 (1978).

pay a monthly carrying charge based on PSE&G's cumulative investment multiplied by an allowed rate of return.[28] Second, after completion of construction, Con Edison was obligated to pay monthly charges on plant investment in the new facilities (minus $9.5 million to reflect PSE&G's use of the Waldwick-Fair Lawn circuit for its own purposes). The charge included return on capital investment calculated as described above, depreciation at the annual rate of 3.33% per year and an income tax allowance. In addition, Con Edison was required to make a $57 million annual payment to PSE&G "to implement the additional delivery from Ramapo Substation to New York City via the [PSE&G] system."[29] As was the case under the 1975 agreement, the 1978 contract did not allow for reductions in Con Edison's payment obligations if PSE&G's service to Con Edison were reduced.

19. Finally, and most importantly from our standpoint, the May 8, 1978 agreement, under the heading "Other Provisions," provided for transmission service to be rendered by PSE&G:

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[28] The composite rate of return was based on a 14.6% rate of return on equity, actual rates of return on senior capital and a capitalization ratio of 39% equity, 48% debt, and 13% preferred stock. In addition, if New Jersey's regulators authorized PSE&G a return-on-equity allowance in excess of 14.6%, PSE&G was entitled to use the higher figure to compute its composite return from Con Edison.

[29] Ex. CE-9 at 9, ¶II(G).

> Under normal conditions [PSE&G] will transfer a maximum of 600 MW . . .in addition to the 400 MW transfer presently in effect, from Ramapo to Farragut utilizing the new and existing Ramapo-Waldwick and Hudson-Farragut interconnections, the existing Linden-Goethals interconnection, the new Waldwick-Fair Lawn circuit, and other [PSE&G] internal transmission facilities. As used herein, "normal conditions" means that there are no major generating and/or transmission facility outages in the northern zone of the [PSE&G] system. This transfer can be reasonably expected to take place for most hours of the year, but will be curtailed, in full or in part, as required when critical bulk-power system outages make it impossible for [PSE&G] to maintain such transfer. When curtailment is required as a result of system outages, [PSE&G] will, upon request, provide to the [Con Edison] System Operations Department such information as is reasonably required to demonstrate that curtailment is necessary and will consider such suggestions for removal of the curtailment as [Con Edison] may make. To the extent reasonably feasible, [PSE&G] will schedule outages so as to maintain the wheeling for [Con Edison]. [PSE&G] will 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].[30]

20. Each of the parties to the 1978 agreement came away from the negotiations with a markedly different view of what had been accomplished. For PSE&G the deal with Con Edison provided the financial wherewithal to make major structural improvements to its internal bulk power transmission system and to do so largely at the expense of another utility. These improvements could then be used to serve the rapidly growing load in the northern portion of its service territory for many years to come. The sweetness of the arrangement was amplified by the substantial revenues that would accrue to the utility from the payments that Con Edison was obliged to make, payments that were not

[30] Id. at 10, ¶III (B).

dependent on any specific level of service PSE&G might have to provide in the future. It was a happy coincidence, moreover, that these improvements and revenues would come at the expense of ratepayers in another state.

21. From Con Edison's standpoint, it had achieved the result it sought when it first considered construction of an underground HVDC line from Ramapo to downtown Manhattan. Such a facility could provide almost absolute reliability. Unlike an alternating-current bulk power transmission facility, a direct-current circuit allows the amount of power and energy delivered to be varied very precisely, merely by turning a switch. Additionally, a critical weakness in Con Edison's transmission system, the fact that all power transfers had to pass through the very narrow neck of lower Westchester County, could be overcome. A vast improvement in reliable transmission service had been secured under the agreement. Indeed, the Joint Study had laid down as one of the criteria for the alternating-current alternative to the HVDC line the condition that the AC alternative would have to "satisfy the same overall system objectives and system reliability criteria as the DC plan."[31] These goals appeared to have been achieved, at a cost that was $104.5 million less than that of a HVDC system, without sacrificing the reliability or serviceability that an HVDC link would have provided.

22. As we shall see, however, for both utilities, any inclination to celebrate would have been decidedly premature.

Con Edison Complains and PSE&G Answers

23. On November 15, 2001, Con Edison filed a complaint with the Federal Energy Regulatory Commission, alleging that PSE&G had violated the contractual obligations it had undertaken in the two contracts. According to the complaint, PSE&G had on several occasions curtailed its 1000-MW transmission service to Con Edison under both the 1975 and 1978 contracts. Although both contracts call for PSE&G to render "firm" service to Con Edison, curtailable "only when outages of certain of [PSE&G's] facilities render continued service impossible,"[32] PSE&G had "continually" curtailed the service to Con Edison. Con

[31] Ex. CE-8 at App. A-1, ¶C(1).

[32] Compl. at 2.

Edison also complained that PSE&G "has not curtailed its transmission services to other customers pro rata with its curtailment of service to Con Edison."[33]

[33] Id. at 29, ¶52.

> Public Service regards its service to Con Edison as non-firm and curtails it prior to any curtailment of other firm services, and without regard to such services. Given the firm nature of Con Edison's service entitlement, such curtailments of Public Service's service to Con Edison are unduly discriminatory in violation of the Federal Power Act and the Commission's OATT.[34]

24. In addition to its generalized grievances about breach of contract through curtailment of service, Con Edison's complaint accused PSE&G of several additional malevolencies:

- Failure to comply with a Commission order directing transfer to PJMISO of responsibility for service under the contracts.

- Failure to maintain sufficient facilities to render service to both Con Edison and its other customers.

- Violation of good utility practice by failure to replace a failed transformer in timely fashion and failure to make a timely investigation into the cause of the failure.

- Abuse of market power by virtue of the unjustified curtailment of Con Edison.

25. Con Edison asked the Commission to (i) investigate the matters raised by its complaint; (ii) issue a determination that PSE&G may not curtail service to Con Edison except in the limited circumstances of "critical bulk power facility outages;" (iii) order PSE&G to transfer to PJMISO responsibility for its transmission service to Con Edison; (iv) order PJMISO to "assure the delivery of up to 1,000 MW to Con Edison" under the contracts; (v) order PSE&G to replace a spare transformer; (vi) order PSE&G "to observe good utility practice in operating and maintaining facilities used in the service to Con Edison;" and (vii) "direct PJMISO and the NYISO to develop procedures to coordinate the transmission service to Con Edison."[35] Con Edison's complaint named both PJMISO and NYISO as

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[34] Id.

[35] Id. at 2.

respondents (in addition to PSE&G) because it sought relief against these two regional transmission organizations.

26. PSE&G's answer, filed January 22, 2002, denied that it had an obligation under the 1975 and 1978 agreements to provide firm transmission service or, indeed, to provide any transmission service at all. The agreements, according to PSE&G were simply facilities contracts, not transmission service contracts. They merely "require PSE&G to receive up to 1,000 MW from Con Edison at the Ramapo-Waldwick interconnection and -- to the extent that such transfers can be effectuated through coordinated adjustments of certain phase angle regulators ('PARs') -- to redeliver that same amount of power to [Con Edison] across the Hudson-Farragut and Linden-Goethals interconnections to New York City."[36]

> The agreements do not obligate PSE&G to provide firm transmission service. They nowhere use the terms "firm" service (or any equivalent term) . . . They nowhere mention the use of generating facilities to support the transfers to New York City or the need for *pro rata* curtailment in the event that PSE&G can only transfer less than 1,000 MW to New York City.[37]

27. In its answer, PSE&G denied that it had ever transferred to Con Edison less power than Con Edison had delivered at the northern interconnection. Nor had PSE&G, according to its answer, ever refused a request for a PAR adjustment in order to increase deliveries to New York City. Pointing to the 1975 Joint Study and a schedule attached to the 1975 agreement, PSE&G argued that the parties had contemplated that power transfers across its service territory would be accomplished solely by means of appropriate PAR settings. In addition, said PSE&G, neither agreement provides for the use of generation facilities to make the transfers. All this, plus the absence of the usual provisions found in firm transmission contracts, demonstrates that PSE&G did not, in either agreement with Con Edison, undertake an obligation to operate its generation resources "off-cost" in order to provide service to Con Edison. Nor did PSE&G agree to curtail or shed its native load in order to deliver up to 1,000 MW to Con Edison at any particular time, said PSE&G.

28. PSG&E's answer heatedly denied Con Edison's claim that the inter-utility transfers at Farragut and Goethals amounted to less power and energy than

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[36] Answer at 2.

[37] Id.

PSE&G had received from Con Edison at Waldwick. In fact, said PSE&G, it was impossible to determine exactly how much electricity had been delivered at any of the interconnections; meter readings did not reflect power flows in the opposite direction as a result of transfers from the New York Power Pool to the PJM System. PSE&G relied on an operating agreement between the two utilities, an agreement which it said was memorialized in an October 4, 1984 memorandum from the head of PSE&G's Operating Department to his opposite number at Con Edison. The memorandum recognized that under the terms of the 1975 and 1978 agreements,

> PSE&G . . .is to wheel for Con Edison (CE) up to a total of 1000 mw from Ramapo substation to Farragut and Goethals substations. * * * The power transfers will be established by coordinated adjustment of phase angle regulators at Waldwick, Farragut and Goethals.[38] [Emphasis added]

29. Although it relied on the emphasized language to support its contention that the contracts contemplated only use of PARs to produce the requisite power flows, PSE&G also recognized that the memorandum stated that the 600 MW wheel under the 1978 agreement must be accomplished "even if off-economic operation is required."[39] Attached to the memorandum was a table in which PSE&G operators took the position that, under capacity emergency conditions, the utility's obligation to wheel for Con Edison (under both agreements) was "always subordinate to reliable service to PG&E customers." By subordinating Con Edison's service to the needs of PSE&G's native load customers, the answer argued, the operating agreement made it clear that Con Edison was not entitled to firm service. That is the case, PSE&G said, because Commission precedent "made it clear that 'firm transmission service' must have curtailment priority equal to that of service to the transmission provider's native load; any transmission service that is not 'firm' in this sense is 'non-firm'."[40]

30. PSE&G's answer denied Con Edison's allegation that control of the wheeling service had not been turned over to PJMISO. PJMISO denied it too in its answer.

The Commission Issues a Hearing Order

[38] Ex. PS-12 at 1.

[39] Id. at 2.

[40] Answer at 29.

31. In an order issued April 10, 2002,[41] the Commission expressed some views on the disputes between the two utilities and ordered a hearing held in the case.

32. In its hearing order, the Commission determined that PSE&G had not violated the Commission's directive to turn over to PJMISO responsibility for administering the two contracts with Con Edison.[42] "ConEd may pursue this issue at hearing," the Commission

[41] Consolidated Edison Co. of N.Y., Inc. v. Public Service Elec. and Gas Co. and PJM Interconnection, L.L.C. and New York Independent Sys. Operator, Inc., 99 FERC ¶61,033 (2002) ("hearing order").

[42] In Pennsylvania-New Jersey-Maryland Interconnection, 81 FERC ¶61,257 at 62,283 (1997) the Commission indicated that individual utilities had a duty to ensure that the entity that later became PJMISO would assume responsibility for administering the so-called "grandfathered" bilateral transmission agreements.

said, "but it must demonstrate more than it has thus far to show that PSE&G and PJM failed to meet their obligations in this regard."[43] At the prehearing conference, counsel for Con Edison indicated that it was no longer challenging the *bona fides* of PJMISO's past practices, including its control over the service for which it had contracted with PSE&G.[44]

33. The hearing order dealt with the issue of market power in much the same way. On the basis of the pleadings and the affidavits and exhibits attached to the complaint and answers, the Commission held that Con Edison "has not demonstrated that PSE&G has market power and has abused it."[45] The Commission did, however, grant Con Edison leave to pursue this issue in the hearing "if it can develop and support . . . a reasonably precise and plausible scenario concerning what conduct PSE&G and its affiliates engaged in, how that violated Commission rules, and how they unfairly benefitted."[46]

34. On the issue of whether, and to what extent, the service to Con Edison is deemed "firm," the Commission noted the difficulty of interpreting these old contracts in light of the developments that followed the issuance of Orders Nos. 888 and 2000. It decided to "allow this issue concerning the nature of the transmission service under the contracts to be further developed in the hearing. . . ."[47] Nevertheless, the Commission did voice its own preliminary analysis, admonishing the parties and the administrative law judge to "consider the Commission's analysis of the issue set forth in this order and, as necessary, supplement it and suggest and explain proposed modifications to that analysis."[48]

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[43] Supra note 41 at 61,124.

[44] Tr. at 16-17. However, PJMISO's future activities with respect to PSE&G's transmission service to Con Edison remains a "live" issue in the case.

[45] Supra note 41 at 61,125.

[46] Id.

[47] Id.

[48] Id. at 61,126.

35. The Commission concluded that the contracts did not provide for "firm" service, as the term "firm" is understood under today's transmission regime. "The agreements," said the Commission, "provide for curtailment of service under specified conditions, conditions that are quite different from those that would justify curtailment under the standard FERC *pro forma* transmission tariff." That being true, "we would deny ConEd's request that the services be curtailed *pro rata* under the terms of the *pro forma* tariff. However, the agreements seem clearly to be more than simple facilities agreements since neither can be interrupted for purely economic reasons and the obligation to serve is inherent."[49]

36. The hearing order cited differences between the 1975 and 1978 agreements, which indicated that they did not call for the same degree of "firmness" in the service under them. For example, the 1978 agreement required PSE&G to plan, design and operate its system in a way that allowed the 600 MW wheel to continue notwithstanding PSE&G's obligations to its native load customers and its obligations to PJM. No such requirement is set forth in the earlier contract. The Commission also noted that the 1984 memorandum by PSE&G's Operations Department distinguished between the "firmness" of the utility's commitment to provide wheeling service to Con Edison under the 1975 agreement and its commitment to wheel an additional 600 MW for Con Edison under the 1978 agreement. "We are not persuaded," the Commission concluded, "that the First Agreement carries with it the inherent obligation to plan and operate the transmission system in the same fashion as the Second Agreement."[50]

37. The hearing order also set forth a litany of other issues that the Commission wanted developed in the hearing:

- Whether PSE&G's curtailments have been consistent with the terms of the agreements.
- Whether the parties have violated contract provisions requiring them to reinforce their systems in a manner to insure service.
- Whether PSE&G failed to observe good utility practice in dealing with equipment failures.
- Whether PSE&G has an obligation to provide a spare transformer.

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[49] Id.

[50] Id.

- Whether PSE&G had provided enough information to Con Edison to allow Con Edison to evaluate its and PJMISO's implementation of the two contracts.

38. In addition, the Commission directed the parties to address the issue of remedies, in light of the difficulty of administering such old contracts in the present-day transmission environment. Noting that the two utilities belong to different transmission organizations, the Commission expressed concern for the proper resolution of "seams" issues that might arise between PJM and NYISO. The Commission also expressed concern about a recent NYISO report predicting that supplies of electricity in New York City would be scarce during the upcoming summer months.

39. The hearing, said the Commission, would be an investigation proceeding conducted under § 206 of the Federal Power Act.[51] The hearing order authorized the administrative law judge to phase the proceeding. It instructed the judge to issue an initial decision on the issues identified by Con Edison for "prompt resolution" no later than May 28, 2002; as for the balance of the issues, the administrative law judge was told to issue a Phase II initial decision no later than November 25, 2002. Appropriate dates for briefs on and opposing exceptions were set out so that a Phase I order could be issued before the close of the summer and the remainder of the administrative proceeding could be the subject of a Commission order by March 1, 2003.

The Stipulated Issues

40. A prehearing conference was held on April 17, 2002. At the conference, I approved a provision in prehearing stipulation between counsel for PSE&G and Con Edison setting out the following three issues as "prompt resolution" issues to be dealt with in Phase I of the proceeding:

1. Whether PSE&G and PJM Interconnection, L.L.C. ("PJMISO") are obligated to render and whether ConEd is entitled to receive up to 1000 MW of firm transmission service under the contracts, subject to curtailment only when a critical bulk power facility outage in PSE&G's northern zone impedes full service;

2. Whether transmission service to Con Ed under the contracts should be curtailed on a non-discriminatory basis pro rata with other firm services over PSE&G's affected transmission facilities; and

[51] 16 U.S.C. §824e. The Commission expressly reserved judgment about the scope of its remedial authority. See supra note 41 at 61,127, n.17.

3. Whether PSE&G is obligated to provide a spare transformer and how the cost of that transformer should be allocated between ConEd and PSE&G.

In addition, a fourth Phase I issue was added to deal with a dispute about whether the so-called "remedy" issue qualified for "prompt resolution":

4. What steps should PSE&G and the PJMISO take in the short term (*i.e.*, before the end of this summer's peak usage season) to assure that Con Edison gets the service to which it is entitled?

41. The Phase I hearing was held on May 1 and 2, 2002. Testimony filed by witnesses sponsored by Con Edison, PSE&G, PJMISO, NYISO and the Commission Staff was received for the record.

Is Service Firm or Non-firm? An Issue of Construction

42. The principal issue in this phase of the case is one of contractual construction: What rights and obligations devolve on the parties from the 1975 and 1978 agreements? It is axiomatic that the most important evidence of what they wrought is the words of the contracts themselves.[52] Each of the parties was a mature utility, well-stocked with superb lawyers, intelligent engineers and excellent managers. There is no indication that they used contractual language recklessly or inadvertently. There is no evidence of mutual mistake. So we must assume that, regardless of what they may have thought the contracts provided, they intended to be bound by the language they used and nothing more -- or less.

43. If we look at the controversy in light of the present-day transmission regime, we are drawn irresistibly to several conclusions. First, the contracts are valid in accordance with their terms. In its Order No. 888 and Order No. 888-A proceedings[53], the

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[52] As the Commission said in Mid-Continent Area Power Pool, 92 FERC ¶ 61,229, 61,755 (2000), "it is well established that, where the terms of a contract are clear and unambiguous, the contract must be construed according to its literal terms." See also Boston Edison Co. v. FERC, 856 F.2d 361, 365 (1st Cir. 1988) (If the terms of a contract are "plain and free from ambiguity, they must be construed in their usual sense.")

[53] See Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, FERC Statutes and Regulations, Regulations Preambles January 1991-June 1996 ¶ 31,036 at 31,938 (1996), 61 Fed. Reg. 21,540 at 21,712 (May 10, 1996), order on reh'g, Order No. 888-A, FERC Statutes and Regulations, Regulations Preambles July 1996-December 2000 ¶ 31,048 (1997). ("We do not believe it is appropriate to order generic

Commission expressly declined to invalidate contracts for transmission service that pre-dated the outset of those proceedings. In Order No. 888-A, the Commission ruled that "Order No. 888 did not abrogate existing contracts; therefore customers with unique curtailment priorities established by pre-existing contracts would not have those priorities eliminated for the term of the existing contract."[54]

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modification of existing requirements and transmission contracts.")

[54] Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888-A FERC Statutes and Regulations, Regulations and Preambles July 1996 - December 2000 ¬31,048 at 30, 279 (1997), 62 F.R. 12,274 at 12,334.

44. Second, Con Edison and PSG&E did not contract for what we would today call "firm transmission service." As Staff's witness Gross pointed out in his prepared testimony, the Commission essentially defined the meaning of "firm transmission service" in the *pro forma* open access transmission tariff it promulgated in 1996 as an appendix to Order No. 888.[55] The *pro forma* open access tariff does not permit curtailment of firm service merely for economic reasons, *i.e.*, because it is more expensive to render the service than to curtail it. It is only when reliability is threatened that curtailment can take place. Moreover, curtailments must be made "on a non-discriminatory basis" and, to the extent practicable, must be proportionally allocated among the transmission provider's native load customers, network customers, and transmission customers taking firm point-to-point service.[56]

45. In 1975 and 1978, this kind of precise definitional standard was unknown. And if we measure by today's standards the "firmness" of the service PSE&G promised to deliver, it is clear that service does not comport with modern notions of firm transmission service. For example, neither the 1975 nor the 1978 contract contains provisions for scheduling of deliveries from PSE&G to Con Edison and vice versa. Line losses are not accounted for; PSE&G is to deliver to Con Edison exactly the same number of megawatts that Con Edison sends into the PSE&G system. The need for ancillary services is dealt with only in the most rudimentary way.[57] These issues would be addressed as part of any agreement or tariff for firm transmission service concluded in today's environment. The fact that they are not alluded to in the 1975 and 1978 agreements indicates that those agreements cannot be regarded as "firm" transmission service contracts.

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[55] See Ex. S-1 at 14.

[56] See Order No. 888, supra note 53, ¶13.6 (Appendix D - Pro Forma Open Access Transmission Tariff).

[57] The 1975 agreement provides that "each party will normally supply substantially its own reactive requirements." Ex. CE-3 at 3, § 2.5.

46. But this does not end the Commission's inquiry. We must also determine exactly what species of service PSE&G promised to provide and whether PSE&G has lived up to its promises. In the absence of any regulatory prohibition to the contrary, PSE&G and Con Edison were free to make any contractual arrangements they chose, file the contracts under § 205 of the Federal Power Act, and once those contracts were accepted, expect the Commission to respect and enforce the agreed-to deal in accordance with its terms. That is the clear teaching of the Supreme Court's decisions in the Sierra and Mobile cases.[58] Of course, as in Sierra and Mobile, the Commission is empowered to set aside the parties' bargain if the public interest so requires, but no party has suggested that this is an instance in which that power should be employed.

47. Just as it is clear that the parties did not contract for "firm" service under the modern usage of that nomenclature, it is equally clear that they did not contract for "interruptible" service. Interruptible service, as we have indicated, may be curtailed for any reason the utility providing the service deems sufficient, including economic reasons. Indeed, many utilities consider the capacity used to provide interruptible service as reserve capacity that is immediately available to serve firm load should it be required. Under the two contracts, PSE&G's transfer service for Con Edison was far more than mere interruptible service, even if it did not rise to the full dignity of firm service. It lies somewhere in between those two poles, though far closer to the firm side than to the interruptible side.

[58] FPC v. Sierra Pacific Power Co., 350 U.S. 348 (1956); United Gas Pipe Line Co. v. Mobile Gas Serv. Corp., 350 U.S. 332 (1956).

48. In the 1975 contract, PSE&G promised to transfer "up to" 400 MW of power from Ramapo to Farragut. The words "up to" clearly and unmistakably conferred upon Con Edison an option to require a smaller transfer if it so desired. Under the words of the contract, PSE&G's transfer obligation was conditional on two things and two things only. First, it was conditional on the amount of power and energy that Con Edison made available on the line from Ramapo to the New Jersey border. If, for instance, Con Edison delivered only 200 MW to PSE&G, the latter was required to deliver only 200 MW to Con Edison. That is the clear purport of the term "deliver." Second, § 4.1 of the contract allowed PSE&G to curtail the transfer to Con Edison when critical bulk power outages in the northern portion of PSE&G's system would, in the opinion of the New Jersey utility, reduce its ability to complete the transfer. Note that an insufficiency of bulk power generation in the northern portion of PSE&G's system would not suffice, nor would a mere lack of transfer capability. There must be an "outage." Only a facility can suffer an "outage." And the language leaves no room for argument about PSE&G's entitlement to curtail deliveries simply in order to avoid operating its generating resources "off cost" or "out of merit."[59] Unless there is an outage of a bulk power facility in the northern portion of its system, the contract requires PSE&G to make whatever arrangements are required (including out-of-merit dispatch of generating units) to fulfill its duty to deliver "up to" 400 MW to Con Edison. That includes operation of generating facilities, if necessary. Nothing in the contractual language excuses a refusal to use generating facilities in whatever way they must be used to fulfill PSE&G's obligations to Con Edison (and vice versa).

49. The service that the utilities agreed to provide in the 1975 contract was not today's "firm" service to be sure. But it was the next best thing.

50. The 1978 contract is more explicit concerning PSE&G's obligation to deliver the second tranche of 600 MW to Con Edison. That obligation consists of a promise to transfer "a maximum of 600 MW . . . in addition to the 400 MW transfer presently in effect" from Ramapo to Farragut using certain specified facilities "and other [PSE&G] internal transmission facilities." The transfers, according to the 1978 contract, will take place under "normal conditions." The term "normal conditions" was defined to include the absence of any major generation or transmission facility outage in the northern zone of the PSE&G system. In this respect, the undertaking in the 1978 contract appears to be quite similar to that found in the earlier agreement. But there is one significant exception: in the 1978 contract, PSE&G promised to "plan, design, build and operate its

[59] In the normal operation of a utility system, generating facilities are dispatched in the order that produces the lowest overall cost to serve the utility's load. Other things being equal, the lowest-cost units are dispatched before higher-cost units. At times, however, units must be dispatched in a different order in order to achieve goals other than lowest-cost service, such as maintaining system reliability or providing ancillary service. This latter form of operation is called "off-cost" or "out-of-economic-merit" dispatch.

system so as to supply its own load, meet its obligations to PJM and wheel 600 MW to [Con Edison]."

51. In the context of the negotiations that led up to the execution of the 1978 agreement, this latter undertaking can only be read one way: PSE&G was agreeing to do whatever it might take to ensure that "normal conditions" prevailed on its system to the extent necessary to deliver the "maximum of 600 MW" to Con Edison.[60] If a major outage occurred and prevented the agreed-to transfer, and if it could be shown that the outage was proximately caused by PSE&G's failure to plan, design or operate its system properly, PSE&G would incur a liability to Con Edison and whatever regulatory enforcement consequences might flow from its failure to comply with its filed rate schedule. Here again, it is perfectly plain that PSE&G was obligated under the 1978 contract to redispatch its generation in order the maintain the 600 MW transfer, if such redispatch were necessary.[61] That is the case even if it proves necessary to dispatch generating facilities in out-of-merit order or "off-cost." As the Commission recognized in its hearing order, this construction of the 1978 contract is consistent with the interpretation set forth in PSE&G's Operations Department's October 4, 1984 memorandum.[62]

52. To the extent noted in the preceding paragraph, the transmission service for which Con Edison and PSE&G contracted in the 1978 agreement is somewhat more "firm" than the service called for under the 1975 agreement. Neither, however, rises to the dignity of "firm transmission service" as it is defined in the Commission's *pro forma* tariff and in the conforming open access transmission tariffs of many jurisdictional public utilities. To say that the service in question is something other than "firm" does not say much, however. The term "firm" is only a symbol, just as any word is a symbol.[63] To be sure, it is useful in that its use saves us the trouble of describing all of the attributes we ascribe to firm transmission service each time we wish to deal with the concept of such

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[60] PSE&G witness Mallard suggested that the words "supply its own load, meet its obligations to PJM, and wheel 600 MW to CE" should be read "in the order of descending priority" so that service to PSE&G's native load had priority over meeting its obligations to PJM, which in turn took priority over the 600 MW wheel to Con Edison." See Ex. PS-27 at 13. The difficulty with this suggestion is that there is no language in the contract to support it, and the use of the conjunction "and" tends to belie it.

[61] As we shall see, however, the actual dispatch of PSE&G's generation is in the hands of PJM, a "tight" power pool of which PSE&G is a member.

[62] Ex. PS-12.

[63] "A word," as Justice Holmes once pointed out, "is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used." Towne v. Eisner, 245 U.S. 418, 425 (1918).

service. But we must not forget that transmission service, or any other service rendered by a public utility, can have a wide range of attributes, each of which may be the subject of a bargain between the utility and its customer.[64] What is important is what circumstances, if any, justify curtailment of the service. In this case, the parties have spelled out those circumstances by contract. Upon reading the contracts, we find that the right to curtail is severely limited; the limitations do not permit service to be curtailed merely because the utility performing the wheeling would have to run its generation out of economic merit to provide the service.

53. For the foregoing reasons, it is my decision that the contracts are neither "firm" nor "interruptible" as those terms are used today by utilities which provide service under an open access transmission tariff governed by Order No. 888 and its progeny. The two agreements are *sui generis*. They mean exactly what they say, however.

The PARs Issue

[64] Subject, of course, to the power of a regulatory agency to declare some forms of contractual relationships ipso facto unjust and unreasonable and, therefore, unlawful.

54. PSE&G's answer to all of this is encapsulated in the prepared direct testimony of Robert V. Snow, its Director of Transmission Planning and Reliability. According to Mr. Snow, the 1975 and 1978 agreements envisioned that the wheeling service would be undertaken by the use of phase-angle regulators (PARs), which would be adjusted in a coordinated manner "so as to cause electricity produced by or on behalf of Con Ed to the north of New York City to travel through PSE&G's transmission facilities rather than through Con Ed's transmission facilities."[65] In substance, PSE&G's position is that its responsibility ended when the settings on the PARs under its control were adjusted to achieve the flow of power from the Ramapo interconnection to the Hudson-Farragut and Linden-Goethals interconnections as desired by Con Edison. It notes with some asperity that it never denied a Con Edison request for changes in those settings

55. A phase-angle regulator, or PAR, is a type of transformer which changes the relative angle of the source voltage with respect to the angle of the load voltage in an electrical system. A phase-shifting transformer advances or retards the angular relationship of the two voltages. Such a transformer has a number of movable settings called "taps." By manipulating the taps on a PAR, the system operator can adjust the angular difference between the voltage of the load and the voltage of the source. Since power flow is a function of the phase difference between these two voltages,[66] adjustment of the taps can change the power flow. There are, however, limits to what can be achieved through adjustment of the taps on PARs. If, for example, there is insufficient transmission capacity in the utility's system to serve its native load and also to fulfill its obligations to transfer energy to a neighboring utility (perhaps because its native load has grown while its resources have not), all of the manipulation of taps on PARs it can muster will not do the job. More transmission must be built.

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[65] Ex. PS-1 at 5-6.

[66] "It is well understood that power flows on a line are proportional to the angular displacement between the sending and receiving ends of the line." R.H. Miller, Power System Operation 167-68 (1970).

56. The trouble with PSE&G's position is that the contracts themselves do not say what PSE&G wants them to say. No language in those agreements lends support to the notion that PSE&G's responsibility for achieving the power transfers it agreed provide was limited to adjusting the tap settings on the PARs under its control.[67] It is true that the 1975 and 1978 contracts contain specific mention of PARs. But the mention of PARs in the contracts occurs in schedules of the facilities that each of the parties will supply. The same provisions also list many other transmission system components. The 1975 agreement, for example, made mention of circuit breakers, bus structures, metering facilities, and cables in the same sections as PARs are specified, while the 1978 agreement incorporated by reference the entire bill of materials set out in the Joint Study[68] that the parties had issued three years earlier. These references cannot be transmuted into a limitation on the clear and unambiguous language by which PSE&G promised to transfer to Con Edison, *by whatever means necessary*, up to the 1000 MW that the latter furnished at the Waldwick interconnection.

57. It is true, as PSE&G says repeatedly, that the contracts appear to contemplate that certain specific transmission facilities will be used to fulfill its transfer obligation. The 1975 contract states that PSE&G will utilize the Ramapo-New Milford interconnection as well as the Hudson-Farragut interconnection and the Linden Goethals interconnection to provide the service to Con Edison. But, it goes on to provide that the transmission-service obligation will be fulfilled by use of "other [PSE&G] and Con Edison internal transmission facilities." Similarly, the 1978 agreement says that PSE&G in providing the second tranche of transmission service to Con Edison will utilize the new and existing Ramapo-Waldwick and Hudson-Farragut interconnections, the existing Linden-Goethals interconnection, the new Waldwick-Fair Lawn circuit, "and other [PSE&G] internal transmission facilities." Thus, in identical language the contracts make it clear that in addition to the specific facilities being constructed under the agreement, PSE&G was obligated to make use of such "internal transmission facilities" as it might have. How else would a utility render a transmission service to another utility? To accept PSE&G's contention that by referring to certain facilities, the contracts limited its responsibility to the use of only those its facilities (specifically the PARs that it controlled) would represent a completely unjustified reading of the texts.

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[67] Of the six PARs located on tie lines connecting PSE&G and Con Edison, PSE&G physically controls three at Waldwick, while Con Edison controls two at Farragut, and one at Goethals. See Ex. PJM-1 at 13. Of course, since the formation of the PJMISO, the ISO technically has the last word on how PARs in the PJM region are set. Consequently, PSE&G would have to obtain the permission of the PJM operators before changing the setting of one of the PARs in its service territory. There is no evidence that such permission has ever been refused.

[68] See Ex. CE-8 at App. B-1 and B-2.

When May Service be Curtailed?

58. PSE&G has the right to curtail the first 400 MW of transmission service under the 1975 contract "when critical bulk-power facility outages in the northern portion" of its system would, in PSE&G's opinion, reduce its ability to provide the service. A fair reading of this language suggests that the reduction in service must be proportionate to the outage. In other words, if the outage reduces PSE&G's ability to provide 200 MW of the service, it can curtail the 200 MW, not the full 400 MW. By the same token, however, curtailment of service to Con Edison under the 1975 contract by reason of one or more critical bulk power facility outages in the northern portion of PSE&G's system need not be *pro rata* with the curtailment of other transmission customers taking service under the Open Access Transmission Tariff. The contract allows Con Edison to be curtailed even if other transmission customers are not. PSE&G may take the entire amount of the curtailment (up to 400 MW) out of Con Edison's entitlement.

59. Finally, if PSE&G seeks to invoke curtailment of Con Edison's 400 MW entitlement, in whole or in part, on the basis of one or more critical bulk power facility outages, it must promptly identify to Con Edison, upon request, the facility or facilities involved and the nature and expected duration of the outage. While this last requirement is not explicitly set forth in the contract, it is part of the implied covenant of good faith and fair dealing that is inherent in every contract.[69]

60. The transfer service for 600 MW that Con Edison bought under the 1978 contract is also not, strictly speaking, "firm." As the Commission indicated in its hearing order, however, it is somewhat more firm than the service under the 1975 agreement. The later contract permits PSE&G to curtail transfers to Con Edison when "there are major generating and/or transmission facility outages in the northern zone" of the PSE&G system or there are "critical bulk-power system outages" that "make it impossible" for PSE&G to provide the service. This language appears to be virtually indistinguishable from the provisions of the earlier agreement pertaining to PSE&G's right to curtail service to Con Edison. There is, however, one critical difference. The 1978 agreement also places upon PSE&G's shoulders an obligation to plan, design and build its system so that it can meet its obligation to, *inter alia*, provide uninterrupted service to Con

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[69] See Restatement (Second) of Contracts § 205 cmt. a (1981). In the 1978 contract, to duty to give notice of the nature and extent of the outage said to justify curtailment is set forth in express terms.

Edison. Hence, in the event of a putative major facility outage, PSE&G must also demonstrate that the outage was not the proximate result of its failure to plan, design and build its system adequately.

61. As was the case under the 1975 contract, (a) PSE&G may curtail Con Edison's service only to the extent that it finds it "impossible" to provide the full 600 MW of transfer capability; and (b) need not curtail Con Edison *pro rata* with that of other transmission customers, when a contract-specific occasion justifying such curtailment arises.

62. During this case, Con Edison made two concessions, both of which limit PSE&G's obligation to provide transmission service of its 1000 MW at critical times. First, in its complaint, Con Edison asked the Commission to require PSE&G to give it *pro rata* treatment when its transmission service to customers under the Open Access Transmission Tariff is being curtailed. As we have seen, however, Con Edison is not entitled to such treatment when one of the specific events justifying its curtailment under the contracts takes place. If, for example, PSE&G suffers a major bulk-power transmission facility outage in northern New Jersey that makes it "impossible" to complete the transfer to Con Edison, the entire 1000 MW transfer to Con Edison may be curtailed, regardless of what treatment PSE&G gives its other transmission customers under the OATT. Since Con Edison's rights derive from its contracts and not the transmission tariff, it must be prepared to bear its contractual burdens, regardless of how other transmission customers fare.

63. The second concession that Con Edison made was to note that it was not asking the Commission to confer upon it a priority ahead of transmission service needed to prevent shedding of PSE&G's retail load. "Con Edison," said its witness William L. Jaeger in his prepared reply testimony, "would not require PSE&G to shed retail load in order to continue transmission service to Con Edison if Con Edison was not in a corresponding load shedding condition on its own system."[70] This is a very wise concession on Con Edison's part. Without it, there undoubtedly would be grounds for examining the contracts on which it relies to determine whether they should be set aside under the Sierra-Mobile doctrine. That doctrine permits the Commission to set aside or modify a contract for jurisdictional service when continued performance of the contract is contrary to the public interest. One of the classic "public interest" grounds for doing so is that continued performance of the contract would "cast upon other consumers an excessive burden."[71] To require curtailment of service on a priority

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[70] Ex. CE-65 at 16. See also Jaeger's cross-examination at Tr. 149-50. Jaeger is the Chief Engineer, Transmission Planning, for Con Edison.

[71] FPC v. Sierra Pacific Power Co., 350 U.S. 348, 355 (1955).

scheme that mandates shedding of retail sales load, directly or indirectly, might indeed cast upon PSE&G's retail consumers "an excessive burden."

64. At the time the 1975 and 1978 contracts were negotiated and executed, open-access transmission service by investor-owned utilities was virtually non-existent. As Con Edison's witness Jaeger testified, utilities that sold transmission service always subordinated it to service to native load customers.[72] The notion that transmission customers were entitled to equal treatment with the transmitting utility itself did not exist at that time. The concept that a utility's refusal to treat its own transmission service on a par with the service afforded other parties violated its duty to eschew undue discrimination did not arise until two later events took place: First, the Energy Policy Act of 1992 amended the Federal Power Act to give the Commission power to order transmitting utilities to perform open access transmission service.[73] Second, the Commission in 1994 had a revolutionary epiphany while disposing of an otherwise mundane rehearing petition and announced that a utility's favoritism toward its own transmission service might well constitute a type of "undue discrimination" prohibited under the Federal Power Act.[74] At the time the 1975 and 1978 contracts were signed, however, these developments were some two decades in the future. Hence, it is not possible to conclude that the contracts were written with a view to giving Con Edison the same treatment in a curtailment regime as transmission to service PSE&G's native load sale customers. Con Edison's reliance on its contractual rights cannot prevail unless its service under the contracts is subordinated to sales and transmission service for PSE&G's retail customers.

65. For the foregoing reasons, I conclude that Con Edison is entitled to transmission service from PSE&G as specified in its contracts, subject to the concessions it made in this proceeding: While the service is not literally "firm" within the meaning of the PJMISO's OATT, it has a priority that prohibits its curtailment for purely economic reasons and requires PSE&G to take or pay for whatever steps are necessary (including redispatch of generation within the PJM system) to provide the service. The contractual service to Con Edison may be curtailed only in the following circumstances:

- If Con Edison does not deliver a full 1000 MW through the Ramapo-Waldwick interconnection, its service may be curtailed to the extent its deliveries fall below 1000 MW.

- If one or more outages of critical bulk power facilities in the northern portion of the PSE&G system reduce PSE&G's ability transfer electricity across its system, the first 400 MW of service to Con

[72] Tr. at 117-18, 122.

[73] See Pub. L. 102-486 §§721-723, 106 Stat. 2776, 2915-19 (1992).

[74] See American Electric Power Service Corp., 67 FERC ¶61,168, 61,490 (1994).

Edison may be curtailed to the extent that, in PSE&G's opinion, its ability to transfer the full 400 MW is reduced by reason of the outage or outages. However, PSE&G is obligated, as a condition of its right to implement such curtailment, to notify Con Edison promptly of the nature, location and probable duration of such outage or outages.

- If one or more outages of critical bulk power or major generating and/or transmission facilities occur in the northern zone of the PSE&G system, the second 600 MW of service to Con Edison may be curtailed to the extent that such critical bulk power outage or outages make it impossible for PSE&G to maintain the transfer of electricity to Con Edison. However, PSE&G is obligated, as a condition of its right to implement such curtailment, to provide to Con Edison's Operations Department such information as is reasonable required to demonstrate that the curtailment is necessary and to consider (and notify PJMISO of) such suggestions for the removal of the curtailment as Con Edison may make. In addition, service to Con Edison may not be curtailed if the outage or outages that are relied upon to provide the basis for curtailment arose from PSE&G's failure to design, build and operate its system so as to supply its own load, meet its obligations to PJM and wheel the 600 MW to Con Edison.

- Transfer of any portion of the 1000 MW to Con Edison may be curtailed when such curtailment is necessary to avoid shedding retail native load.

- For any other cause justifying curtailment, Con Edison may be curtailed pro rata with firm transmission customers under the PJMISO OATT.

The Spare Transformer Question

66. Con Edison's complaint charged PSE&G with failure to fulfill its obligation to have a spare transformer available to replace one of the primary transformers at the major interfaces (the so-called "A", "B" and "C" Feeders) in the event of a failure of the primary transformer. Transformers are critical components at the interconnections between PSE&G and Con Edison because PSE&G's transmission system is a 230kV system, while Con Edison 's system operates at 345kV.

67. According to Con Edison, the obligation to keep a spare transformer on hand is derived from the 1975 contract. Section 5.2 of that contract provides:

> . . .[PSE&G] will provide, at its own expense, an additional 345/230 kV transformer of approximately 500-mva capacity for use as a standby spare at Waldwick which may also be used as a spare for the Hudson Station of [PSE&G] and the Goethals Station of Con Edison.[75]

[75] Ex. CE-6 at 8, §5.2.

68. Three years later, the parties executed the 1978 contract. In the 1978 contract, they provided for PSE&G to supply two new transformers at the Hudson Generating Station, "one for replacing the autotransformer in the existing Hudson-Farragut interconnection, which will be retained as a non-operating spare."[76] On the next day (May 9, 1978), the parties amended the 1975 agreement in several respects to bring it into line with their new contract. (We have already noted that the May 8, 1978 amendments extended the expiration date of the 1975 contract to December 31, 2020.) One of the amendments dealt with PSE&G's obligation to keep a spare transformer available. Section 4 of the May 9, 1978 agreement repealed the provision of the 1975 contract quoted above, as of the date that PSE&G fulfilled its obligation to supply the two new transformers at its Hudson Generating Station.[77]

69. The PSE&G-supplied facilities called for by the 1978 agreement were completed and placed in service in 1983. From that date until 1999, a spare transformer remained available and was, in fact, used on several occasions when the primary transformer was being repaired. In 1999, however, the primary transformer at the Hudson-Farragut interconnection failed; the spare transformer was installed in its place, but it too failed and was damaged beyond repair.[78] From that day to this, there has been no spare transformer available for use on the interconnections between the two utilities.

70. Is PSE&G obligated to provide one, as Con Edison says it is or did literal compliance with the 1978 contract (by supplying a spare transformer that is no longer capable of substituting for the primary transformers) exhaust PSE&G's duties under the two contracts? This is a difficult and close question. Con Edison can prevail only if the contracts evince an intention on the part of the parties to have a spare transformer on hand at all times. That may have been the subjective intent of Con Edison. As Con Edison's witness Jaeger testified, transformers are critical components in a utility transmission interface. Many repairs cannot be done on-site, no facilities for repairing a damaged transformer

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[76] Ex. CE-9 at 3.

[77] See Ex. CE-7 at 2, ¶A.

[78] See Ex. CE-4 at 12.

are available in or near the New York City area and replacement of a transformer can consume (and has consumed) more than a year's time.[79]

71. But the subjective intent of one party to a contract will not fill the office of express language in the instrument. In the final analysis, Con Edison's claim flounders on the fact that there is no language in the contracts that expressly requires PSE&G to keep a spare transformer on hand at all times. True, PSE&G undertook that obligation at one time, when the 1975 contract was signed. But three years later, in the May 8, 1978 amendments, that obligation was repealed and replaced with a less onerous duty -- to allow a transformer that was being replaced to remain as a spare. The 1978 contracts nowhere addressed the issue of what was to happen if the spare transformer were actually used in lieu of the primary transformer. Was a new spare to be procured? The contract is silent on that point. As the Commission noted in its hearing order Con Edison's rights are entirely a creature of its contracts. Not having had the foresight to negotiate for an express contractual provision imposing on PSE&G the burden of replacing the one-time spare transformer with another spare transformer, Con Edison cannot prevail on its claim that PSE&G was deficient in meeting its legal responsibility to provide a replacement spare.

72. Con Edison makes two further submissions. First, it relies on § 6.4 of the 1975 agreement, which deals with the obligation of a party to repair, restore or reconstruct facilities that are damaged or destroyed in a "catastrophe" such that the facilities "are no longer useful" or are "taken by condemnation." The short answer to this contention is that there is no evidence of a "catastrophe" or of a taking by condemnation.

[79] Id. at 13.

73. Con Edison also suggests that PSE&G's obligation to keep a spare transformer available was part of its implied duty to follow "good utility practice" in managing its interconnections with its New York colleague. The difficulty with this claim is that Con Edison did not provide the record with evidence demonstrating that "good utility practice" requires a utility always to provide a back-up transformer. Mr. Jaeger, Con Edison's witness on this point, merely said that many utilities, including Con Edison itself, maintain spare transformers for their transmission systems.[80] Such a statement implies that other utilities do not do so. It falls far short of persuasive evidence that PSE&G's refusal to replace a spare transformer that had been pressed into service with another spare transformer constituted a violation of the standards that make up the rubric of "good utility practice."

74. For these reasons, I hold that PSE&G is not required to provide a spare transformer for its interconnections with Con Edison. If Con Edison wishes to have a spare transformer available, it is, of course, entitled to acquire one at its own expense and keep it on hand at one of the interconnections.[81]

An Interim Remedy

75. Devising an appropriate remedy is not an easy matter. In the prehearing conference, the parties were asked to deal with the question of remedy in two parts. First, what, if any, remedy should the Commission impose on a short-term basis, bearing in mind the Commission's expressed desire to act, at least on a preliminary basis, in time to afford Con Edison some relief before the upcoming

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[80] Id. at 14.

[81] Section 6.2(a) of the 1975 agreement allows either party to "make capital improvements, betterments, replacements, reinforcements or additions to either interconnection at its own expense." See Ex. CE-6 at 10, §6.2(a).

summer's peak demand for electricity in New York City? Second, what, if any, relief should the Commission afford on a long-term basis, in order to make the administration of these contracts compatible with its general policies on how regional transmission organizations should deal with so-called "seams" issues? The first question will be dealt with in Phase I of this case, while the second question will be at issue in Phase II.

76. Both the 1975 and 1978 contracts between PSG&E and Con Edison assume that each of those utilities has complete control over the transmission of electricity within its own service territory. Indeed, since the contracts call for the wheeling of power over specific transmission facilities to specific interconnection facilities, the arrangements the parties made assume that such specific flows are possible. Perhaps they were twenty-five or more years ago, when each jurisdictional utility operated its own transmission system in isolation. But that is not the case today. Today, both Con Edison and PSE&G have committed their transmission resources to regional transmission organizations, which are responsible for providing open-access over a vast area served by numerous utilities. PSE&G's transmission system, for example, is in the hands of PJMISO, which administers a transmission network that stretches from Lake Erie to the Chesapeake Bay. In such an environment, it is not possible to comply literally with the contracts' requirements. As PJMISO's Executive Director for Operations, Michael J. Kormos, testified, it would be impossible for PJMISO to carry out PSE&G's contractual commitment to wheel electricity to Con Edison over certain specified transmission facilities -- or even to transmit a specific amount of power over PSE&G's facilities, as is called for in the two contracts.[82] There is no transmission service PJMISO administers that requires flow to be on certain lines, Mr. Kormos testified.[83]

77. As of today, the PJMISO does not take account of the service contemplated by the 1975 and 1978 contracts. It is not included in schedules of transactions between PJM and the NYISO. Because the two agreements call for a transfer of energy from the NYISO's control area to the PJMISO's control area and then back to the NYISO's control area, the net transfer is zero, and PJM

[82] Ex. PJM-1 at 9-10.

[83] Tr. at 376.

thinks of the transactions as mere "circulation" or "loop flow."[84] If those flows cannot be handled by adjustment of PARs, they are not handled at all, according to PJM's witness.

78. Both PSE&G and PJMISO agree that, as a technical matter, it is not possible to determine precisely whether the flows from Con Edison to PJM at Waldwick and the flows back to Con Edison at Farragut and Goethals are of the magnitude specified in the contracts. This is the case, they assert, because there are counter-flows of power and energy moving from the PJM area to the New York Power Pool via the Waldwick-Ramapo tie and the Farragut-Hudson and Goethals-Linden interfaces. These counter-flows make the meter readings at the interconnections unreliable as a source of information with which to determine whether Con Edison is getting the full measure of transfer service to which it is entitled.

[84] See Ex. PJM-1 at 14-15.

79. The NYISO does not agree. According to its witness, Michael C. Calimano, its Vice President for Operations and Reliability, NYISO has software which "presently tracks the net interchange between ConEd and PSE&G on a real-time basis."[85] Mr. Calimano went on to say that "[i]t would be feasible for the NYISO to continue to track these flows."[86] Thus, the record reflects a disagreement among the experts on whether it is possible to monitor compliance with PSE&G's contractual obligations in the context of today's electrical transmission regime.

80. It is well-settled both as a matter of law and physics that once electrical energy is on an interconnected grid, it cannot be traced from its source to its sink. From a legal standpoint, that is the teaching of two of the Commission's greatest jurisdictional victories, FPC v. Florida Power & Light Co.[87] and FPC v. Southern California Edison Co..[88] From the standpoint of physical laws, electrical energy follows the path of least impedance to its flow. The pattern of flow will vary with changes in the pattern of load and generation. "In a complicated system such as PJM, the actual flow on a given transmission line will be affected by a virtually infinite set of constantly changing variables."[89]

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[85] Ex. NY-1 at 4.

[86] Id.

[87] 404 U.S. 453 (1972).

[88] 376 U.S. 205 (1964).

[89] Ex. PJM-1 at 9.

81. So the problem of assuring that Con Edison obtains what it has paid for under the two contracts is a complex one. But that does mean it is unsolvable. Even PJM concedes that power transfers between PJM utilities and New York Power Pool members take place every day. When that happens, the transactions are scheduled in advance, and the generation of both areas is adjusted to reflect the transfer. If a PJM utility is to send 1000 MW of power and energy to a NYISO utility, for example, PJM generates 1000 additional megawatts and the New York pool generates 1000 fewer megawatts than its actual load in order to accommodate the transaction.[90] So even if Mr. Kormos and his company were correct in their belief that it is impossible for power transfers to be routed along specific transmission lines in today's environment, it is very possible for PJMISO to schedule and transfer the requisite quantity to electrical energy to NYISO for Con Edison's account. This suggests that Mr. Calimano was correct in suggesting that, if there is good will on both sides of the table, the two utilities and the transmission organizations to which they belong can work out a protocol under which either (1) the obligations of PSE&G to Con Edison under the 1975 and 1978 contracts can be satisfied under present-day conditions of transmission service; or (2) they can come so close to satisfying those obligations that the difference between the service Con Edison bought under the 1975 and 1978 contracts and the service it receives in the current transmission-service environment will be *de minimis*.[91]

82. In the interim, pending a long-range resolution, the Commission will adopt in modified form a suggestion made by Mr. Kormos during his cross-examination. He noted that, under the PJM OATT, Con Edison could treat its transactions with PSE&G as an injection into the PJM grid at Waldwick and a withdrawal at the "A" line at Linden Goethals and the "B" and "C" interconnections at Hudson-Farragut. Such a series of transactions, Mr. Kormos said, would "reproduce the effect of the service" under the 1975 and 1978 contracts. In addition, Con Edison could schedule the service and receive basically the same service as an OATT point-to-point customer.[92]

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[90] See Ex. PJM-1 at 9-10. For simplicity's sake, line losses and the need for ancillary services appear to have been ignored in this illustration.

[91] Tr. at 378-89.

[92] Id. at 380.

83. If Con Edison were to receive such treatment, PJMISO might be entitled to charge for congestion costs. PJM operates, with the Commission's approval, a market that is based on locational marginal pricing.[93] Treating Con Edison as a seller at Waldwick and a purchaser at Hudson-Farragut and Linden-Goethals might very easily require payment of an additional charge to reflect the marginal difference among the prices of electricity at the specified locations. If that is the case, Mr. Kormos assumed, Con Edison should pay the charge. For reasons discussed in detail above, however, it would be unfair to require Con Edison to pay an additional charge for service for which PSG&E is already being well compensated. In my opinion, the burden of paying any additional charge, which would largely reflect the cost of dispatching generation out of merit, should fall on the shoulders of PSE&G. As an interim resolution, pending agreement of the parties on a permanent solution (which may include renegotiation of the contracts to be more compatible with the terms of the OATT), the Kormos suggestion, as modified, will be adopted.

Order

84. WHEREFORE, it is ordered, subject to review by the Commission on exceptions or on the Commission's own motion, as provided in the Rules of Practice and Procedure that:

A. The questions (i) whether Con Edison is entitled to firm service from PSE&G under the 1975 and 1978 contracts; and (ii) under what circumstances such service may be curtailed are answered as set forth in this Initial Decision.

B. PSE&G is not obligated to provide a spare transformer to support its service under the 1975 and 1978 contracts.

C. Effective on the date this Decision becomes final and prior to the end of the summer of 2002, PJMISO should treat the service to Con Edison under the 1975 and 1978 contracts as an injection into the PJM grid at Waldwick and a withdrawal from the grid at Hudson-Farragut and Linden-Goethals. Any incremental charge under the PJM OATT for such treatment should be charged to the account of PSE&G.

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[93] Locational marginal pricing was first approved by the Commission in Pennsylvania-New Jersey-Maryland Interconnection, 81 FERC ¶61,257 at 62,253-61 (1997).

D. Con Edison, PSE&G, PJMISO and the NYISO shall promptly meet and negotiate in good faith for the development of a protocol under which the obligations of PSE&G to Con Edison under the 1975 and 1978 contracts can be satisfied as nearly as possible pursuant to the open access transmission tariffs of both regional organizations. Such protocol shall be filed with the Commission for review and approval as promptly as possible and in no event later than December 31, 2002.

Isaac D. Benkin
Presiding Administrative Law Judge