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FUNCHES, J. L. Planning & Program Analysis Staff (post 851125)

SUBJECT: Forwards response to 860627 request for addl info per Reg Guide 9.3. Power & energy provided to town of Wickenburg at wholesale rate.

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Arizona Nuclear Power Project
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

August 21, 1986
ANPP-37826-JGH/KLM/98.05

Mr. Jesse L. Funches, Director
Planning and Program Analysis Staff
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530
Additional Information-Updated
Regulatory Guide 9.3 Information
File: 86-G-056-026; 86-007-220

References: 1) Letter to J. L. Funches, NRC, from E. E. Van Brunt, Jr., ANPP, dated April 11, 1986 (ANPP-36071). Subject: Updated Regulatory Guide 9.3 Information.

2) Letter from W. M. Lambe, NRC, to W. F. Quinn, ANPP, dated June 27, 1986. Subject: Palo Verde Nuclear Generating Station, Unit 3: Docket No. 50-530A; Updated Regulatory Guide 9.3 Information.

Dear Mr. Funches:

Reference 1) provided the NRC with updated Regulatory Guide 9.3 information. After reviewing the information provided in Reference 1), your staff identified areas which required further clarification to complete their review.

Reference 2) requested ANPP to provide the additional information required to complete the Regulatory Guide 9.3 review. The enclosure provides the requested information.

If you should have any questions concerning the enclosed information, contact Mr. W. F. Quinn of my staff.

Very truly yours,

JGHaynes

J. G. Haynes
Vice President
Nuclear Production

JGH/KLM/rw
Enclosure

cc: O. M. De Michele (all w/enclosure)
E. E. Van Brunt, Jr.
W. M. Lambe
A. C. Gehr

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ENCLOSURE

ANPP Response To NRC Request for Additional Information Regulatory Guide 9.3

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SECTION I

Arizona Public Service
Company

Responses to NRC Request
for Additional Information -
Regulatory Guide 9.3

NRC Question 1h(1)

Please provide the date and amount (type, etc.) of the wholesale power agreement between APS and the Town of Wickenburg.

Response

Pursuant to a Contract Agreement, effective July 17, 1979, APS provides power and energy to the Town of Wickenburg at a Wholesale rate. The maximum demand is 4500 kW. Wickenburg is a full requirement APS customer. Arizona Power Authority has allocated 2200 kW of preference power (Hoover B) for the Town of Wickenburg in 1987. APS is working with the Town of Wickenburg to negotiate a Wheeling contract for this preference power.

NRC Question 1h(2)

Explain the relationship or proposed relationship between APS and the Town of Safford. Did APS approach Safford pursuant to a power sale or did Safford approach APS?

Response

In 1978, Safford approached APS to either buy or lease its electrical system. Later on, Safford decided to own and operate its electrical system. Safford continues as a municipality and provides service to its customers. APS does not have any contractual agreements regarding the sale of power and energy.

NRC Question 2

Arizona Public Service Company's responses concerning implementation of antitrust license conditions are too general. APS's response simply restates the broad tenants [sic] of the license conditions, indicating that APS has fulfilled its commitments to the antitrust license conditions attached to the Palo Verde construction permits and operating licenses.

Staff needs more specific information concerning requests for transmission over APS's facilities. For example, when a request occurs, provide the name of the requesting party, the date of the request, the proposed destination of the power being transmitted, the amount of power (or energy) being transmitted and APS's action on the request. Where the request was denied, APS should provide justification for such action.

In conjunction with requests for transmission of bulk power over its facilities, APS should highlight the measures it has taken to implement said requests through the planning and construction of new transmission facilities--provided APS received sufficient advance notice to accommodate the requirements of the requesting entity, as provided for in the license conditions.

If no requests for transmission over APS's facilities have been received from an "entity" since the construction permit review, so indicate; however, where requests have been received, please document as indicated above.

Response

Since APS supplied its initial response to Regulatory Guide 9.3 on October 1, 1979, various requests have been made of APS to supply both firm and non-firm transmission service.

Regarding firm transmission service, the following requests have been made:

Plains Electric Generation and Transmission Cooperative, Inc. (Plains)

In October 1980, APS and Plains executed a Service Schedule to a Power Coordination Agreement under which APS will wheel power (up to 75 MW) from its Four Corners Switchyard to multiple delivery points for delivery to Navopache Electric Cooperative (a member system of Plains). Negotiations on multiple issues, including a wholesale power agreement and a sale of Switchyard facilities, began in mid-1978 and concluded simultaneously on October 27, 1980. Initial service to Plains began in 1984.

Response to NRC Question 2 (continued)

City of Los Angeles, Department of Water and Power (LADWP)

On March 19, 1980, APS and LADWP executed an agreement whereby APS would transmit 24 MW from Four Corners to the Pinnacle Peak, Westwing and Navajo Switchyards. Service was initiated March 21, 1980 and the contract terminated April 30, 1982.

Tucson Electric Power Company (TEP)

On December 21, 1981, APS and TEP executed an agreement whereby APS would transmit power from the Westwing 500 KV Switchyard to the Arizona Nuclear Power Project (ANPP) 500 KV Switchyard. The contractual wheeling amount was 100 MW through May 31, 1985 and 230 MW from June 1, 1985 through December 31, 1988. The contract has subsequently been extended through May 31, 1989 at TEP's request.

Southern California Edison Company (SCE)

In late 1979, APS and SCE entered into negotiations whereby APS would sell SCE the output of APS' Cholla No. 4 generating unit for the period June 1, 1984 through May 31, 1989. A companion transmission service agreement was also negotiated under which APS would transmit the Cholla No. 4 Layoff Power to SCE. Executed February 7, 1980, the agreement was permitted by FERC to become effective in August 1981. This agreement has been extended once and provides SCE with the following amounts of wheeling service from Cholla to the ANPP 500 KV Switchyard:

6-1-84 through 5-31-85	121 MW
6-1-85 through 5-31-89	350 MW
6-1-89 through 5-31-90	196 MW

Utah Power & Light Company (UP&L)

In late 1980, APS and UP&L initiated negotiations whereby APS would sell UP&L a portion of the output of APS' Cholla No. 4 generating unit for the period June 5, 1981 through May 31, 1983. A companion transmission agreement was also negotiated under which APS would transmit the Cholla No. 4 Layoff Power to UP&L. Executed November 25, 1980, the agreement became effective June 1, 1981.

Under the terms of the agreement, APS wheeled 50 MW (14.41% of 350 MW) for the period June 5, 1981 through May 31, 1982 and 151 MW (43.23% of 350 MW) for the period June 1, 1982 through May 31, 1983, all over the path Cholla to Four Corners.

San Diego Gas & Electric Company (SDG&E)

In early 1980, SDG&E requested 35 MW of firm transmission service from APS over the contract path Four Corners to Pinnacle Peak and/or Westwing. APS had already committed to LADWP for 24 MW of firm transmission service and could not accommodate the request of SDG&E utilizing existing facilities. SDG&E was informed and the request was dropped.

In addition, several small power producers have made informal requests regarding wheeling of PURPA power to California. APS has indicated a willingness to do this provided (i) existing facilities can accommodate the increased line loadings, (ii) existing customers will not be adversely affected and (iii) an appropriate agreement is executed. No formal requests have been made to date.

Regarding non-firm transmission service, APS has contractual agreements in place with everyone who has ever requested non-firm service. These agreements cover multiple interconnection points and are with the following entities:

Arizona Electric Power Cooperative
El Paso Electric Company
City of Farmington, NM
City of Los Angeles, Department of Water and Power
Plains Electric Generation and Transmission Cooperative, Inc.
Public Service Company of New Mexico
San Diego Gas & Electric Company
Southern California Edison Company
Tucson Electric Power Company
Inland Power Pool Participants (other than those members in the above list)

- Boise Electric Power Cooperative
- City of Colorado Springs
- Colorado Ute Electric Association
- Deseret Generation and Transmission Cooperative
- County of Los Alamos, NM
- Platte River Power Authority
- Public Service Company of Colorado
- Salt River Project Agricultural Improvement and Power District
- Texas-New Mexico Power Company
- Tri-State Generation and Transmission Association, Inc.
- United States - WAPA - Boulder City
- United States - WAPA - Loveland/Ft. Collins
- United States - WAPA - Salt Lake City
- Wyoming Municipal Power Agency

SECTION II

El Paso Electric
Company

Responses to NRC Request
for Additional Information -
Regulatory Guide 9.3

NRC Question 1b

Provide names of parties involved in the fifteen bilateral Interchange/Interconnection Agreements with a brief description of each agreement, e.g., economy energy exchange, partial wholeshale power service, and the amount of power or energy, if applicable, associated with each agreement.

Response

Please refer to the attached, Attachment II-1, summary of bilateral Interchange/Interconnection Agreements EPE has entered into since 1979. Several of these agreements have been executed since EPE's first responses in this matter earlier this year.

NRC Question 1h(i)

Is the list of four companies, Imperial Irrigation District, Texas-New Mexico Power Company, Southern California Edison Company and the Colorado-Ute Electric Association a complete list of organizations contacted by EPE that resulted in a contract to sell firm capacity and/or energy since 1979 or is this list only an illustration of such organizations as alluded to in EPE's response.

Response

Yes, the four companies listed above comprise all new firm capacity wholesale customers of EPE since 1979.

NRC Question 1h(ii)

Were there requests by other entities to EPE for electric service? (EPE's response only refers to EPE offers to sell); if so, please list, noting names of the parties, date of the request, type of request (quantity of power and energy involved if appropriate) and action taken by EPE.

Response

EPE has received periodic inquiries as to the availability of various forms of electric power and/or energy sales for possible purchase by other electric utilities since 1979. In each case, EPE has responded affirmatively as to its desire to serve such possible loads. The subject requests are described below:

1. Requesting Party: M-S-R Public Power Agency
   Date of Request: July 23, 1981
   Type of Request: Purchase of 25% of EPE's Palo Verde entitlement
   Quantity: Approximately 150 MW
   Disposition: Voted down by Modesto Electorate

2. Requesting Party: Northern California Power Agency (NCPA)
   Date of Request: August 25, 1981
   Type of Request: Firm, nonfirm or contingent capacity and energy
   Quantity: Not specified
   Disposition: NCPA pursued other options

3. Requesting Party: Sacramento Municipal Utility District (SMUD)
   Date of Request: November 11, 1981
   Type of Request: Purchase of 25% of EPE's Palo Verde Entitlement
   Quantity: Approximately 150 MW
   Disposition: Negotiations terminated by SMUD Board

Response to NRC Question 1h(ii) (continued)

4.	Requesting Party:	Arizona Electric Power Cooperative (AEPCO)
	Date of Request:	November 4, 1982
	Type of Request:	Various power commodities
	Quantity:	Not specified
	Disposition:	AEPCO terminated discussions due to reduced load growth expectations
5.	Requesting Party:	Utah Municipal Power Agency (UMPA)
	Date of Request:	June 22, 1983
	Type of Request:	Bulk power purchases or joint ownership in generating facilities
	Quantity:	12.5 MW in 1985 up to 90 MW in 2000
	Disposition:	No interest expressed by UMPA
6.	Requesting Party:	City of Colorado Springs, Colorado (CCS)
	Date of Request:	June 13, 1984
	Type of Request:	Firm capacity and energy
	Quantity:	Up to 100 MW
	Disposition:	No follow-up action by CCS
7.	Requesting Party:	City of Riverside, California
	Date of Request:	September 18, 1984
	Type of Request:	Economy energy, short-term firm energy (with and without capacity), emergency capacity service, long-term capacity
	Quantity:	Ranging from 35 MW/hour to 125 MW/hour
	Disposition:	Riverside consummated purchase with Utah utility
8.	Requesting Party:	Southern California Edison (SCE)
	Date of Request:	February 5, 1985
	Type of Request:	Long-term firm capacity and energy
	Quantity:	100 MW beginning in August 1987, with increasing amounts in later years
	Disposition:	SCE is still considering options
9.	Requesting Party:	City of Gallup, New Mexico
	Date of Request:	March 6, 1985
	Type of Request:	Full requirements, partial requirements, unit contingent, generating station entitlement
	Quantity:	Not specified
	Disposition:	Gallup still considering long-term options
10.	Requesting Party:	Salt River Project (SRP)
	Date of Request:	June 11, 1985
	Type of Request:	Peaking Capacity
	Quantity:	75 MW
	Disposition:	Other arrangements consummated by SRP

Response to NRC Question 1h(ii) (continued)

11.	Requesting Party:	Lower Colorado River Authority (LCRA)
	Date of Request:	October 15, 1985
	Type of Request:	Firm capacity and energy
	Quantity:	160 MW in 1992; increasing thereafter
	Disposition:	No interest expressed by LCRA
12.	Requesting Party:	City of Austin, Texas
	Date of Request:	December 2, 1985
	Type of Request:	Firm capacity and energy
	Quantity:	35 MW in 1992; increasing thereafter
	Disposition:	Still under review by Austin
13.	Requesting Party:	Citizens Utility Company
	Date of Request:	February 12, 1986
	Type of Request:	Peaking capacity
	Quantity:	7-10 MW
	Disposition:	Citizens contracted with another utility
14.	Requesting Party:	Texas-New Mexico Power Company
	Date of Request:	February 28, 1986
	Type of Request:	Long-term firm capacity (40 years)
	Quantity:	150 MW in 1990; increasing thereafter
	Disposition:	Discussions are ongoing
15.	Requesting Party:	Electrical District Nos. 1 and 3 of Pinos Altos County, Arizona
	Date of Request:	April 24, 1986
	Type of Request:	1986 summer peaking capacity
	Quantity:	Up to 36 MW
	Disposition:	Pinos Altos contracted with another utility
16.	Requesting Party:	Southwestern Public Service Company (SPS)
	Date of Request:	June 13, 1986
	Type of Request:	Partial firm-load requirements
	Quantity:	50 MW in 1993; increasing thereafter
	Disposition:	Under review by SPS

ATTACHMENT II-1

EL PASO ELECTRIC COMPANY
BILATERAL INTERCHANGE/INTERCONNECTION AGREEMENTS

1. El Paso Electric/Arizona Electric Power Cooperative, Inc.
Interchange Agreement

This October 6, 1981, Agreement provides for the exchange of capacity and energy between the electric systems of the Parties. More specifically, this Agreement contains provisions for Emergency Assistance, Economy Energy Interchange and Nonfirm Transmission Service.

2. El Paso Electric/Comision Federal de Electricidad (CFE)
Interchange Agreement

CFE's electric system in Ciudad Juarez, Chihuahua, and EPE's electric system in El Paso, Texas, are contiguous along a portion of the Mexico-United States of America border and are interconnected through two 69 KV circuits. This April 14, 1982, Agreement provides the terms and conditions for Emergency Assistance and Short-Term Firm Capacity.

3. El Paso Electric/Texas-New Mexico Power Company
Interchange Agreement

The provisions of this December 8, 1981, Interchange Agreement relate to utilizing existing facilities more efficiently and to enhancing the reliability of overall system operations. Service Schedules include Emergency Assistance, Economy Energy Interchange, Wheeling Service and Maintenance Service.

4. El Paso Electric/San Diego Gas & Electric Company
Interchange Agreement

This April 29, 1982, Agreement provides for the specific services to be rendered as set forth in the Service Schedules. These services include Economy Energy Interchange, Energy Exchange and Nonfirm Transmission Service.

5. El Paso Electric/Southwestern Public Service Company
Interconnection Agreement

This Agreement, executed on December 8, 1981, contains provisions for Emergency Service, Economy Energy and Interruptible Power Service.

6. El Paso Electric/City of Riverside
Interchange Agreement

This November 29, 1983, Agreement provides terms and conditions under which the Parties may engage in Economy Energy, Emergency Assistance and Short-Term Firm Capacity transactions.

EL PASO ELECTRIC COMPANY
BILATERAL INTERCHANGE/INTERCONNECTION AGREEMENTS
(Continued)

7. El Paso Electric/City of Burbank
Interchange Agreement

This July 14, 1980, Agreement establishes the terms and conditions under which Nonfirm Energy and Economy Energy may be purchased and sold, thereby making more efficient use of the Parties' system resources.

8. El Paso Electric/City of Glendale
Interchange Agreement

This September 30, 1980, Agreement establishes the terms and conditions under which Nonfirm Energy and Economy Energy may be purchased and sold, thereby making more efficient use of the Parties' system resources.

9. El Paso Electric/City of Pasadena
Interchange Agreement

This September 29, 1980, Agreement establishes the terms and conditions under which Nonfirm Energy and Economy Energy may be purchased and sold, thereby making more efficient use of the Parties' system resources.

10. El Paso Electric/Department of Water & Power of Los Angeles
Interchange Agreement

This August 21, 1980, Agreement establishes the terms and conditions under which Nonfirm Energy and Economy Energy may be purchased and sold, thereby making more efficient use of the Parties' system resources.

11. El Paso Electric/City of Farmington
Interchange Agreement

This August 1, 1983, Agreement provides for Economy Energy Interchange and Emergency Assistance between the Parties.

12. El Paso Electric/Tucson Electric Power
Interchange Agreement

While the services to be provided may vary during the term of the December 16, 1983, Agreement, initially, the services to be provided are Economy Energy Interchange, Nonfirm Transmission Service and Power Exchange Service.

EL PASO ELECTRIC COMPANY
BILATERAL INTERCHANGE/INTERCONNECTION AGREEMENTS
(Continued)

13. El Paso Electric/City of Anaheim
Interchange Agreement

This November 12, 1984, Agreement provides terms and conditions under which the Parties may engage in Economy Energy and Emergency Assistance transactions.

14. El Paso Electric/M-S-R Public Power Agency
Interchange Agreement

The specific services to be provided pursuant to this December 30, 1983, Agreement are Economy Energy Interchange and Emergency Assistance.

15. El Paso Electric/Imperial Irrigation District
Interchange Agreement

This February 21, 1985, Agreement provides for the specific services to be rendered as set forth in the Service Schedules. These services include Economy Energy Interchange, Emergency Assistance and Nonfirm Transmission Service.

16. El Paso Electric/California Department of Water Resources
Interchange Agreement

This April 18, 1985, Agreement specifically provides for the interchange of Economy Energy between the Parties.

17. El Paso Electric/Alamito Company
Interchange Agreement

This August 23, 1985, Agreement provides for the rates and terms of Economy Energy transactions between the Parties.

18. El Paso Electric/City of Azusa
Interchange Agreement

This January 24, 1986, Agreement provides for the specific services to be rendered as set forth in the Services Schedules. These services include Economy Energy Interchange, Emergency Assistance and Nonfirm Transmission Service.

EL PASO ELECTRIC COMPANY
BILATERAL INTERCHANGE/INTERCONNECTION AGREEMENTS
(Continued)

19. El Paso Electric/City of Banning
Interchange Agreement

This January 24, 1986, Agreement provides for the specific services to be rendered as set forth in the Service Schedules. These services include Economy Energy Interchange, Emergency Assistance and Nonfirm Transmission Service.

20. El Paso Electric/City of Colton
Interchange Agreement

This February 5, 1986, Agreement provides for the specific services to be rendered as set forth in the Service Schedules. These services include Economy Energy Interchange, Emergency Assistance and Nonfirm Transmission Service.

21. El Paso Electric/City of Vernon
Interchange Agreement

This January 28, 1986, Agreement provides for the specific services to be rendered as set forth in the Service Schedules. These services include Economy Energy Interchange, Emergency Assistance and Nonfirm Transmission Service.

SECTION III

Public Service Company
of New Mexico

Responses to NRC Request
for Additional Information -
Regulatory Guide 9.3

NRC Question 1b(3)

Please provide summary conclusions of the Rand Report on the Southwest Bulk Power Market Experiment.

Response

Attached herewith, Attachment III-1, are the summary pages of the Rand Report entitled, "Regulation, Efficiency, and Competition in the Exchange of Electricity, First-Year Results for the FERC Bulk Power Market Experiment". A copy of the Full Text is available upon request to PNM.

NRC Question 1h (Citizens)

Elaborate on why Citizens Energy Corp. was unable to make appropriate transmission arrangements for a power purchase from PNM in May of 1985.

Response

PNM was not privy to any discussions Citizens may have had with third parties regarding transmission.

NRC Question 1h (Citizens Utilities)

Has Citizens Utilities responded to PNM's proposal to sell 7-10 MW of power to Citizens Utilities in September of 1986?

Response

Yes. Citizens Utilities elected to purchase power from another entity.

NRC Question 1h (Anaheim)

Elaborate on the reasons why Anaheim was unable to obtain adequate transmission arrangements for long-term power purchase from PNM.

Response

It is PNM's understanding from Anaheim that Anaheim was unable to obtain necessary transmission. Since PNM was not directly involved in transmission negotiations with third parties, Anaheim may be better able to elaborate on this matter.

NRC Question 1h (Burbank/Pasadena)

How much "block energy" are the Cities of Burbank and Pasadena purchasing from PNM?

Response

The Block Energy Agreement between PNM and the Cities of Burbank and Pasadena was attached to PNM's April 11, 1986 (ANPP-36071) Submittal as Item 13 of Appendix 3A. As set forth therein, the Agreement terminated in April 1984.

NRC Question 1h (Gallup)

Has the City of Gallup solicited power suppliers other than PNM for its power requirements?

Response

Yes. Gallup sent requests to nearly 20 utilities in the Southwest as documented in a written report issued in late 1985 by Gallup's consultants, Gold, Darvall & Associates, Inc.

NRC Question 1h (Riverside)

Elaborate on the efforts (failures) made by the City of Riverside to obtain transmission rights for a power sale from PNM to the City in May of 1984 and again in November of 1984.

Response

PNM was not directly involved in discussions between Riverside and entities with whom it had been negotiating transmission arrangements. Since Riverside was responsible for obtaining transmission rights, Riverside may be better able to elaborate on this matter.

NRC Question 1h (HL&P)

Did the PNM proposal to sell capacity to Houston Lighting & Power, beginning in the 1988-1990 time period, indicate how the power would be transmitted to HL&P?

Response

Several possible transmission paths were conceptualized by PNM and discussed verbally with HL&P. However, no formal proposal on a final transmission path was made.

NRC Question 1h (TNP)

Elaborate on the "transmission constraints" within the existing New Mexico transmission system that may prevent a block energy sale from PNM to Texas-New Mexico Power Co. beginning in 1986.

Response

Transmission capability to the southern portion of New Mexico, where TNP is located, is limited. The southern system is served by only two 345 kV lines, one from the west (Greenlee) and, one from the north (West Mesa). The total allowable schedule on these two lines is about 525 MW. Schedules above this level could lead to an entire blackout of the southern system if one of the lines trips.

Furthermore, when northern New Mexico loads are simultaneously at high levels, the southern system can only achieve this 525 MW of schedules at the expense of increased voltage support and/or line load reduction measures in the Albuquerque, New Mexico area. This is due to the portion of the southern schedules that actually flow through the northern New Mexico system.

Additionally, PNM's transmission rights into Greenlee from PNM's generator location are fully utilized. Any new rights must be obtained from Tucson Electric Power Company (TEP) located on the edge of the New Mexico system. PNM requested additional rights for delivery to Greenlee but TEP rejected PNM's request under the terms and conditions proposed.

NRC Question 1h (Agency)

When was the West Texas Municipal Power Agency formed? What Texas municipalities make up the Agency's membership? What is the current status of the PNM proposal (submitted in February of 1986) to sell power to the Agency from 1990 to 1995?

Response

It is believed that the Agency was formed in 1985. Member municipalities include Brownfield, Floydada, Lubbock, Plains, and Tulia, Texas. The Agency never responded to PNM's letter proposal.

ATTACHMENT III-1

SUMMARY PAGES FROM
REGULATION, EFFICIENCY AND COMPETITION
IN THE EXCHANGE OF ELECTRICITY

FIRST-YEAR RESULTS FROM THE FERC
BULK POWER MARKET EXPERIMENT

SUMMARY

The Federal Energy Regulatory Commission (FERC) has expresse interest in the effects of modified regulation of certain wholesale tran actions involving electric utilities under its jurisdiction. This intere has led FERC to authorize a two-year experiment proposed by six util ties in the Southwestern United States to test the effect of changes i its regulation. FERC's objectives in the experiment are to determin the effects of current and alternative regulatory practices on the *eff. ciency* of bulk power exchanges and on the *competitiveness* th market in which such exchanges occur. If current regulatory practice appear costly relative to their benefits, FERC, as well as state regula tory commissions, may wish to modify this regulation on a permanen basis. FERC chose to conduct an experiment involving actual utilit transactions to obtain information about utility responses to modifie regulation under real-world conditions. This report provides result from the first year of the experiment.

In authorizing the experiment—or demonstration—FERC did no "deregulate" all or part of the wholesale exchanges over which it ha control. Instead, it *modified* regulation over one category o exchanges—coordination sales—by permitting utilities wide latitude ir setting prices and by permitting a specific percentage of profits to.b retained by the utilities if they chose to do so. It also required tha participating utilities not employ their control of the transmission sys tem to frustrate transactions involving other participants.

In this report, we first describe current FERC regulation of v[illegible]us transactions among utilities in order to understand the conte[illegible] in which modified regulation occurred (Sec. II). We then develop (Sec. III) a simple conceptual model of the economics of bulk power exchanges among utilities. This model provides the basis for understanding utility motivation to trade under current regulatory practices as well as under modified incentives and conditions. This model permits us to analyze the changes in efficiency—which are based on differences in marginal costs across utilities—and the changes in competitiveness—which are based on differences between utility marginal costs and the prices at which transactions took place—that might occur under modified regulation. Because utilities can exercise market power as either sellers or buyers, our model examines both monopoly and monopsony behavior.

We then discuss the effects of current regulation on the behavior of utilities in this simple economic model (Sec. IV). Current FERC policy provides specific procedures for passing through costs and profits from coordination transactions to utility customers and stockholders. The modified regulation permitted by the experiment alters the procedures, by explicitly providing for selling utilities to retain some of the profits from coordination transactions, although it is unclear, on theoretical grounds, how the incentive to trade is affected. Present regulation requires that the prices of coordination transactions be "just and reasonable." Under the experiment, the participating utilities are permitted to set prices for transactions within a very wide zone of flexibility. Finally, the experiment made specific provision for access to the transmission network.

Section VI describes the six utilities participating in the FERC experiment. These utilities vary from relatively large systems with annual revenues over $800 million, to quite small systems with annual revenues of about $35 million. Some are privately owned, and therefore regulated by FERC, while others are public entities whose wholesale transactions are not regulated by FERC. Revenues from coordination transactions under FERC jurisdiction account for less than ten percent of the revenue of participating utilities.

In proposing this experiment to FERC, the Southwest utilities provided for pricing flexibility that permitted any mutually agreeable price between one-half the marginal cost and two times the fully allocated cost of the selling utility. With respect to revenue treatment, utilities could either continue to employ current FERC treatment of profits from coordination transactions, or the selling utility could elect to retain for its shareholders 25 percent of the amount by which actual revenues from coordination transactions exceeded the incremental costs of the electricity sold. The utilities participating in the experiment agreed not to use their control over the transmission system to prevent trades involving other utilities. They also agreed to provide transmission services at a charge of 1.5 mills/kwh, in addition to whatever standard arrangements already existed among parties to the experiment. Finally, the utilities in the Southwest chose to conduct their transactions through bilateral contact and did not establish a formal mechanism for information exchange or arrangement of trades. Trade in both economy energy—hour to hour exchanges up to a month in duration—and in block energy—transactions taking place over a month or more—were subject to the experimental treatments.

The efficiency analysis reported in Sec. VII is based on a paradigm of a hypothetical competitive and frictionless market consisting of the six participating utilities. We use the results of analyzing this

hypothetical market to predict the gains from trade that would have been expected in the absence of an experiment and compare it with the observed gains under experimental conditions. Statistical cost relationships estimated for each participating utility underlie this analysis.

We calculate changes in efficiency under experimental conditions using two analytic techniques: The first is based on the proportion of potential welfare gains realized and is calculated as the difference in the ratio of actual to potential welfare gains between the baseline year, 1983, and the first year of the experiment, 1984. The second is based on regression analysis to explain changes in the relationship between actual and potential welfare gains from the baseline to experimental period.

Potential and actual welfare gains are examined under four cases:

1. BASE CASE—Full frictionless trading among participating utilities is assumed in calculating potential gains to trade.
2. GENERATION/TRANSMISSION CONSTRAINED CASE—Certain generation or transmission constraints are taken into account in calculating potential gains to trade.
3. MINIMUM COST SPREAD CASE—We require that the marginal costs of potential buyers exceed the marginal cost of potential sellers by various minimum amounts when calculating the potential gains to trade.
4. COMBINED CONSTRAINTS PLUS MINIMUM SPREAD CASE—We combine the effects of the constraints on generation and transmission in Case 2 with the mid-value of the minimum spread alternatives considered in Case 3.

We regard Case 4 as the most realistic of the cases, although the val of 5 mills for the minimum spread in marginal costs is arbitrary and was not imposed by utilities in the Southwest.

Our findings with respect to efficiency are decidedly mixed, and vary depending on the analytic technique selected and the case analyzed. By some measures, efficiency increases under the experiment; by others it is unchanged or falls by a statistically significant amount. Some core findings emerge across all techniques and cases. They include:

- Actual efficiency gains, in dollar terms, increased between 1983 and 1984. This gain is observed under all four cases.
- The megawatt-hour volume of trades remained essentially unchanged between the two years.

- The number of trades per hour is essentially the same in both years.
- The potential gains to trade generally increased between 1983 and 1984.

Furthermore, in all instances, the proportion of potential gain realized is higher when we take account of generation and transmission constraints or require a minimum spread between marginal costs of buyers and sellers. Beyond this, the conclusions about experimental effects depend upon the analytic technique selected and the case under examination.

In general, we feel that the regression technique yields the greatest insight to changed behavior under experimental conditions. This approach should benefit from added refinement and the addition of the second year of experimental data, where more observations will be available, behavior may be more representative of permanent response, experimental revenue effects can be observed over a full year, and one of the major utilities participating in the experiment can be observed over a full year.

The analysis of competitiveness in the experiment was conducted by first calculating the market-clearing price in our hypothetical competitive and frictionless market. This price, which is the (common) marginal cost of all utilities when all efficient trades are consummated, is then compared with the actual prices that prevailed in the market using a variant of the Lerner index of monopoly power. The index is defined as (Price – Marginal Cost)/Price, so that a value of zero indicates that the market price equals the competitive price.

Our analysis of competitiveness in the Southwest bulk power market, which was conducted using Cases 1 and 2, yielded somewhat inconclusive findings. Although there are statistically significant deviations from the hypothetical market prices in many of the seasons in Case 1 and in all of the seasons in Case 2, the deviations are primarily positive in Case 1 (indicating the exercise of monopoly power) and negative in Case 2 (indicating the exercise of monopsony power). This indicates that measured competitiveness is sensitive to the case employed in carrying out the analysis.

The analysis of changes in the Lerner indices between the baseline year, 1983, and the first year of the experiment, 1984, also produced mixed results. For Case 1, we find that for two of the seasons analyzed, and for the entire year, measured market competitiveness declined between the two years by a statistically significant amount. However, in Case 2, which we regard as more realistic because it takes into account generation and transmission constraints, market

competitiveness, as measured by the Lerner indices, increased by a statistically significant amount between the two years in all of the seasons and for the entire year. As with the efficiency analysis, we feel that the competitiveness analysis would benefit from refining the analytic technique and adding the second year of experimental data.

SECTION IV

Salt River Project Agricultural and Improvement District

Responses to NRC Request for Additional Information - Regulatory Guide 9.3

NRC Question 1f(1)

Describe the type and amount of service supplied to the new wholesale customers listed. (To the extent these new customers are referenced in response to Q1h, i.e., request or indications of interest by other electric entities, so indicate.)

Are the contractual arrangements for future sales to the Cities of Azusa, Banning, Colton and Glendale, California and the Imperial Irrigation District, separate and distinct from sales to and agreements with the Southern California Public Power Authority? If so, please elaborate on the contractual arrangements with the Imperial Irrigation District and the four California Cities of Azusa, Banning, Colton and Glendale.

Response

(1)

PARTY	TYPE	AMOUNT
*City of Anaheim, California	Economy Enmergy	as available
*California Dept. of Water Resources	Economy Energy	as available
*Colorado River Commission, State of Nevada	Firm Sale	10-35 MW
El Paso Electric	ANPP Start-up Power	0-15 MW
City of Farmington, New Mexico	Economy Energy	as available
*Pacific Gas & Electric Company	Economy Energy	as available
City of Pasadena, California	Economy Energy	as available
Plains Electric Generation & Transmission Cooperative	Economy Energy	as available
City of Riverside, California	Economy Energy	as available
Southern California Public Power Authority	ANPP Start-up Power	0-7 MW

In addition, although no sales have yet been made, contractual arrangements have been made for possible future sales to:

*City of Azusa, California	Economy Energy	as available
*City of Banning, California	Economy Energy	as available
*City of Colton, California	Economy Energy	as available
*City of Glendale, Arizona	Economy Energy	as available
*Imperial Irrigation District	Economy Energy	as available

(2) The City of Mesa, Arizona and the San Carlos Irrigation Project were transferred from a special contract rate to a modification of Salt River Project's E-39 (Large Industrial) rate in 1986.

(3) There have been no changes in Salt River Project's service area boundaries.

(4) Salt River Project has not acquired nor merged with any other utility.

* Included in response to Item 1h, April 11, 1986 submittal (ANPP-36071)

NRC Question 2

Salt River Project has provided the same unacceptable response to this question as that provided by Arizona Public Service Company. See APS Q2 above for direction on what information is necessary for a satisfactory response to this data request.

Response

SRP has fulfilled the condition in its construction permit pertaining to antitrust aspects by transmitting bulk power over its transmission system, between or among entities with which it is interconnected, without restrictions on use or resale of the power so transmitted, provided that such services can reasonably be accommodated from a technical standpoint without impairing SRP's reliability or its own use of its facilities.

SRP has also included, in its planning and construction program, sufficient transmission capacity for such bulk power transactions described above, provided that SRP has received sufficient advance notice as may be necessary from a technical standpoint to accommodate the requirements of any requesting entity, and further provided that such entity(ies) are obligated as may be agreed (i) to share the capital, operating and maintenance costs of such new transmission facilities to the extent that additional cost burdens would be imposed on SRP or (ii) to compensate SRP fully for the use of its system (Attachment IV-1).

ATTACHMENT IV-1

SRP has had the following requests for transmission over our system and has taken the action indicated:

PARTY	DATE	DESTINATION	AMOUNT	ACTION TAKEN
Plains Electric G & T	1979	Navapache Electric	Up to 100 MW	Contract executed
Electrical and Irrigation Districts	1979-86	ED-ID Load	Variable 0-5 MW	Contracts executed
City of Mesa	1980	Third Parties	Variable	Involved Navajo System-SRP could not take unilaterial action
Plains Electric G & T	1982	Plains G & T	Variable/non-firm	No mutual interconnection points
El Paso Electric	1982	EPE/PVNGS	0-60 MW	Contract executed
San Diego Gas & Elec.	1984	SDG&E	Variable	SRP declined because no excess firm capacity
Arizona Electric Power Coop	1984	Third Parties	Variable/non-firm	AEPCO showed no continuing interest
San Carlos Irrigation Project	1985	SCIP load	Emergency tie 0-5 MW	SCIP chose alternative
Public Service Co. of New Mexico	1985	PVNGS	100 MW	Contract executed
Tucson Electric Power Co.	1985-86	PVNGS	100 MW	To be reviewed in 1987

SECTION V

Southern California Edison Company

Responses to NRC Request for Additional Information - Regulatory Guide 9.3

NRC Question 1b(1), (2)

Provide a brief description of the Integrated Operations Agreements between SCE and (1) the Cities of Azusa, Banning, Colton and (2) Vernon.

Response 1b(1)

In 1981, Edison and each of the Cities of Azusa, Banning and Colton executed Integrated Operations Agreements (IOAs), substantially identical to the IOAs entered into between Edison and the Cities of Anaheim and Riverside in 1977. This form of IOA is an "umbrella" contract designed to allow the parties to better meet their power requirements and to obtain operational economies on their respective systems. Through the IOAs, Edison and these Cities of Azusa, Banning and Colton agreed to integrate their power sources, including their entitlement to the electrical output from the Palo Verde Nuclear Generating Station.

The IOA specifies criteria and procedures for the integration of City resources. Under this concept of integration, a City's resource is available for Edison to schedule for the benefit of the combined loads within the Edison-City Control area. In exchange, the City receives a credit for the capacity contributed by its resources against the billing demand component of its resale requirements bill. The amount of this credit is reduced in exchange for reserve support which is provided by Edison. The IOA specifies the method by which this reduction is determined.

Further, the energy scheduled from a City's resource is credited to the City to reduce its requirements for energy purchases from Edison. Edison provides scheduling and dispatching services for sources of power owned by, or under the control of, the Cities, and schedules operation and maintenance of such sources in the same manner as if they were owned and controlled by Edison.

In the event that an integrated capacity resource has been unavailable for more than 70 consecutive days, or for more than 100 nonconsecutive days during the 180 consecutive day period immediately proceeding a given day, the City will incur an obligation to provide capacity to replace the unavailable resource. In this regard, a maintenance account is provided from which a City may, for a period of time, obtain capacity from Edison to replace the unavailable resource. In the event that this account is exhausted, a City may obtain such replacement capacity from third parties and integrate it pursuant to the terms of the IOA, or obtain such capacity from Edison.

The Agreement also provides that Edison shall provide energy to replace energy associated with the capacity credit obtained from integrated capacity resources when those capacity resources are unavailable and such energy is not available from other integrated resources. The IOA provides a formula for the calculation of the cost of this energy (Contract Energy Cost). In the event that a City's capacity resource is available but not scheduled or dispatched by Edison, a City may elect to purchase energy associated with that resource at either Contract Energy Cost or City Incremental Cost.

The IOA provides the conditions under which Edison will provide firm transmission service on Edison's facilities within its certificated service area in conjunction with an integrated City capacity resource. To the extent that City requests transmission service from Edison facilities outside Edison's certificated service area, Edison agrees to use its best efforts to make arrangements satisfactory to the parties for transmission service over Edison's solely-owned transmission facilities existing at the time transmission service is to commence.

The IOA also enables a City to integrate nonfirm energy to meet all or a portion of its load, as long as the proposed nonfirm energy resource meets the qualifications set out in the IOA. In the event that nonfirm energy which is excess to a City's load can be economically used by Edison, the IOA provides that Edison shall purchase such nonfirm energy at the City's cost, which shall include, but not be limited to, charges made by Edison and others to the City for transmission service, plus 15 percent of such cost. The Agreement also states that Edison is to provide spinning reserves to back-up the City's nonfirm energy purchases. In addition, Edison is to use its best efforts to provide firm transmission service for nonfirm energy over existing transmission facilities solely owned by Edison.

Finally, the IOAs provide procedures for the joint planning by Edison and the Cities of their loads, resources, transmission facilities, and other related matters.

Response 1b(2)

At Vernon's request, the IOA executed between Vernon and Edison on August 25, 1982 only integrates Vernon's entitlement to the electrical output from the Palo Verde Nuclear Generating Station, and certain quantities of energy required for replacement in the event of curtailments or outages of such entitlement. Edison provides dispatching services for this source of power and schedules its operation and maintenance in the same manner as if it were owned and controlled by Edison.

NRC Question 1b(3)

Provide the tenants [sic] of the Western Systems Power Pool Agreement, i.e., what does the Pool expect to accomplish for its members?

Response

The Western Systems Power Pool is expected to increase the efficiency of interconnected power system operations in the far West above that already being accomplished with existing agreements. The parties plan to proceed initially with this power pool on a two-year trial basis limited to prescheduled coordinated transactions, such as economy energy transactions, unit commitment service, firm system capacity/energy sales or exchanges, and transmission service by intermediate systems.

NRC Question 1c(2)

1. Who is conducting the studies pursuant to the second upgrading (from 1955 MW to 2986 MW) of the Pacific Intertie DC Transmission Line? How will this second upgrade in capacity be allocated?

2. Provide additional details of the amendment to the California Department of Water Resources Power Contract (dated October 11, 1979) that would change the firm transmission service to the Department of Water Resources power plant and pumping plants. (Supply date agreement was signed and any change in the amount of transmission service provided.)

Response

1. With respect to the Pacific Intertie DC Transmission Line:

The studies supporting the second upgrading of the Pacific DC Intertie (from 1955 to 2986 MW), also known as the HVDC Expansion Project, are being conducted by: Bonneville Power Administration (BPA), Los Angeles Department of Water and Power (LADWP), Southern California Edison (SCE), Pacific Gas and Electric (PGandE), and San Diego Gas & Electric (SDG&E).

The added transmission capacity associated with DC facilities north of the Nevada-Oregon Border will be fully allocated to BPA. In accordance with the City-Edison Pacific Intertie DC Transmission Facilities Agreement and the California Companies Pacific Intertie Agreement, it is expected that the added transmission capacity associated with the DC facilities south of the Nevada-Oregon Border will be allocated as follows:

Utility	Allocation %	Allocation MW
LADWP	40	413
Glendale/Pasadena/Burbank	10	103
PGandE	25	258
SCE	21.5	221
SDG&E	3.5	36
	100	1031

2. With respect to the California Department of Water Resources (CDWR) Power Contract:

The Power Contract was signed on October 11, 1979. The Amendment to Power Contract was signed on May 13, 1986. Section 6.7 of the Power Contract allows CDWR to request and, if available, receive additional transmission service and increase or decrease the amount of service purchased from Edison under the Power Contract.

Pursuant to the Power Contract, CDWR requested changes in transmission service, resulting in the Amendment. Changes in transmission service are as follows:

Path	Previous Amount of Service (MW)	Amended Amount of Service (MW)
William E. Warne Power Plant* to Vincent Substation 500 kV bus	75	82
Sylmar Substation 220 kV bus to Vincent Substation 500 kV bus	80	120
Vincent Substation 500 kV bus to Edmonston Pumping Plant	836	787
Vincent Substation 500 kV bus to Oso Pumping Plant	70	72
Vincent Substation 500 kV bus to Pearblossom Pumping Plant	86	80

* Previously named Pyramid Recovery Plant

New transmission service as a result of amendment:

Path	Amount of Service (MW)
Vincent Substation 500 kV bus to Sylmar Substation 220 kV bus	120

NRC Question 1f

1. Were the Cities of Buckskin and Moonridge formerly wholesale customers of APS? When were these two loads transferred to SCE and how large was each load?

2. When did Anza Cooperative switch suppliers? Is Anza now solely supplied by Arizona Electric Power Cooperative.

Response

1. Buckskin and Moonridge are developments, not cities. The residents of Buckskin and Moonridge remain retail customers of APS. Because APS had limited capacity in these rapidly developing areas, APS requested that SCE provide wholesale service until APS' system capacity within the areas becomes adequate. Wholesale service to APS-Buckskin commenced on August 27, 1984, and constitutes an annual peak demand of approximately 105 kW. Wholesale service to APS-Moonridge commenced on August 27, 1984, and constitutes an annual peak demand of approximately 537 kW.

2. Anza Cooperative began receiving service from Arizona Electric Power Cooperative (AEPCO) on December 31, 1981. AEPCO is now Anza's sole supplier.

NRC Question 1h(6)

Did the City of Anaheim accept SCE's proposal to (1) provide interruptible transmission service from the Four Corners plant, and (2) integrate the purchase as non-firm energy beginning July 1, 1983?

Response

1. Interruptible transmission service became available to Anaheim from the Four Corners Switchyard 345 kV bus and 500 kV bus under the Edison-Anaheim Interruptible Transmission Service Agreement executed January 30, 1981. Interruptible transmission service pursuant to that agreement is available to Anaheim for any non-firm energy that has been integrated by Edison.

2. Because of the unavailability of firm transmission service for capacity and energy credit purposes, Anaheim did not continue to pursue that particular purchase from the City of Farmington, New Mexico. However, later Anaheim did make a purchase of non-firm energy from the City of Farmington which Anaheim requested Edison integrate. The supplemental agreement integrating this non-firm energy became effective September 26, 1984.

NRC Question 1h(14)

What was Vernon's reaction to SCE's unilateral filing of a firm transmission agreement with the FERC on February 24, 1986?

Response

Vernon requested Edison make a unilateral filing of a Firm Transmission Service Agreement (Docket No. ER86-316-000) for Vernon's Palo Verde entitlement. The City of Vernon filed a document entitled "City of Vernon (1) Protest, (2) Motion to Intervene, (3) Support for Edison's Request for Waiver of Notice Requirements, (4) Request for One-Day Suspension and an Evidentiary Hearing, (5) Request for Consolidation, and (6) Motion for Summary Disposition." This intervention stated that Vernon disputed several items which were contained within the Agreement. These items related to the following areas: (1) Vernon questioned the methodology used in the calculation of the firm transmission service charge contained in the Firm Transmission Service Agreement. Vernon alleged that Edison did not provide sufficient support for the level of these charges. Vernon also disputed the proposed charges for scheduling and dispatching specified in the Firm Transmission Service Agreement. Again, Vernon alleged that Edison did not fully support the proposed levels of these charges. Vernon's intervention also contained statements which indicated that Vernon disputed the date upon which the Agreement was to become effective. A hearing on these matters is scheduled for January, 1987.

NRC Question 1h(34)

How have ownership and usage rights been apportioned in the proposed new 1600 MW (500 kV) transmission line linking California and the Pacific Northwest scheduled for completion in 1991? (Is the method of determining ownership and usage rights different from the procedures employed in Q1c(2) above?)

Response

Ownership and usage rights in the proposed new 1600 MW (500 kV) transmission line between California and the Pacific Northwest (California-Oregon Transmission Project) were apportioned through negotiations among the participants with a small part of the ownership rights determined by mandate of the Department of Energy. As a result of these negotiations and the federal government mandate, ownership and usage of the proposed new facilities is allocated as follows:

Transmission Agency of Northern California (Consisting of 15 public agencies)	42.2916%
Pacific Gas and Electric Company	20.3918%
San Diego Gas & Electric Company	2.8549%
Southern California Edison Company	17.5370%
Western Area Power Administration	6.2500%
Southern San Joaquin Valley Power Authority	2.0625%
Trinity County Public Utility District	0.3125%
Shasta Dam Area Public Utility District	0.4375%
San Juan Suburban Water District	0.0625%
El Dorado Hills Community Services District	0.1875%
Carmichael Water District	0.0625%
City of Anaheim	3.0198%
City of Azusa	0.3020%
City of Banning	0.1510%
City of Colton	0.3020%
City of Riverside	2.0762%
City of Vernon	1.6987%

In addition, the California Department of Water Resources (CDWR) has an option to acquire ownership rights to 6.0417% of the Project on January 1, 2005. If such option is exercised, certain of the percentages noted above will be reduced to accommodate CDWR.

NRC Question 1h(44)

When was the California Companies Pacific Intertie Agreement consummated and what are the tenants [sic] of the agreement (generally)? Has SCE made any capacity rights (firm or non-firm) in the proposed upgraded Pacific Intertie DC Transmission Line available to other entities? To what extent will SCE's increased capacity in the DC Intertie be used to supply the loads of entities requesting usage rights in the upgraded Intertie?

Response

The California Companies' Pacific Intertie Agreement (Intertie Agreement), among Edison, Pacific Gas and Electric Company (PGandE) and San Diego Gas and Electric Company (SDG&E), was executed on August 25, 1966. The Intertie Agreement provides for sharing among the Companies of the benefits and costs associated with the Pacific Intertie AC and DC lines on the basis of PGandE's, SCE's and SDG&E's historical relative sizes; 50%, 43% and 7% respectively. The principal tenets of the Agreement provide for the three companies to own, construct, operate, and maintain the Pacific Intertie 500 kV AC lines and 50% of the DC line, to establish the rating of these lines, and to share related costs. Execution of the Intertie Agreement was an integral step in fulfilling obligations assumed by the Companies in their 1964 proposal to the federal government to construct the Pacific Intertie. The Companies' proposal, which was accepted by the federal government, was designed to meet the government's so-called Federal Yardstick criteria. The Federal Yardstick required, among other things, provision of low cost transmission service for several public agencies and an equitable distribution of the benefits of electrical exchanges between the Northwest and California.

The Edison-City Pacific Intertie DC Transmission Facilities Agreement (DC Agreement) was also in fulfillment of the Companies' proposal to the Federal Government. Under the terms of the DC Agreement, Edison is entitled to share in 50% of any increased capacity on the Pacific Intertie DC Line in return for sharing 50% of the associated costs. PGandE and SDG&E have the right, in accordance with the Intertie Agreement, to participate in Edison's share of upgraded DC Line capacity in the amount of 50% and 7% of Edison's share respectively, by contributing their proportional share of the annual revenue requirements associated with Edison's investment. It is expected that PGandE and SDG&E will exercise that right with respect to the planned DC Line upgrade. In addition, Edison has contractually committed to provide non-firm transmission service over all DC intertie facilities to Anaheim, Riverside, Azusa, Banning and Colton. Edison has expressed its willingness to enter into similar arrangements for non-firm transmission service with other utilities.

Edison's increased capacity will be used to supply the loads of all entities requesting usage rights in the upgraded Intertie, with the exception of the Northern California Power Authority (NCPA). As stated in our April 1986 Response (ANPP-36071), Edison received inquiries from the Cities of Anaheim, Riverside, Banning, Colton, Azusa, and Vernon, as well as from NCPA regarding participation in the DC Line upgrades. These entities with the exception of NCPA, are resale customers of Edison and are part of Edison's control area. Edison expects to use much, if not all, of its share of transmission capacity from the upgrades to purchase firm capacity to provide reliable electric service to its entire control area. The Cities within Edison's control area will receive a share of the benefits of the capacity and energy purchased by Edison over the upgrade through the resale rates and fuel cost adjustment clause. Most of the members of NCPA are resale customers of PGandE. They too will receive a share of the benefits through PGandE's resale rates.

SECTION VI

Addendum to Public
Service Company of New
Mexico April 11, 1986 Submittal
for Antitrust Review

Public Service Company of New Mexico (PNM) amends herewith its responses, as submitted to the NRC on April 11, 1986 (ANPP-36071), to include transactions or interrelationships between PNM and any other Palo Verde participant or any federal agency. The following amendments to the April 11, 1986 PNM Submittal are not intended as general updates, but relate only to such transactions and interrelations which were not included in the April 11, 1986 Submittal.

Item 1a

Anticipated excess or shortage in generating capacity resources not expected at the construction permit stage. Reasons for the excess or shortage along with data on how the excess will be allocated, distributed, or otherwise utilized or how the shortage will be obtained.

Response

No change from the April 11, 1986 PNM Submittal.

Item 1b

New power pools or coordinating groups or changes in structure, activities, policies, practices, or membership of power pools or coordinating groups in which the licensee was, is, or will be a participant.

Response

No change from the April 11, 1986 PNM Submittal.

Item 1c

Changes in transmission with respect to (1) the nuclear plant, (2) interconnections, or (3) connections to wholesale customers.

Response

No change from the April 11, 1986 PNM Submittal.

Item 1d

Changes in the ownership or contractual allocation of the output of the nuclear facility. Reasons and basis for such changes should be included.

Response

No change from the April 11, 1986 PNM Submittal.

Item 1e

Changes in design, provisions, or conditions of rate schedules and reasons for such changes. Rate increases or decreases are not necessary.

Response

Under Section 4 of PNM's response (p. 15 of April 11, 1986 PNM Submittal), add subsection "f." as follows:

"f. Arizona Public Service Company--Letter Agreement for the Sale of 25 MW Block Energy. This Letter of Agreement, dated May 4, 1984, provided for delivery to APS of up to 100.4 GWh of nonfirm block energy for a period of six months from May 1, 1985, through October 31, 1985. Specific delivery terms and rates are included in the Letter Agreement which is attached as Item 19 of Appendix 3A."

Item 1f

List all of (1) new wholesale customers, (2) transfers from one rate schedule to another, including copies of schedules not previously furnished, (3) changes in licensee's service area, and (4) licensee's acquisitions or mergers.

Response

Under Section 1., New Wholesale Customers Added Since PNM's 1979 Submittal (p. 16 of the April 11, 1986 PNM Submittal), add "Arizona Public Service Company" as Item g.

Item 1g

List of those generating capacity additions committed for operation after the nuclear facility, including ownership rights or power output allocations.

Response

No change from the April 11, 1986 PNM Submittal.

Item 1h

Summary of requests or indications of interest by other electric power wholesale or retail distributors, and licensee's response, for any type of electric service or cooperative venture or study.

Response

To the April 11, 1986 PNM Submittal, add the following:

Arizona Public Service Company (APS)

On August 4, 1983, PNM and APS entered into the PNM/APS Interruptible Transmission Service Agreement under which APS provides bidirectional interruptible transmission service to PNM. Under the terms of the Agreement, PNM purchases interruptible transmission service over APS' electrical transmission facilities for PNM's purchase of energy from a supplier or PNM's sale of energy to a purchaser. This Agreement, still in effect, has an indefinite term of performance.

In early 1984, APS and PNM discussed arrangements wherein PNM would provide APS capacity and energy to meet APS' base load needs. By letter dated March 15, 1984, PNM outlined these arrangements and on May 4, 1984, PNM and APS executed the 35 MW San Juan Contingent Capacity Agreement in conjunction with a Letter Agreement providing for a 25 MW block energy arrangement between the parties. The sale of block energy was to be performed under the auspices of the FERC's Southwest Bulk Power Market Experiment (Experiment) and, as such, all terms of the Experiment Participation Agreement applied to the block energy arrangement. The term of both the Contingent Capacity Agreement and the Block Energy Letter Agreement was from the date of initial service, May 1, 1985, to October 31, 1985.

Department of Energy (DOE)

On November 26, 1975, the United States Energy Research and Development Administration, ERDA (the predecessor agency to DOE), and PNM entered into Contract No. DE-AC04-76DP02323, which was thereafter amended from time to time, in which ERDA, now DOE, agreed to purchase and PNM agreed to sell electric power to DOE at DOE's 115 kV ETA Switching Station in the Los Alamos Service Area. The "Los Alamos Service Area" meant that area within and adjacent to the geographic boundary of Los Alamos County receiving service from the electric systems of either the Incorporated County of Los Alamos, New Mexico (County) or DOE. In December 1975, ERDA and PNM entered into Contract No. EY-76-C-04-3378 which provided for PNM to take the allotments of Colorado River Storage Project (CRSP) power and energy from PNM's West Mesa 115 kV Switching Station (West Mesa) and deliver said power and energy to the Los Alamos Service Area for DOE. By Letter of Principles dated March 5, 1984, DOE, PNM and the County outlined certain principles concerning Los Alamos area power supply issues to be incorporated into definitive agreements. The Letter of Principles contemplated, among other things, the sale of an undivided ownership interest in Unit 4 of the San Juan Generating Station by PNM to County, the acquisition by PNM of DOE's Norton to Zia 115 kV transmission line and associated facilities, the acquisition by DOE of PNM's ETA to TA-3 115 kV transmission line and associated facilities, the provision of transmission service for DOE from West Mesa to the Los Alamos Service Area, the provision of payback energy to DOE by PNM and certain modifications of PNM's transmission arrangements with DOE for CRSP deliveries. The agreements entered into between PNM and DOE are detailed in the Letter of Principles, and included modification of Contract No. EY-76-C-04-3378 and the termination of Contract No. DE-AC04-76DP02323. Prior to the termination of Contract No. EY-76-C-04-3378, Contract No. DE-AC04-85AL27436 was executed on January 29, 1985, by DOE and PNM, which incorporates certain provisions provided for in the Letter of Principles and modified and incorporated pertinent provisions from Contract No. EY-76-C-04-3378. (Please refer to the April 11, 1986 PNM Submittal, response to Item 1e (p. 14), section 3b for further synopsis of these transactions.)

Department of Energy--Western Area Power Administration (WAPA)

By letter dated May 11, 1981, WAPA solicited indications of interest in a Mead-Phoenix DC Intertie Project. After attending a December 1981 meeting and evaluating the feasibility of its participation in the Project, PNM elected not to participate. This project has now become a part of a larger project (Inland Intertie) and a general invitation to participate is in the offering.

On December 4, 1984, WAPA requested PNM to accept up to 100 MW of power and energy at Ambrosia Lake, near Grants, New Mexico, at 230 kV for delivery to WAPA at the Four Corners Interconnection, near Farmington, New Mexico. PNM responded by letter dated March 6, 1985, requesting additional information from WAPA in order to proceed with PNM's analysis of WAPA's request. In a letter dated July 31, 1985, to PNM, WAPA withdrew its initial request for the present time without further comment.

El Paso Electric Company (EPE)

As a result of discussions held between representatives of EPE and PNM in September 1982, PNM submitted a proposed statement of principles for the sale of block energy to EPE for the calendar year 1983. Negotiations ensued and, in January 1983, PNM and EPE executed Service Schedule "F," Short Term Energy Sales, to the PNM/EPE Interconnection Agreement dated July 19, 1966. Under the terms of the Service Schedule, PNM agreed to provide to EPE 400 gigawatt hours of interruptible block energy from approximately March 1, 1983, through January 31, 1984. Upon termination of Service Schedule "F," PNM and EPE executed Service Schedule "H," Block Energy Sale, which provided for the sale to EPE of approximately 495 gigawatt hours of interruptible block energy from April 1, 1984. to December 31, 1984.

In March 1983, PNM and EPE entered into a Letter Agreement, still in effect, wherein PNM agreed to provide EPE with 100 MW of firm wheeling between San Juan/Four Corners Generating Stations and West Mesa Switching Station. In addition, PNM also agreed to firm EPE's power imports for certain transmission outages.

Los Angeles Department of Water and Power (LADWP)

In late 1979, LADWP expressed its desire to purchase energy from PNM. Negotiations commenced and continued through January 1980 culminating in the execution of the PNM/LADWP Firm Surplus Energy Agreement on January 17, 1980. Under the terms of the Agreement, PNM supplied LADWP (i) 300 GWh from the date of initial service to December 31, 1980, (ii) 300 GWh from January 1, 1981, to December 31, 1981, and, (iii) 100 GWh from January 1, 1982, to April 30, 1982.

By letter dated August 17, 1982, PNM proposed a capacity sale to LADWP during the mid-to-late 1980's and early 1990's under either a firm system power or generating unit contingent scenario. No action was taken by LADWP.

As a result of verbal discussions between representatives of PNM and LADWP in early 1985, PNM submitted to LADWP an economy energy agreement for LADWP's review. Negotiations ensued. The Agreement has been signed by PNM and PNM is awaiting final execution by LADWP.

By letter dated October 24, 1985, PNM proposed a long-term purchase of block energy. LADWP indicated interest in discussing a purchase of up to 100 MW for the 1986 through 1988 time frame; however, no formal response has been received from LADWP.

Salt River Project (SRP)

At a meeting on May 25, 1984, SRP requested a proposal for purchasing power over the 1986 summer peak (May-September). PNM responded on June 18, 1986, with such a proposal. SRP ultimately accepted an arrangement with WAPA.

Since late 1985, PNM and SRP have been negotiating a firm transmission agreement which would enable PNM to provide back-up transmission service in support of the PNM/San Diego Gas & Electric Company (SDG&E) 100 MW System Power Agreement. Negotiations concluded successfully with the execution of the Transmission Service Agreement between SRP and PNM in May 1986 in which

SRP agreed to make available to PNM up to 100 MW of firm transmission service from the Coronado 500 kV High Voltage Switchyard to the High Voltage Switchyard at PVNGS.

Early in 1986, SRP verbally requested a price at which PNM would be willing to sell peaking power over the 1986 summer peak. PNM responded with the information. SRP, however, decided not to purchase such power.

Southern California Edison Company (SCE)

In response to a December 26, 1980, PNM proposal offering to provide San Juan Contingent Capacity, SCE indicated a desire to enter into further discussions. However, based on an evaluation of other responses received by PNM, PNM elected to sell its San Juan Contingent Capacity to SDG&E.

By letter dated August 3, 1982, SCE responded to PNM's July 15, 1982, statement of principles for the proposed sale of "firm" energy during the period May 1983 through April 1986. Based on SCE's assessment of resource needs, PNM was unable to provide the operational flexibility, especially during off-peak hours, required by SCE.

On November 13, 1984, PNM and SCE began serious discussions concerning a purchase by SCE of 200 MW of power from 1988-2007. Those discussions are still progressing.

JOINT STUDIES

To the April 11, 1986 PNM Submittal (p. 34 thereof), add the following:

PNM/EPE PNM System Var Requirements Study

Date Formed: 1982

Parties: El Paso Electric Company
Public Service Company of New Mexico

Status: Final Report completed May 1983

Purpose: PNM increased New Mexico transfer capability to provide a requested additional 100 MW of firm wheeling at West Mesa 345 kV station for EPE.

PNM/EPE Joint Area Control Study

Date Formed: May 1985

Parties: El Paso Electric Company
Public Service Company of New Mexico

Status: Final Report issued May 1985

Purpose: Evaluate potential benefits of combining two separate control areas into one quasi-control area for electrical regulation purposes.

APPENDIX 3A

ITEM 19

ARIZONA PUBLIC SERVICE COMPANY

LETTER OF AGREEMENT - 25 MW BLOCK ENERGY SALE

APS CONTRACT NO. 8932-B

PNM PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE ALBUQUERQUE, NEW MEXICO 87158

May 4, 1984

Arizona Public Service Company
Post Office Box 21666
Phoenix, AZ 85036

Dear Sirs:

Subject: Letter of Agreement—
Public Service Company of
New Mexico and Arizona
Public Service Company
25 MW Block Energy
Agreement ("Agreement")

This letter shall serve to formalize the agreement between Public Service Company of New Mexico ("PNM") and Arizona Public Service Company ("APS"), whereby PNM shall make available and APS shall purchase up to 110.4 GWh of nonfirm block energy for six months of 1985. Further, it is recognized by APS and PNM that this Agreement is being entered into together with the San Juan Contingent Capacity Agreement between our companies, dated as of the date of your acceptance of this letter, and that our companies are entering into these two agreements together and would not be able to make either one of the agreements without the other.

This Agreement, by mutual consent, shall be implemented under the auspices of the Federal Energy Regulatory Commission Southwest Bulk Power Market Experiment (Market Experiment). As such, all terms and conditions of Service Schedule B of the Southwest Bulk Power Market Experiment Participation Agreement ("Participation Agreement") as well as the Participation Agreement itself, shall apply to this Agreement. Should either APS or PNM withdraw as a participant from the Market Experiment, or should the Market Experiment be terminated, the terms and conditions contained in the Participation Agreement which relate to this Block Energy transaction shall continue to govern this transaction until the end of the term of this Letter of Agreement. In addition, the specific terms and conditions of this Agreement are set forth below.

I. Term: The term of this Agreement shall be from the date of its execution through midnight, Mountain Standard Time, October 31, 1985, with service hereunder to be provided beginning May 1, 1985, through October 31, 1985. Should the San Juan Contingent Capacity Agreement between PNM and APS, dated as of the date of APS' acceptance hereof, not be fully executed prior to June 1, 1984, not be accepted for filing by the Federal Energy Regulatory Commission prior to May 1, 1985, or be terminated, PNM

thereafter shall have the right to terminate this Agreement upon ten (10) days advance written notice to APS.

II. Point of Delivery: All energy delivered to APS by PNM under this Agreement shall be delivered to APS at the Four Corners 345 kV Switchyard.

III. Delivery Rate: Energy shall be provided by PNM to APS at a maximum delivery rate of 25 MW per hour, and a minimum delivery rate of (a) 15 MW per hour during the months of May and October, and (b) 20 MW per hour during the months of June through September, subject to the interruptibility provisions discussed in Section V. APS shall schedule energy for delivery between the maximum and minimums, inclusive.

IV. Scheduling: APS's schedulers shall preschedule each day's hourly deliveries on a daily basis, and both PNM's system dispatchers and APS' load supervisors will maintain hourly schedule coordination.

V. Interruptibility: PNM may curtail or interrupt deliveries and APS may curtail or interrupt acceptance of deliveries for reasons delineated in Section 5 of Service Schedule B of the Participation Agreement. In addition:

A. PNM may curtail or interrupt deliveries, upon two hours notice, in the event the operating capability of the San Juan Plant (Units 1, 2, 3, and 4) in any hour is less than 75 percent of the sum of the net rated capabilities of the San Juan units.

B. APS may curtail or interrupt acceptance of deliveries in the event its transfer capability, after consideration of loop flow, is insufficient to accommodate (i) its schedule under this Agreement and (ii) APS' other firm receipts at Four Corners pursuant to arrangements executed prior to the date of execution of this Agreement.

VI. Rate for Service: For all energy delivered to APS, APS shall pay PNM $22/MWh.

If you concur with the above, please indicate your agreement and acceptance of this letter of agreement by APS by signing two copies of this letter in the space provided below, and return one copy to PNM.

Sincerely,

Jack Wilkins
Senior Vice President, Power Supply

JK:wp

Agreed and Accepted:

ARIZONA PUBLIC SERVICE COMPANY

By: _____

PRESIDENT

Date: May 4, 1984

APPROVED AS TO FORM
APS Legal Department
By J.E. Powers
Date 5-4-84