

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;
Nora Mead Brownell, Joseph T. Kelliher,
and Suedeen G. Kelly.

Arizona Public Service Company

Docket No. PA04-11-000

ORDER APPROVING AUDIT REPORT AND
DIRECTING COMPLIANCE ACTIONS

(Issued December 16, 2004)

1. In this order we approve the attached Audit Report (Report) prepared by the Division of Operational Audits (Operational Audits), Office of Market Oversight and Investigations. The Report contains Operational Audit staff's findings and recommendations with respect to Arizona Public Service Company's (APS) compliance with the Commission's rules, regulations, and requirements pertaining to transmission service. The Commission directs APS to enact the Report's recommended corrective actions, including the payment of \$4.0 million related to APS' unauthorized use of point-to-point transmission service. This order is in the public interest because the recommendations made in the Report provide appropriate remedies for the identified violations, and also require the establishment of strict procedures to help ensure future compliance with applicable requirements of law and the Commission's rules and regulations.

Background

2. On November 25, 2003, Operational Audits issued a letter to APS in Docket No. PA04-11-000 announcing that it was commencing an audit to determine whether APS was in compliance with: (1) Standards of Conduct and Open Access Same Time Information System (OASIS) requirements; (2) Codes of Conduct requirements; and (3) APS' Open Access Transmission Tariff (OATT) provisions.¹ The audit period was from January 1, 2002, through October 31, 2003.

¹ APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002).

3. Operational Audits issued data requests, conducted a thorough site visit, and held multiple meetings with APS counsel, officials, and staff. APS cooperated with Operational Audits in the course of this audit.

4. We also note that, during the course of the audit and in association with a proposed acquisition of assets from PPL Sundance, LLC, APS has proposed to establish an independent market monitor. This proposal, which APS states is intended to be consistent with the market monitoring plan recently approved for Tucson Electric Power Company,² is now pending before the Commission in Docket No. EC05-20-000.³ If approved, the independent monitor will focus on identifying events that cause increases in wholesale electricity prices or the foreclosure of competition, will investigate the behavior of APS and its affiliates, and will report its findings directly to the Commission in a timely manner.

Discussion

5. Operational Audits determined that APS did not fully comply with Commission rules, regulations, and requirements, and made recommendations to correct the identified areas of non-compliance or departures from best practices.

6. The principal Report findings are that APS:

- A. Failed to arrange for necessary transmission service when making off-system sales. APS, acting as a wholesale power merchant, made off-system power sales at trading hubs from system resources, without properly requesting, scheduling, and paying for point-to-point (PTP) transmission service that was required to support those off-system sales.
- B. Incorrectly treated the Phoenix Valley 230kV system as a single node on its transmission system, resulting in the failure to request, schedule, and pay for PTP transmission service necessary to serve off-system sales from generators physically connected to that system.
- C. Did not post all transmission outages and transmission schedule curtailments on APS' OASIS as required by 18 C.F.R. § 37.4 (b)(3)(2003) and 18 C.F.R. § 37.6 (e)(3)(2003), respectively.

² *UniSource Energy Corp., et al.*, 109 FERC ¶ 61,047 (2004).

³ *PPL Sundance Energy, LLC, et al.*, Docket No. EC05-20-000, filed November 22, 2004.

- D. Did not make a timely filing with the Commission subsequent to emergency situations that resulted in deviations from the Standards of Conduct, consistent with 18 C.F.R. § 37.4 (a)(2)(2003).
- E. Did not consistently assign the proper status code for transmission service requests as prescribed in the Standard & Communication Protocol (S&CP) and did not always post reasons for denying transmission service requests as required by 18 C.F.R. § 37.6(e)(2)(i)(2003).
- F. Incorrectly identified the Transmission Provider's wholesale merchant function or affiliate on transmission service requests; and did not provide all ancillary service offerings and prices on its OASIS.

7. The Report includes monetary and procedural remedies to address the identified instances of non-compliance and to help ensure future compliance with the Commission's rules, regulations, and requirements.⁴ The major recommendations include:

- A. For its use of unauthorized PTP transmission service, APS will pay \$4.0 million dollars, determined in conformance with overrun provisions contained in APS' OATT. APS must distribute the \$4 million payment in the following manner: (1) \$2.75 million to upgrade the West Phoenix-Lincoln Street 230kV transmission line with high capacity composite conductors; and (2) \$1.25 million as a contribution to established low income energy assistance programs in Arizona. APS must not recover these monies from any existing or future wholesale or retail rate recovery mechanism, nor may it announce the low income payment as a public interest contribution.
- B. APS must file a mitigation plan within 30 days of the issuance of this Order. The mitigation plan must subject all off-system sales from units affected by the upgrade of the West Phoenix-Lincoln Street 230kV system to mitigation until the in-service date of the planned Phoenix Valley Transmission Substation 5, expected in 2007.

⁴ The Commission does not have authority under the Federal Power Act to levy civil penalties for such non-compliance. We strongly endorse Congressional legislation that would provide the Commission with additional civil penalty authority for violations of our rules, regulations, and requirements.

- C. APS must establish procedures, subject to the approval of Operational Audits staff, to ensure that: (1) APS, when acting in its wholesale merchant function, requests, schedules, and pays for appropriate transmission services to support off-system sales; (2) APS transmission customers are charged the appropriate overrun charges for use of transmission service in excess of the customers' reservation amounts; (3) all required information is timely posted on APS' OASIS; and (4) all emergency deviations from the Standards of Conduct are reported to the Commission and posted to APS' OASIS within 24 hours of the occurrence. APS must file all procedures pursuant to this audit in this Docket No. PA04-11-000 within 90 days of the issuance of this Order.

- D. APS must make quarterly filings in this Docket No. PA04-11-000 detailing its progress in implementing the corrective actions, including the contribution to low income energy assistance programs, until all the corrective actions are completed. The filings should be made not later than 30 days after the end of each calendar quarter, beginning with the first quarter of 2005.

The Commission orders:

- (A) The attached Report is approved in its entirety without modification.

- (B) APS is directed to implement the corrective action recommended in the Report and to submit quarterly reports as discussed in the body of this order, commencing with the first quarter of 2005.

By the Commission.

(S E A L)

Magalie R. Salas,
Secretary.

FEDERAL ENERGY REGULATORY COMMISSION

Audit of Standards of Conduct and OASIS, Codes of Conduct, & Transmission Transactions

Arizona Public Service Company

Audit Period: January 1, 2002 through October 31, 2003



Audit Report

Office of Market Oversight and Investigations
Division of Operational Audits

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY	1
A. Overview	1
B. Conclusions	2
C. Additional Compliance Efforts Undertaken by APS	5
D. Audit Objective	6
E. Background	6
II. COMPLIANCE FINDINGS AND RECOMMENDATIONS	8
1. Failure to Arrange for Necessary Transmission Service when Making Off-System Sales	8
2. Incorrect Treatment of the 230kV Phoenix Valley System as a Single Node	12
3. Public Disclosure of Market Information	17
4. Emergency Deviations	20
5. Transmission Service Status	21
6. OASIS Posting Requirements	23

I. EXECUTIVE SUMMARY

A. Overview

The Division of Operational Audits within the Office of Market Oversight and Investigations has completed an audit of the Arizona Public Service Company (APS). The audit covers the period from January 1, 2002 through October 31, 2003. The audit focused on:

- Compliance with Part 37 of the Commission’s rules, which requires Public Utilities to operate the transmission system independently from the wholesale merchant function (APS Merchant), and dictates the operation of an Open Access Same-Time Information System (OASIS) to ensure that all users of the open access transmission system have access to the same information.¹
- Provision of transmission services consistent with APS’ Open Access Transmission Tariffs (OATT).²
- Compliance with the requirements of the Codes of Conduct filed with the Commission.³

The time frame for the audit covers a period prior to the effective date of Order No. 2004.⁴ Therefore, the audit measures compliance with then-existing rules, regulations, and requirements (*e.g.*, Part 37 of the Commission’s rules), not with the requirements of Order No. 2004. Where the audit staff has made recommendations for the company’s activities on a going-forward basis, the company must ensure that implementation of any such recommendations is consistent with all new requirements under Order No. 2004.

¹ 18 C.F.R. Part 37 (2003)

² APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002)

³ ER00-2268-000 (April 26, 2000)

⁴ Standards of Conduct for Transmission Providers, Order No. 2004, III FERC Stats. & Regs., Regs. Preambles ¶ 31,155 (2003) (“Order No. 2004”), order on reh’g, 107 FERC ¶ 61,032 (“Order No. 2004-A”), order on reh’g, 108 FERC ¶ 61,118 (2004) (“Order No. 2004-B”).

APS migrated to wesTTrans.net, a new OASIS provider on April 1, 2004. The compliance findings identified through the OASIS examination refer to issues identified under APS' previous OASIS. However, a few of these issues have been identified as ongoing problems even after the migration to wesTTrans.net. APS must ensure that the capabilities of, and their postings to, wesTTrans.net satisfy all of the recommendations made in this report, and continue to satisfy all of the Commission's requirements for OASIS posting.

B. Conclusions

Based on our assessment of materials provided by APS in response to Data Requests, interviews with APS staff, site visits, and review of publicly available materials, we determined that APS did not fully comply with Commission rules, regulations and requirements. The audit uncovered the following areas of non-compliance or departures from best practices:

Compliance Findings

1. *Failure to Arrange for Necessary Transmission Service when Making Off-System Sales:* The APS wholesale Merchant function (APS Merchant) made off-system power sales at trading hubs from system resources, without properly requesting, scheduling, and paying for point-to-point (PTP) transmission service that was required to support the off-system sale.
2. *Incorrect Treatment of the 230kV Phoenix Valley System as a Single Node:* APS incorrectly treated the Phoenix Valley 230kV system as a single node on its transmission system. The result is that some off-system sales made by generators connected to this system should have been, but were not, supported by PTP transmission service.
3. *Public Disclosure of Market Information:* APS did not post all transmission outages and transmission schedule curtailments on OASIS as required by 18 C.F.R. § 37.4 (b)(3)(2003) and 18 C.F.R. § 37.6 (e)(3)(2003), respectively.
4. *Emergency Deviations:* APS emergency procedures did not include a timely Commission filing consistent with 18 C.F.R. § 37.4 (a)(2)(2003).
5. *Transmission Service Status:* APS did not consistently assign the proper status code for transmission service requests as prescribed in the Standard & Communication Protocol (S&CP) and did not always post a reason for

denying transmission service requests as required by Commission regulations.

6. *OASIS Posting Requirements*: APS incorrectly identified the Transmission Provider's wholesale merchant function or affiliate on transmission service requests and did not provide all ancillary service offerings and prices on its OASIS.

To remedy these concerns, OMOI audit staff makes the following recommendations:

Recommendations Regarding Transmission Services

1. *Failure to Arrange for Necessary Transmission Service when Making Off-System Sales*: APS must make payments for the PTP transmission service that the APS Merchant should have reserved and paid for, but did not for the period from 1996 through October 2004. The payment, totaling \$2.1 million, was determined in conformance with APS' OATT. APS must also establish procedures, subject to audit staff approval, to ensure that the appropriate transmission services to support off-system sales by APS Merchant is requested, scheduled and paid for.
2. *Incorrect Treatment of the 230kV Phoenix Valley System as a Single Node*: APS must make payments for PTP transmission service that it should have reserved to support all of the off-system power sales from the two generators connected to the Phoenix Valley 230kV system for the period from 1996 through October 2004. The payment, totaling \$1.9 million, is consistent with the overrun charges embedded in APS' OATT. APS must also establish procedures, subject to audit staff review, to ensure that all required paths are properly posted on the OASIS.
3. APS must distribute the \$4 million payment associated with its unauthorized use of PTP transmission service in the following manner: 1) \$2.75 million to upgrade of the West Phoenix-Lincoln Street 230kV transmission line with high capacity composite conductors; and 2) \$1.25 million as a contribution to fund low income energy assistance programs in Arizona.
4. APS must commence work on the upgrade of the West Phoenix-Lincoln Street 230kV transmission line within 30 days of the Commission order approving the audit report.

5. APS must file monthly reports with OMOI detailing the status of the transmission project, including estimated and actual costs, until APS places in-service the upgraded transmission line.
6. APS must file a report detailing the distribution of the monies to fund low income energy assistance within 30 days of the date of issuance of the Commission Order approving the audit report.
7. APS must file with OMOI a mitigation plan within 30 days of the Commission Order approving the audit report. The mitigation plan must subject all off-system sales from units affected by the upgrade of the West Phoenix-Lincoln Street 230kV system to mitigation until the in-service date of the planned Phoenix Valley Transmission Substation 5, expected in 2007.
8. APS must submit to OMOI copies of all new and revised procedures developed to address our findings and recommendations within 90 days of the date of issuance of the Commission Order approving the audit report.

Recommendations Regarding OASIS

9. *Public Disclosure of Market Information:* APS must develop procedures to post all transmission information on its OASIS in a timely fashion, and to post all transmission schedule curtailments on OASIS. When improper information exchange occurs, APS must make a posting on OASIS. In addition, APS should divulge transmission information to the APS Merchant only at the same time as such information is made available to the public via its OASIS.
10. *Emergency Deviations:* APS must strengthen its procedures to ensure all emergency deviations from the Standards of Conduct are reported to the Commission and posted on its OASIS within 24 hours of the occurrence of the emergency.
11. *Transmission Service Status:* APS must strengthen its procedures to ensure status codes are applied correctly to requested transmission service. All transmission service requests should receive a clear, concise explanation and code on APS' OASIS. In addition, APS must provide additional training to OASIS staff to reinforce the importance of listing reasons for a service denial and assigning the correct request status.

12. *OASIS Posting Requirements*: APS must post on its OASIS all required information with requests for transmission service relating to affiliates and post price for and offers for all ancillary services found in its tariff.

C. Additional Compliance Efforts Undertaken by APS

1. Independent Market Monitor

Subsequent to the completion of our audit fieldwork, and in association with the proposed acquisition of assets from PPL Sundance, LLC, APS began the process of establishing an independent market monitor for Arizona. The independent monitor will focus on identifying events that cause increases in wholesale electricity prices or the foreclosure of competition, and will investigate the behavior of APS and its affiliates with regards to the identified events. The monitor will make quarterly reports to the Commission, and will immediately and directly report any identified anticompetitive behavior it observes.

APS' market monitoring plan addresses the major concerns identified by our audit, and we believe that the plan will help ensure APS' compliance with the Commission's requirements.

2. New Compliance Department

APS proactively revamped the company's compliance department effective November 1, 2004. The company created a new position of Director of Regulatory Compliance, who will manage a full time staff of seven. The Director will report to the Executive Vice President for Customer Service and Regulation.

The Department of Regulatory Compliance will assign dedicated employees to oversee compliance in the daily operations of the APS merchant and transmission functions.

The Director is responsible for ensuring compliance with all aspects of State and Federal utility regulatory requirements, including compliance with Order 2004 and the implementation of procedures to address the recommendations made within this report.

The Director will file semi-annual reports with Operational Audits commencing at the end of the first semi-annual period in calendar year 2005, for a period of two years, detailing APS' compliance with the findings made within this

report and APS' ongoing compliance efforts in general. These semi-annual filings may be extended at Operational Audit's discretion.

D. Audit Objective

Our objective was to determine whether and how APS and its subsidiaries and affiliates are complying with: 1) The requirements of the Standards of Conduct and Open Access Same Time Information System (OASIS); 2) Codes of Conduct; and 3) APS' Open Access Transmission Tariff (OATT).

E. Background

The APS Merchant capitalizes on the flexibility of serving native load from various generation resources to allow it to sell power at trading hubs adjacent to APS' control area without having to procure PTP transmission service.

APS' control area is located in Arizona, adjacent to the Four Corners and Palo Verde trading hubs. Through the use of Network Service, the APS Merchant is able to serve its native load from a variety of network resources, including off-system purchases and generators located within the APS system. Many of the generators designated by the APS Merchant as network resources are located at the trading hubs on the border of APS' system and at other points of interconnection.

To serve off-system sales without utilizing PTP transmission service, the APS Merchant designates the APS border generators as the source and delivery point of off-system sales and physically serves its network load with other units located within the APS system. The pricing for off-system sales and network load service may be based on units other than those physically providing the service. APS has told audit staff that it dispatches its network resources so that costs to serve native load and make off-system sales are minimized, subject to constraints.

When APS makes off-system sales, it treats most off-system sales as physically coming from the generating units located at the trading hubs that serve as the point of delivery (POD) for the off-system sale, meaning that no transmission service is necessary to support the sale. However, when the power to support an off-system sale was not provided from units located at the POD, then APS would have needed to request and pay for PTP transmission service from the appropriate generator bus to the POD to support the off-system sale. For example, when APS wants to sell 50 MW at Palo Verde, it may ramp up a unit located in the Phoenix Valley system (not a border location) by 50MW to serve network

load. After ramping up this unit, APS will sell 50 MW off-system without reserving or paying for PTP service because it treats the Palo Verde unit as physically providing power for the off-system sale, and treats the Phoenix Valley system unit as physically providing power to APS' native load customer.

APS' Merchant, as a network customer of the APS transmission system, with a portfolio of generation located at trading hubs, is able to market its excess power without the need to procure PTP transmission service. Under the principles of APS' OATT, other generators that are not network customers must strictly match points of receipt and points of delivery in PTP reservations to enact a power sale across the APS control area.

APS' flexibility is exemplified by the case of Pinnacle West Energy Corporation's (PWEC) West Phoenix unit. During Track B months (June through September), these units are designated as Network Resources and their output can be used by the APS Merchant as part of the APS off-system sales strategy discussed above, where APS uses its border units for off-system sales without incurring PTP transmission charges and uses internal units to serve its load. During non-Track B months, this unit cannot be used to serve network load, and cannot be used as part of the APS displacement portfolio. Therefore, during non-Track B months, the West Phoenix unit does not have the flexibility of APS' network resources. When these units are economic and can make sales, the power for these sales must be sourced off the West Phoenix units, which requires PTP transmission from the generator source to the point of delivery for the sale.

APS' actions are not in violation of the terms of its OATT, but APS must ensure that it complies with the requirements of the OATT in making these types of transactions. As discussed below, APS did not always comply with the tariff requirements for PTP transmission service.

II. COMPLIANCE FINDINGS AND RECOMMENDATIONS

1. Failure to Arrange for Necessary Transmission Service when Making Off-System Sales

APS' wholesale Merchant function (APS Merchant) did not request and pay for PTP transmission service, consistent with its OATT, to support some of the off-system power sales it made at trading hubs where APS system resources are directly connected.

Background

The APS Merchant's portfolio of generation assets includes a number of units that we characterize as border units—located at buses on the transmission system that are also trading points or points of interconnection with other transmission systems. APS' border units deliver power directly to wholesale customers at Palo Verde, Four Corners, Saguaro, and Navajo. These trading points are major points of interconnection between APS and other transmission owners.

The border units can deliver power at these trading points without requiring the APS Merchant to contract for transmission service. In contrast, power delivery from APS' non-border units would require the APS Merchant to contract for transmission service. Under APS' OATT, the transmission service used to support off-system sales must be PTP service.

APS Merchant acknowledged the advantage of making off-system sales from units at a border location, *i.e.*, the APS Merchant would not have to request or pay for transmission service. This raised the concern for audit staff that the APS Merchant might have used the APS transmission system in a manner that was inconsistent with the requirements of APS' Open Access Transmission tariff (OATT), *e.g.*, by using unauthorized PTP transmissions service to make off-system sales.

To determine whether APS was using its transmission system improperly when making off-system sales at border locations, we instructed APS to perform a detailed transactional analysis of its off-system sales. This data analysis identified several transactions totaling thousands of MWhs where APS made off-system sales without the required PTP transmission service.

The analysis conducted for the period commencing with the inception of open access⁵ (1996) through October 2004, revealed that in a number of hours, APS' share of the border generating units' output was insufficient to support the volume of the sales at the trading hub. In fact, there were instances identified where the number of MWh sold by the APS Merchant in an hour at these trading hubs exceeded the generators' total available capacity, which APS attributed to human error by the traders.

Where this deficiency occurred, APS would have been required to serve the balance of the off-system sale from units not directly connected to the point of delivery (POD). Under the terms of the APS Open Access Transmission Tariff (OATT), PTP transmission service is required for deliveries of power to off-system third parties on the APS transmission system.

The evidence we reviewed indicates that the APS Merchant did not procure or otherwise arrange for PTP transmission service when necessary to cover for these deficiencies. In effect, APS used unauthorized PTP transmission service to transport power across the APS system to serve the off-system, third-party sales.

The evidence also indicates that APS was the only customer in the APS control area able to capture the benefits of PTP transmission service without having to reserve, schedule, or pay for such service. For other customers taking service under the OATT, APS imposes a charge for unauthorized use of transmission service.⁶ This charge is set equal to two (2) times the maximum allowable rate for the overrun, which is the difference between the maximum integrated hourly amounts of transmission service actually used by the customer less the amount of transmission service the customer has reserved for such hour.

APS contends that its failure to arrange and pay for PTP transmission service was inadvertent. APS maintains that a lack of procedures to ensure that

⁵ Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, FERC Stats. & Regs. ¶ 31,036 (1996) (hereinafter cited as "Order No. 888"), order on reh'g, FERC Stats. & Regs. ¶ 31,048 (1997) (hereinafter cited as "Order No. 888-A"), order on reh'g, 81 FERC ¶ 61,248 (1997), order on reh'g, 82 FERC ¶ 61,046 (1998), aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC, 225 F.3d 667 (D.C. Cir 2000), aff'd sub nom. New York v. FERC, 535 U.S. 1(2002)

⁶ APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002); Schedule 7 Paragraph 7.

border generators were producing at a level sufficient to accommodate off-system sales resulted in these violations.

According to APS, on many of the identified occasions, system reliability operators, for non-emergency operational purposes, ramped down the border units that were supposed to be servicing the off-system sales to levels below the sales commitments of the APS Merchant. Additionally, APS also says that the instances where traders in the APS Merchant committed to sell more power from the border generators than APS' share of the generators' output were due to isolated errors by traders.

We were concerned that transmission service to third-party customers may have been affected by APS' actions. We analyzed available OASIS data for a sample of the period to determine if other customers' service requests were denied, curtailed, or reduced, at times when APS improperly used transmission service. We did not find any evidence that other customers' transmission service was affected. However, competition in energy markets may have been impacted, given that in some cases APS was able to avoid the required PTP transmission charges.

Although the impacts on energy markets are unobservable given the lack of available historical information relating to sales offers at the various trading hubs, APS Merchant's avoidance of the necessary PTP charges may have afforded it a competitive advantage over other power marketers with otherwise lower cost and more efficient power to sell.

APS calculated the estimated total transmission overrun associated with its unauthorized use of PTP transmission service. These calculations, made in accordance with schedule 7 of the APS OATT⁷, totaled \$2.1 million, covering the period from July 1996 through October 2004.

Commission Regulations and Requirements

APS OATT⁸ Part II: Point-to-Point Transmission Service: APS will provide Firm and Non-Firm Point-to-Point Transmission Service pursuant to the applicable terms and conditions of [the] Tariff. Point-to-Point Transmission Service is for the receipt of capacity and energy at designated

⁷ Schedule 7 of the APS OATT sets this charge equal to two (2) times the maximum allowable rate for the overrun. *Id.*

⁸ APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002).

Point(s) of Receipt and the transmission of such capacity and energy to designated Point(s) of Delivery.

APS OATT⁹ SCHEDULE 7 Paragraph 7: Overrun of Reserved Transmission Capacity: APS will assess a charge for unauthorized use of transmission service at a rate equal to two times the maximum allowable amount (“the overrun”), which shall be the difference between the maximum integrated hourly amount of transmission service actually used by the customer less the amount of transmission service the customer has reserved for such hour. The transmission customer will incur the charge for maximum hourly overrun during the calendar month or for the period of transmission service if such service is for a term less than one month.

Recommendations

We recommend APS:

1. Establish written procedures for the APS Merchant to ensure that on a going-forward basis, PTP transmission service is reserved for all sales of off-system power serviced from any unit not directly connected to the point of delivery.
2. Establish written procedures for the APS Transmission to ensure that transmission customers are charged the appropriate overrun charges for use of transmission service in excess of the customers’ reservation amounts.
3. Pay \$2.1 Million in overrun charges to upgrade the West Phoenix-Lincoln Street 230kV transmission line with composite conductors. Work on the upgrade must commence within 30 days of the Commission order approving the audit report. APS must file monthly reports with OMOI detailing the status of the transmission project, including estimated and actual costs, until the in-service date of the upgraded line and verify capacity additions.
4. APS must not recover the monies paid in association with recommendation 3 above through any existing or future wholesale or retail rate recovery mechanism.

⁹ *Id.*

2. Incorrect Treatment of the 230kV Phoenix Valley System as a Single Node

APS incorrectly treated the Phoenix Valley 230kV system as a single node on its transmission system. The result is that off-system sales made by generators connected to the Phoenix Valley system should have been, but were not, supported by PTP transmission service.

Background

In the course of analyzing transactional data in response to our questions concerning APS' off-system sales, APS discovered that its treatment of the Phoenix Valley 230kV system as a single node was not consistent with the Commission's requirements. Upon making this discovery, APS notified us of this inconsistency and promptly took steps to come into compliance.

APS owns two generators interconnected to the Phoenix Valley 230kV System – Ocotillo and West Phoenix. During the period that APS Transmission treated this system as a single node¹⁰, it considered generation from either of those plants to be delivered at either West Wing (WW) or Pinnacle Peak (PP), effectively treating those units as physically and directly connected to those points of interconnection. Neither generator was directly connected to WW or PP.

We checked APS' OASIS and determined that the APS transmission function had not posted the individual paths that comprise this system on its OASIS as required by 18 C.F.R. 37.6(b)(1)(i)(2003).

We have determined based on the location of the APS units interconnected on this system that PTP transmission service should have been purchased in accordance with Part II of the APS OATT for all off-system third party sales of power made from these units and delivered over the Phoenix Valley 230kV System.

During the course of our audit, we reviewed off-system sales transactions from Ocotillo and West Phoenix delivered at West Wing and Pinnacle Peak and determined that the APS Merchant used unauthorized PTP transmission service to transmit the power associated with hundreds of these sales, totaling thousands of MWs.

¹⁰ July 1996 through June 30, 2004.

We understand from APS that this problem has existed since the inception of open access. APS therefore extended the transactional analysis to cover the entire time period from the effective date of Order No. 888 through the present.

The treatment of this portion of the APS system as a single node raises some concerns. APS Merchant failed to procure or otherwise arrange for PTP transmission service for sales from Ocotillo and West Phoenix that were delivered at WW and PP. As a result, the APS Merchant did not incur a PTP transmission charge for these sales. Although no other transmission customers were denied service as a result of this error, this cost avoidance may have provided the APS merchant with a potential advantage over other power marketers trying to sell power to those locations. And by not posting the required paths on the OASIS, the APS transmission function undermined the transparency of the transmission system.

Although the impacts on energy markets are unobservable given the lack of available historical information relating to sales offers at West Wing and Pinnacle Peak, APS Merchant's avoidance of the necessary PTP charges may have afforded it a competitive advantage over other power marketers with otherwise lower cost and more efficient power to sell.

As a result of our audit, on June 30, 2004, APS Transmission changed the necessary postings on its OASIS to ensure that the required paths were posted and to allow the APS Merchant and all other transmission customers the ability to make reservations for PTP transmission service on those paths. Whereas APS previously posted only a single node for the 230kV Phoenix Valley system, the audit has led to the posting of the following 20 transmission paths which are now available to all open access customers:

1. W/AZPS/AZPS-AZPS/WESTPHX230-FOURCORNE230/
2. W/AZPS/AZPS-AZPS/WESTPHX230-FOURCORNE345/
3. W/AZPS/AZPS-SRP/WESTPHX230-JOJOBA500/
4. W/AZPS/AZPS-AZPS/WESTPHX230-KYRENE230/
5. W/AZPS/AZPS-AZPS/WESTPHX230-MOENKOPI500/
6. W/AZPS/AZPS-AZPS/WESTPHX230-NAVAJO500/
7. W/AZPS/AZPS-SRP/WESTPHX230-PALOVERDE500/
8. W/AZPS/AZPS-AZPS/WESTPHX230-PINPKAPS230/
9. W/AZPS/AZPS-SRP/WESTPHX230-RUDD230/
10. W/AZPS/AZPS-AZPS/WESTPHX230-WESTWING230/
11. W/AZPS/AZPS-AZPS/WESTPHX230-WESTWING500/
12. W/AZPS/AZPS-AZPS/OCOTILLO69-FOURCORNE230/
13. W/AZPS/AZPS-AZPS/OCOTILLO69-FOURCORNE345/

14. W/AZPS/AZPS-AZPS/OCOTILLO69-KYRENE230/
15. W/AZPS/AZPS-AZPS/OCOTILLO69-NAVAJO500/
16. W/AZPS/AZPS-SRP/OCOTILLO69-PALOVERDE500/
17. W/AZPS/AZPS-AZPS/OCOTILLO69-PINPKAPS230/
18. W/AZPS/AZPS-SRP/OCOTILLO69-RUDD230/
19. W/AZPS/AZPS-AZPS/OCOTILLO69-WESTWING230/
20. W/AZPS/AZPS-AZPS/OCOTILLO69-WESTWING500/

We view APS Transmission treatment of the Phoenix Valley System as a single node on their transmission system as a violation of the Commission's posted path requirements¹¹, and APS Merchant's use of unauthorized PTP transmission service as a violation of the APS tariff. According to APS, since the posting of these paths, no transmission customers – other than the APS Merchant – have requested service over these paths.

APS calculated the estimated total transmission overrun associated with its unauthorized use of PTP transmission service. These calculations, made in accordance with schedule 7 of the APS OATT¹², totaled \$1.9 million, covering the period from July 1996 through October 2004.

Commission Regulations and Requirements

18 C.F.R. § 37.6(b)(1)(i)(2003) Definition of Posted Path: Posted path means any control area to control area interconnection; any path for which service is denied, curtailed or interrupted for more than 24 hours in the past 12 months; and any path for which a customer requests to have ATC or TTC posted.

18 C.F.R. § 37.6(e)(1)(i)(2003) Posting specific transmission and ancillary service requests and responses: All requests for transmission and ancillary services offered by Transmission Providers under the pro forma tariff, including requests for discounts, must be made on the OASIS, and posted prior to the Transmission Provider responding to the request, except as discussed in paragraphs (e)(1) (ii) and (iii).

¹¹ 18 C.F.R. § 37.6(b)(1)(i)(2003)

¹² Schedule 7 of the APS OATT sets this charge equal to two (2) times the maximum allowable rate for the overrun. APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002).

APS OATT¹³ Part II: Point-to-Point Transmission Service: APS will provide Firm and Non-Firm Point-to-Point Transmission Service pursuant to the applicable terms and conditions of [the] Tariff. Point-to-Point Transmission Service is for the receipt of capacity and energy at designated Point(s) of Receipt and the transmission of such capacity and energy to designated Point(s) of Delivery.

OATT SCHEDULE 7, Paragraph 7:¹⁴ Overrun of Reserved Transmission Capacity: APS will assess a charge for unauthorized use of transmission service at a rate equal to two times the maximum allowable amount (“the overrun”), which shall be the difference between the maximum integrated hourly amount of transmission service actually used by the customer less the amount of transmission service the customer has reserved for such hour. The transmission customer will incur the charge for maximum hourly overrun during the calendar month or for the period of transmission service if such service is for a term less than one month.

Recommendations

APS must:

5. Establish written procedures for the APS Merchant to ensure that on a going-forward basis, PTP transmission service is reserved for all sales of off-system power serviced from any unit not directly connected to the point of delivery.
6. Establish written procedures for the APS Transmission to ensure that all required paths are properly posted on the OASIS.
7. Post all required paths comprising the 230-kV Phoenix Valley System to its OASIS.
8. Pay \$1.9 Million in overrun charges. APS must distribute the \$1.9 million payment associated with its unauthorized use of PTP transmission service in the following manner: 1) \$650 thousand to upgrade of the West Phoenix-Lincoln Street 230kV transmission line with composite conductors; and 2) \$1.25 million as a contribution to fund low income energy assistance programs in Arizona.

¹³ APS Open Access Transmission Tariff, Eleventh Revised Volume No. 2 (April 1, 2002).

¹⁴ *Id.*

9. Commence work on the transmission upgrade within 30 days of the Commission order approving the audit report. APS must file monthly reports with OMOI detailing the status of the transmission project, including estimated and actual costs, until the in-service date of the upgraded line.
10. File a report with the Commission detailing the distribution of the \$1.25 million contribution, within 90 days of the date of issuance of the Commission Order approving the audit report.
11. Must not recover the monies paid in association with recommendation 8 above through any existing or future wholesale or retail rate recovery mechanism.

3. Public Disclosure of Market Information

APS did not post all transmission outages and transmission scheduled curtailments on OASIS as required by 18 C.F.R. § 37.4 (b)(3)(2003) and 18 C.F.R. § 37.6 (e)(3)(2003), respectively.

Background

We were concerned that APS might have given the APS Merchant access to market-valuable transmission information before that information was provided to other market participants via the OASIS. APS posted short duration “unplanned” outages and transmission schedule curtailments on the Western Electric Coordinating Council’s member site (wecc.net) rather than on APS’ OASIS site. APS’ Power Operations manager explained that the APS control area is operated to absorb unplanned outages that last less than one hour, with the APS Merchant absorbing any necessary curtailments. APS believes that system reliability is not in jeopardy during a transmission outage that lasts less than one hour, so only a wecc.net posting is required.¹⁵

If APS Merchant has knowledge of transmission outages, then APS is required to make all market participants aware of the outages at the same time. The APS Merchant stated that they received phone calls from the APS generation or scheduling desks when transmission outages and/or curtailments occurred within the APS control area. This suggested that APS Merchant employees knew about short duration transmission outages as they occurred and thus APS should have made other transmission customers simultaneously aware of the outages.

We are concerned that market participants do not check wecc.net for outage information and that some market participants may not have access to wecc.net. As a result, posting short duration transmission outages on wecc.net does not satisfy the requirement to make all market participants aware of transmission outages at the same time APS Merchant is made aware of the outages. This concern is based on interviews with APS Merchant employees who revealed that they observe and gather market information on OASIS sites and not wecc.net. In addition, APS did not retain documentation to indicate when transmission outages were posted on wecc.net, so we cannot verify that the market was aware of

¹⁵ APS’ “unplanned” outages and curtailments that persist longer than an hour are posted to the APS OASIS site immediately following the lapse of 60 minutes. APS’ “planned” outages and curtailments are also posted to the APS OASIS for all participants to view.

transmission outages at the same time as the APS Merchant, even if the market regularly checked wecc.net. Additionally, wecc.net is available only to members of the Western Electric Coordinating Council (WECC). Any APS transmission customer who is not a member of WECC would not have access to the outage postings.

During the scope of the audit, APS had 51 unplanned outages that were not posted to the APS OASIS. Eleven of the 51 unplanned outages lasted more than one hour and were never posted to the APS OASIS, despite APS' policy to post on its OASIS outages of more than one hour in duration. It does not appear that transmission customers were affected by the lack of posting during these 11 outages, as APS did not deny any transmission service requests during any of the outages.

We are also concerned that APS did not appropriately post some transmission schedule curtailments resulting from short duration transmission outages. During the scope of the audit, APS identified 96 transmission schedule curtailments that were posted to its OASIS that may or may not have been posted on wecc.net. However, only 32 of those provided by APS match the 102 OASIS posted curtailments queried by staff on the APS OASIS. In the event of a curtailment, APS is required to report the curtailment and relevant transmission information *on OASIS*. Thus, for any outage that resulted in a curtailment, posting the outage on wecc.net rather than OASIS was not sufficient, even if the APS Merchant was or was not aware of the outage.

Commission Regulations and Requirements

APS Merchant employees access to information about outages not posted on OASIS is inconsistent with 18 C.F.R. § 37.4 (b)(3)(2003) which stipulates that merchant function employees shall not have access to or obtain any information concerning the transmission system that is not at the same time available to all OASIS users.

Furthermore, 18 C.F.R. Section 37.4(b)(4)(2003) states that employees engaged in the transmission function may not disclose to employees engaged in wholesale merchant functions any information concerning the transmission system through non-public communications conducted off-OASIS.

According to 18 C.F.R. § 37.6 (e)(3)(2003), APS is required to “post notice of the curtailment or interruption on the OASIS, and the Transmission Provider must state why the transactions could not be continued or completed.”

Recommendations

APS must:

12. Develop procedures to post all transmission information, “planned” and “unplanned,” on the APS OASIS site in a timely fashion and when improper information exchange occurs make a posting in accordance with 18 C.F.R. § 37.4 (b)(4)(2003).
13. Divulge all transmission information to the wholesale merchant function at the same time as the general public via the APS OASIS site and wecc.net, simultaneously.
14. Develop procedures to post all curtailments on the APS OASIS site in accordance with 18 C.F.R. § 37.6 (e)(3)(2003).

4. Emergency Deviations

APS emergency procedures did not include a timely Commission filing consistent with 18 C.F.R. § 37.4 (a)(2)(2003).

Background

APS experienced one emergency situation during the scope of the audit that required system reliability to be handled by the APS Merchant. On April 30, 2002, the APS Energy Control Center (*i.e.* the transmission control room) was evacuated for 30 minutes due to a fire alarm. APS followed its procedures and promptly posted the emergency deviation from Standards of Conduct to its OASIS site. However, the emergency was never reported to the Commission.

Discussions with APS staff revealed a lack of awareness that Transmission Providers are required to notify the Commission when emergency deviations occur. We identified APS' departure from the Commission's requirements during our audit fieldwork; APS had recognized the deficiency and developed procedures that included timely Commission notification within 24 hours of the emergency event. As a result of our audit, APS developed written procedures to ensure timely Commission filing subsequent to emergency deviations. These procedures were tested in July 2004 when APS experienced two emergency situations. Following its newly established written procedures, APS made timely filings with the Commission within 24 hours of each event.¹⁶

Commission Regulations and Requirements

18 C.F.R. § 37.4 (a)(2)(2003) requires Transmission Providers to report to the Commission and on its OASIS each emergency that results in deviation of its Standards of Conduct with 24 hours of such an event.

Recommendations

APS must:

15. Ensure all emergency deviations from the Standards of Conduct are reported to the Commission and posted to its OASIS within 24 hours of incident's emergence.

¹⁶ EY04-5-000 and EY04-7-000

5. Transmission Service Status

APS did not consistently assign the proper status code for transmission service requests as proscribed in the Standard & Communication Protocol (S&CP) and did not always post a reason for denying transmission service requests as required by Commission regulations.

Background

APS has, in some instances assigned the wrong status to transmission service request. We reviewed all refused, declined, and invalid transmission service requests that entered the request queue during the months of August 2002 and 2003. Of the 53 requests we reviewed, half were assigned the incorrect status codes. The assignment mistakes fall into one of three categories:

- APS assigned the status code “refused” rather than “invalid” when customers requested the wrong transmission path or provided an incorrect start and stop time;
- APS assigned the status code “invalid” rather than “refused” when customers requested service on a path that did not have sufficient ATC; and
- APS assigned the status code “declined” rather than “invalid” when customers provided an incorrect start and stop time for a transmission service request.

APS’ use of incorrect status codes led staff to further test the information provided on wesTTrans.net. For April 1, 2004 through May 17, 2004, APS assigned a status of refused, invalid or declined to a total of 113 service requests. Of these 113 requests, 32 requests were incorrectly coded.

APS also failed to provide a sufficient reason for refused requests in some instances. Of the 62 refused requests queued between April 1, 2004 and May 17, 2004, 22 potentially contained unacceptable reasons, and 11 did not provide an explanation for denial at all. The protocols found in *Standards and Communication Protocols for OASIS* dictate that the status “refused” is assigned to indicate that the “service request has been denied due to lack of availability of transmission capability.” The seller comment and status comment field should be used to provide information sufficient to inform the transmission customer’s decision-making process, and should include information of a transient nature that causes ATC to be zero for short periods of time.

Commission Regulations and Requirements

18 C.F.R. §37.6(a)(4)(2003) dictates that the information posted on the OASIS be in such detail and have such capabilities to allow transmission customers to clearly identify the degree to which transmission service requests or schedules were denied or interrupted. This provision requires APS to assign transmission status request status in a manner consistent with the protocols found in *OASIS Standards and Communications Protocol (S&CP)*, Versions 1.41. The S&CP states that:

- “Refused” is assigned to indicate the service request has been denied due to lack of availability of transmission capability;
- “Invalid” is assigned to indicate an invalid field in the request, such as improper POR, POD, source, sink, etc.; and
- “Declined” is assigned to indicate that the terms and conditions, such as the BID_PRICE, are unacceptable and that negotiations are terminated or that contractual terms and conditions have not been met.

18 C.F.R. § 37.6 (e)(2)(i)(2003) states that the responsible party must provide the reason for denial as part of any response to a transmission service request.

Recommendations

APS must:

16. Strengthen procedure(s) to ensure status codes are applied correctly to requested transmission service.
17. Provide additional and periodic follow-up training to OASIS staff to reinforce the importance of listing a reason for a service denial and assigning the correct request status.
18. Post a clear, concise explanation for all transmission service requests coded as denied, invalid, or declined on wesTTrans.net.

6. OASIS Posting Requirements

APS incorrectly identified the Transmission Provider's wholesale merchant function or affiliate on transmission service requests and did not provide all ancillary service offerings and prices on its OASIS.

Background

Before April 1, 2004, APS maintained an OASIS site¹⁷ that hosted the OASIS sites for Puget Sound Energy, Inc.; Tucson Electric Power Company; Southwest Transmission Cooperative, Inc.; and APS (AZPS OASIS). On April 1, 2004, APS switched from its previous OASIS system to wesTTrans.net.

By changing OASIS systems at a date beyond the scope of this audit, the compliance exceptions identified through a review of APS' previous OASIS would need to be compared with the current system to ensure that the recommended course of action to rectify the areas of non-compliance account for the inherent differences between the two OASIS systems.

After reviewing both APS' "old" OASIS and its postings on wesTTrans.net¹⁸, we identified the following areas of non-compliance with the Commission's OASIS requirements:

1. APS failed to identify transmission service requests that involved the APS Merchant or affiliates.

18 C.F.R. § 37.6 (c)(4) (2003) sets forth the required information that Transmission Providers are required to post on the OASIS in association with requests for transmission and ancillary services. Among these requirements, Transmission Providers must identify whether the Customer is the Transmission Providers' wholesale merchant function or an affiliated power marketers.

A review of transmission service requests received both through APS' previous OASIS and wesTTrans.net revealed that it did not properly identify requests for transmission service submitted by APS Merchant or the affiliated power marketer Pinnacle West Energy Corp.

2. APS did not post on the OASIS all ancillary services contained in its OATT.

¹⁷ Historical data is still available on the 'old' OASIS site located at <http://www.azpsoasis.com/>

¹⁸ <http://www.westtrans.net>

A review of the posted ancillary services and prices associated with those services on AZPS OASIS revealed that APS did not post all ancillary services it offers under its filed OATT. We determined that APS did not post any of the retail class ancillary services under schedules 1, 3, 5 and 6 required of Retail Network Integration Transmission Customers taking service under part IV of the APS OATT.

Additionally, APS did not post any ancillary services offered to customers of Operating Reserve Service, including: 1) unbundled regulation and frequency response; 2) unbundled spinning reserve; and, 3) supplemental reserve.

WesTTrans.net contained fewer postings for ancillary services than the AZPSOASIS. APS only posted two services on wesTTrans.net: 1) scheduling, system control and dispatch service; and, 2) reactive supply and voltage control from generation sources service. Other services contained within the APS OATT were not posted on wesTTrans.net.

Commission Regulations and Requirements

18 C.F.R. § 37.6 (c)(4)(2003) requires, for any transaction for transmission service agreed to by the transmission provider and a customer, the Transmission Provider must post on the OASIS, among other things, identification of whether the transaction involves the Transmission Provider's wholesale merchant function or any affiliate.

18 C.F.R. § 37.6 (d)(1)(2003) requires that any ancillary service required to be provided or offered under the *pro forma* tariff must be posted with the price of that service.

Similarly, 18 C.F.R. § 37.6 (d)(3)(2003) requires, for any transaction for ancillary service agreed to by the transmission provider and a customer, the transmission provider must post on the OASIS, among other things, identification of whether the transaction involves the transmission provider's wholesale merchant function or any affiliate.

18 C.F.R. § 37.6 (e)(1)(iv)(2003) requires, for processing a request for transmission or ancillary service, the transmission provider or someone to whom the task has been delegated shall post, among other things, whether the Transmission Provider's wholesale merchant function or any affiliate is the same information as required in § 37.6 (c)(4) and § 37.6 (d)(3) requesting the service.

Recommendations

APS must:

19. Post on wesTTrans.net all required information with requests for transmission service relating to affiliates as required in 18 C.F.R. § 37.6 (e)(1)(iv)(2003).
20. Post prices for and offer all ancillary services found within its tariff on wesTTrans.net.