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BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

Arizona Corporation Commission

DOCKETED

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DOCKETED BY	<i>CM</i>
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IN THE MATTER OF THE APPLICATION
OF ARIZONA PUBLIC SERVICE
COMPANY FOR APPROVAL OF THE
NEW EXPERIMENTAL RESIDENTIAL
TIME-OF-USE RATE SCHEDULES, ET-2
AND ECT-2

DOCKET NO. E-01345A-05-0674

DECISION NO. 68645

ORDER

Open Meeting
April 4 and 5, 2006
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. On September 22, 2005, Arizona Public Service Company ("APS" or "Company") filed an application for approval of two new experimental residential time-of-use ("TOU") rate schedules, ET-2 and ECT-2. These rates are experimental and customer participation is limited to 20,000 customers on both rate schedules combined. Customer participation in these rate schedules is completely voluntary. These rate schedules were filed for approval pursuant to the requirements of Decision No. 67744 (April 7, 2005.) In that Decision, the Commission found that APS' "traditional demand response programs that define 'off-peak' hours as between 9:00 p.m. to 9:00 a.m. are ineffective in creating an incentive to residential ratepayers to shift their consumption to 'off-peak' hours."¹ The Company was therefore ordered to file additional TOU programs similar to the existing Time Advantage and Combined Advantage TOU programs but with different peak and off-peak periods.

¹ Decision No. 67744, Page 22, Lines 22 thru 24.

2. APS' existing residential TOU rate schedules are ET-1 (Time Advantage Rate) and ECT-1R (Combined Advantage Rate.) Both of these rate schedules define the off-peak time period as 9:00 p.m. to 9:00 a.m. during both the summer and winter months. The per kWh charges for both ET-1 and ECT-1R are higher during the summer months (May-October) than the winter months. Also the ratio of on-peak kWh charges to off-peak kWh charges is greater in the summer than the winter. ECT-1R contains a demand charge applicable to the on-peak period only.

3. APS' proposed new experimental TOU rate schedules (ET-2 and ECT-2) are very similar to the existing ET-1 and ECT-1R. The proposed and existing rate schedules differ structurally in that ET-2 and ECT-2 define the off-peak time period as 7:00 p.m. to noon and the ratio of summer on-peak to off-peak kWh charges is greater for ET-2 and ECT-2. The following table compares the existing ET-1 rate schedule with the proposed ET-2 rate schedule:

Table 1: ET-1 to ET-2 Comparison

	ET-1	ET-2	Difference
Basic Service Charge per day	\$ 0.4930	\$ 0.5480	11%
Summer on-peak rate per kWh	\$ 0.1331	\$ 0.1820	37%
Summer off-peak rate per kWh	\$ 0.0430	\$ 0.0452	5%
Summer ratio of on-off peak rates	3.09	4.03	30%
Winter on-peak rate per kWh	\$ 0.1092	\$ 0.0870	-20%
Winter off-peak rate per kWh	\$ 0.04167	\$ 0.0578	39%
Winter ratio of on-off peak rates	2.62	1.5	-43%
Off-peak time period	9:00 p.m. to 9:00 a.m.	7:00 p.m. to noon	
Off-peak hours	12	17	42%

4. The following table compares the existing ECT-1R rate schedule with the proposed ECT-2 rate schedule:

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Table 2: ECT-1R to ECT-2 Comparison

	ECT-1R	ECT-2	Difference
Basic Service Charge per day	\$ 0.493	\$ 0.548	11%
Summer Demand Charge on-peak kW	\$ 11.81	\$ 11.81	0%
Summer on-peak rate per kWh	\$ 0.04765	\$ 0.0569	19%
Summer off-peak rate per kWh	\$ 0.02672	\$ 0.02792	4%
Summer ratio of on-off peak rates	1.8	2	14%
Winter Demand Charge on-peak kW	\$ 8.11	\$ 8.11	0%
Winter on-peak rate per kWh	\$ 0.03641	\$ 0.0373	2%
Winter off-peak rate per kWh	\$ 0.0257	\$ 0.02733	6%
Winter ratio of on-off peak rates	1.4	1.4	-4%
Off-peak time period	9:00 p.m. to 9:00 a.m.	7:00 p.m. to noon	
Off-peak hours	12	17	42%

5. The proposed per kWh charges for ET-2 and ECT-2 are designed to achieve revenue neutrality with the existing ET-1 and ECT-1R, respectively. Revenue neutrality requires the charges to be generally higher for the proposed rates because customers will have a greater opportunity to consume off-peak. Under the proposed rates, there will be 42 percent more off-peak hours (17 as opposed to 12.) Also, the off-peak period starts at a more convenient time for customers (7:00 p.m. as opposed to 9:00 p.m.) Staff has reviewed the billing determinants APS used to develop the proposed rates and agrees that the per kWh charges for ET-2 and ECT-2 are revenue neutral compared to ET-1 and ECT-1R, respectively. Revenue neutrality is desirable in these circumstances because the intent of these new experimental rates is not to benefit or penalize the Company.

6. The Basic Service Charge per day for both ET-2 and ECT-2 is \$0.548 compared with \$0.493 for both ET-1 and ECT-1R. The difference between the Basic Service Charges (\$0.055 per day) is derived from APS' implementation costs for the proposed rate schedules.

7. Staff generally supports the proposed new experimental TOU rate schedules. The new schedules have an off-peak time period that is more convenient for customers than existing TOU rate schedules and thus could result in shifting a greater part of APS residential load to off-peak time periods. Additionally, the ratio of on-peak rates to off-peak rates in the summer is

1 greater for the proposed rates than for existing TOU rates. This provides additional incentive for
2 customers to shift their usage to off-peak hours.

3 8. While Staff generally supports the new TOU rate schedules, Staff does have some
4 concerns. First, there is some concern that the proposed rates will simply result in shifting the
5 system peak period to the 7:00 – 9:00 p.m. time period rather than actually reducing the peak.
6 Second, Staff is concerned about the use of the same off-peak hours for both the summer and
7 winter months. Third, Staff questions whether it is appropriate for APS to seek recovery for the
8 implementation costs of the new TOU rates in this filing. Finally, Staff is concerned that the
9 number of customers allowed to participate in the new experimental rate schedules is too low.

10 9. APS maintains in its application that there is a potential that shifting load from the
11 7:00 p.m. to 9:00 p.m. time period in the summer could simply move the peak to that time period.
12 (Currently APS' summer system peak occurs between 3:00 p.m. and 6:00 p.m.) The goal of TOU
13 rates is to smooth the load shape and *reduce* the peak demand, not simply to shift the peak demand
14 period. While Staff shares APS' concern regarding peak shifting, Staff sees no reason to alter or
15 deny APS' proposed ET-2 and ECT-2 experimental rate schedules because of it. Staff notes that
16 APS' contention is not supported by hard data or analysis. Also, since these rate schedules are
17 experimental and customer participation is limited, it is unlikely that they will have a substantial
18 impact on APS' system load shape. These experimental rates will provide APS and the
19 Commission with information regarding customer behavior on such rates and will allow for an
20 assessment of TOU off-peak time periods that is based on actual data. To that end Staff
21 recommends that on an annual basis after these experimental rates are approved by the
22 Commission APS shall file with Docket Control a report that details the load shape of the
23 participants in the experimental rates.

24 10. Staff is also concerned about the use of the same on and off-peak time periods
25 during both the summer and winter months. This is actually quite unusual; typically utilities use
26 different on and off-peak hours in the winter to reflect the different system load shape during the
27 winter months. During the winter, APS' system load typically peaks in the early morning with a
28 second lower peak in the early evening. (Both of these intra-day winter peaks are significantly less

1 than the summer peak.) Other utilities in Arizona and in other states typically have winter TOU
 2 rates that track the winter load shape and have two different on-peak periods (one in the morning
 3 and one in the evening.) APS contends that setting winter peak hours the same as summer peak
 4 hours is advantageous because it matches the daily load shape for hot days in March and April
 5 (which typically follow a summer load shape), it will reduce customer confusion, and customers
 6 will likely not be able to shift load away from the early morning and early evening hours.
 7 Additionally, Staff adds that it is the summer peak that matters in that it drives the need for
 8 capacity. Smoothing the winter load shape will have little impact on APS' capacity needs. Thus,
 9 APS' argument in favor of simplicity is reasonable. While most other utilities have TOU rates that
 10 track the winter load shape more precisely, Staff sees little benefit in adding this additional
 11 complication to APS' proposed experimental TOU rates at this time. However, before these
 12 experimental rate schedules are made permanent, an assessment should be made regarding the
 13 appropriateness of APS' proposed winter off-peak periods. To that end, Staff recommends that the
 14 annual report mentioned above include both the summer and winter load shape of the participants
 15 in the experimental rates.

16 11. Staff is also concerned about APS' proposal to collect the implementation costs of
 17 the proposed TOU rates through the Basic Service Charge. APS proposed daily Basic Service
 18 Charge includes \$0.055 to cover implementation costs. APS reports estimated implementation
 19 costs as follows:

20	Incremental meter, installation and transportation costs:	\$365,205
21	Billing and related systems costs – programming and testing:	\$650,000
21	Customer service costs:	\$159,675
22	Total:	\$1,174,880 ²

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 24 The proposed Basic Service Charge is designed to collect these costs over three years.
 25 Staff believes that costs such as these are more appropriately considered through a general rate

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28 ². APS reports implementation costs of \$1,194,880 but there appears to be a \$20,000 error in the calculations contained in APS' application.

1 case and does not recommend their recovery at this time. Thus, Staff recommends that the
2 proposed daily Basic Service Charge for ET-2 and ECT-2 be reduced by \$0.055 and set at \$0.493.

3 12. Staff's final concern involves the number of customers allowed to participate in the
4 new experimental TOU rate schedules. Given the potential customer benefits of these new rates,
5 Staff does not agree with the Company that only 20,000 customers should be allowed to participate
6 in these rates. APS reports in its application that there are currently over 357,000 customers on
7 APS' current TOU rates. Given this high level of customer participation, it is reasonable to
8 assume that the level of customer interest in these new experimental rates will be high. In order to
9 allow more customers the opportunity to benefit from the new experimental TOU rates, Staff
10 recommends that the level of allowed customer participation in the new experimental TOU rates
11 be increased to 50,000 customers.

12 13. Staff is aware that increasing the level of customer participation will increase the
13 implementation costs borne by APS. APS has provided Staff with the spreadsheet models it used
14 to estimate the implementation costs of its proposed new experimental TOU rate schedules. Using
15 APS' spreadsheets, and keeping all of APS' assumptions therein the same, Staff has calculated
16 estimates of implementation costs for various levels of customer participation. The following table
17 summarizes the results of those calculations:

18 **Table 3: Estimated Implementation Costs for Different Levels of Customer Participation**

19 Expected new participants	20,000	50,000	100,000
Meter and installation and transportation	\$365,205	\$866,680	\$1,702,471
System programming and testing	\$650,000	\$650,000	\$650,000
Customer service costs	\$159,675	225,488	335,175
Total incremental costs	\$1,174,880	\$1,742,167	\$2,687,646
Total incremental cost per customer	\$58.74	\$34.84	\$26.88

21
22 According to these cost estimates, moving from APS' proposed 20,000 limit on customer
23 participation to Staff's proposed 50,000 limit will result in an additional \$567,287 in
24 implementation costs for APS. While Staff is not recommending recovery of these costs at this
25 time, Staff did calculate the increase to the daily Basic Service Charge that would recover the
26 estimated implementation costs with 50,000 customers participating. Assuming a three year
27 amortization period, the daily Basic Service Charge would have to equal \$0.525 (or \$0.032 more
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1 than the daily Basic Service Charge on APS' current TOU rates) in order to recover the estimated
2 implementation costs with 50,000 customers participating.

3 14. Because the proposed experimental tariffs are designed to be revenue neutral, and
4 because they were contemplated in Decision No. 67744, Staff believes it is appropriate to use the
5 fair value finding in that decision for the purposes of a fair value finding regarding the analysis of
6 these experimental rate schedules. Decision No. 67744 found APS' fair value rate base to be
7 \$5,054,426,000 and its fair value rate of return to be 5.92 percent. Because these experimental rate
8 schedules are intended to be revenue neutral, they should have little or no effect on APS' rate of
9 return.

10 15. Staff recommends approval of APS' proposed experimental rate schedules ET-2
11 and ECT-2 with the modification that the daily basic service charge for both rate schedules is set at
12 \$0.493 and the limit on customer participation is set at 50,000.

13 16. Staff also recommends that on an annual basis after these experimental rates are
14 approved by the Commission, APS shall file with the Commission a report that details the summer
15 and winter load shapes of the participants in the experimental rates. The annual reports should
16 also include the number of customers taking service on these experimental rates and the amount
17 that customers have saved relative to non-time-of-use rates.

18 17. Staff further recommends that concurrent with the filing of the second annual
19 report, APS will file an application to make these experimental rates (with appropriate
20 modifications) permanent and available to all customers.

21 18. While the Commission appreciates Staff's position, we find that limiting residential
22 customer participation in the new TOU rates is unnecessary. During the outages at Westwing in
23 the summer of 2004, APS' customers sufficiently demonstrated their ability and willingness to
24 reduce their usage of electricity during the hours designated as "peak" by the Company. During
25 that timeframe, APS made it known to consumers through the press that the "peak" hours where it
26 was necessary for customers to reduce their consumption of electricity were from 3:00 p.m. to
27 6:00 p.m. At that time, customers were motivated to alter their usage patterns in response to the
28 danger of outage, not to reduce the amount of their bills; however, it is highly likely that customers

1 would respond similarly if faced with drastically increased rates. In light of the recent rate
2 increases granted to APS and the potential of further increases, it is only fair to APS' residential
3 customers that they be given every opportunity to take advantage of a TOU rate that will motivate
4 them to reduce their consumption of electricity, resulting in lower bills for them and a decreased
5 peak for the Company.

6 19. While the Commission agrees with Staff that the recovery of costs such as APS'
7 implementation charges are better addressed through a general rate case, we recognize the fact that
8 some of these costs may increase and go unrecovered depending on the level of customer
9 participation in the new TOU rate schedules. It is therefore appropriate that at the time enrollment
10 in the new TOU rates exceeds 50,000, APS may file an application with the Commission seeking
11 to modify the daily Basic Service Charge.

12 20. Staff's recommendations as set for in Findings of Fact Nos. 9 through 17, as
13 modified by Findings of Fact Nos. 18 and 19, are reasonable and should be adopted.

14 CONCLUSIONS OF LAW

15 1. APS is certificated to provide electric service as a public service corporation in the
16 State of Arizona.

17 2. The Commission has jurisdiction over APS and over the subject matter of the
18 application.

19 3. The Commission having reviewed the application and Staff's memorandum dated
20 March 23, 2006, concludes it is in the public interest to approve APS' proposed ET-2 and ECT-2
21 rate schedules as modified herein.

22 ORDER

23 IT IS THEREFORE ORDERED that APS' proposed experimental rate schedules ET-2 and
24 ECT-2 are approved.

25 IT IS FURTHER ORDERED that the daily basic service charge for rate schedules ET-2
26 and ECT-2 is set at \$0.493.

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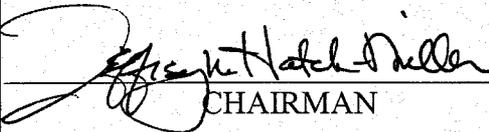
1 IT IS FURTHER ORDERED that APS shall not impose a limit on customer participation
2 on rate schedules ET-2 and ETC-2.

3 IT IS FURTHER ORDERED that by each January 31st from the date of this order, APS
4 will file with Docket Control annual reports that detail the load shape of the participants in the
5 experimental rates ET-2 and ECT-2.

6 IT IS FURTHER ORDERED that this Order shall become effective immediately.

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8 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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10 CHAIRMAN


COMMISSIONER

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COMMISSIONER


COMMISSIONER


COMMISSIONER

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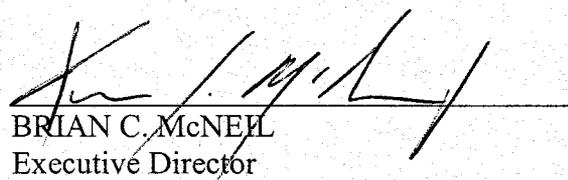
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IN WITNESS WHEREOF, I BRIAN C. McNEIL, Executive
Director of the Arizona Corporation Commission, have
hereunto, set my hand and caused the official seal of this
Commission to be affixed at the Capitol, in the City of
Phoenix, this 12th day of April, 2006.

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BRIAN C. McNEIL
Executive Director

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DISSENT: _____

DISSENT: _____

EGJ:MJR:lhmfJFW

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