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BEFORE THE ARIZONA CORPORATION COMMISSION

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GARY PIERCE, Chairman
BOB STUMP
SANDRA D. KENNEDY
PAUL NEWMAN
BRENDA BURNS

IN THE MATTER OF THE APPLICATION OF MOHAVE ELECTRIC COOPERATIVE, INCORPORATED, AN ELECTRIC COOPERATIVE NONPROFIT MEMBERSHIP CORPORATION, FOR A DETERMINATION OF THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON AND TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN.

DOCKET NO. E-01750A-11-0136

**STAFF'S NOTICE OF FILING
DIRECT TESTIMONY**

The Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") hereby files the Direct Testimony regarding Cost of Service and Rate Design of Staff witness Bentley Erdwurm in the above-referenced matter.

RESPECTFULLY SUBMITTED this 1st day of February, 2012.

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BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
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BOB STUMP
Commissioner
SANDRA D. KENNEDY
Commissioner
PAUL NEWMAN
Commissioner
BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. E-01750A-11-0136
MOHAVE ELECTRIC COOPERATIVE,)
INC., AN ELECTRIC COOPERATIVE)
NONPROFIT MEMBERSHIP CORPORATION)
FOR A DETERMINATION OF THE)
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RATEMAKING PURPOSES, TO FIX A JUST)
AND REASONABLE RETURN THEREON AND)
TO APPROVE RATES DESIGNED TO)
DEVELOP SUCH RETURN)

DIRECT
TESTIMONY
OF
BENTLEY ERDWURM
CONSULTANT
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

FEBRUARY 1, 2012

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**EXECUTIVE SUMMARY
MOHAVE ELECTRIC COOPERATIVE
DOCKET NO. E-01750A-11-0136**

This testimony addresses cost allocation and rate design for Mohave Electric Cooperative (“Mohave”) with an emphasis on the residential customer charge, the structure of the inclining block residential rate, residential time-of-use rate design, a demand-side management (“DSM”) adjustor mechanism and a renewable energy adjustor mechanism. Staff recommends setting the residential customer charge at \$12.00 per month as opposed to Mohave’s proposed \$16.50 per month (as compared to a current residential customer charge of \$9.50), increasing the differential among the “inclining” rate blocks in the residential rate, reflecting the inclining block structure in the purchased power component of the rate as well as the distribution component, modifying the peak hours in the residential time-of-use rate, incorporating an inverted block structure into the residential time-of-use rate, and establishing a DSM adjustor mechanism and a renewable energy adjustor mechanism. The Staff recommendations for a lower customer charge, increased inverted block residential rate differentials, and incorporation of the inclining block structure into the residential time-of-use rate help promote the efficient use of energy.

Under Staff’s proposal, the median residential customer using 637 kWh per month sees a monthly bill reduction of \$1.44 (2.09% reduction). The bill for the median residential customer is \$77.58 under present rates, and \$75.96 under Staff-proposed rates. Under Mohave’s Proposal, the median residential customer using 637 kWh per month sees a monthly bill increase of \$1.50 (1.94% increase). The bill for the median residential customer is \$79.08 under Mohave-proposed rates.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Bentley Erdwurm. I am a Consultant employed by the Arizona Corporation
4 Commission ("Commission") in the Utilities Division ("Staff"). My business address is
5 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Briefly describe your responsibilities as a Staff Consultant.**

8 A. I perform cost-of-service, rate design, economic, statistical and regulatory policy analyses
9 and as an expert witness prepare reports and testimonies to present Staff's
10 recommendations to the Commission.

11
12 **Q. Please describe your educational background and professional experience.**

13 A. I earned my Master of Science in Economics from Texas A&M University, and my
14 Bachelor of Arts from the University of Dallas. I have thirty years of utility experience in
15 the areas of cost allocation and rate design, forecasting, valuation and fair market value
16 determination, and utility acquisitions. I have testified before state regulators in Arizona,
17 Texas and Alabama on these issues. I have been employed by the Public Utility
18 Commission of Texas (1982-85), Alabama Gas Corporation (1985-91), Tucson Electric
19 Power Company (1991-99 and 2006-10) and Arizona Public Service Company (1999-
20 2005).

21
22 **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

23 **Q. What is the scope of your testimony in this case? "**

24 A. I will address issues related to cost allocation and rate design for Mohave Electric
25 Cooperative ("Mohave") with an emphasis on the residential customer charge, the
26 structure of the inclining block residential rate, and time-of-use ("TOU") rate design. I

1 will also address the establishment of a demand-side management (“DSM”) adjustor
2 mechanism and a renewable energy adjustor mechanism.

3
4 **Q. Have you reviewed Mohave’s cost allocation and rate design?**

5 A. Yes. I reviewed the testimony of Mohave’s witness, Mr. Michael W Searcy. Mr. Searcy
6 has presented a traditional fully allocated cost of service study (“COSS”), along with
7 Mohave’s proposed rate designs.

8
9 **Q. Please summarize your recommendations in this proceeding.**

10 A. My recommendations are:

- 11 1. Mohave’s non-residential rate design proposals should be approved, subject to
12 adjustments for a final revenue requirement determination, an adjustment in the design
13 of the Large Commercial and Industrial Time-of-Use (“TOU”) rate (which currently
14 applies to sales amounting to only around 0.1% of revenue) to mitigate a large
15 percentage impact under Mohave’s proposal, an adjustment to shift a small portion of
16 the rate increase to larger non-residential customers and away from the residential
17 class, and other minor changes to conform Staff’s proof of revenue to the Staff
18 recommended overall revenue levels. Staff has preserved the overall spirit of
19 Mohave’s non-residential rate design through maintaining the relative levels of many
20 rate components (i.e., the demand, energy and customer components).

21
22 Recommended percentage revenue increases by class are shown in Exhibits DBE-1
23 and DBE-2 (more detail). Rate design detail and the proof of revenue are shown in
24 Exhibit DBE-3, with residential rate impacts in Exhibit DBE-4.

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2. Mohave's proposal to increase the residential customer charge to \$16.50 per month should be rejected. The residential customer charge should be set at \$12.00 per month. The lower customer charge will promote the efficient use of scarce energy resources. Staff's recommendation here is consistent with cost-of-service principles. Staff and Mohave have a different view of what should be classified as "customer-related" in a COSS.
3. Staff proposes a modification in the inverted block structure (the price of incremental usage increases as usage increases) of the residential rate as proposed by Mohave. Under Staff's modification, the differential between rate blocks increase (i.e., usage becomes relatively more expensive in the higher use blocks), which reduces bills to lower-use customers and increases bills to higher-use customers. This modification also enhances the incentive promoting the efficient use of energy resources, and makes a block of energy serving basic needs more affordable. In light of the larger differential, Staff recommends an inverted structure for both the purchased power component and the distribution component of the residential rate because the benefits of promoting efficient energy use apply to both components.
4. Staff proposes that the number of peak hours in Mohave's residential time-of-use rate be reduced. Typically, shorter peak periods are more effective at controlling coincident peak demand spikes in Arizona's desert climate.
5. Staff proposes that an inclining block structure also be incorporated into the residential time-of-use rate. This would prevent higher use residential customers from "gaming the system" by switching to time-of-use to avoid the inclining block structure in the regular non-TOU residential rate.

1 **NON-RESIDENTIAL RATE DESIGN**

2 **Q. Please discuss your proposed adjustment to Mohave's Large Commercial and**
3 **Industrial Time-of-Use rate.**

4 A. Mohave has modified the Large Commercial and Industrial TOU rate to include both a
5 demand charge applying only during the peak period (i.e., during the "on-peak" time-of-
6 use hours) and a new "NCP" (non-coincident peak) demand charge that applies over all
7 hours of the day. Currently, the rate only includes the on-peak demand charge, a customer
8 charge and an energy charge. The current on-peak demand charge is \$13.50 per kW-
9 month and the Mohave-proposed on-peak demand charge is \$23.00 per kW-month.
10 Mohave has proposed a new NCP demand charge of \$2.99 per month. The Company's
11 purpose in adding the NCP demand charge is to insure that all customers, even those using
12 power primarily during off-peak periods, contribute to covering some demand-related
13 costs. This helps eliminate what is referred to as a free-rider problem, and Staff agrees
14 that two demand charges are appropriate. Moreover, having both an "on-peak" demand
15 charge and an NCP demand charge is a more cost-based design that recognizes that
16 "upstream" costs (incurred closer to power generation and further from the end-use
17 customer) are more driven by the level of "on-peak demand" (system-wide coincident
18 peaks) and "downstream" costs (incurred further from power generation and closer to the
19 end-use customer) are more driven by NCP demand (localized non-coincident peaks).
20 Mohave appropriately has proposed using its proposed "on-peak" demand charge to
21 recover purchased power costs (upstream) and its NCP demand charge to recover
22 distribution costs (more-downstream). The Staff proposal maintains this structure.

23
24 Mohave's approach would be reasonable for designing a new rate. However, this Large
25 Commercial and Industrial TOU rate is an existing rate, and Mohave's proposal results in
26 a percentage revenue increase of over 40% to customers served thereunder. To address

1 the bill impact issue, Staff proposes an on-peak demand charge of \$11.11 and an NCP
2 demand charge of \$3.08 per kW-month (to match many other Staff-proposed NCP
3 demand charges (distribution portion) in the commercial-industrial rates), and plus
4 customer charge and energy charge components as shown in Exhibit DBE-3. Staff's
5 redesign of the rate results in a revenue increase of approximately 26%, still substantial
6 but necessary to provide proper incentives.

7
8 Subscription to the current rate is very low. During the test year, the rate accounted for
9 only about 0.1% of system revenue. The substantial impact of Mohave's proposed
10 redesign indicates that current customers may have load profiles inconsistent with time-of-
11 use.

12
13 **PERCENTAGE INCREASE FOR THE RESIDENTIAL CLASS**

14 **Q. You indicated that a small portion of the rate increase has been shifted to non-**
15 **residential customers and away from residential customers.**

16 **A.** The impact is small; however, in the current economic climate, Staff believes that the
17 residential percentage increase should not exceed the system percentage increase, unless
18 compelling cost considerations indicate otherwise. In this case, Mohave has proposed a
19 residential percentage increase of 4.07% and an overall percentage increase of 3.94%.
20 Staff has proposed a residential percentage increase of 3.81% and an overall percentage
21 increase of 3.82%, essentially equal. The differences between Mohave's and Staff's
22 allocation of the revenue increase are minor, and there exists no practical reason that the
23 residential percentage increase cannot be capped at the system increase.

1 **ALLOCATED COST OF SERVICE STUDY**

2 **Q. Please discuss the structure, purpose and some limitations of a fully allocated cost-of-**
3 **service study.**

4 A. Cost allocation involves the assignment of joint costs of providing utility service to
5 various classes or groups of customers. There is no single correct way to allocate these
6 joint costs. In fact, there are multiple “reasonable” ways to use COSSs to assign revenues
7 among customer classes, because there are multiple “reasonable” COSSs.

8
9 Because the quest for cost-based rates can lead to a range of scenarios for revenue
10 assignments among customer classes, other non-cost-of-service based criteria can (and
11 should) be used to winnow out less beneficial options and to determine the best revenue
12 allocation and rate design for a specific utility and its customers at a specific time. Other
13 criteria (e.g., avoidance of adverse customer impact, potential loss of load from self
14 generation or plant closure, potential job losses, economic development, or the promotion
15 of renewable generation), in addition to cost of service considerations, may be considered
16 to determine revenue allocation and rate design. The attainment of higher priority non-
17 cost-of-service goals often trumps the strict application of any specific allocated cost-of-
18 service study. A COSS serves as a guideline, not a straightjacket, in setting rates.

19
20 Utilities typically are required to file COSSs in an application to change rates. Such a
21 study provides a cost basis and guideline for rate design. As mentioned, other studies may
22 reasonably allocate costs differently – and could be used to construct quite different rate
23 designs – however; the utility’s proposed COSS study, even if conflicting with the studies
24 of other parties, allows a rate proposal to be characterized (at least by the utility) as cost-
25 based. The purpose of a COSS is to assign each cost component to the respective classes
26 in order to approximate (based on the COSS assumptions used) a total cost to serve each

1 class. A cost component may be: (1) an individual rate base or expense account; (2) a
2 portion of a single account, or (3) some composite of accounts.

3

4 **Q. Please briefly describe the steps in a fully allocated cost-of-service study.**

5 A. There are three basic steps involved in developing a COSS: functionalization,
6 classification, and allocation. Functionalization involves grouping cost components by
7 purpose or function. Examples of functional categories for an electric utility include
8 transmission, distribution-primary, metering, and meter-reading. The next step,
9 classification, involves identifying each function as demand-related, energy-related or
10 customer-related. The final step, allocation, involves apportioning each cost component to
11 the classes of service (e.g., residential, commercial and industrial).

12

13 **Q. Please describe how costs are classified for purposes of the COSS.**

14 A. Costs classified as demand are most affected by the level of kW by class. These demand-
15 classified costs are either coincident, meaning that they occur at the same time, or non-
16 coincident, meaning at times that may vary. Coincident demands tend to be more
17 correlated with cost at the production level. In other words, coincident demands address
18 whether there is purchased power and generation capacity for a utility's entire system
19 needs. Consequently, non-coincident demands become more correlated with cost as we
20 move downstream through the distribution system to the end-users.

21

22 Costs classified as energy are most affected by kWh by class. The energy classification
23 can be affected either by time-of-day (e.g., on-peak, shoulder-peak, and off-peak) or non-
24 time-differentiated.

25

1 Finally, costs classified as customer are based on class customer counts - either non-
2 weighted counts or weighted counts. Weighted counts take into account not just the
3 number of customers but the level of costs imposed by the customers. In dealing with
4 billing costs, for example, a residential customer may be defined as one "weighted
5 customer" and an industrial customer that costs twenty times as much to meter would
6 count as twenty "weighted customers". A proper classification helps insure that
7 deviations in sales due to conservation, economic conditions, or weather conditions do not
8 result in significant over-recoveries or under-recoveries.

9
10 **Q. Please describe the allocation step in designing a COSS.**

11 A. As I stated above, allocation involves assigning each cost component to the different
12 classes of service, including residential, commercial, industrial and lighting. Each
13 function has a single allocation factor that applies to all cost components in that function.
14 The allocation factor should be based upon an equitable method that harmonizes (to the
15 extent possible) cost causation with the functional cost being considered. The purpose of
16 a COSS is to assign each cost component to the respective classes in order to approximate
17 an appropriate total cost to serve each class. As mentioned, specific cost allocation
18 approaches may be disputed because there is often more than one reasonable way to
19 allocate cost. As a general example, consider the cost to serve certain off-peak lighting
20 customers. If we assign cost responsibility for certain items based on coincident peak
21 demand, lighting customers may have zero use at the time of the system peak. Does that
22 mean that lighting customers should contribute nothing for the use of facilities they only
23 use during off-peak periods? That is, should lighting customers be free riders? There is
24 no single correct way to allocate these joint costs. A simple non-utility cost allocation
25 example involves the allocation of a cab fare between an airport and a hotel. If person
26 "A" was willing to pay \$15 for a cab ride alone, how much should "A" pay of the \$15 if

1 person "B" joins him? Should "A" and "B" each pay half, \$7.50, or should "A" pay the
2 whole \$15 because he had previously been willing to pay \$15 to travel alone over the
3 same route? Again, there is no single correct allocation approach.
4

5 **Q. Does Staff agree with Mohave's COSS methodology as presented in the testimony of**
6 **Mohave witness, Mr. Michael W Searcy?**

7 A. It is not the position of Staff that Mohave's proposed functionalization, classification, and
8 allocation techniques used in its proposed COSS fall outside the bounds of standard
9 industry practice, and for this reason Staff is recommending revenue increases similar to
10 Mohave's proposal, subject to being scaled down to conform with the final revenue
11 requirement determination and shifting a small amount of the increase away from the
12 residential class. However, Mohave's use of the customer classification for distribution
13 items separate from the functions of metering, meter-reading, the service drop, billing and
14 customer service is not acceptable to Staff.
15

16 **CUSTOMER CHARGES – RESIDENTIAL AND SMALL COMMERCIAL**

17 **Q. How does Mohave's classification approach affect its rate design proposals?**

18 A. Mohave's approach inflates its proposed residential customer charge to \$16.50 per month,
19 which is in excess of a more appropriate charge of \$12.00 per month supported by Staff.
20 When the customer classification applies to items other than metering, meter reading, the
21 service drop, billing and customer service - the items most directly tied to establishing and
22 maintaining a customer's connection to the system – the resulting COSS-based customer
23 charge increases and the COSS-based usage (volumetric) charge decreases. This creates a
24 price signal that runs counter to encouraging the efficient use of electricity. The "law of
25 demand" says that a lower incremental price of consumption (lower usage charge) could
26 promote electric usage in excess of efficient levels (i.e., lower price leads to higher

1 quantity demanded). Energy charges that are set too low fail to recognize costs associated
2 with excessive energy consumption.

3
4 The current customer charge is only \$9.50 per month. Mohave notes that the current
5 charge was established over twenty years ago, and that the annualized increase is
6 reasonable. However, Staff contends that a customer charge is excessive if it collects
7 substantially more than the amount necessary to establish and maintain a customer's
8 connection to the system. Based on Mohave's response to a data request (Staff's sixth
9 Data Request, Q. 1), a monthly charge of \$11.71 covers the metering, meter reading, the
10 service drop, billing and customer service. Moreover, an increase in the customer charge
11 from \$9.50 even to the Staff-proposed \$12.00 represents a substantial impact to some
12 customers. An increase from \$9.50 to \$16.50 (with no phase-in period) creates an
13 unacceptable impact. Staff's recommendation to scale back Mohave-proposed customer
14 charges applies also to the Residential Time-of Use rate. Staff recommends that the
15 Residential Time-of-Use customer charge be kept at the current level of \$15.00 per month,
16 and not increased to \$21.50 as proposed by Mohave. Likewise, Staff-proposed customer
17 charges for Residential rates with lower subscription are set at the levels shown in Exhibit
18 DBE-3. Because Small Commercial Energy and Small Commercial -Net Metering
19 customer charges are based on residential charges, Staff proposes reducing the Small
20 Commercial Energy customer charge from Mohave-proposed \$21.50 per month to a Staff-
21 proposed charge of \$17.00. The Staff-Proposed Small Commercial-Net Metering
22 customer charge is \$18.50 per month, compared to the Mohave-proposed \$30.00.

1 **RESIDENTIAL INCLINING BLOCK RATE**

2 **Q. Please discuss your recommendation for structuring of the residential inclining block**
3 **rate and compare your recommendation to Mohave's proposal.**

4 A. Under Staff's recommendation, the differentials between rate blocks is larger (i.e., usage
5 becomes relatively more expensive in the higher use blocks), which lowers bills to lower-
6 use customers and increases bills to higher-use customers. Staff is proposing a 1.5 cent
7 differential between the first and second blocks and a 1.5 cent differential between the
8 second and third blocks – for a total of a 3.0 cent differential between the first and third
9 blocks. Mohave is proposing a 1.0 cent differential between the first and second blocks
10 and a 1.0 cent differential between the second and third blocks – for a total of a 2.0 cent
11 differential between the first and third blocks. Staff's proposed modification enhances the
12 incentive promoting the efficient use of scarce energy resources, and makes a block of
13 energy serving basic needs more affordable.

14
15 Staff recognizes that larger differentials place more “distribution wires” revenue at risk.
16 To the extent that customers respond to the inclining block rate, use per customer will fall.
17 Under an inclining block structure, a utility will lose the highest margin load as second
18 and/or third block (higher usage blocks) usage declines. Other things constant, higher
19 differentials can aggravate margin loss. For this reason, Staff recommends an inverted
20 block structure for both the purchased power component and the distribution wires
21 component of the residential rate. This is appropriate because the benefits of promoting
22 efficient energy use apply to both components. Under Staff's proposal, 1.35 cents of the
23 1.5 cent differential (90% of the differential) is applied to the purchased power
24 component, and 0.15 cents (10% of the differential) is applied to the distribution wires
25 component. The Staff proposal is a win/win for the promotion of efficient energy use, and
26 for Mohave's margin (wires revenue) stability. Mohave placed the entire differential

1 between blocks (1 cent escalation per block; 2 cents total differential between 1st and 3rd
2 blocks) in the distribution wires component, thereby subjecting the utility to more
3 potential margin loss than would exist under Staff's proposal.

4
5 **RESIDENTIAL TIME-OF-USE PEAK HOURS**

6 **Q. Please discuss your recommendation for the peak hour definition for residential**
7 **time-of-use rates and compare your recommendation to Mohave's proposal.**

8 A. Mohave has proposed an Option 1, under which peak periods apply only to weekdays, and
9 Option 2, under which peak periods apply for both weekdays and weekends. Currently,
10 Mohave has a Residential TOU rate offering with weekends all off-peak and a nine-hour
11 daily on-peak window. Subscription to the current rate is low.

12
13 Mohave's decision to offer both options is a positive move that could expand the appeal of
14 the TOU options. Under Mohave's proposed Option 1 (peak on weekdays only), Mohave
15 has designated the summer (April 16-October 15) peak period as 12:00 p.m. (noon) to
16 9:00 p.m. (9 hours). Under proposed Option 2, (peak applies weekdays and weekends),
17 Mohave has designated the summer peak period as 2:00 p.m. to 8:30 p.m. (6.5 hours).
18 Staff recommends that the summer peak period for both options end at 7:30 p.m., and that
19 it begin no earlier than 1:00 p.m. for either option. Either 1:00 p.m. or 2:00 p.m. is an
20 appropriate summer peak start time under either option. Under Staff's recommendation,
21 the summer peak period will be 6.5 hours for a 1:00 p.m. peak start time, and 5.5 hours for
22 a 2:00 p.m. peak start time. Staff realizes that weekday and weekend load profiles differ.
23 If Mohave has some specific reasons for using different peak hours for Options 1 and 2,
24 Mohave should provide testimony explaining those reasons. However, Staff's review of
25 load profiles does not indicate that different peak hours are required.

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Shortening the summer peak period:

1. eliminates hours where the probability of a system peak (based on load data provided in response to Staff's Sixth Data Request, question 3) is significantly smaller than "super-peak" hours in which the peak occurs most often (2:00 p.m. to 6:00 p.m.),
2. avoids overly long peak periods that can result in customers needlessly sacrificing comfort when power is not in critically short supply,
3. avoids potential peaks that can result when customers who have shown restraint for six or more hours reason that an hour or two of higher peak usage has been earned by the sacrifice in the early hours, and
4. makes the rate more attractive and could increase subscription.

Time-of-use programs should not require needless sacrifice brought on by overly long peak periods. Arizona's extreme desert climate is easier to bear if summer peak periods are kept short. Staff recommends acceptance of Mohave's proposed winter peak hours (Option 1: 6:00 a.m. to 10:00 a.m. and 5:30 pm. to 10:00 p.m.; and Option 2: 6:30 a.m. to 9:30 a.m. and 5:30 pm. to 9:00 p.m.).

Staff notes that Mohave has attempted to use the same prices while adjusting the hours to account for differences in the number of peak hours in Options 1 and 2. Another approach would be to use the same peak hours for both options (except for weekday and weekend differences) and change the prices.

1 **RESIDENTIAL TIME-OF-USE INCLINING BLOCK RATE**

2 **Q. Please discuss your recommendation to incorporate an inclining block provision into**
3 **Mohave's residential time-of-use rates.**

4 A. This would prevent higher use residential customers from "gaming the system" by
5 switching to time-of-use to avoid the inclining block structure in the regular non-TOU
6 residential rate. The inclining block structure could be implemented simply by applying a
7 first block adder to first block kWh (1st 400 kWh), a second block adder to second block
8 kWh (next 600 kWh), and a third block adder to third block kWh (over 1000 kWh). The
9 first block adder will reduce the effective kWh charge in that block (it will be negative).
10 The second block adder will equal the first block adder plus 1.5 cents and the third block
11 adder will equal the second block adder plus 1.5 cents. The goal is to send a price signal
12 that will promote the efficient use of energy.

13
14 **DSM ADJUSTOR MECHANISM**

15 **Q. Please discuss your recommendation for a DSM adjustor mechanism?**

16 A. Mr. Searcy indicates on page 15, lines 1-7, of his direct testimony that Mohave intended to
17 file a separate request for recovery of DSM expenses through a DSM adjustor, and that
18 DSM related expenses have been removed from adjusted test-year expenses. On June 1,
19 2011, Mohave filed its proposed 2012-13 demand-side management and energy efficiency
20 ("EE") implementation plan in Docket No. E-01750A-11-0228, pursuant to the Electric
21 Energy Efficiency Standards ("EEE rules"). Mohave included a request for approval of a
22 DSM adjustment tariff within that filing. Staff recommends that a DSM adjustment
23 mechanism be established within this rate case, with the initial adjustor rate to be
24 approved by the Commission in Docket No. E-01750A-11-0228.

1 Staff believes that a DSM adjustor mechanism will provide flexibility to adjust the level of
2 DSM spending as new programs are added/deleted and current programs are adjusted
3 between rate cases, while also providing timely recovery of DSM costs. Separating DSM
4 costs from other costs included in base rates promotes transparency and allows customers
5 to see the costs of the DSM programs. Also, separating DSM costs from other costs
6 provides Mohave the incentive to initiate programs at any time; Mohave need not wait for
7 a rate case. Finally, separating DSM costs from other costs protects customers from
8 paying DSM costs not actually incurred by Mohave.

9
10 **Q. What costs should be recoverable through the DSM adjustor mechanism?**

11 A. Recoverable costs should include DSM costs and related costs prudently incurred by
12 Mohave for Commission-approved DSM programs and activities. Allowable costs
13 include costs for rebates and other incentives, including rebate processing; training and
14 technical assistance, customer education, program planning and administration, program
15 implementation, marketing and communications, monitoring and evaluation, and baseline
16 studies.

17
18 **Q. How would the DSM adjustor mechanism rate be applied to customer bills?**

19 A. The DSM adjustor mechanism rate would be assessed on a per-kWh basis and would be
20 shown as a separate line item on the customer bills. The bill would show the unit charge
21 and the number of kWh to which the charge applies. In the event that kWh is not metered
22 (e.g., lighting), imputed kWh would be used for the adjustment, and the bill presentation
23 may vary.

1 **Q. When would the DSM adjustor be reset?**

2 A. The DSM adjustor mechanism rate would be reset after Commission approval of each
3 Mohave DSM and EE implementation plan. The EE rules require an implementation plan
4 to be filed by June 1 in every odd year, although the utility has the option to file annually.
5 In years when the utility does not file an implementation plan, Mohave could file an
6 application for a change in the adjustor rate.

7

8 **RENEWABLE ENERGY ADJUSTOR MECHANISM**

9 **Q. Please discuss your recommendation for a renewable energy adjustor mechanism.**

10 A. Mohave currently has a Renewable Energy Standard Tariff. Staff recommends that the
11 tariff become an adjustment mechanism. The adjustor rates should be the same as
12 contained in the tariff, including caps. The rates and caps would be reset only after
13 Commission approval of a renewable energy implementation plan or a separate
14 application to revise the rates or caps.

15

16 **Q. Does this conclude your direct testimony?**

17 A. Yes, it does.

MOHAVE ELECTRIC COOPERATIVE, INC.
COMPARISON OF 2010 REVENUE UNDER EXISTING AND PROPOSED RATES

	Cust	kWh		Adjusted 2010	Mohave Proposed 2010		Change		Staff Proposed 2010		Change	
		Total	Avg Mn		\$	%	\$	%	\$	%		
Residential	34,875	364,970,959	872	42,986,712	44,735,329	1,748,617	4.07%	1,638,527	44,625,239	1,638,527	3.81%	
Irrigation Time of Use	12	1,730,345	12,016	166,306	168,026	1,720	1.03%	1,062	167,368	1,062	0.64%	
Irrigation Pumping	11	2,572,007	19,485	302,194	309,962	7,768	2.57%	6,204	308,398	6,204	2.05%	
Subtotal Irrigation	23	4,302,352	15,588	468,500	477,988	9,488	2.03%	7,266	475,766	7,266	1.55%	
Small Comm Energy	3,201	42,164,591	1,098	4,900,351	5,177,391	277,040	5.65%	282,453	5,182,804	282,453	5.76%	
Small Comm Demand	529	70,626,268	11,126	7,389,210	7,729,118	339,908	4.60%	314,519	7,703,729	314,519	4.26%	
Small Comm TOU	8	1,020,044	10,625	96,177	100,936	4,759	4.95%	5,071	101,248	5,071	5.27%	
Subtotal Small Comm	3,738	113,810,903	2,537	12,385,738	13,007,445	621,707	5.02%	602,043	12,987,781	602,043	4.86%	
Large Comm & Industrial	118	170,994,538	4,495,062	15,775,430	16,108,634	333,204	2.11%	327,908	16,103,338	327,908	2.08%	
LC&I TOU	3	564,880	15,691	48,035	67,443	19,408	40.40%	12,330	60,365	12,330	25.67%	
Lighting Devices	* 1,151	1,100,103	80	98,025	103,184	5,159	5.26%	5,571	103,596	5,571	5.68%	
Resale	* 1	46,862,961	3,905,247	3,698,667	3,698,667	0	0.00%	0	3,698,667	0	0.00%	
Total Energy Sales	* 38,757	702,606,696	1,511	75,461,107	78,198,690	2,737,583	3.63%	2,593,645	78,054,752	2,593,645	3.44%	
Other Revenue				606,899	863,547	256,647	42.29%	312,468	919,367	312,468	51.49%	
Total Revenue				76,068,007	79,062,237	2,994,230	3.94%	2,906,112	78,974,119	2,906,112	3.82%	

* Total Customers excludes Lighting Devices and Resale

MOHAVE ELECTRIC COOPERATIVE, INC.

COMPARISON OF 2010 REVENUE UNDER EXISTING AND PROPOSED RATES (DETAIL)

	Cust	kWh		Adjusted 2010	Cents per kWh	Mohave		Cents per kWh	Change under Mohave Proposal		Staff Proposed 2010	Cents per kWh	Change under Staff Proposal	
		Total	Avg Mn			Proposed 2010	%		\$	%			\$	%
Residential	34,775	364,111,753	873	\$ 42,878,813	11.8	\$ 44,621,441	12.3	\$ 1,742,628	4.06%	\$ 44,512,327	12.2	\$ 1,633,515	3.81%	
Residential - Seasonal	1	549	46	\$ 164	29.9	\$ 235	42.8	\$ 71	43.29%	\$ 186	33.9	\$ 22	13.58%	
Residential - Net Metering	72	640,060	741	\$ 81,352	12.7	\$ 86,113	13.5	\$ 4,761	5.85%	\$ 85,736	13.4	\$ 4,384	5.39%	
Res - Gov	27	218,597	675	\$ 26,383	12.1	\$ 27,540	12.6	\$ 1,157	4.38%	\$ 26,989	12.3	\$ 606	2.30%	
Residential	34,875	364,970,959	872	\$ 42,986,712	11.8	\$ 44,735,329	12.3	\$ 1,748,617	4.07%	\$ 44,625,239	12.2	\$ 1,638,527	3.81%	
Irrigation Time of Use	12	1,730,345	12,016	\$ 166,306	9.6	\$ 168,026	9.7	\$ 1,720	1.03%	\$ 167,368	9.7	\$ 1,062	0.64%	
Irrigation Pumping	11	2,572,007	19,485	\$ 302,194	11.7	\$ 309,962	12.1	\$ 7,768	2.57%	\$ 308,398	12.0	\$ 6,204	2.05%	
Subtotal Irrigation	23	4,302,352	15,588	\$ 468,500	10.9	\$ 477,988	11.1	\$ 9,488	2.03%	\$ 475,766	11.1	\$ 7,266	1.55%	
Small Commercial Energy	2,930	38,541,431	1,096	\$ 4,479,803	11.6	\$ 4,733,078	12.3	\$ 253,275	5.65%	\$ 4,738,140	12.3	\$ 258,337	5.77%	
SC Energy Gov	267	3,559,150	1,111	\$ 413,221	11.6	\$ 436,237	12.3	\$ 23,016	5.57%	\$ 436,881	12.3	\$ 23,660	5.73%	
SC Energy - Net Metering	4	64,010	1,334	\$ 7,327	11.4	\$ 8,076	12.6	\$ 749	10.22%	\$ 7,783	12.2	\$ 456	6.22%	
Small Comm Energy	3,201	42,164,591	1,098	\$ 4,900,351	11.6	\$ 5,177,391	12.3	\$ 277,040	5.65%	\$ 5,182,804	12.3	\$ 282,453	5.76%	
Small Commercial Demand	463	63,019,478	11,343	\$ 6,561,332	10.4	\$ 6,854,527	10.9	\$ 293,195	4.47%	\$ 6,831,610	10.8	\$ 270,277	4.12%	
SC Demand Gov	65	7,582,510	9,721	\$ 825,265	10.9	\$ 871,832	11.5	\$ 46,567	5.64%	\$ 869,367	11.5	\$ 44,103	5.34%	
SC Demand - Net Metering	1	24,280	2,613	\$ 2,613	10.8	\$ 2,759	11.4	\$ 146	5.58%	\$ 2,752	11.3	\$ 139	5.33%	
Small Comm Demand	529	70,626,268	11,126	\$ 7,389,210	10.5	\$ 7,729,118	10.9	\$ 339,908	4.60%	\$ 7,703,729	10.9	\$ 314,519	4.26%	
Small Comm TOU	8	1,020,044	10,625	\$ 96,177	9.4	\$ 100,936	9.9	\$ 4,759	4.95%	\$ 101,248	9.9	\$ 5,071	5.27%	
Subtotal Small Comm	3,738	113,810,903	2,537	\$ 12,385,738	10.9	\$ 13,007,445	11.4	\$ 621,707	5.02%	\$ 12,987,781	11.4	\$ 602,043	4.86%	
Large Power Sec	82	76,311,058	77,552	\$ 7,200,844	9.4	\$ 7,578,027	9.9	\$ 377,183	5.24%	\$ 7,578,395	9.9	\$ 377,550	5.24%	
LP Gov	30	17,180,160	47,723	\$ 1,842,672	10.7	\$ 1,963,366	11.4	\$ 120,694	6.55%	\$ 1,967,193	11.5	\$ 124,521	6.76%	
Large Power Primary	3	8,497,320	236,037	\$ 758,514	8.9	\$ 781,262	9.2	\$ 22,748	3.00%	\$ 780,495	9.2	\$ 21,981	2.90%	
LP Subtransmission	1	30,204,000	2,517,000	\$ 2,625,974	8.7	\$ 2,493,869	8.3	\$ (132,105)	-5.03%	\$ 2,493,468	8.3	\$ (132,506)	-5.05%	
LP Substation	2	38,802,000	1,616,750	\$ 3,347,425	8.6	\$ 3,292,110	8.5	\$ (55,315)	-1.65%	\$ 3,283,787	8.5	\$ (63,638)	-1.90%	
Large Comm & Industrial	118	170,994,538	4,495,062	\$ 15,775,430	9.2	\$ 16,108,634	9.4	\$ 333,204	2.11%	\$ 16,103,338	9.4	\$ 327,908	2.08%	
LC&I TOU	3	564,880	15,691	\$ 48,035	8.5	\$ 67,443	11.9	\$ 19,408	40.40%	\$ 60,365	10.7	\$ 12,330	25.67%	
Lighting Devices	1,151	1,100,103	80	\$ 98,025	8.9	\$ 103,184	9.4	\$ 5,159	5.26%	\$ 103,596	9.4	\$ 5,571	5.68%	
Resale	1	46,862,961	3,905,247	\$ 3,698,667	7.9	\$ 3,698,667	7.9	\$ -	0.00%	\$ 3,698,667	7.9	\$ -	0.00%	
Total Energy Sales	38,757	702,606,696	1,511	\$ 75,461,107	10.7	\$ 78,198,690	11.1	\$ 2,737,583	3.63%	\$ 78,054,752	11.1	\$ 2,593,645	3.44%	
Other Revenue				\$ 606,899		\$ 863,547		\$ 256,647	42.29%	\$ 919,367		\$ 312,468	51.49%	
Total Revenue				\$ 76,068,007		\$ 79,062,237		\$ 2,994,230	3.94%	\$ 78,974,119		\$ 2,906,112	3.82%	

* Total Customers excludes Lighting Devices and Resale

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units	Proposed Rate		Pur Pwr	Proposed Revenue	Dist Wires	Total
		Pur Pwr	Dist Wires				
1. RESIDENTIAL SERVICE							
Residential							
Service Charge (12 Month Sum)	417,302	\$ -	\$ 12.00	\$ -	\$ 5,007,624	\$ -	\$ 5,007,624
Energy Charge per kWh							
First 200 kWh per month	75,441,637	\$ 0.079958	\$ 0.014865	\$ 6,032,162	\$ 1,121,440	\$ -	\$ 7,153,602
Next 200 kWh per month	62,783,417	\$ 0.079958	\$ 0.014865	\$ 5,020,036	\$ 933,275	\$ -	\$ 5,953,312
Next 200 kWh per month	50,237,165	\$ 0.093458	\$ 0.016365	\$ 4,695,065	\$ 822,131	\$ -	\$ 5,517,196
Next 200 kWh per month	39,197,460	\$ 0.093458	\$ 0.016365	\$ 3,663,316	\$ 641,466	\$ -	\$ 4,304,783
Next 200 kWh per month	30,436,462	\$ 0.093458	\$ 0.016365	\$ 2,844,531	\$ 498,093	\$ -	\$ 3,342,624
Over 1,000 kWh per month	106,015,612	\$ 0.106958	\$ 0.017865	\$ 11,339,218	\$ 1,893,969	\$ -	\$ 13,233,187
Base Revenue	364,111,753			\$ 33,594,329	\$ -	\$ -	\$ 44,512,327
PPCA Revenue							
Total Revenue				\$ 33,594,329	\$ 10,917,999	\$ -	\$ 44,512,327
Residential - Seasonal							
Service Charge (12 Month Sum)	11	\$ -	\$ 12.00	\$ -	\$ 132	\$ -	\$ 132
Energy Charge per kWh							
First 200 kWh per month	201	\$ 0.079958	\$ 0.014865	\$ 16	\$ 3	\$ -	\$ 19
Next 200 kWh per month	200	\$ 0.079958	\$ 0.014865	\$ 16	\$ 3	\$ -	\$ 19
Next 200 kWh per month	148	\$ 0.093458	\$ 0.016365	\$ 14	\$ 2	\$ -	\$ 16
Next 200 kWh per month	0	\$ 0.093458	\$ 0.016365	\$ -	\$ -	\$ -	\$ -
Next 200 kWh per month	0	\$ 0.093458	\$ 0.016365	\$ -	\$ -	\$ -	\$ -
Over 1,000 kWh per month	0	\$ 0.106958	\$ 0.017865	\$ -	\$ -	\$ -	\$ -
Base Revenue	549			\$ 46	\$ 140	\$ -	\$ 186
PPCA Revenue							
Total Revenue				\$ 46	\$ 140	\$ -	\$ 186

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units	Proposed Rate		Total	Proposed Revenue		Total
		Pur Pwr	Dist Wires		Pur Pwr	Dist Wires	
1. RESIDENTIAL SERVICE (Continued)							
Residential - Net Metering							
Service Charge (12 Month Sum)	863	\$ -	\$ 17.50	\$ 17.50	\$ -	\$ 15,103	\$ 15,103
Energy Charge per kWh							
First 200 kWh per month	114,805	\$ 0.079958	\$ 0.014865	\$ 0.094823	\$ 9,180	\$ 1,707	\$ 10,886
Next 200 kWh per month	97,201	\$ 0.079958	\$ 0.014865	\$ 0.094823	\$ 7,772	\$ 1,445	\$ 9,217
Next 200 kWh per month	79,816	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 7,459	\$ 1,306	\$ 8,766
Next 200 kWh per month	63,706	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 5,954	\$ 1,043	\$ 6,996
Next 200 kWh per month	49,825	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 4,657	\$ 815	\$ 5,472
Over 1,000 kWh per month	234,706	\$ 0.106958	\$ 0.017865	\$ 0.124823	\$ 25,104	\$ 4,193	\$ 29,297
Base Revenue	640,060				\$ 60,125	\$ 25,611	\$ 85,736
PPCA Revenue							
Total Revenue					\$ 60,125	\$ 25,611	\$ 85,736
Res - Gov							
Service Charge (12 Month Sum)	318	\$ -	\$ 12.00	\$ 12.00	\$ -	\$ 3,816	\$ 3,816
Energy Charge per kWh							
First 200 kWh per month	60,246	\$ 0.079958	\$ 0.014865	\$ 0.094823	\$ 4,817	\$ 896	\$ 5,713
Next 200 kWh per month	44,692	\$ 0.079958	\$ 0.014865	\$ 0.094823	\$ 3,573	\$ 664	\$ 4,238
Next 200 kWh per month	28,446	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 2,659	\$ 466	\$ 3,124
Next 200 kWh per month	20,173	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 1,885	\$ 330	\$ 2,215
Next 200 kWh per month	15,693	\$ 0.093458	\$ 0.016365	\$ 0.109823	\$ 1,467	\$ 257	\$ 1,723
Over 1,000 kWh per month	49,347	\$ 0.106958	\$ 0.017865	\$ 0.124823	\$ 5,278	\$ 882	\$ 6,160
Base Revenue	218,597				\$ 19,679	\$ 7,310	\$ 26,989
PPCA Revenue							
Total Revenue					\$ 19,679	\$ 7,310	\$ 26,989
Base Revenue	364,970,959				\$ 33,674,179	\$ 10,951,060	\$ 44,625,239
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 33,674,179	\$ 10,951,060	\$ 44,625,239

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units	Proposed Rate		Proposed Revenue	
		Pur Pwr	Dist Wires	Pur Pwr	Dist Wires
			Total		Total
2. IRRIGATION SERVICE					
Irrigation Time of Use					
Service Charge (12 Month Sum)	144	\$ -	\$ 66.91	\$ -	\$ 9,635
On-Peak Demand	2,234.49	\$ 8.63	\$ 8.63	\$ 19,284	\$ 19,284
NCP Demand	8,466.81	\$ -	\$ 1.68	\$ -	\$ 14,224
Energy Charge per kWh	1,730,345	\$ 0.071776	\$ 0.071792	\$ 124,197	\$ 124,225
Base Revenue				\$ 143,481	\$ 23,887
PPCA Revenue				\$ -	\$ -
Total Revenue				\$ 143,481	\$ 23,887
Irrigation Pumping					
Service Charge (12 Month Sum)	132	\$ -	\$ 61.76	\$ -	\$ 8,152
NCP Demand	12,025.74	\$ 5.74	\$ 7.42	\$ 69,028	\$ 20,203
Energy Charge per kWh	2,572,007	\$ 0.072027	\$ 0.082043	\$ 185,254	\$ 25,761
Base Revenue				\$ 254,282	\$ 54,117
PPCA Revenue				\$ -	\$ -
Total Revenue				\$ 254,282	\$ 54,117
Base Revenue	4,302,352			\$ 397,763	\$ 78,004
PPCA Revenue				\$ -	\$ -
Total Revenue				\$ 397,763	\$ 78,004
3. SMALL COMMERCIAL SERVICE					
Sm Comm Demand - Net Metering					
Service Charge (12 Month Sum)	5	\$ -	\$ 36.03	\$ -	\$ 180
NCP Demand > 3 kW	73.68	\$ 6.13	\$ 4.61	\$ 452	\$ 340
Energy Charge per kWh	24,280	\$ 0.072753	\$ 0.073351	\$ 1,766	\$ 15
Base Revenue				\$ 2,218	\$ 534
PPCA Revenue				\$ -	\$ -
Total Revenue				\$ 2,218	\$ 534

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units		Proposed Rate		Proposed Revenue		
	Units	Pur Pwr	Dist Wires	Total	Pur Pwr	Dist Wires	Total
3. SMALL COMMERCIAL SERVICE (Continued)							
<u>Small Commercial Demand</u>							
Service Charge (12 Month Sum)	5,552	\$ -	\$ 36.03	\$ 36.03	\$ -	\$ 200,039	\$ 200,039
NCP Demand > 3 kW	187,060.45	\$ 6.13	\$ 4.61	\$ 10.74	\$ 1,146,681	\$ 862,349	\$ 2,009,029
Energy Charge per kWh	63,019,478	\$ 0.072753	\$ 0.000598	\$ 0.073351	\$ 4,584,856	\$ 37,686	\$ 4,622,542
Base Revenue					\$ 5,731,537	\$ 1,100,073	\$ 6,831,610
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 5,731,537	\$ 1,100,073	\$ 6,831,610
<u>Small Commercial Energy</u>							
Service Charge (12 Month Sum)	35,164	\$ -	\$ 17.00	\$ 17.00	\$ -	\$ 597,788	\$ 597,788
Energy Charge per kWh	38,541,431	\$ 0.087338	\$ 0.020088	\$ 0.107426	\$ 3,366,132	\$ 774,220	\$ 4,140,352
Base Revenue					\$ 3,366,132	\$ 1,372,008	\$ 4,738,140
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 3,366,132	\$ 1,372,008	\$ 4,738,140
<u>Small Commercial - Net Metering</u>							
Service Charge (12 Month Sum)	49	\$ -	\$ 18.50	\$ 18.50	\$ -	\$ 907	\$ 907
Energy Charge per kWh	64,010	\$ 0.087338	\$ 0.020088	\$ 0.107426	\$ 5,591	\$ 1,286	\$ 6,876
Base Revenue					\$ 5,591	\$ 2,192	\$ 7,783
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 5,591	\$ 2,192	\$ 7,783
<u>Small Commercial TOU</u>							
Service Charge (12 Month Sum)	91	\$ -	\$ 41.01	\$ 41.01	\$ -	\$ 3,732	\$ 3,732
On-Peak Demand	1,430.12	\$ 14.45	\$ -	\$ 14.45	\$ 20,665	\$ -	\$ 20,665
NCP kW	3,175.62	\$ -	\$ 4.61	\$ 4.61	\$ -	\$ 14,640	\$ 14,640
Energy Charge per kWh	1,020,044	\$ 0.045399	\$ 0.015590	\$ 0.060989	\$ 46,309	\$ 15,902	\$ 62,211
Base Revenue					\$ 66,974	\$ 34,274	\$ 101,248
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 66,974	\$ 34,274	\$ 101,248
<u>SC Energy Gov</u>							
Service Charge (12 Month Sum)	3,208	\$ -	\$ 17.00	\$ 17.00	\$ -	\$ 54,536	\$ 54,536
Energy Charge per kWh	3,559,150	\$ 0.087338	\$ 0.020088	\$ 0.107426	\$ 310,849	\$ 71,496	\$ 382,345
Base Revenue					\$ 310,849	\$ 126,032	\$ 436,881
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 310,849	\$ 126,032	\$ 436,881

Follows Structure of Mohave's Supplemental Schedule N-1.0

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units	Proposed Rate		Total	Proposed Revenue		Total
		Pur Pwr	Dist Wires		Pur Pwr	Dist Wires	
3. SMALL COMMERCIAL SERVICE (Continued)							
SC Demand Gov							
Service Charge (12 Month Sum)	784	\$ -	\$ 36.03	\$ 36.03	\$ -	\$ 28,248	\$ 28,248
NCP Demand > 3 kW	26,495.68	\$ 6.13	\$ 4.61	\$ 10.74	\$ 162,419	\$ 122,145	\$ 284,564
Energy Charge per kWh	7,582,510	\$ 0.072802	\$ 0.000598	\$ 0.073400	\$ 552,022	\$ 4,534	\$ 556,556
Base Revenue					\$ 714,440	\$ 154,927	\$ 869,367
PPCA Revenue					\$ 714,440	\$ -	\$ -
Total Revenue					\$ 714,440	\$ 154,927	\$ 869,367
Base Revenue	113,810,903				\$ 10,197,740	\$ 2,790,041	\$ 12,987,781
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 10,197,740	\$ 2,790,041	\$ 12,987,781
4. LARGE COMMERCIAL & INDUSTRIAL SERVICE							
Large C&I Secondary							
Service Charge (12 Month Sum)	983	\$ -	\$ 175.00	\$ 175.00	\$ -	\$ 172,025	\$ 172,025
NCP Demand	189,369.16	\$ 7.81	\$ 3.08	\$ 10.89	\$ 1,478,973	\$ 583,257	\$ 2,062,230
Energy Charge per kWh	76,311,058	\$ 0.063682	\$ 0.006349	\$ 0.070031	\$ 4,859,641	\$ 484,499	\$ 5,344,140
Base Revenue					\$ 6,338,614	\$ 1,239,781	\$ 7,578,395
PPCA Revenue					\$ 6,338,614	\$ -	\$ -
Total Revenue					\$ 6,338,614	\$ 1,239,781	\$ 7,578,395
Large C&I Primary							
Service Charge (12 Month Sum)	36	\$ -	\$ 175.00	\$ 175.00	\$ -	\$ 6,300	\$ 6,300
NCP Demand	17,172.00	\$ 7.81	\$ 3.08	\$ 10.89	\$ 134,113	\$ 52,890	\$ 187,003
Energy Charge per kWh	8,497,320	\$ 0.063682	\$ 0.006349	\$ 0.070031	\$ 541,126	\$ 53,949	\$ 595,076
Primary Discount on Demand & Energy		-1.00%	-1.00%	-1.00%	\$ (6,752)	\$ (1,131)	\$ (7,884)
Base Revenue					\$ 668,487	\$ 112,008	\$ 780,495
PPCA Revenue					\$ 668,487	\$ -	\$ -
Total Revenue					\$ 668,487	\$ 112,008	\$ 780,495

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units		Proposed Rate		Proposed Revenue		
	Pur Pwr	Total	Dist Wires	Total	Pur Pwr	Dist Wires	Total
4. LARGE COMMERCIAL & INDUSTRIAL SERVICE (Continued)							
Large C&I TOU							
Service Charge (12 Month Sum)	31	\$ 189.00	\$ 189.00	\$ 189.00	\$ -	\$ 5,859	\$ 5,859
On-Peak Demand	690.80	\$ 11.11	\$ 11.11	\$ 11.11	\$ 7,675	\$ -	\$ 7,675
NCP kW	5,713.20	\$ 3.08	\$ 3.08	\$ 3.08	\$ -	\$ 17,597	\$ 17,597
Energy Charge per kWh	564,880	\$ 0.045405	\$ 0.006349	\$ 0.051754	\$ 25,648	\$ 3,586	\$ 29,235
Base Revenue					\$ 33,323	\$ 27,042	\$ 60,365
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 33,323	\$ 27,042	\$ 60,365
Large C&I GOV							
Service Charge (12 Month Sum)	362	\$ 175.00	\$ 175.00	\$ 175.00	\$ -	\$ 63,350	\$ 63,350
NCP Demand	64,343.36	\$ 7.81	\$ 3.08	\$ 10.89	\$ 502,522	\$ 198,178	\$ 700,699
Energy Charge per kWh	17,180,160	\$ 0.063682	\$ 0.006349	\$ 0.070031	\$ 1,094,067	\$ 109,077	\$ 1,203,144
Base Revenue					\$ 1,596,589	\$ 370,604	\$ 1,967,193
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 1,596,589	\$ 370,604	\$ 1,967,193
LC&I Trans (Current TOU)							
Service Charge (12 Month Sum)	12	\$ 175.00	\$ 175.00	\$ 175.00	\$ -	\$ 2,100	\$ 2,100
NCP kW	53,106.00	\$ 7.81	\$ 3.08	\$ 10.89	\$ 414,758	\$ 163,566	\$ 578,324
Energy Charge per kWh	30,204,000	\$ 0.063682	\$ 0.006349	\$ 0.070031	\$ 1,923,451	\$ 191,765	\$ 2,115,216
Subtransmission Discount on Demand & Energy					\$ (175,366)	\$ (26,807)	\$ (202,173)
Base Revenue					\$ 2,162,843	\$ 330,624	\$ 2,493,468
PPCA Revenue					\$ -	\$ -	\$ -
Total Revenue					\$ 2,162,843	\$ 330,624	\$ 2,493,468

MOHAVE ELECTRIC COOPERATIVE, INC.
DEVELOPMENT OF 2010 REVENUE UNDER PROPOSED RATES

	Billing Units	Proposed Rate		Proposed Revenue	
		Pur Pwr	Dist Wires	Pur Pwr	Dist Wires
			Total		Total

4. LARGE COMMERCIAL & INDUSTRIAL SERVICE (Continued)						
LP Substation						
Service Charge (12 Month Sum)	24	\$ -	\$ 175.00	\$ -	\$ 4,200	\$ 4,200
NCP kW	67,500.00	\$ 7.81	\$ 3.08	\$ 527,175	\$ 207,900	\$ 735,075
Energy Charge per kWh	38,802,000	\$ 0.063682	\$ 0.006349	\$ 2,470,989	\$ 246,354	\$ 2,717,343
Substation Discount on Demand & Energy		-5.00%	-5.00%	(\$149,908)	(22,923)	(\$172,831)
Base Revenue				\$ 2,848,256	\$ 435,531	\$ 3,283,787
PPCA Revenue				\$ -	\$ -	\$ -
Total Revenue				\$ 2,848,256	\$ 435,531	\$ 3,283,787
Base Revenue	171,559,418			\$ 13,648,112	\$ 2,515,591	\$ 16,163,703
PPCA Revenue				\$ -	\$ -	\$ -
Total Revenue				\$ 13,648,112	\$ 2,515,591	\$ 16,163,703
5. LIGHTING SERVICE						
175 W MVL	6,039	\$ 6.13	\$ 0.98	\$ 37,019	\$ 5,918	\$ 42,937
100 W HPS	2,594	\$ 3.07	\$ 5.39	\$ 7,964	\$ 13,982	\$ 21,945
175 W MVL CO	320	\$ 6.07	\$ 0.51	\$ 1,942	\$ 163	\$ 2,106
100 W HPS CO	3,644	\$ 3.07	\$ 2.34	\$ 11,187	\$ 8,527	\$ 19,714
250 W HPS	1,211	\$ 7.81	\$ 6.14	\$ 9,458	\$ 7,436	\$ 16,893
Base Revenue	13,808			\$ 67,570	\$ 36,026	\$ 103,596
PPCA Revenue				\$ -	\$ -	\$ -
Total Revenue				\$ 67,570	\$ 36,026	\$ 103,596
kWh	1,100,103					
6. RESALE REVENUE						
Base Revenue				\$ 3,222,980	\$ 475,687	\$ 3,698,667
PPCA Revenue				\$ -	\$ -	\$ -
Total Revenue				\$ 3,222,980	\$ 475,687	\$ 3,698,667
7. TOTAL REVENUE						
Base Revenue	702,606,696			\$ 61,208,344	\$ 16,846,408	\$ 78,054,752
PPCA Revenue				\$ -	\$ -	\$ -
Other Revenue				\$ -	\$ 919,367	\$ 919,367
Total				\$ 61,208,344	\$ 17,765,775	\$ 78,974,119

