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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

- BOB STUMP - Chairman
- GARY PIERCE
- BRENDA BURNS
- BOB BURNS
- SUSAN BITTER SMITH

2013 APR 23 A 10:42

ARIZONA CORP COMMISSION
DOCKET CONTROL

IN THE MATTER OF THE APPLICATION OF
DIXIE-ESCALANTE RURAL ELECTRIC
ASSOCIATION, INC. FOR A
DETERMINATION OF THE FAIR VALUE OF
ITS PROPERTY AND FOR AN ORDER
SETTING JUST AND REASONABLE RATES.

DOCKET NO. E-02044A-12-0419

STAFF'S NOTICE OF FILING DIRECT
TESTIMONY

Staff of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of
Julie McNeely-Kirwan, Mary Rimback, Ed Stoneburg and Prem Bahl in the above docket.

RESPECTFULLY SUBMITTED this 23rd day of April 2013.

Brian E. Smith
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Original and thirteen (13) copies
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23rd day of April 2013 with:

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Arizona Corporation Commission

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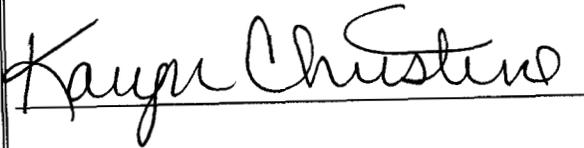
APR 23 2013

DOCKETED BY	
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1 Copy of the foregoing mailed this
23rd day of April 2013 to:

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BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP
Chairman
GARY PIERCE
Commissioner
BRENDA BURNS
Commissioner
BOB BURNS
Commissioner
SUSAN BITTER SMITH
Commissioner

IN THE MATTER OF THE APPLICATION OF)
DIXIE ESCALANTE RURAL ELECTRIC)
ASSOCIATION, INC. FOR A DETERMINATION)
OF THE FAIR VALUE OF ITS PROPERTY AND)
FOR AN ORDER SETTING JUST AND)
REASONABLE RATES)
_____)

DOCKET NO. E-02044A-12-0419

DIRECT
TESTIMONY
OF
JULIE MCNEELY-KIRWAN
PUBLIC UTILITIES ANALYST V
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

APRIL 23, 2013

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EXECUTIVE SUMMARY
DIXIE ESCALANTE RURAL ELECTRIC ASSOCIATION, INC.
DOCKET NO. E-02044A-12-0419

Staff's testimony will concern Dixie Escalante Rural Electric Association, Inc. ("Dixie" or "Cooperative") with respect to its base cost of power, its Electric Service Regulations, its purchased power adjustor mechanism, and changes to its Impact Fees and Line Extension Policy.

Staff recommends a base cost of power of \$0.032778, which reflects the test year cost of power and kWh usage. Staff also recommends that the adjustor mechanism currently in place in Utah be adopted for Dixie's Arizona customers, but be calculated taking the base cost of power into account, as discussed in Staff's testimony. Staff recommends some modifications to the language of Dixie's Electric Service Regulations and recommends that the proposed changes to Dixie's Impact Fees and Line Extension Policy be approved.

1 **INTRODUCTION**

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

3 A. My name is Julie McNeely-Kirwan. I am a Public Utilities Analyst V employed by the
4 Arizona Corporation Commission (“ACC” or “Commission”) in the Utilities Division
5 (“Staff”). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst V.**

8 A. My duties as a Public Utilities Analyst V include reviewing and analyzing applications
9 filed with the Commission, and preparing memoranda and proposed orders for Open
10 Meetings. In addition, my duties have included preparing written testimony in multiple
11 rate cases, and testifying during the related hearings. I have also acted as lead in several
12 rate cases and have performed evaluations of energy efficiency implementation plans.
13

14 **Q. Please describe your educational background and professional experience.**

15 A. In 1979, I graduated Magna Cum Laude from Arizona State University, receiving a
16 Bachelor of Arts degree in History. In 1987, I received a Master’s Degree in Political
17 Science from the University of Wisconsin, Madison. I have been employed by the
18 Commission since September of 2006. Since that time, I have attended seminars and
19 classes on general regulatory issues, including demand-side management and the gas and
20 electric industries.
21

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

23 A. My testimony will concern Dixie Escalante Rural Electric Association, Inc. (“Dixie” or
24 “Cooperative”) in regard to its base cost of power, its Electric Service Regulations, a
25 purchased power adjustor mechanism, and changes to its Impact Fees and Line Extension
26 Policy.

1 **BASE COST OF POWER**

2 **Q. What is the base cost of power proposed by Dixie?**

3 A. In his testimony, John Wallace proposed a base cost of \$0.03693 kWh, calculated based
4 on the purchased power costs of \$13,781,199 and kWh sales of 373,163,930 for both
5 Arizona and Utah.

6
7 **Q. What base cost of power does Staff recommend for Dixie?**

8 A. Staff recommends a base cost of power of \$0.032778 per kWh. This base cost of power
9 reflects actual purchased power costs and kWh usage during the 2011 test year. Setting
10 the base cost at \$0.32778 per kWh would also make the base cost of purchased power for
11 Dixie's Arizona customers equal to that for Dixie's Utah customers.

12
13 **PURCHASED POWER ADJUSTOR MECHANISM**

14 **Q. What is the purpose of a purchased power adjustor mechanism?**

15 A. A purchased power adjustor mechanism is designed to recover or refund the difference
16 between base cost of power included in the utility's base rates and actual cost of power.

17
18 **Q. Does the Cooperative currently have a Commission-approved purchased power
19 adjustor mechanism in Arizona?**

20 A. No. Dixie has a purchased power adjustor for its Utah customers and is requesting that the
21 Commission approve the same adjustor mechanism for its Arizona customers.

22
23 **Q. Why is Dixie now requesting a purchased power adjustor mechanism in Arizona?**

24 A. The Cooperative indicates that its purchased power expense has been more variable in
25 recent years and that "purchased power expense accounts for approximately 58% of its

1 total operating expense.” The Cooperative states that it is unable to continue absorbing
2 those costs until its next rate case.

3
4 **Q. Does Staff recommend that Dixie use an adjustor mechanism for its Arizona**
5 **customers?**

6 A. Yes. The proposed adjustor mechanism would allow Dixie to limit its under-collections
7 and adjust its level of recovery for purchased power costs between rate cases.

8
9 **Q. Should a new, separate, adjustor mechanism be designed for Dixie’s Arizona**
10 **customers?**

11 A. No. Dixie’s existing adjustor mechanism covers its approximately 13,000 customers in
12 Utah. Creating a separate adjustor mechanism for Dixie’s approximately 2,200 Arizona
13 customers would be burdensome and inefficient, particularly if the Arizona adjustor
14 functioned differently. In addition, transmission and power costs for Arizona and Utah are
15 not calculated separately, making the actual cost identical for customers in both states.
16 Dixie purchases all of its power from Deseret Power.

17
18 **Q. How long has Dixie’s existing adjustor mechanism been in place, in Utah?**

19 A. Dixie states that its rates, and its purchased power adjustor mechanism, were filed on July
20 1, 2012, and accepted by Utah’s Public Service Commission on August 6, 2012. (In Utah,
21 rates are effective when filed.)

22
23 **Q. Have there been problems or complaints regarding Dixie’s existing adjustor**
24 **mechanism in Utah?**

25 A. No. Dixie states that there have been no problems or complaints. Staff notes, however,
26 that the first change in the adjustor rate occurred in February 2013.

1 **Q. Please describe how Dixie's existing adjustor mechanism functions.**

2 A. Dixie's adjustor mechanism recovers the Cooperative's power costs through a per kWh
3 adjustor rate. The annual reset takes place on February 1 and the new adjustor rate runs
4 through the next January.

5
6 Following discussions with Staff, the Cooperative has agreed to take the base cost into
7 account when calculating the reset or determining whether a reset is necessary.

8
9 **Q. Please describe how the purchased power adjustor mechanism would be calculated.**

10 A. The total of the base cost plus the adjustor rate (if any) would be subtracted from the
11 actual total cost per kWh. If the difference between the base cost plus the adjustor rate (if
12 any) and the actual total cost per kWh is less than \$0.0005 per kWh, Dixie will not reset
13 the adjustor rate. If the difference per kWh is more than \$0.0005 any adjustment will be
14 rounded up or down to the nearest increment of \$0.0005 per kWh. (For example,
15 0.001406 would be rounded up to 0.001500.)

16
17 A table demonstrating the functioning of the adjustor mechanism is shown below.

18

Adjustor Mechanism: Example

	Year 1	Year 2	Year 3
total cost (actual)	0.032778	0.034184	0.035555
base cost	0.032778	0.032778	0.032778
calculated adjustor rate	0.000000	0.001406	0.002777
rounded adjustor rate	0.000000	0.001500	0.003000

*Test year cost treated as base cost. Year 3 numbers
are hypothetical, except for base cost.

19

1 **Q. If the adjustor mechanism is approved by the Commission, will \$0.001500 be the**
2 **initial adjustor rate for Dixie's Arizona customers?**

3 A. Yes. The initial adjustor rate would be \$0.001500 per kWh.
4

5 **Q. Is there a bank balance?**

6 A. No. Changes in the cost of power would be addressed through the adjustor mechanism, as
7 described above. In addition, with respect to over-collections, Dixie is a cooperative and
8 if its power costs are less than projected, it would increase margins and money would be
9 returned to members as capital credits.

10

11 **Q. Please explain capital credits and how they are returned to customers.**

12 A. Capital credits are a portion of net income allocated to customers based on the revenue
13 each customer paid into Dixie.

14

15 At the end of each year, if Dixie is financially sound, a percentage of these capital credits
16 are retired/refunded to the customers as a credit on the bill (for current customers) or in a
17 check (former customers).

18

19 **Q. Have capital credits been returned to Dixie customers in the past?**

20 A. Yes. Dixie indicated that a percentage of capital credits are refunded to customers each
21 year that Dixie is financially sound.

22

23 **Q. What is Staff's recommendation with respect to the adjustor mechanism proposed by**
24 **Dixie?**

25 A. Staff recommends that the Commission approve the adjustor mechanism currently being
26 used in Utah for use in Dixie's Arizona service territory.

1 **Q. Should there be additional reporting associated with having an adjustor mechanism**
2 **in Arizona?**

3 A. Yes. As a compliance item, Dixie should file an updated tariff with the Commission
4 within thirty days of resetting its adjustor rate each February. The filing should include
5 both a clean copy of the new tariff and a redlined copy, showing what has been changed.

6
7 **Q. Should the Cooperative file a Plan of Administration?**

8 A. Yes. Dixie should file a proposed Plan of Administration (“POA”) for its purchased
9 power adjustor mechanism in this docket as a compliance item, within 90 days after the
10 effective date of the Decision in the current rate case. The POA should include a clear and
11 detailed description of how its adjustor mechanism functions. The POA should be filed
12 for Staff’s review and approval.

13

14 **IMPACT FEES**

15 **Q. Why were Impact Fees instituted?**

16 A. Impact Fees for Dixie’s Arizona customers were approved in Decision No. 56655 (March
17 1989), because without such fees there was insufficient margin to support needed plant
18 construction in Arizona without subsidization by Dixie’s Utah customers. The Decision
19 stated that such subsidization would be inequitable in a member-owned utility.

20

21 **Q. What costs do the Impact Fees cover?**

22 A. In the calculation of Impact Fees attached to the rate case filing Dixie states, “Items
23 assigned to be largely covered by Impact Fees include new transmission lines, substations,
24 and main feeders that are necessitated with the addition of new customers.”

25

1 **Q. Why have increases in Impact Fees been proposed?**

2 A. In testimony, Dixie states that it has made “significant plant investments” since its last
3 Test Year, in 1987. In addition, in the calculation of Impact Fees for Arizona included
4 with Dixie’s filing, the Cooperative indicates that it will need to make other significant
5 investments in the foreseeable future.

6

7 Dixie states, “[t]he purpose of charging customers Impact Fees is to appropriately assign
8 costs to those who incur them, thereby reducing or eliminating subsidies between existing
9 and new consumers and keeping retails [*sic*] rates at a more equitable level.”

10

11 **Q. What are Dixie’s current Impact Fees?**

12 A. Under Decision No. 56655, Dixie was authorized to collect \$750 for residential installed
13 capacity over 20 kW and \$60 per kW of maximum installed capacity for other customer
14 classes. The Decision also ordered Impact Fees “which shall exempt small applicants for
15 electrical service with anticipated loads of less than 20kw.”

16

17 **Q. What has Dixie proposed with respect to its Impact Fees?**

18 A. The Cooperative is proposing to increase the Impact Fee from \$750 to \$1,950 for
19 Residential and Single Phase Small Commercial overhead systems and from \$750 to
20 \$2,950 for Residential and Single Phase Small Commercial underground systems.

21

22 Dixie has also proposed a smaller Impact Fee for extra small residential or commercial
23 consumers using 0-60 amps. In its filing Dixie states that its members occasionally need
24 service for structures such as sheds or airplane hangars which consume very little
25 electricity.

26

1

Residential and Single phase Small Commercial*	
Overhead System Connection	Impact Fees
0 to 60 amps	\$400
61 to 200	\$1,950
Each additional 200 amps or portion thereof	\$1,950
Underground System Connection	Impact Fees
0 to 60 amps	\$525
61 to 200 amps	\$2,950
Each additional 200 amps or portion thereof	\$2,950
All Commercial, Irrigation, etc.	
Installed capacity	\$60/KW

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*Upgrading of existing service will require the applicable impact fees to be paid, and \$30 connect fees are also required for all services.

Q. Do the Impact Fees proposed by Dixie fully cover the cost of the existing and projected plant investments?

A. No. The total cost for consumers with overhead service is estimated to be \$2,462, while the total cost for customers with underground service is estimated to be \$3,017. The charges proposed by Dixie (\$1,950 and \$2,950 respectively) are lower than these projected total costs, but equal to the Impact Fees being charged in Utah.

The Impact Fees proposed for extra small residential or commercial consumers also equal the fees charged in Utah for that type of service.

Q. Why were increases proposed for Residential and Single Phase Small Commercial customers but not for Commercial, Irrigation, and General Service customers?

A. The Utah Impact Fee for Residential and Small Commercial customers was increased to cover costs, while the Arizona Impact fee for this class was not. Dixie is proposing to update the Impact Fees in Arizona in order to better cover costs and in order to match what its Utah customers are already paying.

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The Impact Fee for Commercial, Irrigation, and General Service customers is currently \$60 per kW of maximum installed capacity. Dixie is not proposing to increase the Impact Fee for Commercial, Irrigation and General Service customers, as this fee is already the same for customers in Arizona and Utah and is calculated to cover the associated costs.

Q. What is Staff's recommendation?

A. Staff recommends that the Commission approve the Impact Fees proposed by Dixie.

LINE EXTENSION POLICY

Q. What is Dixie's current policy with respect to reimbursement of an original payer's contribution in aid of construction for the costs of a line extension?

A. The Electric Service Regulations state the following:

"If a consumer desires a line extension from a line on which a contribution-in-aid has been made, the new consumer shall pay a pro rata share of construction if this occurs within 60 months after construction of the line. The pro-rated cost factor share will be based on a 20% reduction in the cost factor for the actual line extension costs for each of the five years. Dixie Escalante will reimburse the pro rata share to the original payer."

Q. Please describe Dixie's reimbursement process.

A. Dixie provided an example of its reimbursement process. In its example, customer A paid to tap into an existing line and install a transformer, while customers B through E each reimbursed a portion of the previous customer's payment, but customer C also reimbursed customer E to utilize a transformer and associated secondary lines. The amount of the reimbursements is determined by factors including the level at which the line extension cost has been depreciated, and whether or not transformers are installed or co-utilized.

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Q. What is Dixie proposing with respect to its Line Extension Policy?

A. Dixie is proposing to delete the section of its Line Extension Policy which provides for reimbursement of pro rata share to original payers, thereby eliminating the reimbursement process.

Q. Why is Dixie proposing this change?

A. Dixie is proposing this change because it has become very difficult to administer on both a practical and on an equitable basis.

Q. How much has Dixie been paying out in reimbursements for line extensions?

A. From 2006 through 2012, Dixie paid out an average of \$1,038 per year in line extension reimbursements.

Q. If Dixie ceases to pay out reimbursements for line extensions, would it retain these funds?

A. No. Dixie would not charge new customers to reimburse original payers.

Q. Does Staff agree with the proposed change?

A. Yes. There is no way of clearly determining an equitable basis for reimbursing contributions in aid of construction to original payers and the requirement for reimbursement should be eliminated. However, the change should be phased in, and customers who have made contributions in aid of construction to date should be reimbursed under the existing system.

1 **ELECTRIC SERVICE REGULATIONS**

2 **Q. Does Staff have recommendations regarding changes to Dixie's Electric Service**
3 **Regulations, other than Impact Fees and Line Extension Policy?**

4 A. Yes. Staff is proposing to add clarifying language to the Billing section, under the
5 paragraph headed "Rate Schedules." The sentence reads, "The rates prescribed by all Rate
6 Schedules are subject to revision upon approval of the Board of Directors." Staff
7 recommends that the phrase "and following approval by the Arizona Corporation
8 Commission" be added to the end of this sentence.

9
10 Staff is also recommending that Dixie's proposed language in Paragraph 5 of the
11 Cooperative Installation Section be changed. The phrase "cut, trim and control the growth
12 by chemical means, machinery or otherwise of" should be removed and replaced with "cut
13 and trim." Staff believes that Dixie's proposed language is too broad. Dixie has provided
14 no information indicating the need to use chemical means to clear its rights of way
15 easements across property owned or controlled by its customers.

16
17 **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

18 **Q. Please summarize Staff's recommendations.**

19 A. Staff's recommendations are summarized as follows:

- 20
21 • Staff recommends a base cost of power of \$0.032778 per kWh.
22
23 • Staff recommends that the Commission approve the purchased power adjustor mechanism
24 used in Dixie's Utah territory, calculated as discussed in this testimony.
25
26 • Staff recommends that the Commission approve the Impact Fees proposed by Dixie.

- 1 • Staff recommends that reimbursements for Line Extensions be eliminated, but that the
2 change should be phased in, and customers who have made contributions in aid of
3 construction through the effective date of the Decision in this rate case should be
4 reimbursed under the existing system.
- 5
- 6 • Staff recommends that the phrase “and following approval by the Arizona Corporation
7 Commission” be added to the end of the sentence in the Billing section which states: “The
8 rates prescribed by all Rate Schedules are subject to revision upon approval of the Board
9 of Directors.”
- 10
- 11 • Staff recommends that Dixie’s proposed language in Paragraph 5 of the Cooperative
12 Installation Section be changed. The phrase “cut, trim and control the growth by chemical
13 means, machinery or otherwise of” should be removed and replaced with “cut and trim.”
- 14

15 **Q. Does this conclude your Direct Testimony?**

16 **A. Yes, it does.**

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP
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DIRECT
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PUBLIC UTILITIES ANALYST V
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APRIL 23, 2013

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EXECUTIVE SUMMARY
DIXIE ESCALANTE ELECTRIC ASSOCIATION, INC.
DOCKET NO. E-02044A-12-0419

Dixie Escalante Rural Electric Association, Inc. ("Dixie") is a non-profit cooperative association incorporated in Utah. Dixie provides electric distribution service to approximately 13,000 customers in Utah, and approximately 2,200 customers in Mohave County, Arizona. The application requests increased rates for Arizona ratepayers. The requested rates would increase rates to Arizona ratepayers to the same rates currently in effect for Dixie's Utah ratepayers. The current rates for Arizona have been in effect since April of 1998.

Dixie is a Class B Utility as defined by Arizona Administrative Code ("A.A.C.") R14-2-103 and is certificated to provide electric service as a public service corporation in the State of Arizona. On September 25, 2012, Dixie filed a full rate application for customers in the State of Arizona. On October 19, 2012, Dixie filed an amendment to the application. On October 19, 2012, Staff issued a letter declaring the application sufficient.

Dixie's application proposes total operating revenue of \$2,108,887 in Arizona. This represents an increase of \$193,316 (10.09 percent) over its \$1,915,571 test year revenue. Dixie's proposed revenue, as filed, would provide a \$45,155 operating loss and a \$3,393 net margin for a 1.06 times interest earned ratio ("TIER"), a 12.49 debt service coverage ratio ("DSC") and a negative (0.86 percent) rate of return on its proposed \$5,222,201 fair value rate base ("FVRB") which is the same as the proposed original cost rate base ("OCRB") rate base. The application shows a negative adjusted net margin for Arizona of \$189,922 for the test year ending December 31, 2011.

Staff recommends the same revenue requirement proposed by Dixie. Staff recommends total operating revenue of \$2,108,887, a \$193,316 increase (10.09 percent) over the \$1,915,571 test year revenues, to provide a \$44,615 operating margin, a \$48,783 net margin, a 0.42 TIER, a 0.94 DSC and a 0.88 percent rate of return on a \$5,042,240 FVRB and OCRB. Due to Staff's use of a different allocation basis for loan obligations, the TIER and DSC values calculated by Staff would differ from Dixie's even for the same operating margin, and while the Staff-calculated values show that the TIER and DSC are insufficient for the Arizona jurisdiction, on a combined Arizona and Utah basis, Dixie would experience a 4.93 TIER and 3.94 DSC, both of which exceed loan covenant requirements.

1 **I. INTRODUCTION**

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

3 A. My name is Mary J. Rimback; I am a Public Utilities Analyst employed by the Arizona
4 Corporation Commission (“ACC” or “Commission”) in the Utilities Division (“Staff”).
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.
6

7 **Q. Please describe your responsibilities as a Public Utilities Analyst.**

8 A. In my capacity as a Public Utilities Analyst, I analyze and examine accounting, financial,
9 statistical and other information and prepare reports based on my analyses that present
10 Staff’s recommendations to the Commission on utility revenue requirements, rate design
11 and other issues.
12

13 **Q. Please summarize your educational background and professional experience.**

14 A. I graduated from Arizona State University with a Bachelor of Science in Accounting, and
15 I am a Certified Public Accountant with the Arizona State Board of Accountancy. I have
16 been employed with the Arizona Corporation Commission since June of 2012.
17

18 **Q. What is the purpose of your testimony in this case?**

19 A. The purpose of my testimony in this case is to present the Staff recommendations
20 regarding Dixie Escalante Rural Electric Association, Inc.’s (“Dixie” or “Applicant” or
21 “Cooperative”) applications for a permanent rate increase for Arizona customers. My
22 testimony includes recommendations for the regulatory areas of rate base and revenue
23 requirement.
24

1 **Q. What is the basis of Staff's recommendations?**

2 A. Staff performed a regulatory audit of Dixie's records to determine whether sufficient
3 evidence exists to support Dixie's request for an increase in its rates and charges. A
4 regulatory audit consists of examining Dixie's books and records, reviewing accounting
5 ledgers, reports and workpapers, using data requests and responses to confirm Dixie's
6 information, tracing recorded amounts to source documents, and verifying that Dixie
7 follows Arizona Revised Statutes, Commission rules and that accounting principles used
8 are applied in accordance with the Commission authorized Uniform System of Accounts
9 ("USoA"). In the course of completing these duties, Staff conducted meetings with Dixie
10 representative/consultants to discuss Dixie's application for an increase in rates, collect
11 necessary information and clarify Dixie's positions.

12
13 **Q. What other Staff members are presenting Direct Testimony in Dixie's case?**

14 A. Mr. Patrick Lowe is responsible for preparation of the rate design testimony. Mr. Prem
15 Bahl is assigned to prepare cost of service testimony. Ms. Julie McNeely-Kirwan is
16 responsible for providing testimony on Dixie's base cost of power, proposed purchased
17 power adjustor mechanism, Electric Service Regulations, and proposed changes to Impact
18 Fees and Line Extension Policy. Mr. Ed Stoneburg provides the Staff Engineering Report
19 and recommendations.

20
21 **Q. How is your testimony organized?**

22 A. My direct testimony is composed of nine specific sections:

23
24 Section I is this introduction.

25 Section II provides a background of Dixie.

26 Section III is a summary of Consumer Services - Arizona Jurisdiction.

1 Section IV is a summary of proposed revenues - Arizona Jurisdiction.
2 Section V presents Staff's rate base and operating expense adjustments - Arizona
3 Jurisdiction.
4 Section VI presents Staff's rate base recommendations - Arizona Jurisdiction.
5 Section VII presents Staff's operating margin recommendations - Arizona Jurisdiction.
6 Section VIII presents Staff's recommendations with regards to the combined Arizona and
7 Utah jurisdictions.
8 Section IX presents Staff's recommendations concerning approval of long-term debt with
9 the Arizona Corporation Commission.

10

11 **Q. Have you prepared any schedules to accompany your testimony?**

12 **A.** Yes, I prepared Schedules MJR-1 to MJR-11.

13

14 **II. BACKGROUND**

15 **Q. Please review the background of the Applicant.**

16 **A.** Dixie is a non-profit rural electric cooperative located in Beryl, Utah. The Cooperative
17 provides electric service to a total of 15,200 customers - 13,000 in Utah and 2,200 in
18 Arizona. The Cooperative claims that all consumers by class have the same
19 characteristics and are considered to be identical with equal rights, irrespective of
20 jurisdiction. Consequently, Dixie provides service to each account class under the same
21 tariff regardless of jurisdiction. In addition, the Cooperative maintains a common
22 financial record for all consumers for ease of administration. Dixie's current rates were
23 authorized in Decision No. 60806 effective April 1998. Net Metering Service was
24 approved in Decision No. 72445, effective June 27, 2011.

25

1 **III. CONSUMER SERVICES**

2 **Q. Please provide a brief summary of customer complaints received by the Commission**
3 **for Dixie.**

4 A. Staff reviewed the Commission's records and found one complaint during the past three
5 years and no customer opinions opposed to the proposed rate increase. The single
6 complaint concerned a billing dispute and was resolved.

7
8 **IV. SUMMARY OF PROPOSED REVENUES**

9 **Q. What revenue requirement is being proposed in the Dixie application?**

10 A. Dixie proposes total operating revenue of \$2,108,887; this represents an increase of
11 \$193,315, or 10.09 percent, over test year revenue of \$1,915,571. The proposed revenue,
12 as filed, would produce an operating loss of \$45,155 and a net margin of \$3,393 for a 1.06
13 times interest earned ratio ("TIER"),¹ a 12.49 debt service coverage ratio ("DSC")² and a
14 negative or not meaningful return of (0.86 percent) on original cost rate base ("OCRB") of
15 \$5,222,201.

16
17 **Q. What is Staff's revenue requirement recommendation?**

18 A. Staff recommends a total operating revenue of \$2,108,887, a \$193,315 (10.09 percent)
19 increase, over the \$1,915,571 test year revenues to provide a \$44,615 operating margin,
20 \$44,783 net margin, a 0.42 "TIER", 0.94 DSC. The calculated rate of return on rate base
21 is 0.88 percent.

22
23 **V. SUMMARY OF STAFF'S RATE BASE AND EXPENSE ADJUSTMENTS**

24 **Q. Please summarize Staff's rate base and expense adjustments.**

25 A. Rate Base:

¹ Dixie includes non-operating margins in its TIER calculations.

² The TIER and DSC calculations in the application are not mathematically correct.

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Construction Work in Process ("CWIP") – This adjustment removes \$179,961 in cost represented as CWIP at the end of the test year.

Operating Margin:

Donations – This adjustment removes \$12,421 of donations included in the test year.

Purchased Power – This adjustment removes \$77,349 from the cost of Purchase Power in the test year.

Non-Operating Margin:

Long-Term Debt Interest Expense – This adjustment adds \$44,381 to long-term debt interest expense in the test year.

VI. RATE BASE

Fair Value Rate Base ("FVRB")

Q. Does the application for Dixie include schedules with elements of a Reconstruction Cost New Rate Base?

A. No, the application does not request recognition of a Reconstruction Cost New Rate Base. Therefore, the Cooperative's OCRB is its FVRB.

1 *Rate Base Summary*

2 **Q. Please summarize Staff's rate base recommendation.**

3 A. Staff recommends a \$5,042,240 rate base, a \$179,961 reduction to Dixie's proposed rate
4 base of \$5,222,201. Staff's recommendation results from the rate base adjustment
5 described below.

6
7 *Rate Base Adjustment No. 1 – CWIP Removal*

8 **Q. What did Dixie propose with respect to CWIP?**

9 A. Dixie proposed to include its end of test year CWIP balance in the rate base.

10

11 **Q. Is the inclusion of CWIP in rate base appropriate?**

12 A. No. CWIP by definition is not used and useful plant-in-service. This account reflects
13 plant facilities that are only in the process of being built and are therefore not used and
14 useful in serving customers. As such, they are excluded from rate base until the facilities
15 meet the classifications of being completed, serving customers and having been
16 reclassified into a plant-in-service category in the Cooperative's books and records. They
17 would then be available for inclusion in the plant-in-service of a subsequent rate case.

18

19 **Q. What is Staff recommending regarding CWIP?**

20 A. Staff recommends excluding the proposed \$179,961 of CWIP from rate base, as shown in
21 Schedule MJR-5.

22

1 **VII. OPERATING MARGIN ADJUSTMENTS**

2 *Operating Margin Adjustment No. 1- Dues, Sponsorships, Food and Scholarships*

3 **Q. What is Dixie proposing for Dues, Sponsorships, Food and Scholarships?**

4 A. Dixie proposes \$12,421 for Dues, Sponsorships, Food, and Scholarships, as shown in
5 Schedule MJR-7.

6
7 **Q. What ratemaking treatment does Staff recommend for these expenses?**

8 A. Since charitable contributions, sponsorships, food entertainment and similar expenses are
9 voluntary costs, the \$12,421 expense is not necessary to provide service. Consequently,
10 Staff recommends that they be recognized as non-operating expenses and excluded from
11 the revenue requirement.

12
13 **Q. What is Staff's recommendation?**

14 A. Staff recommends decreasing operating expense by \$12,421 as shown in Schedules MJR-
15 7 and MJR-6.

16
17 *Operating Margin Adjustment No. 2 – Base Cost of Revenue and Expense Adjustment*

18 **Q. What did Dixie propose for Purchased Power expense?**

19 A. Dixie proposed a \$77,349 pro forma increase over the \$1,208,637 test year expense, i.e.,
20 \$1,285,986.

21
22 **Q. Did Dixie request a purchase power adjuster mechanism (“PPAM”) in its rate
23 application?**

24 A. Yes, Dixie requested a PPAM as part of its rate application. Staff witness Julie McNeely-
25 Kirwan addresses the PPAM and base cost of power in her testimony.

1 **Q. How does the base cost of power relate to the establishment of a PPAM?**

2 A. Integral to implementing a PPAM is establishment of a base cost of power, i.e., a cost per
3 kWh. The purchased power expense should be consistent with the base cost of power.
4

5 **Q. Is Staff recommending a base cost of Purchased Power rate?**

6 A Yes, as described in the testimony of Julie McNeely-Kirwan, Staff recommends
7 \$0.032778 per kWh as the base cost of Purchased Power.
8

9 **Q. How did Staff arrive at its Purchased Power expense?**

10 A. Staff recommends a Purchase Power expense that is consistent with the Staff-
11 recommended \$0.032778 per kWh base cost of power. The Purchase Power expense that
12 is consistent with the base cost of power is the actual test year purchased power expense
13 of \$1,208,637.
14

15 **Q. What is Staff Recommending?**

16 A. Staff recommends a \$77,349 decrease, from \$1,285,986 to \$1,208,637, to the cost of
17 Purchased Power, an amount consistent with the Staff-recommended \$0.032778 per kWh
18 base cost of power.
19

20 *Operating Margin Adjustment No. 3 – Long-Term Debt Interest and Principal*

21 **Q. What did Dixie propose for interest and principal for the Arizona jurisdiction long-
22 term debt?**

23 A. Dixie proposed interest expense of \$61,394 (Schedules: A2, C1, E2 and F1) for the
24 Arizona jurisdiction using Transmission and Distribution Gross Utility Plant-In-Service as
25 the basis to allocate interest expense between Arizona and Utah, and Dixie proposed debt

1 principal repayment of \$62,890 (Schedule A2) for Arizona using Gross Plant as an
2 allocation basis.

3
4 **Q. What are Staff's comments regarding Dixie's proposed allocation methods for**
5 **calculating Arizona and Utah jurisdictional interest expenses and debt principal**
6 **repayments?**

7 A. First, since principal and interest for any debt obligation are bound to that same underlying
8 debt, the interest and principal should be allocated using the same basis. Further,
9 attaching specific sources of capital to specific uses is not consistent with sound financial
10 theory. Accordingly, Staff allocated interest expense and debt principal repayment
11 between Arizona and Utah using rate base.

12
13 **Q. Did Dixie provide Staff with amortization schedules of existing loans to identify the**
14 **relevant principal and interest obligations?**

15 A. Yes, Staff used the amortization schedules provided in response to Staff's Data Request
16 No. 8 to allocate interest and principal between Arizona and Utah.

17
18 **Q. What is the effect of Staff using a different allocation basis than Dixie for interest**
19 **and debt principal repayments?**

20 A. Staff recommends increasing interest expense by \$44,381, from \$61,394 to \$105,775, as
21 shown in Schedule MJR-9, and increasing principal repayments by \$57,805, from \$62,890
22 to \$120,695, as shown in Schedule MJR-2.

23

1 **VIII. COMBINED ARIZONA AND UTAH JURISDICTIONS**

2 **Q. Did Staff evaluate the application in relation to the combined Arizona and Utah**
3 **jurisdiction?**

4 A. Yes, Staff prepared Schedules MJR-10 and MJR-11 for the combined Arizona and Utah
5 jurisdictions. Due to Staff's use of a different allocation basis for loan obligations, the
6 TIER and DSC values calculated by Staff would differ from Dixie's even for the same
7 operating margin, and while the Staff-calculated values show that the TIER and DSC are
8 insufficient for the Arizona jurisdiction, on a combined Arizona and Utah basis, Dixie
9 would experience a 4.93 TIER and 3.94 DSC, both of which exceed loan covenant
10 requirements.

11
12 **IX. LONG TERM DEBT APPROVAL**

13 **Q. Please discuss the Staff's review of Dixie's long-term debt.**

14 A. Dixie did not seek approval for all of its debts and loans. Dixie is relying on the Garkane
15 Power Association, Inc. ("Garkane Power") case.

16
17 **Q. Did the Garkane Power case relieve Dixie of its obligation to provide information to**
18 **the Arizona Corporation Commission pertaining to the long term debts incurred by**
19 **Dixie?**

20 A. No, Dixie has not filed an application for a Declaratory Order on the matter and as such is
21 not in the same position as Garkane Power.

22
23 **Q. What does Staff recommend?**

24 A. Staff recommends that Dixie file an application to have its long-term debt approved or a
25 request for a Declaratory Order.

1 **Q. Does this conclude your Direct Testimony?**

2 **A. Yes, it does.**

Dixie Escalante REA, Inc.

Docket No.: E-2044A-12-0419

Test Year Ended: December 31, 2011

DIRECT TESTIMONY OF MARY J RIMBACK

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Dixie Escalante REA, Inc.
 Docket No.: E-2044A-12-0419
 Test Year Ended: December 31, 2011

Schedule MJR-1

REVENUE INCREASE SUMMARY

Line No.	Description	[A] COOPERATIVE AS FILED	[B] STAFF RECOMMENDED
1	Total Test Year Revenue	\$ 1,915,571	\$ 1,915,571
2	Proposed Revenue - Base Rate Power Cost	\$ 1,285,986	\$ 1,208,637
3	Proposed Revenue - Base Rate Non-Power Cost	822,901	900,250
4	Total Recommended Revenue (L2+L3)	\$ 2,108,887	\$ 2,108,887
5	Proposed Overall Increase/(Decrease) in Rates (L4-L1)	\$ 193,316	\$ 193,316
6	Percent Increase over Current Rates (Including Power Cost)	10.09%	10.09%

References:

Column A: Company Schedule C-1 & A-2
 Column B: Company Schedule A-1 & A-2, MJR-2
 Column C: MJR Testimony

Line No.	[A] [B] [C] [D]			
	SUMMARY OF FILING - ARIZONA			
	PRESENT RATES		PROPOSED RATES	
	Cooperative as Filed	Staff as Adjusted	Cooperative Proposed	Staff Recommended
Revenues				
1	\$ 1,900,754	\$ 1,900,754	\$ 2,094,070	
	Base Cost of Power	\$ -	\$ -	\$ 1,208,637
	Non-Base Cost of Power Revenue	\$ -	\$ -	\$ 885,433
2	\$ 14,817	\$ 14,817	\$ 14,817	\$ 14,817
3	Total Revenue	\$ 1,915,571	\$ 1,915,571	\$ 2,108,887
Expenses				
5	\$ 1,285,986	\$ 1,208,637	\$ 1,285,986	\$ 1,208,637
6	13,586	13,586	13,586	13,586
7	169,255	169,255	169,255	169,255
8	113,509	113,509	113,509	113,509
9	127,467	127,467	127,467	127,467
10	224,087	211,666	224,087	211,666
11	167,166	167,166	167,166	167,166
12	50,667	50,667	50,667	50,667
13	2,317	2,317	2,317	2,317
14	2	2	2	2
15	Total Operating Expenses	\$ 2,154,042	\$ 2,064,272	\$ 2,064,272
16	Operating Margins Before Intr. on L.T. Debt	\$ (238,471)	\$ (148,701)	\$ (45,155)
17	Interest on Long Term Debt	\$ 61,394	105,775	\$ 61,394
18	Operating Margin after Interest Expense	\$ (299,865)	\$ (254,476)	\$ (106,549)
Non-Operating Margins				
20	\$ 20,640	\$ 20,640	\$ 20,640	\$ 20,640
21	\$ 83,044	\$ 83,044	\$ 83,044	\$ 83,044
22	6,259	6,259	6,259	6,259
23	Total Non-Operating Margins	\$ 109,943	\$ 109,943	\$ 109,943
24	NET MARGINS	\$ (189,922)	\$ (144,533)	\$ 3,394
25	Long-Term Debt Principal Payment	62,890	\$ 120,695	62,890
26	TIER¹ L16/L17	(2.09)	(1.41)	1.06
27	DSC² (L16+L11)/(L17+L25)	10.93	0.08	12.49
28	Rate Base	\$ 5,222,201	\$ 5,042,240	\$ 5,222,201
29	Return on Rate Base (L16 / L28)	-4.57%	-2.95%	-0.86%

¹ The Cooperative's TIER calculations include non-operating margins in the numerator. They are also mathematically incorrect.

² The Cooperative's DSC calculations are mathematically incorrect.

Dixie Escalante REA, Inc.
Docket No.: E-2044A-12-0419
Test Year Ended: December 31, 2011

Schedule MJR-3

Line No.	[A]	[B]	[C]	
	ORIGINAL COST RATE BASE - ARIZONA			
	Cooperative	Adjustment	Staff	
1	Plant In Service	\$ 7,088,595	\$ -	\$ 7,088,595
2	Less: Accumulated Depreciation	2,122,835	-	2,122,835
3	NET PLANT	\$ 4,965,760	\$ -	\$ 4,965,760
4	DEDUCTIONS			
5	Customer Deposits	\$ 49,053	\$ -	\$ 49,053
	Impact Fees	435,703	-	435,703
6	TOTAL DEDUCTIONS	\$ 484,756	\$ -	\$ 484,756
7	ADDITIONS			
8	Construction work in process	\$ 179,961	\$ (179,961)	\$ -
9	Materials and Supplies	558,080	-	558,080
10	Prepayments	3,156	-	3,156
11	Intangible Rate Base	\$ -	\$ -	\$ -
12	TOTAL ADDITIONS	\$ 741,197	\$ (179,961)	\$ 561,236
13	RATE BASE	\$ 5,222,201	\$ (179,961)	\$ 5,042,240

References:

Column A: Company Schedule B-1 & E-5
Column B: MJR-5
Column C: MJR Testimony

SUMMARY OF RATE BASE ADJUSTMENTS - ARIZONA

Line No.		[A] Cooperative	[B] Adjustment	Ref	[C] Staff
1	TRANSMISSION Gross Plant	\$1,838,826	\$ -		\$1,838,826
2	SUBTOTAL TRANSMISSION	\$1,838,826	\$ -		\$1,838,826
	DISTRIBUTION PLANT				
3	Gross Plant	\$3,553,521	\$ -		\$3,553,521
4	SUBTOTAL DISTRIBUTION	\$3,553,521	\$ -		\$3,553,521
	General & Intangible				
5	Gross Plant	\$1,696,248	\$ -		\$1,696,248
6	SUBTOTAL GENERAL	1,696,248	\$ -		1,696,248
7	TOTAL PLANT IN SERVICE	\$7,088,595	\$ -		\$7,088,595
8	ACCUMULATED DEPRECIATION	\$2,122,835	-		\$2,122,835
9	NET PLANT	\$4,965,760	\$ -		\$4,965,760
	DEDUCTIONS				
10	Customer Deposits	\$49,053	\$ -		\$49,053
11	Impact Fees	435,703	-		435,703
12	SUBTOTAL DEDUCTIONS	\$484,756	\$ -		\$484,756
	ADDITIONS				
13	CWIP	\$179,961	\$ (179,961)	MJR-5	\$ -
14	Materials and Supplies	\$558,080	-		\$558,080
15	Prepayments	\$3,156	-		\$3,156
	SUBTOTAL ADDITIONS	\$741,197	(\$179,961)		\$561,236
	TOTAL	\$5,222,201	(\$179,961)		\$5,042,240

References:

Column A: Company Schedule E-5
Column B: MJR-5
Column C: MJR Testimony

Dixie Escalante REA, Inc.
Docket No.: E-2044A-12-0419
Test Year Ended: December 31, 2011

Schedule MJR-5

RATE BASE ADJUSTMENT NO. 1 - REMOVE CONSTRUCTION WORK-IN-PROCESS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Construction Work in Process	\$ 179,961	\$ (179,961)	\$ -

References:

Column A: Company Schedule B-2
Column B: Column [A] - Column [C]
Column C: MJR Testimony

SUMMARY OF TEST YEAR OPERATING ADJUSTMENTS

Line No.	[A] COOPERATIVE AS FILED	[B] MJR-7 Donations ADJ #1	[C] MJR-8 Purchased Power ADJ #2	[D] MJR-9 Interest Exp L-T Debt ADJ #3	[E] STAFF AS ADJUSTED
	Revenues				
1	\$ 1,900,754	\$ -	\$ -	\$ -	\$ 1,208,637
2	-	-	-	-	692,117
3	\$ 1,900,754	\$ -	\$ -	\$ -	\$ 1,900,754
4	14,817	-	-	-	14,817
5	\$ 1,915,571	\$ -	\$ -	\$ -	\$ 1,915,571
	Expenses				
6	\$ 1,285,986	-	\$ (77,349)	\$ -	1,208,637
7	13,586	-	-	-	13,586
8	169,255	-	-	-	169,255
9	113,509	-	-	-	113,509
10	127,467	-	-	-	127,467
11	224,087	(12,421)	-	-	211,666
12	167,166	-	-	-	167,166
13	50,667	-	-	-	50,667
14	2,317	-	-	-	2,317
15	2	-	-	-	2
16	\$ 2,154,042	\$ (12,421)	\$ (77,349)	\$ -	\$ 2,064,270
17	(238,471)	12,421	77,349	-	(148,701)
18	61,394	-	-	44,381	105,775
19	(299,865)	12,421	77,349	(44,381)	(254,476)
20	\$ 20,640	\$ -	\$ -	\$ -	20,640
21	83,044	-	-	-	83,044
22	6,259	-	-	-	6,259
23	\$ 109,943	\$ -	\$ -	\$ -	109,943
24	\$ (189,922)	\$ 12,421	\$ 77,349	\$ (44,381)	\$ (144,533)
25					
26					

References:

Column A: Company Schedule C-1.
 Col. B - D: Staff Testimony.

Dixie Escalante REA, Inc.
Docket No.: E-2044A-12-0419
Test Year Ended: December 31, 2011

Schedule MJR-7

OPERATING MARGIN ADJUSTMENT NO. 1 - DONATIONS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Administrative & General	\$ 224,087	\$ (12,421)	\$ 211,666

References:

Column A: Schedule C-1, C-2, D-2
Column B: Column C - Column A
Column C: MJR Testimony

Dixie Escalante REA, Inc.
Docket No.: E-2044A-12-0419
Test Year Ended: December 31, 2011

Schedule MJR-8

OPERATING MARGIN ADJUSTMENT NO. 2 - PURCHASED POWER EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Purchased Power	\$ 1,285,986	\$ (77,349)	\$ 1,208,637

References:

Column A: Schedule C-1, C-2, D-2
Column B: Column C - Column A
Column C: MJR Testimony

Dixie Escalante REA, Inc.
Docket No.: E-2044A-12-0419
Test Year Ended: December 31, 2011

Schedule MJR-9

ADJUSTMENT NO. 3 - INTEREST EXPENSE (LONG-TERM DEBT)

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Interest Expense - Long-term Debt	\$ 61,394	\$ 44,381	\$ 105,775

References:

- Column A: Schedule C-1, C-2, D-2
- Column B: Column C - Column A
- Column C: MJR Testimony

Line No.	SUMMARY OF FILING - AZ and UT COMBINED			
	[A] PRESENT RATES		[B] PROPOSED RATES	
	Cooperative as Filed	Staff as Adjusted	Cooperative Proposed	Staff Recommended
Revenues				
1	\$ 20,640,796	\$ 12,947,928	\$ 22,486,308	12,947,928
2		\$ 7,692,868	\$ -	9,538,380
2	\$ 173,495	\$ 173,495	\$ 173,495	173,495
4	\$ 20,814,291	\$ 20,814,291	\$ 22,659,803	22,659,803
Expenses				
6	\$ 13,781,199	\$ 12,947,928	\$ 13,781,199	\$ 12,947,928
7	108,258	\$ 108,258	108,258	108,258
8	1,190,622	\$ 1,190,622	1,190,622	1,190,622
9	899,605	\$ 899,605	899,605	899,605
10	1,451,646	\$ 1,451,646	1,451,646	1,451,646
11	1,827,518	\$ 1,721,194	1,827,518	1,721,194
12	1,631,468	\$ 1,631,468	1,631,468	1,631,468
13	406,164	\$ 406,164	406,164	406,164
14	15,899	\$ 15,899	15,899	15,899
15	\$ 21,312,379	\$ 20,372,784	\$ 21,312,379	\$ 20,372,784
16	\$ (498,088)	\$ 441,507	\$ 1,347,424	\$ 2,287,019
17	\$ 503,192	463,938	\$ 503,192	\$ 463,938
18	\$ (1,001,280)	\$ (22,431)	\$ 844,232	\$ 1,823,081
Non-Operating Margins				
20	\$ 226,127	\$ 226,127	\$ 226,127	\$ 226,127
21	\$ 909,819	\$ 909,819	\$ 909,819	\$ 909,819
22	68,572	\$ 68,572	68,572	68,572
	(13,905)	\$ (13,905)	(13,905)	(13,905)
23	\$ 1,190,613	\$ 1,190,613	\$ 1,190,613	\$ 1,190,613
23	\$ 189,333	\$ 1,168,182	\$ 2,034,845	\$ 3,013,694
24	529,378	\$ 529,378	529,378	529,378
25	TIER¹	(0.99)	0.95	2.68
26	DSC¹	1.10	2.09	2.88

¹ Staff's TIER calculations exclude Non-Operating margins, the Cooperative's include Non-Operating Margins. Also, Schedule A-2 of the application shows a 1.40 TIER and a 3.88 DSC for the test year, both are mathematically incorrect.

Column A: Company Schedule A-2 & C-1
Column B: MJR-11 adjusted for Base Cost of Power
Column C: Company Schedule A-2 & F-1
Column D: MJR-11 adjusted for Base Cost of Power

SUMMARY OF OPERATING ADJUSTMENTS - AZ and UT COMBINED

Line No.	[A]	[B]	[C]	[D]	
	COOPERATIVE AS FILED	Expense ADJ #1 Donations	Expense ADJ #2 Purch Power	Interest Exp L-T Debt ADJ #3	STAFF AS ADJUSTED
Revenues					
1	Sales of Electric Energy	\$ 20,640,796	\$ -	\$ (20,640,796)	\$ -
2	Base Cost of Power	-	-	12,947,928	12,947,928
3	Non-Base Cost of Power Revenue	-	-	7,692,868	7,692,868
		\$ 20,640,796	\$ -	\$ -	20,640,796
4	Other Electric Revenue	173,495	-	-	173,495
5	Total Revenue	\$ 20,814,291	\$ -	\$ -	20,814,291
Expenses					
7	Purchased Power	\$ 13,781,199	\$ -	(833,271)	12,947,928
8	Transmission Expense O&M	\$ 108,258	-	-	108,258
9	Distribution Expense - Operations	\$ 1,190,622	-	-	1,190,622
10	Distribution Expense - Maintenance	\$ 899,605	-	-	899,605
11	Consumer Accounts Expense	\$ 1,451,646	-	-	1,451,646
12	Administrative & General	\$ 1,827,518	(106,324)	-	1,721,194
13	Depreciation & Amortization	\$ 1,631,468	-	-	1,631,468
14	Tax Expense Property	\$ 406,164	-	-	406,164
15	Interest Expense - Other	\$ 15,899	-	-	15,899
16	Total Operating Expenses	\$ 21,312,379	\$ (106,324)	\$ (833,271)	\$ 20,372,784
17	Operating Margins Before Intr. on L.T. Debt	(498,088)	106,324	833,271	441,507
18	Interest on Long Term Debt	503,192	-	-	(39,254)
19	Operating Margin after LT Interest Expense	(1,001,280)	106,324	833,271	39,254
20	Non-Operating Margins				
21	Interest Income	\$ 226,127	-	-	226,127
22	Other Non-Operating Income	\$ 909,819	-	-	909,819
23	Capital Credits - Cash	\$ 68,572	-	-	68,572
	Other Deductions	\$ (13,905)	-	-	(13,905)
24	Total Non-Operating Margins	\$ 1,190,613	\$ -	\$ -	\$ 1,190,613
25	NET MARGINS	\$ 189,333	106,324	\$ 833,271	\$ 39,254
					\$ 1,168,182

References:

Column A: Company Schedule C-1.
Col. B - C: Staff Testimony.

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP – Chairman
GARY PIERCE
BRENDA BURNS
BOB BURNS
SUSAN BITTER SMITH

IN THE MATTER OF THE APPLICATION) DOCKET NO. E-02044A-12-0419
OF DIXIE ESCALANTE RURAL ELECTRIC)
ASSOCIATION, INC FOR A DETERMINATION)
OF THE FAIR VALUE OF ITS PROPERTY AND)
FOR AN ORDER SETTING JUST AND)
REASONABLE RATES)
_____)

DIRECT

TESTIMONY

OF

EDWARD F STONEBURG

ELECTRIC UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 23, 2013

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EXECUTIVE SUMMARY
DIXIE ESCALANTE RURAL ELECTRIC ASSOCIATION, INC
DOCKET NO. E-02044A-12-0419

This testimony makes recommendations regarding the Arizona Corporation Commission (“Commission” or “ACC”) Utilities Division Staff’s (“Staff”) engineering evaluation of Dixie Escalante Rural Electric Association, Inc. (“Dixie”) Application for a Determination of the Fair Value of its Property and for an Order Setting Just and Reasonable Rates (“Application”) filed with the Commission in Docket No. E-02044A-12-0419. In conjunction with Staff’s engineering evaluation, Staff gives an account of its inspection of Dixie’s distribution system, of Dixie’s current operations and maintenance practices, and of Dixie’s future plans for its Arizona electric system. Staff has the following conclusions and recommendations:

1. It is Staff’s conclusion that Dixie:
 - a. is operating and maintaining its electrical system properly and in accordance with applicable industry and regulatory standards;
 - b. is carrying out system improvements, upgrades, and new additions to meet the current and projected load of Dixie in an efficient and reliable manner. These improvements, system upgrades, and new additions are reasonable and appropriate;
 - c. has an acceptable level of system losses, consistent with industry guidelines;
 - d. has a satisfactory record of service interruptions in the historic period from 2007 thru 2012, reflecting satisfactory quality of service; and
 - e. constructed a transmission line, as defined in A.R.S. § 40-360, from St. George, Utah, to Beaver Dam, Arizona, capable of operating at 138kV without obtaining a Certificate of Environmental Compatibility (“CEC”) as required by A.R.S. § 40-360.03.

2. Staff recommends that Dixie should:
 - a. continue with planned system improvements, upgrades, and new additions as provided for in the 2012-2014 Construction Work Plan; and
 - b. be required to comply with filing requirements of A.R.S. § 40-360.02 going forward, and to obtain a CEC prior to operating the Arizona portion of the transmission line from St. George, Utah, to Beaver Dam, Arizona at or above 115 kV.

1 **I. INTRODUCTION**

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

3 A. My name is Edward F. Stoneburg. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. By whom and in what capacity are you employed?**

7 A. I am employed by the Arizona Corporation Commission (“Commission”) in the Utilities
8 Division (“Staff”) as an Electric Utilities Engineer.

9
10 **Q. Please describe your educational background.**

11 A. I received both my Bachelors and Masters Degrees in Electrical Engineering from the
12 University of Illinois and Michigan State University, respectively. I received my
13 Bachelors Degree in 1973 and my Masters Degree in 1977. I received my Professional
14 Engineering (“P.E.”) License in the state of Michigan in 1977.

15
16 **Q. Please describe your pertinent work experience.**

17 A. Prior to joining the Commission in August 2012 I worked for 37 years in the electric
18 utility industry in various positions, with various levels of responsibility, and for various
19 utilities and consulting firms. During that time I worked over 12 years directly in the area
20 of distribution and transmission operations, maintenance and construction. I have also
21 worked in the areas of resource planning, power marketing, transmission project
22 development, regulatory strategy, and central market development.

23
24 **Q. As part of your assigned duties at the Commission, did you perform Staff’s
25 engineering evaluation of the application that is the subject of this proceeding?**

26 A. Yes, I did.

1 **Q. Is the testimony herein based on that evaluation?**

2 A. Yes, it is.
3

4 **II. PURPOSE OF TESTIMONY**

5 **Q. What is the purpose of your prefiled testimony?**

6 A. The purpose of my testimony is to discuss Staff's engineering evaluation of the Dixie
7 Escalante Rural Electric Association, Inc. ("Dixie") system operations and planning, and
8 to present the results of this evaluation.
9

10 **III. ENGINEERING EVALUATION**

11 **Q. Did you perform an engineering evaluation of Dixie's Arizona electrical system?**

12 A. Yes, I did. In response to Dixie's rate filing, I inspected Dixie's Arizona distribution
13 system facilities on December 4, 2012, and discussed with their Chief Operating Officer
14 ("COO") and Engineering Manager Dixie's organization related to customer service,
15 planning, engineering, construction, system operations, metering, and maintenance. I also
16 relied on the responses to Staff's data requests (both written and verbal) received from
17 Dixie.
18

19 **Q. Will you please enumerate the highlights of Staff's inspection of Dixie's electric
20 system?**

21 A. Yes, I will. The following provides an account of Staff's inspection of Dixie's electrical
22 system and its analysis of the data provided by Dixie in response to data requests.
23

24 During my inspection I met with Mr. Colin Jack, Dixie's COO and Engineering Manager.
25 We discussed Dixie's organization, staffing for carrying out the various operational
26 functions, observed Dixie's System Control and Data Acquisition ("SCADA") system,

1 and reviewed the details of Dixie's system within Arizona. We then visited Dixie's
2 Arizona service area.

3
4 A. *Dixie Escalante Arizona Service Area*

5 Dixie was formed through the merger over time of three separate Rural Electric
6 Associations ("REA"), the Dixie REA, the Escalante Valley REA, both of which were
7 located in Utah, and the Littlefield REA in Northern Arizona. Littlefield REA merged
8 with Dixie REA in 1974 and Dixie REA and Escalante REA merged in 1978. Dixie's
9 Arizona service area is located in the northwest corner of Arizona in the Arizona Strip.
10 This is currently a primarily rural area with growth partly driven by the economy of
11 Mesquite, Nevada, which was negatively impacted by the recession. Growth is also
12 driven by individuals choosing to locate into this area for second or retirement homes.
13 Dixie estimates the maximum build out for the Arizona service area would result in a peak
14 demand of 70 MW or approximately 7,000 customers total compared to the current 2,200
15 customers. This estimate is based upon the land available for development within the
16 Arizona service area and a mix of residential and commercial development with an
17 average coincident peak demand of 10 kW per customer.

18
19 B. *Electric System Description*

20 Dixie is a distribution cooperative providing electric service to its members. Dixie has no
21 generating capacity of its own and is a member of Deseret Power Electric Cooperative, a
22 generation and transmission cooperative located in Utah.

23
24 C. *Electric System Characteristics*

25 As of December 31, 2011, Dixie provided electric power distribution service to 2,221
26 metered customers in Arizona. Of these, 1,980 were Residential customers, 220 were

1 Commercial, 11 were Irrigation customers, 1 was a General Service customer, and 9 were
2 Public Street and Highway lighting customers.

3
4 The year-end number of services in Arizona, including all classes of customers, increased
5 from 2,117 in 2007 to 2,224 in 2012, indicating an average increase of 1.2 percent per
6 year.

7
8 Dixie's actual Arizona system peak load and energy are listed below:

9
10

Year	Year End Customers	Actual Peak Demand (MW)	Annual Demand Growth (%)	Annual Load (MWh)	Annual Load Growth (%)
2007	2,117	8.911		31,286	
2008	2,149	8.589	(3.6%)	31,098	(0.6%)
2009	2,209	8.852	3.1%	30,732	(1.2%)
2010	2,218	9.007	1.8%	30,608	(0.4%)
2011	2,221	9.307	3.3%	30,696	0.3%
2012	2,244	8.487	(8.8%)	30,193	(1.6%)

11
12
13
14
15
16
17

18 This data demonstrates that peak demand and energy in the Arizona service area have
19 been relatively flat since 2007 even given the slight increase in customer growth discussed
20 previously. The year to year variations are likely primarily due to year to year weather
21 variations with the customer growth primarily due to non-summer seasonal residents.

22

1 Dixie has 63 miles of energized lines in Arizona, including 35 miles of overhead
2 distribution lines, 6 miles of underground distribution cable, and 22 miles of
3 transmission/sub-transmission lines¹.
4

5 *D. Annual System Losses*

6 Dixie's annual historic system losses as a percentage of load are listed below.

7

8	2007	6.13%
9	2008	5.19%
10	2009	5.17%
11	2010	5.14%
12	2011	5.40%
13	2012	5.00%

14

15 Dixie's annual historic system losses average 5.34 percent per year for the most recent six
16 year period, (2007-2012). Dixie explained that the drop from 2007 to 2008 was mainly
17 due to improved auditing of street light account use and direct metering of Dixie's own
18 facilities use. The losses for Dixie's system are well below the reasonable limits in the
19 guidelines provided by the American Public Power Association's Distribution System
20 Loss Evaluation Manual applicable to electrical systems such as that of Dixie's. Typical
21 distribution system loss values indicated in the Manual range between 6 percent for urban
22 systems to 10 percent for rural systems.
23

24 *E. Quality Of Service*

25 The outages that occur in a utility's system stem from a variety of causes and are an
26 indicator of the quality of service to customers. Some of these causes are storm-related;
27 others are relative to switching surges, equipment failure and planned outages. The

¹ 69 kV and above. Includes approximately 13 miles of line built to 138kV standards but currently operated at 69kV.

1 historical data relative to Dixie's distribution system outages is shown in the following
2 table.

3

4 <u>Year</u>	<u>Avg. Annual Hours per Customer</u>
5 2007	0.16
6 2008	1.06
7 2009	1.05
8 2010	1.19
9 2011	1.29
10 2012	1.13

11

12 Dixie's average outage over the past five year period for Dixie has been 0.98 average
13 annual hours per customer. According to the Rural Utilities Service ("RUS") Bulletin
14 1730-1 Exhibit A, this is of concern when average annual outage hours per customer
15 exceed five hours. Dixie's service quality in terms of this metric is far below RUS
16 standard level of concern. Dixie believes the increases in the outage hours in 2010 and
17 2011 are due to improved reporting. Prior to 2010, reporting relied entirely on field
18 reports. With the implementation of SCADA at all substations and contracting with an
19 after-hours call center, Dixie has three sources of information to ensure all outages are
20 recorded. In 2012, Dixie implemented a bonus structure for employees in which 20
21 percent of the bonus is based upon the customer outage metric in order to provide
22 increased focus on reducing customer outage durations. Dixie attributes at least a portion
23 of the reduction in 2012 to this incentive mechanism.

24

25 *F. Distribution System Inspection*

26 During Staff's inspection of Dixie's distribution system, it observed several system
27 improvements and system upgrades that had been made in accordance with Dixie's
28 Construction Work Plans ("CWP"). Several other upgrades and improvements listed in
29 the CWP for 2012-2014 are planned to be constructed and placed in service in the near

1 future. In the recent past, Dixie's CWP for Arizona has included projects to replace and
2 upgrade old distribution lines which had deteriorated conductors. Dixie follows the RUS
3 design standards for their facilities.

4
5 Dixie also recently constructed a new radial transmission feed into the Arizona service
6 area from St. George, Utah. The 35 mile line, with approximately 13 miles located in
7 Arizona, terminates at the Beaver Dam substation in Beaver Dam, Arizona. This line was
8 approved for construction by Dixie's Board in October 2006 and was placed in service in
9 March 2011. The line was constructed to 138 kV standards in anticipation of future load
10 growth in the area, but is currently operated at 69kV. This new line replaces the original
11 feed into the service area from an interconnection at Mesquite, NV, with Overton Power
12 District.

13
14 In general, the Dixie electric system appears to be well planned and maintained. No
15 deficiencies or obvious problems were observed during the inspection tour. It was also
16 noted that the substations are properly maintained, with safety-related equipment installed
17 and 'Danger' signs installed on the fence around the substations.

18
19 Dixie's routine maintenance program appears robust. It includes, but is not limited to,
20 testing ten percent of wooden poles each year, inspecting padmount transformers every
21 three years, continuous monitoring of substations via SCADA with monthly physical
22 inspections, annual dissolved gas analysis of all oil filled substation equipment, and
23 annual testing of protective relays. Maintenance items discovered during inspections are
24 documented and are assigned to maintenance crews for action.

25

1 Dixie uses technology to achieve efficiencies including automated meter reading over
2 power line carrier, a SCADA system that provides for real-time monitoring and control of
3 all substations, and asset information is maintained in a database including Geographical
4 Information System (“GIS”) location information.

5
6 *G. Projected System Growth*

7 Dixie provided the following projections for peak demand growth in the Arizona service
8 area over the next four year period. These projections were based on assumptions and
9 methodologies that include both historical data and projections for the economy over the
10 next few years. In Staff’s opinion, the level of projected load growth seems aggressive
11 given the growth seen over the past few years for Dixie’s Arizona service area unless there
12 is a significant rebound in the economy. The Company explained that they have typically
13 used similar growth rates for the St. George service area and the Arizona service area.
14 However, since St. George is seeing a faster recovery than Arizona, Dixie indicated it
15 would revisit this assumption in their next forecast. Since Dixie updates this forecast
16 annually and adjusts its CWP accordingly, this should not create an issue.

17
18

<u>Year</u>	<u>Projected System Peak Demand (MW)</u>	<u>Annual Projected Percent Growth</u>
20 2013	9.9	
21 2015	10.2	3.0%
22 2015	10.5	2.9%
23 2016	10.8	2.9%

24

25 **IV. OTHER COMMENTS**

26 **Q. Does Staff have any other comments based upon your engineering evaluation of**
27 **Dixie’s electrical system?**

28 A. Yes. As indicated above, Dixie constructed a new transmission line from St. George,
29 Utah, to Beaver Dam, Arizona, with approximately 13 miles of the line located in

1 Arizona. The line was constructed to 138 kV standards in anticipation of future load
2 growth in the Arizona service area, but is being operated at 69 kV until such time that
3 additional capability is needed. At that time Dixie will need to connect the St. George end
4 of the line to the 138kV system, and a 138kV to 69kV substation will need to be
5 constructed at the Beaver Dam end. Such an approach is generally prudent as the
6 incremental cost, including associated carrying costs, of constructing the line initially to
7 the higher voltage standard is less than the cost of reconstructing the line at a later date.
8

9 **Q. What then is the issue?**

10 A. Under A.R.S. § 40-360.02, any “person contemplating construction of any transmission
11 line within the state during a ten year period shall file a ten year plan with the
12 [C]ommission on or before January 31 of each year.” In addition, A.R.S § 40-360.03
13 requires that a utility planning to construct a transmission line, “shall first file with the
14 [C]ommission an application for a certificate of environmental compatibility.” The statute
15 defines a transmission line as “...a series of new structures erected above ground and
16 supporting one or more conductors designed for the transmission of electric energy at
17 nominal voltages of one hundred fifteen thousand volts or more and all new switchyards
18 to be used therewith and related thereto....” Dixie did not make either of these filings prior
19 to constructing the portion of the new transmission line located within Arizona. As
20 indicated above, the line was built to be capable of operating at 138 kV which meets the
21 definition of a transmission line in the statute.
22

23 **Q. What action does Staff recommend to correct this situation?**

24 A. Staff recommends that the Commission require Dixie to comply with filing requirements
25 of A.R.S. § 40-360.02 going forward, and to obtain a CEC prior to operating the line at or
26 above 115 kV within Arizona.

1 **V. CONCLUSIONS AND RECOMMENDATIONS**

2 **Q. Based upon your testimony, what are Staff's conclusions and recommendations**
3 **regarding its engineering evaluation of Dixie's electrical system?**

4 **A.** Staff's conclusions and recommendations are as follows:

5
6 1. It is Staff's conclusion that Dixie:

7
8 a. is operating and maintaining its electrical system properly and in
9 accordance with applicable industry and regulatory standards;

10
11 b. is carrying out system improvements, upgrades, and new additions to meet
12 the current and projected load of Dixie in an efficient and reliable manner.
13 These improvements, system upgrades, and new additions are reasonable
14 and appropriate;

15
16 c. has an acceptable level of system losses, consistent with industry
17 guidelines;

18
19 d. has a satisfactory record of service interruptions in the historic period from
20 2007 thru 2012, reflecting satisfactory quality of service; and

21
22 e. constructed a transmission line, as defined in A.R.S. § 40-360, from St.
23 George, UT to Beaver Dam, AZ capable of operating at 138kV without
24 obtaining a Certificate of Environmental Compatibility (CEC) as required
25 by A.R.S. § 40-360.03.
26

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2. Staff recommends that Dixie should:

- a. continue with planned system improvements, upgrades, and new additions as provided for in the 2012-2014 Construction Work Plan, and
- b. be required to comply with filing requirements of A.R.S. § 40-360.02 going forward, and to obtain a CEC prior to operating the Arizona portion of the transmission line from St. George, Utah, to Beaver Dam, Arizona, at or above 115 kV.

Q. Does that conclude your testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

BOB BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

IN THE MATTER OF THE APPLICATION OF)
DIXIE ESCALANTE FOR APPROVAL OF A)
RATE INCREASE)

DOCKET NO. E-02004A-12-0419

DIRECT

TESTIMONY

OF

PREM K. BAHL

ELECTRIC UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 23, 2013

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III. CONCLUSIONS AND RECOMMENDATIONS	5

EXHIBIT 1

(COST OF SERVICE SCHEDULES G-1 THRU G-7.1)

Cost of Service Summary – Present Rates.....	Schedule G-1
Cost of Service Summary – Proposed Rates.....	Schedule G-2
Rate Base Classification	Schedule G-3
Rate Base Allocation	Schedule G-3.1
Expense Classification	Schedule G-4
Expense Allocation	Schedule G-4.1
Revenue Allocation.....	Schedule G-5
Development of Average Unit Cost	Schedule G-6
Classification Factors	Schedule G-7
Development of Allocation Factors	Schedule G-7.1

EXECUTIVE SUMMARY
DIXIE ESCALANTE RURAL ELECTRIC ASSOCIATION INC.
COST OF SERVICE STUDY
DOCKET NO. E-02044A-12-0419

Prem Bahl's testimony discusses Utilities Division Staff's ("Staff") review of Dixie Escalante Rural Electric Association, Inc.'s ("Dixie Escalante," "Dixie" or "Cooperative") Cost of Service Study ("COSS") for the rate case filed with the Arizona Corporation Commission ("Commission"), and presents the results of Staff's analysis.

Based on its review of Dixie Escalante's COSS, Staff's conclusions and recommendations are as follows:

1. It is Staff's conclusion that Dixie performed the COSS consistent with the methodology generally accepted in the industry, and developed all of the allocation factors appropriately.
2. Staff further concludes that, based on the evaluation of the COSS model utilized by Dixie, the results of the COSS are satisfactory.
3. Staff recommends that Dixie continue to utilize the current COSS model in future rate cases.
4. Staff further recommends that Dixie's COSS cost allocations and cost allocation factors, included under G-Schedules, be accepted. These G-Schedules are attached in Exhibit 1.

1 **I. INTRODUCTION**

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

3 A. My name is Prem K. Bahl. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. By whom and in what capacity are you employed?**

7 A. I am employed by the Arizona Corporation Commission (“Commission”) as an Electric
8 Utilities Engineer.

9
10 **Q. Please describe your educational background.**

11 A. I graduated from the South Dakota State University with a Master’s degree in Electrical
12 Engineering in May 1972. I received my Professional Engineering (“P.E.”) License in the
13 state of Arizona in 1978. My Bachelor of Science degree in Electrical Engineering was
14 from the Agra University, India, in 1957.

15
16 **Q. Please describe your pertinent work experience.**

17 I worked at the Arizona Corporation Commission from 1988 to 1998 as a Utilities
18 Consultant, and have subsequently been re-employed at the Commission as an Electric
19 Utilities Engineer since June 2002 until the present time. Since rejoining the Commission,
20 I have reviewed utilities’ load curtailment plans; coordinated with the Commission
21 Consultants to hold ten workshops to report on the second through the sixth Biennial
22 Transmission Assessments (“BTA”) for Arizona. I have also worked on compliance of
23 Certificates of Environmental Compatibility including Harquahala, Panda Gila River, Red
24 Hawk, Northern Arizona Project, and Coolidge power plants. In 2004, I testified in the
25 line siting cases of TEP’s 138 kV Robert Bills-Wilmont Substation and Trico Electric
26 Cooperative’s 115 kV Sandario Project. In 2007 and 2008, I testified in the Palo Verde to

1 North Gila 500 kV project, 138 kV Vail to Cienega project and the Coolidge Station
2 project.

3
4 During this time period of over twenty years at the Commission, I conducted engineering
5 evaluations of electric utility rate cases and financing cases, such as those pertaining to
6 Arizona Public Service Company, Tucson Electric Company ("TEP"), Salt River Project,
7 Southwest Gas Company, Trico Electric Cooperative, Duncan Valley Electric
8 Cooperative; Sulphur Springs Valley Electric Cooperative ("SSVEC"), Dixie County
9 Electric Cooperative ("GCEC"), and Dixie County Utilities, Inc., Gas Division ("Dixie")
10 and Navopache Electric, Inc. ("NEC").

11
12 I inspected utility power plants including the Palo Verde Nuclear Generating Station. I
13 was involved with the development of retail competition in Arizona and of DesertStar, an
14 Independent System Operator ("ISO") for the desert southwest region. I was Chairman of
15 the System Reliability Working Group, which evaluated the impact of competition on
16 system reliability and recommended the establishment of the Arizona Independent System
17 Administrator ("AISA") as an interim organization until commercial operation of
18 DesertStar, which later evolved into WestConnect, a pseudo Regional Transmission
19 Operator ("RTO").

20
21 From July 2001 to June 2002, I had my own consulting engineering firm, named P. K.
22 Bahl & Associates. During that time, I was involved with deregulation of the electric
23 power industry and the formation of RTO's, addressing the planning, congestion
24 management, business practices and market monitoring activities of the then Northwest
25 RTO and the MidWest ISO.

1 From July 1998 to August 2000, I worked as Chief Engineer at the Residential Utility
2 Consumer Office. During that time period, I performed many of the duties I performed at
3 the Commission. I was also involved with the Distributed Generation Work Group that
4 looked at the impact of the development of distributed generation in Arizona on system
5 reliability, and modifications to interconnection standards currently specified by the
6 jurisdictional utilities. I was a member of the AISA Board of Directors from September
7 1999 until June 2000. I was involved in the deliberations of the Market Interface
8 Committee of the North American Electric Reliability Council ("NERC"). I also
9 published and presented a number of technical papers at national and international
10 conferences regarding transmission issues and distributed generation during the last thirty
11 years.

12
13 Prior to my employment with the Commission, I worked as an electrical engineer with
14 electric utilities and consulting firms in the transmission and generation planning areas for
15 approximately thirty two years, including ten years' experience at the Punjab State
16 Electricity Board ("PSEB") in India from 1960 to 1970. I worked as Executive Engineer
17 at the PSEB from 1968 to 1970 prior to coming to the United States in 1970.

18
19 **Q. As part of your assigned duties at the Commission, did you perform an analysis of**
20 **the application that is the subject of this proceeding?**

21 **A.** Yes, I did.

22
23 **Q. Is your testimony herein based on that analysis?**

24 **A.** Yes, it is.

1 **Q. What is the purpose of your Direct Testimony?**

2 A. The purpose of my testimony is to discuss Staff's review of Dixie's COSS for the rate
3 case, and present the results of this review.
4

5 **II. COST OF SERVICE STUDY - REVIEW PROCESS**

6 **Q. What does the COSS signify?**

7 A. There are three steps in performing a COSS. They are: 1) functionalization; 2)
8 classification; and 3) allocation. First, the COSS enables us to determine the system cost
9 of service by classifying the utility's costs (investments and expenses) by function, such as
10 customer-related, demand-related, and energy-related functions. Second, the study breaks
11 down these costs by customer classes to reflect as closely as possible the cost causation by
12 respective customer classes. Third, the results of the COSS provide a benchmark for the
13 revenues needed from each customer category by appropriately allocating the revenue
14 requirement for each customer class.
15

16 **Q. Is there a standard COSS model?**

17 A. There is no standard methodology for designing a COSS, but it is generally advisable to
18 follow a range of alternatives to identify which allocations are more reasonable than
19 others. For that reason, the COSS should be used as a general guide only and as one of
20 many considerations in designing rates.
21

22 **Q. Did Staff conduct a separate independent COSS?**

23 A. No. Staff did not conduct a separate independent COSS. Staff reviewed the COSS
24 performed by Dixie. The COSS Schedules are attached to this testimony as Schedules G-
25 1 thru G-8 under Exhibit 1.
26

1 **Q. What was the process Staff used in reviewing Dixie's COSS?**

2 A. First, I reviewed the G Schedules reflecting various allocation factors in the COSS. Based
3 on the information received from the Cooperative's consultant, I corrected a typo in the
4 Classification Factor column for the Line Transformer (595 account). Second, I reviewed
5 the Test Year ("FYE December 31, 2011") rate base, revenues and expenses in the filed
6 rate case. No changes in these were received from other Staff witnesses. Therefore, they
7 remain as filed.

8
9 **III. CONCLUSIONS AND RECOMMENDATIONS**

10 **Q. Based upon your testimony, what are Staff's conclusions and recommendations**
11 **regarding the Cost of Service Study?**

12 A. Based on the review of Dixie's COSS, Staff's conclusions and recommendations are as
13 follows:

14
15 1. It is Staff's conclusion that Dixie performed the COSS consistent with the
16 methodology generally accepted in the industry, and developed the allocation
17 factors appropriately.

18
19 2. Staff further concludes that, based on the evaluation of the COSS model utilized
20 by Dixie, the results of the COSS are satisfactory.

21
22 3. Staff recommends that Dixie should continue to utilize the current COSS model in
23 future rate cases.

24
25 4. Staff further recommends that Dixie's COSS cost allocations and factors be
26 accepted. These G-Schedules are listed under the attached Exhibit 1.

- 1 **Q. Does this conclude your Direct Testimony?**
- 2 **A. Yes it does.**

EXHIBIT 1

Dixie Escalante REA, INC.

Cost of Service Schedules G-1 Through G-7.1

DIXIE ESCALANTE REA INC.
 COST OF SERVICE SUMMARY - PRESENT RATES
 FULLY DISTRIBUTED EMBEDDED COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

	ARIZONA	SC	GS	IR	IR-I	Area Lights	SC + GS	IR + IR I
	TOTAL	Residential	Gen Service	Irrigation	Irrig-Interrupt	Off Peak	SC + GS	IR + IR I
		Sm Comm						
REVENUES-Sales	1,900,754	1,370,675	3,765	71,451	1,563	1,806	258,373	73,014
Other Operating Revenues	14,817	12,822	10	67	10	7	1,808	77
TOTAL OPERATING REVENUES	1,915,571	1,383,498	3,775	71,518	1,573	1,812	260,181	73,091
TOTAL OPERATING EXPENSES	2,154,042	1,579,500	2,883	66,782	3,344	1,064	289,146	70,126
NET OPERATING INCOME	(238,470)	(196,003)	892	4,737	(1,771)	749	(28,965)	2,966
TOTAL RATE BASE	5,222,201	3,615,120	7,130	172,290	11,780	1,918	715,529	184,070
% RETURN ON RATE BASE	-4.57%	-5.42%	12.51%	2.75%	-15.03%	39.03%	-4.05%	1.61%
Cost of Service with Target ROR=	7.50%							
RETURN (\$)	391,665	271,134	535	12,922	883	144	53,665	13,805
EXPENSES	2,154,042	1,579,500	2,883	66,782	3,344	1,064	289,146	70,126
LESS REVENUE CREDITS	14,817	12,822	10	67	10	7	1,808	77
TOTAL COST OF SERVICE	2,530,889	1,837,812	3,408	79,636	4,218	1,201	341,002	83,854
TOTAL SALES REVENUES	1,900,754	1,370,675	3,765	71,451	1,563	1,806	258,373	73,014
DEFICIT	630,135	467,137	(357)	8,185	2,654	(605)	82,629	10,840
% RATE INCREASE FOR EQ ROR	33.15%	34.08%	-9.49%	11.46%	169.81%	-33.49%	31.98%	14.85%

DIXIE ESCALANTE REA INC.
 COST OF SERVICE SUMMARY - PROPOSED RATES
 FULLY DISTRIBUTED EMBEDDED COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

	ARIZONA	SC	GS	IR	IRI	Area Lights	SC + GS	IR + IRI
	TOTAL	Residential	Gen Service	Irrigation	Irrig-Interrupt	Off Peak		
REVENUES-Sales	2,094,069	1,520,354	3,083	79,414	1,871	1,382	282,138	81,285
Other Operating Revenues	14,817	12,822	10	67	10	7	1,808	77
TOTAL OPERATING REVENUES	2,108,887	1,533,176	3,093	79,481	1,881	1,389	283,946	81,361
TOTAL OPERATING EXPENSES	2,154,042	1,579,500	2,883	66,782	3,344	1,064	289,146	70,126
NET OPERATING INCOME	(45,155)	(46,324)	210	12,699	(1,463)	325	(5,200)	11,236
TOTAL RATE BASE	5,222,201	3,615,120	7,130	172,290	11,780	1,918	715,529	184,070
% RETURN ON RATE BASE	-0.86%	-1.28%	2.94%	7.37%	-12.42%	16.93%	-0.73%	6.10%
Cost of Service with Target ROR=	7.50%							
RETURN (\$)	391,665	271,134	535	12,922	883	144	53,665	13,805
EXPENSES	2,154,042	1,579,500	2,883	66,782	3,344	1,064	289,146	70,126
LESS REVENUE CREDITS	14,817	12,822	10	67	10	7	1,808	77
TOTAL COST OF SERVICE	2,530,889	1,837,812	3,408	79,636	4,218	1,201	341,002	83,854
TOTAL SALES REVENUES	2,094,069	1,520,354	3,083	79,414	1,871	1,382	282,138	81,285
DEFICIT	436,820	317,458	325	223	2,347	(181)	58,865	2,569
% RATE INCREASE FOR EQ ROR	20.86%	20.88%	10.54%	0.28%	125.43%	-13.08%	20.86%	3.16%

DIXIE ESCALANTE REA INC.
 RATE BASE CLASSIFICATION
 COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

	CF	TOTAL **	DEM-CP	DEM-PRI	DEM-SEC	ENERGY	CUST-PLT-M	CUST-SER	CUST-PLT-S	DIR-Deposits	DIR-Lighting	DIR-Impact
INTANGIBLE PLANT		0										
TRANSMISSION PLANT	1	1,838,826	1,838,826	-	-	-	-	-	-	-	-	-
DISTRIBUTION PLANT												
360-Land	2	3,883	-	3,883	-	-	-	-	-	-	-	-
362-Station equipment	2	888,272	-	888,272	-	-	-	-	-	-	-	-
364-Poles,towers & fixtures	2	514,694	-	514,694	-	-	-	-	-	-	-	-
365-Overhead conductors	2	488,160	-	488,160	-	-	-	-	-	-	-	-
366-Undergrd conduit	2	11,942	-	11,942	-	-	-	-	-	-	-	-
367-Undergrd conductors	2	383,172	-	383,172	-	-	-	-	-	-	-	-
368-Line transformers	11	588,741	-	-	412,119	-	-	176,622	-	-	-	-
369-Services	7	182,428	-	-	-	-	-	182,428	-	-	-	-
370-Meters	5	412,349	-	-	-	412,349	-	-	-	-	-	-
371-Install on cust premises	9	39,146	-	-	-	-	-	-	-	-	39,146	-
373-St Lighting	9	40,735	-	-	-	-	-	-	-	-	40,735	-
Total Distribution Plant	9	3,553,521	-	2,290,122	412,119	-	412,349	359,051	-	-	79,880	-
GENERAL PLANT	13	1,696,248	578,432	720,394	129,638	-	129,711	-	112,945	-	25,128	-
TOTAL PLANT IN SERVICE		7,088,595	2,417,257	3,010,517	541,757	-	542,060	-	471,996	-	105,008	-
CWIP - Transmission	16	70,447	70,447	-	-	-	-	-	-	-	-	-
CWIP - Distribution	12	30,461	-	19,631	3,533	-	3,535	-	3,078	-	685	-
CWIP - General	17	79,053	26,957	33,574	6,042	-	6,045	-	5,264	-	1,171	-
Subtotal CWIP		179,961	97,405	53,205	9,574	-	9,580	-	8,342	-	1,856	-
Materials & Supplies	13	558,080	190,309	237,016	42,652	-	42,676	-	37,160	-	8,267	-
Prepayments		3,156	1,076	1,340	241	-	241	-	210	-	47	-
Cash Working Capital	13	-	-	-	-	-	-	-	-	-	-	-
Subtotal		741,197	288,790	291,561	52,468	-	52,497	-	45,712	-	10,170	-
LESS Accumulated deprec & amort												
Transmission	16	408,115	408,115	-	-	-	-	-	-	-	-	-
Distribution	12	828,734	-	534,091	96,112	-	96,166	-	83,736	-	18,629	-
General	17	885,986	302,127	376,277	67,713	-	67,751	-	58,994	-	13,125	-
Intangible-Amortization	13	-	-	-	-	-	-	-	-	-	-	-
Subtotal		2,122,835	710,242	910,368	163,825	-	163,917	-	142,730	-	31,754	-
LESS Cust impact fees	10	435,703	-	-	-	-	-	-	-	-	-	435,703
LESS Cust deposits	8	49,053	-	-	-	-	-	-	49,053	-	-	-
TOTAL RATE BASE		5,222,201	1,995,806	2,391,709	430,400	-	430,641	-	374,978	(49,053)	83,424	(435,703)

**DIXIE ESCALANTE REA INC.
RATE BASE ALLOCATION
COST OF SERVICE STUDY - ARIZONA
TEST YEAR ENDED DECEMBER 31, 2011**

	AF	TOTAL	Residential	Sm Comm	SC	Gen Service	Lg Comm	IR	Irrigation	Irrig-Interrupt	IRI	Off Peak	Area Lights	SC + GS	IR + IR I
Demand-CP	1	1,995,806	1,437,714	258,870		1,781	224,217	66,111	3,278				3,835	260,651	69,389
-Primary	2	2,391,709	1,589,346	314,242		3,544	373,611	97,571	7,318			1,250	4,829	317,786	104,888
-Secondary	3	430,400	308,776	53,144		677	53,178	13,096	826			190	512	53,821	13,923
Total Demand	4	4,817,915	3,335,836	626,256		6,002	651,006	176,778	11,421			1,440	9,175	632,258	188,200
Energy	5														
Customer-Plant-Meters	6	430,641	324,662	91,044		1,523	6,600	5,923	888					92,567	6,811
-Services	7														
-Plant-Services	8	374,978	322,526	45,223		252	4,371	1,681	252			672		45,475	1,933
Total Customer	9	805,618	647,188	136,267		1,775	10,971	7,604	1,141			672		138,042	8,745
Direct-Cust Deposits	10	(49,053)	(42,448)	(5,952)		(33)	(144)	(221)	(33)			(22)	(199)	(5,985)	(254)
Direct-Lighting	11	83,424											83,424		
Direct-Impact Fees		(435,703)	(325,457)	(48,173)		(614)	(48,204)	(11,871)	(749)			(172)	(464)	(48,787)	(12,620)
TOTAL RATE BASE		5,222,201	3,615,120	708,399		7,130	613,629	172,290	11,780			1,918	91,936	715,529	184,070

DIXIE ESCALANTE REA INC.
EXPENSE CLASSIFICATION
COST OF SERVICE STUDY - ARIZONA
TEST YEAR ENDED DECEMBER 31, 2011

	CF	TOTAL **	DEM-CP	DEM-PRI	DEM-SEC	ENERGY	CUST-PLT-M	CUST-SER	CUST-PLT-S	DIR-Deposits	DIR-Lighting	DIR-Impact
POWER PRODUCTION												
555-Purchased Power-Demand	1	727,326	727,326	-	-	-	-	-	-	-	-	-
555-Purchased Power-Energy	4	557,577	-	-	-	557,577	-	-	-	-	-	-
555-Purchased Power-Other	14	1,008	571	-	-	437	-	-	-	-	-	-
557-Other power supply	14	75	43	-	-	33	-	-	-	-	-	-
Subtotal		1,285,986	727,939	-	-	558,047	-	-	-	-	-	-
13,586	16											
TRANSMISSION O&M												
DISTRIBUTION OPER												
580-Supervision	12	18,496	-	11,920	2,145	-	2,146	-	1,869	-	416	-
581-Load dispatching	12	1,784	-	1,150	207	-	207	-	180	-	40	-
582-Station	2	8,014	-	8,014	-	-	-	-	-	-	-	-
583-Overhead lines	2	41,606	-	41,606	-	-	-	-	-	-	-	-
584-Undergrd lines	2	4,469	-	4,469	-	-	-	-	-	-	-	-
585-Street Lights	9	8	-	-	-	-	-	-	-	-	8	-
586-Meters	5	38,749	-	-	-	-	38,749	-	-	-	-	-
587-Cust installations	6	18,782	-	-	-	-	-	18,782	-	-	-	-
588-Misc	12	37,287	-	24,030	4,324	-	4,327	-	3,768	-	838	-
589-Rents	12	60	-	39	7	-	7	-	6	-	1	-
Subtotal		169,255	-	91,228	6,683	-	45,436	-	5,823	-	1,304	-
DISTRIBUTION MAINT												
590-Maint suprv & engr	12	-	-	-	-	-	-	-	-	-	-	-
592-Station equipment	2	5,459	-	5,459	-	-	-	-	-	-	-	-
593-Overhead lines	2	51,323	-	51,323	-	-	-	-	-	-	-	-
594-Undergrd lines	2	11,183	-	11,183	-	-	-	-	-	-	-	-
595-Line transformers	18	25,336	-	-	17,735	-	-	-	7,601	-	-	-
596-Maint of St Lights	9	3,919	-	-	-	-	-	-	-	-	-	3,919
597-Meters	5	16,290	-	-	-	-	16,290	-	-	-	-	-
598-Misc	12	-	-	-	-	-	-	-	-	-	-	-
Subtotal		113,509	-	67,964	17,735	-	16,290	-	7,601	-	3,919	-
CUSTOMER EXPENSES												
901-Supervision-accts	6	-	-	-	-	-	-	-	-	-	-	-
902-Meter reading	6	7,280	-	-	-	-	-	7,280	-	-	-	-
903-Records & collection	6	90,531	-	-	-	-	-	90,531	-	-	-	-
904-Uncollectibles	8	3,673	-	-	-	-	-	-	-	3,673	-	-
908-Cust assistance	6	7,780	-	-	-	-	-	7,780	-	-	-	-
909-Info & instruc advertising	6	3,878	-	-	-	-	-	3,878	-	-	-	-
910-Misc cust svc & info	6	-	-	-	-	-	-	-	-	-	-	-
912.1-Demonstrating & selling	6	14,327	-	-	-	-	-	14,327	-	-	-	-
912.2-Rebate expense	1	-	-	-	-	-	-	-	-	-	-	-
Subtotal		127,469	-	-	-	-	-	123,796	-	3,673	-	-
ADMINISTRATIVE & GEN												
920-Admin & gen salaries	15	100,045	3,207	37,578	5,764	-	14,571	33,656	3,169	867	1,233	-
921-Office supplies & expenses	15	17,749	569	6,667	1,023	-	2,585	5,971	562	154	219	-
923-Outside services	15	2,635	84	890	152	-	384	886	83	23	32	-
924-Property insurance	13	9,453	3,224	4,015	722	-	723	-	629	-	140	-
925-Injuries & damages	15	297	10	111	17	-	43	100	9	3	4	-
928-Regulatory expenses	15	14,751	473	5,541	850	-	2,148	4,962	467	128	182	-
928-Duplicate charges - Cr	15	(4,631)	(148)	(1,739)	(267)	-	(674)	(1,558)	(147)	(40)	(57)	-
930-Misc general expenses	15	64,268	2,060	24,140	3,703	-	9,360	21,621	2,036	557	792	-
931-Rents	13	-	-	-	-	-	-	-	-	-	-	-
935-Maint of general plant	17	19,521	6,657	8,291	1,492	-	1,493	-	1,300	-	289	-
Subtotal		224,087	16,135	85,592	13,456	-	30,632	65,638	8,109	1,691	2,834	-
DEPRECIATION & AMORT EXP												
Transmission	16	44,691	44,691	-	-	-	-	-	-	-	-	-
Distribution	12	70,719	-	45,576	8,202	-	8,206	-	7,146	-	1,590	-
General	17	51,755	17,649	21,980	3,955	-	3,958	-	3,446	-	767	-
Intangible-Amortization	13	-	-	-	-	-	-	-	-	-	-	-
Subtotal		167,166	62,340	67,556	12,157	-	12,164	-	10,592	-	2,356	-
Taxes-Property-Electric Utility	13	50,667	17,278	21,518	3,872	-	3,874	-	3,374	-	751	-
Interest on cust deposits	8	2,317	-	-	-	-	-	-	-	2,317	-	-
TOTAL EXPENSES		2,154,042	837,279	333,858	53,904	558,047	108,396	208,217	35,498	7,681	11,163	-

DIXIE ESCALANTE REA INC.
 EXPENSE ALLOCATION
 COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

Schedule G-4.1

	AF	TOTAL	Residential	Sm Comm	Gen Service	Lg Comm	Irrigation	IR	Irrig-Interrupt	Off Peak	Area Lights	SC + GS	IR + IRI
Demand-CP	1	837,279	603,149	108,601	747	94,063	27,735		1,375	-	1,609	109,348	29,110
-Primary	2	333,858	221,856	43,865	495	52,152	13,620		1,021	174	674	44,360	14,641
-Secondary	3	53,904	38,672	6,656	85	6,660	1,640		103	24	64	6,741	1,744
Total Demand		1,225,040	863,676	159,122	1,327	152,876	42,995		2,500	198	2,347	160,448	45,495
Energy	4	558,047	417,786	73,893	1,004	43,055	19,768		241	409	1,890	74,898	20,009
Customer-Plant-Meters	5	108,396	81,720	22,917	383	1,661	1,491		224	-	-	23,300	1,714
-Services	6	208,217	179,138	25,118	140	607	2,334		350	389	140	25,258	2,685
-Plant-Services	7	35,498	30,532	4,281	24	414	159		24	64	-	4,305	183
Total Customer		352,111	291,391	52,315	547	2,692	3,984		598	453	140	52,863	4,582
Direct-Cust Deposits	8	7,681	6,647	932	5	23	35		5	3	31	937	40
Direct-Lighting	9	11,163	-	-	-	-	-		-	-	11,163	-	-
Direct-Impact Fees	11	-	-	-	-	-	-		-	-	-	-	-
TOTAL EXPENSES		2,154,042	1,579,500	286,262	2,883	198,635	66,782		3,344	1,064	15,571	289,146	70,126

DIXIE ESCALANTE REA, INC.
 REVENUE ALLOCATION
 COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

	AF	TOTAL	Residential	SC	GS	Lg Comm	IR	IRrigation	Irrig-Interrupt	Off Peak	Area Lights	SC + GS	IR + IR I
	DIR			Sm Comm	Gen Service								
REVENUES-Sales		1,900,754	1,370,675	254,608	3,765	178,803	71,451	1,563	1,806	18,082	258,373	73,014	
REVENUE CREDITS													
450-Penalties	10	3,302	2,858	401	2	10	15	2	1	13	403	17	
451-Conn,Disc & ret ck fees	10	11,515	9,965	1,397	8	34	52	8	5	47	1,405	60	
Subtotal		14,817	12,822	1,798	10	43	67	10	7	60	1,808	77	
TOTAL REVENUES		1,915,571	1,383,498	256,406	3,775	178,846	71,518	1,573	1,812	18,143	260,181	73,091	

**DIXIE ESCALANTE REA INC.
DEVELOPMENT OF AVERAGE UNIT COSTS
COST OF SERVICE STUDY - ARIZONA
TEST YEAR ENDED DECEMBER 31, 2011**

	TOTAL	Residential	SC	SC Comm	Gen Service	Lg Comm	Irrigation	Irrig-Interrupt	Off Peak	Area Lights	SC + GS	IR + IR I
Total Return (\$) with Target ROR =	7.50%											
Total COS (Return+Exp-Rev Credits)	1,545,279	1,082,163	201,456	1,725	198,061	55,325	3,295	290	2,966	203,181	58,620	
Demand Total	554,208	414,484	73,428	1,002	43,044	19,750	239	408	1,875	74,429	19,989	
Energy Total	431,402	341,185	62,711	681	3,509	4,561	684	504	17,566	63,393	5,245	
Customer Total	2,530,889	1,837,812	337,594	3,408	244,614	79,636	4,218	1,201	22,406	341,002	83,854	
Total Cost of Service												
			SC	GS	IR	IR I	IR + IR I					
ANNUAL BILLING UNITS	TOTAL	Residential	SC Comm	Gen Service	Lg Comm	Irrigation	Irrig-Interrupt	Off Peak	Area Lights	SC + GS	IR + IR I	
Cust-months or lamp-months	28,003	23,022	3,228	18	78	120	18	12	1,507	3,246	138	
KWH (@ meter)	30,696,490	22,981,155	4,064,655	55,234	2,368,320	1,087,357	13,274	22,520	103,975	4,119,889	1,100,631	
KW (MCD @ meter)	236,978	191,028	23,227	161	14,872	7,002	277	102	309	23,388	7,279	
AVERAGE UNIT COST OF SERVICE												
Cust-\$/Cust/mo or Tot \$/lamp/mo	15.41	14.82	19.43	37.86	44.99	38.01	38.01	41.98	14.87	19.53	38.01	
Energy--Cents/kwh	1.81	1.80	1.81	1.81	1.82	1.82	1.80	1.81	1.81	1.81	1.82	
Demand--\$/Kw	6.52	5.66	8.67	10.74	13.32	7.90	11.88	2.85	8.69	8.69	8.05	
Demand+Energy(Avg)--Cents/kwh		6.51	6.76	4.94	10.18	6.90	26.62	3.10	6.74	6.74	7.14	
Unit COS with flat cents/kwh	8.24	8.00	8.31	6.17	10.33	7.32	31.77	5.33	21.55	8.28	7.62	
Actual 2011 Ave Price(C/Kwh)	6.19	5.96	6.26	6.82	7.55	6.57	11.78	8.02	17.39	6.27	6.63	

DIXIE ESCALANTE REA INC.
 CLASSIFICATION FACTORS
 COST OF SERVICE STUDY - ARIZONA
 TEST YEAR ENDED DECEMBER 31, 2011

CLASSIFICATION FACTORS	CF	TOTALS	DEM-CP	DEM-PRI	DEM-SEC	ENERGY	CUST-PLT-M	CUST-SER	CUST-PLT-S	Dir-Deposits	DIR-Lighting	DIR-Impact
Demand-CP	1	1.00000	1									
Demand-Primary	2	1.00000		1								
Demand-Secondary	3	1.00000			1							
Energy	4	1.00000				1						
Customer-Plant-Meters	5	1.00000					1					
Customer-Services	6	1.00000						1				
Customer-Plant-Services	7	1.00000							1			
Direct-Deposits	8	1.00000									1	
Direct-Lighting	9	1.00000										1
Direct-Impact Fees	10	1.00000										1
Line Transformers	11	1.00000	0.00000	0.00000	0.70000	0.00000	0.00000	0.00000	0.30000	0.00000	0.00000	0.00000
Distribution Plant (derived)	12	1.00000	0.00000	0.64447	0.11597	0.00000	0.11604	0.00000	0.10104	0.00000	0.02248	0.00000
Transm+Distr Plant (derived)	13	1.00000	0.34101	0.42470	0.07643	0.00000	0.07647	0.00000	0.06659	0.00000	0.01481	0.00000
Purch Pwr-Kw & Kwh (derived)	14	1.00000	0.56606	0.00000	0.00000	0.43394	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
O&M-Power Prod Exp (derived)	15	1.00000	0.03206	0.37561	0.05762	0.00000	0.14564	0.33641	0.03167	0.00867	0.01232	0.00000
Transmission Plant (derived)	16	1.00000	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
General Plant (derived)	17	1.00000	0.34101	0.42470	0.07643	0.00000	0.07647	0.00000	0.06659	0.00000	0.01481	0.00000

