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BEFORE THE ARIZONA CORPORATION COMMISSION

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COMMISSIONERS

- DOUG LITTLE, CHAIRMAN
- BOB STUMP
- BOB BURNS
- TOM FORESE
- ANDY TOBIN

IN THE MATTER OF THE APPLICATION OF )  
 TRICO ELECTRIC COOPERATIVE, INC., AN )  
 ARIZONA NONPROFIT CORPORATION, FOR )  
 A DETERMINATION OF THE CURRENT FAIR )  
 VALUE OF ITS UTILITY PLANT AND )  
 PROPERTY AND FOR INCREASES IN ITS )  
 RATES AND CHARGES FOR UTILITY )  
 SERVICE AND FOR RELATED APPROVALS. )

Docket No. E- 01461A-15-0363

**NOTICE OF FILING TESTIMONY  
IN SUPPORT OF SETTLEMENT  
AGREEMENT**

Trico Electric Cooperative, Inc. submits Testimony of Vincent Nitido and David Hedrick in support of the Settlement Agreement.

RESPECTFULLY SUBMITTED this 29<sup>th</sup> day of July, 2016.

Arizona Corporation Commission  
**DOCKETED**  
 JUL 29 2016

DOCKETED BY AK

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Docket Control  
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 Phoenix, Arizona 85007

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FAIR VALUE OF THE PLANT AND )  
PROPERTIES AND FOR RELATED )  
APPROVALS. )

Testimony of Vincent Nitido

In Support of Settlement Agreement

on Behalf of

Trico Electric Cooperative, Inc.

July 29, 2016

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1 **I. INTRODUCTION.**

2

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

4 A. My name is Vincent Nitido and my business address is 8600 West Tangerine Road,  
5 Marana, Arizona, 85658

6

7 **Q. What is your position with Trico Electric Cooperative, Inc. (“Trico or  
8 “Cooperative”)?**

9 A. I am Chief Executive Officer and General Manager of Trico.

10

11 **Q. Did you previously submit testimony in this docket?**

12 A. Yes. I submitted Direct Testimony on October 25, 2015. I also submitted Supplemental  
13 Direct Testimony on May 4, 2016, proposing an updated rate design in this case.

14

15 **Q. What is the purpose of your Testimony here?**

16 A. The purpose of my Testimony is to support the July 8, 2016 Settlement Agreement  
17 (“Settlement Agreement”) that was filed with the Arizona Corporation Commission  
18 (“Commission”) in this Docket. In my Testimony, I will: (1) describe the factors that  
19 justify the base rate increase; (2) describe the settlement process that the Company  
20 undertook and why it supports the Settlement Agreement; and (3) provide an overview and  
21 some of the detail for the key provisions of the Settlement Agreement.

22

23

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1 **II. BACKGROUND AND SUMMARY.**

2  
3 **Q. Please summarize the reasons why Trico filed this general rate case on October 25,**  
4 **2015.**

5 A. The principal reason for Trico's rate case is to address increasing inequities regarding who  
6 pays for the use of Trico's electric grid. Trico believed that its rate proposals would lead to  
7 more equitable and sustainable rates for its Members. These proposals seek to modify  
8 Trico's rate design to: (i) recover fixed grid costs associated with existing distributed  
9 generation within Trico's service territory by increasing the fixed monthly customer charge  
10 and decreasing the volumetric energy rate for all members; (ii) better match fixed cost  
11 recovery by customer class to the cost of service for that class; and (iii) reduce the fixed  
12 cost-shift and resultant subsidies to members who install rooftop solar or other distributed  
13 generation ("DG").

14  
15 With respect to DG, Trico supports renewable resources, including the sustainable growth  
16 of distributed generation ("DG") in its service area. However, under current rate design  
17 and net metering, Trico believes DG growth is placing undue burdens on its non-DG  
18 members and is not sustainable in the long run. As I explained in my Direct Testimony, as  
19 a member-owned cooperative, Trico has a fiduciary duty to its members as a whole to  
20 ensure that its rates are fair and equitable to *all* of its member-customers.

21  
22 Trico serves a predominantly rural member base across a large service territory, which  
23 results in a higher cost of service (including fixed costs) per member-customer than the  
24 State's investor-owned electric utilities. That equates to relatively higher rates, and when  
25 members generate power utilizing DG under the current net metering tariff, relatively  
26 higher levels of fixed costs that are either lost or shifted to non-DG members. Trico  
27 experienced steady growth in the installation of distributed generation in its service

1 territory from 2005, when the Cooperative implemented its first renewable energy plan,  
2 and thereafter following the Commission's adoption of the Renewable Energy Standard  
3 and Tariff rules ("REST Rules"). That sustainable level of growth continued as the cost of  
4 rooftop photovoltaic ("PV") systems declined and efficiencies improved, even as Trico and  
5 other Arizona utilities reduced and ultimately eliminated upfront incentives.

6  
7 Following the introduction of the financial leasing model in Trico's service territory in  
8 2014, however, the number of applications for DG interconnections skyrocketed. In 2013,  
9 Trico received 160 applications the year. In December 2014 alone, however, Trico  
10 received 114 applications. Trico received 74 applications in January 2015, and 174  
11 applications in February 2015. That escalating trend has continued. To put it in  
12 perspective, Trico's 2014 test year in this docket reflected 551 interconnected DG systems  
13 at the start of 2014. The adjusted test year, which includes interconnected DG systems as  
14 of the original grandfather date of February 28, 2015 reflects an additional 711 systems  
15 added over 14 months, for a total of 1,262. That does not include an additional 359  
16 systems which Trico has interconnected as of the revised grandfather date included in the  
17 Settlement Agreement of May 31, 2016 for a total of 1,621, all of which, under the  
18 Settlement Agreement, would be grandfathered under the current net metering tariff for the  
19 life of the interconnection agreement. Put another way, under the current net metering  
20 tariff, Trico's non DG members subsidize \$89.91 per month in fixed grid costs for each  
21 interconnected DG system. That equates to an annual subsidy in the amount of \$1,749,000  
22 per year as of May 31, 2016 or \$35 million over the 20 year life of the interconnection  
23 agreements. That subsidy is continuing to escalate at an alarming rate, and is not  
24 sustainable under our current rate design and net metering tariff because the subsidy is  
25 ultimately passed on to Trico members without DG. Even at this point, Trico will be  
26 locking in a cost shift to non-DG members of over \$1.5 million per year for the next 20  
27 years. Trico's member-elected Board of Directors believes that partially reducing the net

1 metering subsidy to DG members on a going forward basis is a fair and equitable step  
2 toward mitigating the cost shift inherent in the current rate, while continuing to support the  
3 growth of solar resources in the Cooperative's service territory.

4  
5 Trico is also seeking a revenue increase of \$2,282,076 (or 2.61%) over its adjusted 2014  
6 test year revenues. It has been seven years since our last rate case and I am pleased that we  
7 have been able to keep our cost increases to this level. The requested increase relates  
8 principally to the recovery of fixed costs associated with existing net metered DG systems;  
9 the costs incurred by Trico to conduct this rate case, which are significantly higher than a  
10 typical electric distribution cooperative rate case; and the carrying costs of certain direct  
11 assigned facilities ("DAFs") to be acquired from Arizona Electric Power Cooperative  
12 ("AEPCO"), which costs will be correspondingly removed from Trico's Wholesale Power  
13 Cost Adjuster ("WPCA").

14  
15 **Q. Please summarize why Trico filed an Amendment to its original Application on May**  
16 **4, 2016, proposing an updated rate design?**

17 **A.** Following the filing of Trico's original application in this docket on October 25, 2015,  
18 developments in various Commission proceedings regarding the net metering of DG led  
19 Trico to believe that three-part rates including a demand component are the most  
20 appropriate way to allocate the fixed costs of the Trico electric grid as new technologies  
21 emerge. I discussed those developments in more detail in my May 4, 2016 Supplemental  
22 Testimony in support of the Amendment. A recurring concern raised regarding three part  
23 rates in other proceedings was the potential for customer confusion and the need for  
24 customer education prior to implementation of the rates. The potential for "outlier" results  
25 for some customers was also noted. Accordingly, Trico proposed to implement three part  
26 rates gradually, in a manner intended to introduce the concept to our members, while  
27

1 simultaneously providing education and guidance to them regarding the operation of  
2 demand rates and the ways to manage electric load to reduce their bills.

3  
4 Trico's Amendment initially proposed a demand rate of \$2 per kW-month for the first 2  
5 kW of usage with a minimum demand of 2 kW and \$0.0 per kW month for demand above  
6 2kW for all residential and small commercial (GS-1) members. Volumetric energy rates  
7 were lowered to produce a revenue-neutral rate proposal. The approach was intended to  
8 provide demand information to the members while avoiding unintended consequences  
9 should a member have and unusual or unanticipated spike in electric usage.

10  
11 Following subsequent discussions with Commission Staff and internal consideration, Trico  
12 determined it is more appropriate to introduce a demand rate without charge for residential  
13 and small commercial members for the period prior to the Cooperative's next rate case, to  
14 collect and analyze member demand data, while simultaneously providing the  
15 aforementioned member education. That proposal is memorialized in the Settlement  
16 Agreement discussed below.

17  
18 **III. COMPONENTS OF THE SETTLEMENT AGREEMENT.**

19  
20 **Q. Please describe the changes between Trico's May 4, 2016 Amendment and the  
21 Settlement Agreement?**

22 **A.** The principal changes in rate design are a reduction in the demand charge to \$0.00 per kW-  
23 month with no monthly minimum, and an increase in the monthly customer charge to  
24 \$24.00 for residential customers on the Company's standard (non-TOU) rate schedule.  
25 Trico had proposed a monthly charge of \$20.00 per month in its May 4, 2016  
26 Supplemental Direct Testimony. The volumetric energy rate would be reduced to produce  
27 a revenue neutral result, while preserving the level of fixed grid cost recovery proposed in

1 Trico's May 4, 2016 Amendment. Providing demand information on the members' bills  
2 without a demand charge will introduce the concept of three-part rates to members without  
3 unintended consequences, allow for education outreach by the Cooperative and provide  
4 significant demand information to the Cooperative to analyze prior to implementing  
5 demand charges. Similar changes in rate design are proposed for small commercial  
6 customers, including a monthly customer charge of \$27.00 for GS1 (single-phase)  
7 members and \$35.00 for GS1 (three-phase) members, with a demand charge of \$0.00 per  
8 kW-month.

9  
10 Trico also will use data obtained by tracking member demand following the  
11 implementation of the initial \$0.00 per-kW demand rate, in order to determine whether it is  
12 appropriate to propose a demand rate in its next rate case, which can be based on a test  
13 year reflecting a 12-month period ending no earlier than June 30, 2018.

14  
15 The Settlement Agreement also provides for a new DG Energy Export Tariff to take effect  
16 in lieu of the current net metering tariff once a decision approving the Settlement  
17 Agreement is issued by the Commission. I discuss the DG Energy Export Tariff in more  
18 detail later in my testimony. The new DG Energy Export Tariff will apply to those DG  
19 members applying for interconnection after May 31, 2016.

20  
21 From a revenue requirement standpoint, the only significant difference is a revised rate  
22 case expense from \$150,000 to \$450,000 amortized over a three-year period. This revision  
23 results in a slight increase over the revenue requirement Trico originally proposed (from  
24 2.49 to 2.63 percent), but more accurately reflects what Trico will actually spend to  
25 process this rate case, which has been significantly more complicated and contested than a  
26 typical small electric cooperative rate case. The resulting rate of return on FVRB remains  
27 at 6.33 percent.

1 The revenue requirement in the Settlement Agreement is \$89,762,812 from \$87,480,736,  
2 or an increase of \$2,282,076, which is equal to approximately 2.63 percent over adjusted  
3 2014 test-year revenues. Fair Value Rate Base (“FVRB”) equals \$175,076,536 and  
4 includes the carrying costs of certain direct assignment facilities (“DAFs”) to be acquired  
5 from AEPCO, which costs will be correspondingly removed from Trico’s WPCA.  
6

7 **Q. Does the rate design proposed in the Settlement Agreement address recovery of fixed**  
8 **costs for more than just from DG members?**

9 A. Yes. The challenge presented with recovery of fixed costs of the grid through volumetric  
10 energy rates is that it creates financial disincentives to utilities that wish to promote not  
11 only DG, but also energy efficiency, demand side management and other energy saving  
12 technologies. For that reason, the concept of “decoupling” fixed cost recovery from  
13 volumetric energy rates has been considered in Arizona and other states for many years.  
14 The recent surge in DG interconnection applications has brought the issue to the forefront  
15 for electric utilities and public utility commissions across the United States. While Trico  
16 believes that ultimately, demand rates in conjunction with a higher basic service charge are  
17 the best and most equitable way to recover the fixed costs of building, maintaining and  
18 financing the electric grid, increasing monthly customer charges closer to the actual cost of  
19 service will allow Trico to recover a higher percentage of those fixed costs pending the  
20 implementation of well-designed demand rates.  
21

22 **Q. How does Trico plan to introduce the concept of demand information to its**  
23 **residential and small commercial members?**

24 A. The Settlement Agreement provides that Trico will conduct member outreach and  
25 education that includes, at a minimum, information on the nature and operation of demand  
26 rates, how members can use such rates to minimize their monthly bills and information on  
27 tools available from Trico and third parties to help members manage demand. Each

1 member's bill will include the member's peak demand in kW, indicate the date and time of  
2 the member's peak demand for the billing period; and education materials will highlight  
3 technology solutions including programmable thermostats and load controllers. Trico  
4 anticipates developing a comprehensive outreach and education plan under the parameters  
5 of the Settlement Agreement following approval of the Settlement Agreement by the  
6 Commission.

7  
8 **Q. Are there limits on Trico's ability to propose a demand rate in the next general rate**  
9 **case?**

10 A. Yes. In keeping with the concept of gradually introducing demand rates to residential and  
11 small commercial customers, Trico has agreed that any demand rate for members on rate  
12 schedules RS1 or GS1 (single-phase or three-phase) will be no larger than \$2.00 per-kW in  
13 the next rate case. This demand rate will reflect a portion of the distribution demand fixed-  
14 cost component of Trico's cost of service.

15  
16 **Q. Has Trico agreed to additional demand reduction measures under the Settlement**  
17 **Agreement?**

18 A. Yes. Under the Settlement Agreement, Trico will propose at least two demand-reduction  
19 programs in its next Energy Efficiency Implementation Plan, which Trico will file on or  
20 before June 1, 2017. To the extent possible, these programs will be included in the  
21 demand-rate education and outreach Trico will undertake.

22  
23 **Q. Please explain the DG Energy Export Tariff proposed under the Settlement**  
24 **Agreement?**

25 A. The Settlement Agreement provides for a new DG Energy Export Tariff to take effect in  
26 lieu of the current net metering tariff once a decision approving the Settlement Agreement  
27 is issued by the Commission. That new DG Energy Export Tariff will apply to those DG

1 members applying for interconnection after May 31, 2016. Thus, the new DG Energy  
2 Export Tariff would *only* apply to DG Members who submit an application for  
3 interconnection *after* May 31, 2016, and then, *only* following the effective date of a  
4 decision in this case. All DG members will remain on the current net metering tariff until  
5 the effective date of the decision in this case. Those DG members who had submitted  
6 applications for interconnection on or before May 31, 2016 will be grandfathered on the  
7 existing current net metering tariff.

8  
9 Under the new DG Energy Export Tariff, the energy supplied by Trico to a DG member  
10 during the billing period will be billed by Trico in accordance with the rates and charges  
11 under the member's standard rate schedule. Because this is essentially a rider to standard  
12 rate schedules, the DG Energy Export Tariff will work in conjunction with all of Trico's  
13 rate schedules. For example, a DG member on Trico's RS1 rate schedule will be billed in  
14 accordance with the rates and charges on that schedule. There will be no netting or  
15 banking of energy (kWh) during the month. If credits received from the export energy are  
16 greater than the member's monthly bill, then that credit balance will carry forward to the  
17 next month; but there will be no rollover of excess energy (kWh) to the following month.

18  
19 **Q. What would be the compensation for excess energy exported onto Trico's system**  
20 **from DG members' systems under the DG Energy Export Tariff?**

21 **A.** The new export rate applying to excess energy produced by a DG member's system and  
22 exported onto Trico's distribution system will be set at \$0.0770 per kWh. This rate is the  
23 equivalent of Trico's power supply portion of the energy charge for the first tier of the  
24 standard residential (RS1) rate schedule. Recovery of the cost of the exported energy will  
25 be permitted through Trico's WPCA, as described in the WPCA Plan of Administration  
26 ("POA") attached to the Settlement Agreement.

27

1 **Q. Would the DG Export Rate be subject to modification prior to Trico’s next rate case?**

2 A. Yes. The Commission Staff and Trico have agreed to support that the general rate case  
3 remain open for 18 months following the decision, for possible modification of the export  
4 rate at either parties’ discretion, following the establishment of one or more methodologies  
5 in the ongoing “Value of Solar” docket (more formally known as *In the matter of the*  
6 *Commission’s Investigation of Value and Cost of Distributed Generation – Docket No. E-*  
7 *00000J-14-0023*). Any new rate would be subject to review and approval by the  
8 Commission.

9  
10 **Q. Will the proposed new DG Energy Export Tariff will be applied retroactively?**

11 A. No. As I indicated previously, the DG Energy Export Tariff will apply to applications  
12 submitted after May 31, 2016, but will take effect only after the decision in this case.  
13 Thus, members who apply after May 31, 2016 will remain on the current net metering  
14 tariff until the effective date of the decision, and thereafter will be on the new DG Energy  
15 Export Tariff. There will be no retroactive application of the new DG Energy Export  
16 Tariff for the period prior to the decision. Members who applied on or before May 31,  
17 2016 will remain on the existing net metering tariff. The Settlement Agreement provides  
18 that all Trico members who applied for DG interconnection on or before May 31, 2016,  
19 will be grandfathered on the current net metering tariff at least until the conclusion of  
20 Trico’s next rate case, but with the expectation that grandfathering will continue for the  
21 remaining term of those members’ interconnection agreement or 20 years, whichever  
22 happens to be shorter. The parties have acknowledged, however, that the right of future  
23 Commissions to make a determination in future rate cases cannot be impeded.

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27

1 **Q. Are elements of rate design, other than net metering, grandfathered under the**  
2 **Settlement Agreement?**

3 A. No. Other than the net metering tariff, there is no grandfathering of rates or rate design for  
4 DG or other members. Once new rates are approved and in effect, all members will be  
5 subject to the applicable rate schedule. For residential customers (both DG members and  
6 non-DG members) the three-part rate set forth in rate schedule RS1 will apply, for  
7 example. All DG members have received notice that their rates are subject to Commission  
8 approved changes.

9  
10 **Q. Are there other limitations to grandfathering set forth in the Settlement Agreement?**

11 A. Yes. Grandfathering will only apply to the same service location with the same DG  
12 system. Any DG member who moves a DG system from one location to another after May  
13 31, 2016, will no longer be grandfathered, and the system will be subject to the then-  
14 applicable tariff. Also, if a DG member replaces a DG system with a new one after May  
15 31, 2016 the new system will not be grandfathered and will be subject to the then-  
16 applicable tariff.

17  
18 **Q. Is there anything else in the Settlement Agreement specifically regarding the**  
19 **interconnection of DG systems?**

20 A. Yes. The Settlement Agreement also requires Trico to revise its DG interconnection  
21 agreements, for both leased and member-owned systems, to provide that members may be  
22 charged a return trip fee for a return trip to inspect installations of DG interconnections  
23 where the return trip is due to member or installer issues.

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1 **Q. Is Trico seeking a waiver of the Net Metering Rules (A.A.C. R14-2-2301 et. seq.) to**  
2 **the extent necessary, for approval of the new DG Energy Export Tariff and other**  
3 **changes from the current net metering tariff?**

4 A. Yes, the Settlement Agreement supports of the requisite waivers to implement these  
5 changes.

6  
7 **IV. IMPACT OF THE SETTLEMENT AGREEMENT.**

8  
9 **Q. What would be the impact of the settlement on the average and median residential**  
10 **member?**

11 A. Under the terms of the Settlement Agreement, residential members using the average of  
12 837 kWh would experience an overall increase in their monthly bill in the amount of  
13 approximately \$2.05 or 1.75 percent over current rates, from \$116.84 to \$118.89.  
14 Residential customers with median usage of approximately 750 kWh would experience an  
15 increase of \$2.45 or 2.31 percent, from \$106.25 to \$108.70, in their monthly bill. I should  
16 note that Trico's last rate increase of approximately 8.4 percent for the average residential  
17 member was based on a 2007 test year, and implemented in September of 2009, so the  
18 requested rates represent an increase of less than 0.25 percent per year over the past seven  
19 years.

20  
21 **Q. Would the Settlement Agreement disproportionately impact Trico's fixed or low**  
22 **income members?**

23 A. It would not. While Trico does not have or maintain data relating to the income of its  
24 members, the Cooperative does coordinate with its low-income members to obtain bill  
25 payment assistance through the Low Income Home Energy Assistance Program  
26 (LIHEAP), a Federally-funded program or other community assistance related programs  
27 (including the Pascua Yaqui Social Services) that help low-income individuals and

1 households with their home energy bills. During the 2014 test year, 675 Trico members  
2 received payment assistance. The average monthly kWh usage for those 675 members in  
3 2014 was 973 kWh, which is higher than the average residential usage of 837 kWh per  
4 month. The net impact to the monthly bill of the members who received payment  
5 assistance would be approximately \$2.26, or 1.65 percent, which is a *smaller* percentage  
6 increase as compared to the system average for all residential members of \$2.05, or 1.75  
7 percent. Thus, because low-income members in Trico's service area on average use more  
8 energy than the average residential member, the overall impact of the Settlement  
9 Agreement on their monthly bill is lower on a percentage basis.

10  
11 **Q. What impact would the Settlement Agreement have on Trico's recovery of fixed grid**  
12 **costs?**

13 A. Under the Settlement Agreement Trico would grandfather 1,621 existing DG Members  
14 under the current Net Metering Tariff, which results in a under-recovery of fixed grid cost  
15 of \$89.91 per month for the average residential net metering customer under current rates  
16 and a total under-recovery of \$1,749,000 per year. Under the rates in the Settlement  
17 Agreement, which proposes a small decrease in the residential energy rates and a  
18 corresponding increase in the fixed customer charge, the under-recovery from  
19 grandfathered existing DG members is reduced by \$8.19 per net metering customer (to  
20 \$81.72 per month). This corresponds to an annual reduction of \$159,300 in under-  
21 recovery of fixed grid cost under the Settlement Agreement (down to \$1,589,700 per year  
22 for all the grandfathered net metering customers.) New net metering customers under the  
23 Settlement Agreement would produce an under-recovery of fixed grid cost of \$60.28 per  
24 month for the average residential net metering customer. Please refer to David Hedrick's  
25 testimony and Exhibit DWH – S1 for more detail.

1 **Q. Do you believe the Settlement Agreement would adversely impact solar DG in the**  
2 **Trico service territory?**

3 A. No. First, by utilizing the \$0.077/kWh export rate under the Settlement Agreement and  
4 the average DG export percentage of 60% for Trico's service territory, the Settlement  
5 Agreement produces an average credit of \$0.091417/kWh from base rates (not including  
6 additional benefits such as avoided sales taxes). That is higher than Tucson Electric  
7 Power Company's (TEP's) current full net metering retail credit (summer first block) of \$  
8 0.091311/kWh. By all accounts, rooftop DG is continuing to increase in the TEP service  
9 territory. As Mr. Hedrick has noted in his testimony, Trico's comparatively higher fixed  
10 costs and associated higher retail rates provide more value for net metered DG in its  
11 service territory. I am concerned that DG systems in our service area are being designed  
12 to export more energy than is used on-site. However, I would also note that as a greater  
13 percentage of DG energy is used on-site, the effective credit increases. Solar witnesses in  
14 other dockets have claimed that DG energy exports are often as low as 30%. If that is the  
15 case, the average base rate energy credit would be \$0.10213/kWh under the Settlement  
16 Agreement.

17  
18 Second, if history is an indication, a gradual reduction in solar DG subsidies by Trico will  
19 not result in a significant reduction in the deployment of DG in the service territory.  
20 Trico, like other Arizona electric utilities, first reduced, then eliminated up-front  
21 incentives for rooftop solar DG as the cost of DG systems reduced and the efficiency of  
22 solar panels increased over time. Notwithstanding the elimination of up-front incentives,  
23 which averaged \$15,000 per DG member, the deployment of rooftop DG has continued  
24 to escalate. The fact that Trico is now receiving several times more DG interconnection  
25 applications each month than it did three years ago suggests a modest reduction in the  
26 subsidies paid by Trico members for rooftop DG as proposed under the Settlement  
27 Agreement is appropriate and would not result in a significant reduction in the

1 deployment of rooftop DG in the Trico service territory. Indeed, even though the  
2 “payback” period for rooftop systems may increase slightly under the Settlement  
3 Agreement as compared to today’s payback period, the payback period will still be  
4 shorter than it was in the near past. PV prices have been decreasing significantly and  
5 steadily over the past years.

6  
7 **Q. Has Trico evaluated the growing amount of lost-fixed costs due to DG?**

8 A. Yes. Mr. Hedrick’s Testimony in Support of the Settlement Agreement provides a cost-  
9 of-service based analysis of Trico’s unrecovered and shifted fixed grid costs in DWH-S1.  
10 Based on that analysis, unrecovered fixed costs associated with serving a DG member  
11 under Trico’s existing rate and net metering tariff is \$89.91 per member per month. And  
12 because the number of DG members is increasing, the overall subsidization will also  
13 increase. EFCA’s assertion that Trico has not conducted any meaningful analysis about  
14 the amount of lost-fixed costs are incorrect.

15  
16 **V. SETTLEMENT PROCESS.**

17  
18 **Q. Please provide an overview of the settlement process.**

19 A. There are six parties to this docket: Trico, Freeport Minerals Corporation & Arizonans for  
20 Electric Choice & Competition (collectively “AECC”), EFCA, Pima County, Robert Hall,  
21 and Staff. Formal settlement discussions took place on June 17, 2016, after they were  
22 noticed. All parties to the docket had opportunity to participate in the settlement  
23 discussions and a settlement in principle was reached between Trico and Staff. A  
24 settlement term sheet was prepared and distributed to the parties on June 22, 2016.  
25 Thereafter, the final details of the Settlement Agreement were negotiated and incorporated  
26 into a definitive draft. All parties were given an opportunity to review on the Settlement  
27

1 Agreement before it was finalized, and all parties were given the opportunity to become  
2 Signatories to the Settlement Agreement before it was filed on July 8, 2016.

3  
4 **Q. Robert Hall, a Trico DG customer, provided Direct Testimony on rate design issues.  
5 What is your response to his testimony?**

6 A. I believe the Settlement Agreement addresses most of Mr. Hall's concerns. The new DG  
7 Energy Export Tariff is comparable to Mr. Hall's bill crediting proposal. Mr. Hall believes  
8 exported energy should be valued at a rate higher than avoided cost, and Trico's proposal  
9 of \$0.0770 per kWh is significantly higher than avoided cost. I believe Mr. Hall also  
10 supports analyzing member demand information and providing outreach and education  
11 prior to implementing demand rates, consistent with Trico's commitment in the Settlement  
12 Agreement.

13  
14 **VII. TRICO'S SUPPORT OF THE SETTLEMENT AGREEMENT.**

15  
16 **Q. Do you believe the Settlement Agreement is in the public interest?**

17 A. Yes. It bears repeating, electric cooperatives like Trico have a fundamentally different  
18 economic and governance model from investor-owned utilities. Cooperatives are owned  
19 and run by the members that they serve, for the sole benefit of the members. Cooperative  
20 Directors, as Cooperative members, do not have an incentive to provide a return to third-  
21 party investors, or to maximize the profitability of the Cooperative to the detriment of its  
22 members. To the contrary, the fundamental responsibility of an Electric Cooperative  
23 Board is to provide safe, reliable energy to members, at the lowest cost while maintaining  
24 a financially sound organization, consistent with its legal requirements and social  
25 responsibilities.

1 To that end, Trico has maintained a vibrant renewable energy portfolio, utilizing its  
2 members' resources carefully to fund incentives for distributed solar generation including  
3 large-scale projects for commercial members and rooftop solar for its residential  
4 members. Trico's relatively higher costs of doing business make solar DG a more  
5 attractive investment in the Trico service area, and consequently, Trico has experienced  
6 an explosive growth in the amount of applications to interconnect rooftop solar DG, the  
7 majority of which relate to leased systems. Like electric utilities and public utility  
8 commissions across the United States, Trico's Board has been seeking to balance the  
9 resulting unrecovered (or in the case of cooperatives, shifted) fixed costs of building,  
10 maintain and financing the electric grid, against the responsibility to create and maintain  
11 a sustainable growth of renewable resources. In addition, because Trico is member-  
12 owned, lost fixed costs that are not otherwise recovered through Trico's Wholesale  
13 Power Cost Adjuster (i.e. fixed costs of the distribution system) act to reduce the capital  
14 accounts of non-DG members until such costs are included in the revenue requirement  
15 through a rate case, which results in an immediate shift of cost from the DG members to  
16 the remaining members.

17  
18 Over time, as the cost of DG declined and efficiencies improved, Trico, like other electric  
19 utilities, reduced and finally eliminated up-front incentives of as much as 50% of the cost  
20 of a rooftop solar DG system that averaged \$15,000 per DG member, while applications  
21 for DG interconnections continued to increase at escalating levels. The volume of DG  
22 interconnection applications in Trico's service area has led the Trico Board to conclude  
23 that a modest reduction, *not elimination*, of the subsidy that the Cooperative provides  
24 through the net metering of rooftop DG will partially mitigate the unrecovered and  
25 shifted fixed grid costs associated with the Cooperative's current net metering tariff,  
26 while continuing to provide adequate incentive for a sustainable growth in renewable  
27 resources within the Trico service area. For the reasons described above, I believe the

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Settlement Agreement reached with Commission Staff provides that balance, and is in the public interest.

**Q. Does that conclude your Settlement Testimony?**

A. Yes it does.

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**BEFORE THE ARIZONA CORPORATION COMMISSION**

**COMMISSIONERS**  
DOUG LITTLE - CHAIRMAN  
BOB STUMP  
BOB BURNS  
TOM FORESE  
ANDY TOBIN

IN THE MATTER OF THE APPLICATION OF ) DOCKET NO. E-01461A-15-0363  
TRICO ELECTRIC COOPERATIVE, INC., AN )  
ARIZONA NONPROFIT CORPORATION, FOR )  
A DETERMINATION OF THE CURRENT FAIR )  
VALUE OF IT UTILITY PLANT AND )  
PROPERTY AND FOR THE ESTABLISHMENT )  
OF JUST AND REASONABLE RATES AND )  
CHARGES DESIGNED TO REALIZE A )  
REASONABLE RATE OF RETURN ON THE )  
FAIR VALUE OF THE PLANT AND )  
PROPERTIES AND FOR RELATED )  
APPROVALS. )

**TESTIMONY**  
**OF DAVID HEDRICK**  
**IN SUPPORT OF SETTLEMENT AGREEMENT**  
**ON BEHALF OF**  
**TRICO ELECTRIC COOPERATIVE, INC.**  
**JULY 29, 2016**

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**INDEX TO TESTIMONY OF DAVID W. HEDRICK**

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**BACKGROUND AND PURPOSE**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is David W. Hedrick and my business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112-5507.

**Q. ARE YOU THE SAME DAVID HEDRICK THAT PROVIDED DIRECT TESTIMONY IN THIS PROCEEDING?**

A. Yes, I am.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. My testimony will provide support for the Settlement Agreement.

**TESTIMONY IN SUPPORT OF AGREEMENT**

**Q. HAS TRICO AND COMMISSION STAFF REACHED A SETTLEMENT AGREEMENT?**

A. Yes, Trico and Commission Staff have reached an agreement on all issues in this proceeding.

**Q. WHAT ARE THE PROVISIONS OF THE AGREEMENT WITH RESPECT TO THE RATE INCREASE?**

A. The agreement provides for a base rate increase of \$2,282,076 which produces a total revenue requirement of \$89,762,812. The Company's fair value rate base is \$175,076,536. The resulting rate of return is 6.33%, the Operating Times Interest Earned Ratio ("TIER") is 2.00 and the Debt Service Coverage ("DSC") of 1.87.

1 Schedule A-2.0 in Attachment A of the settlement agreement is the income  
2 statement reflecting the settlement increase and calculation of the financial metrics.

3

4 **Q. STAFF RECOMMENDED A REVENUE INCREASE OF \$1,972,842 IN ITS**  
5 **DIRECT TESTIMONY. WHAT CHANGED TO ALLOW FOR AN**  
6 **INCREASE OF \$2,282,076 INCREASE REFLECTED IN THE**  
7 **AGREEMENT?**

8 A. Staff initially recommended a lower revenue increase based on Staff's objection to  
9 Trico's adjustment to test year billing determinants for Residential customers with  
10 installed DG. Subsequent to the filing of Staff's testimony, Trico provided the  
11 actual load data for the customers in question which allowed staff to verify that the  
12 revenue adjustment was appropriate. The increased revenue requirement in the  
13 settlement also reflects an increase in rate case expense from \$150,000 to \$450,000  
14 which is supported by the invoiced costs to date. The \$450,000 rate case expense  
15 is amortized over a three year period for a total annualized rate case expense  
16 included in the test year expenses of \$150,000 as shown on Schedule C-2.11 in  
17 Attachment A of the settlement agreement.

18

19 **Q. IS THE RATE INCREASE AMOUNT IN THE SETTLEMENT**  
20 **REASONABLE?**

21 A. Yes. The rate increase in the settlement will allow Trico to meet its financial  
22 objectives as discussed in my direct testimony and maintain its financial integrity.  
23 The rate increase reflects a modest 2.61% overall increase which mitigates the  
24 impact on members. Trico believes that the proposed increase strikes the correct

25

1 balance between maintaining the financial health of the Cooperative and limiting  
2 the impact on members.

3

4 **Q. HAS A BILL IMPACT ANALYSIS BEEN PROVIDED IN THE**  
5 **SETTLEMENT AGREEMENT?**

6 A. Yes. Schedules H-4.0 through H-4.11 included in Attachment A to the Settlement  
7 Agreement provide the bill impact analysis for all rate schedules. The average  
8 Residential customer with monthly kWh consumption of 837 kWh will see an  
9 increase of \$2.05 per month or 1.75%.

10

11 **Q. PLEASE DESCRIBE THE BASE COST OF POWER INCLUDED IN THE**  
12 **SETTLEMENT?**

13 A. The proposed base cost of power in the settlement is \$0.081711 per kWh as  
14 originally proposed by TRICO. The proposed base power cost is calculated on  
15 Schedule H-2.1.1 in the filing and is based on the adjusted test year purchased  
16 power. The adjusted test year purchased power expense was calculated using the  
17 wholesale rates in place during 2015 including the reduction in power cost  
18 resulting from the acquisition of Direct Assignment Facilities from Southwest  
19 Transmission Cooperative. As set forth in the Direct Testimony of Trico  
20 witnesses, acquisition of these facilities provides a financial benefit to Trico  
21 members. Staff had supported inclusion of those facilities in its Direct Revenue  
22 Requirement Testimony. No party has opposed their inclusion in rate base.

23

24

25

1 **Q. WHAT IS THE PURPOSE OF THE PLAN OF ADMINISTRATION (POA)**  
2 **FOR THE WHOLESALE POWER COST ADJUSTMENT INCLUDED IN**  
3 **THE SETTLEMENT?**

4 A. The purpose of the POA is to create a record describing the intended functioning of  
5 the adjustor, including how the adjustor rate is reset. The POA includes a list of  
6 the types of costs permitted to be recovered which ensures that no inappropriate  
7 costs are recovered.

8

9 **Q. WHAT IS THE BASIS FOR THE CLASS REVENUE ALLOCATION**  
10 **INCLUDED IN THE SETTLEMENT?**

11 A. The underlying basis for the class revenue allocation is the cost of service analysis  
12 provided in the rate filing. Staff witness Ranelle Paladino endorsed Trico's cost of  
13 service study in her direct testimony. The class revenue allocation using the rates  
14 agreed to in the settlement is shown on Schedule H-1.0 included in Attachment A  
15 of the Settlement Agreement. The class revenue allocation in the Settlement  
16 Agreement reflects Trico's originally proposed class revenue allocation updated to  
17 include the additional rate case expense.

18

19 **Q. PLEASE DESCRIBE THE RATE DESIGN FOR RESIDENTIAL**  
20 **INCLUDED IN THE SETTLEMENT.**

21 A. The settlement rate for Residential is a three-part rate design that includes a  
22 monthly basic service charge, a demand charge and an energy charge. The  
23 proposed Basic Charge is \$24 which is a \$9 increase from the existing \$15 Basic  
24 Charge.

25

1 **Q. PLEASE DESCRIBE THE BASIS FOR THE BASIC SERVICE CHARGE**  
2 **FOR RESIDENTIAL MEMBERS.**

3 A. The customer component of expense associated with the distribution wires for the  
4 Residential class as reflected on Schedule G-6.0, page 1, is \$31.83 per month. The  
5 customer component of expense reflects Trico's cost of having the service  
6 available before any energy is actually sold to the customer. As an electric  
7 cooperative serving in rural Arizona, Trico's customer density (number of  
8 customer served per mile) is low in comparison to the investor owned utilities in  
9 the state. This means that Trico's average investment required per customer is  
10 higher, and thus the fixed customer related costs of providing service are higher in  
11 comparison to the investor owned utilities.

12  
13 Increasing the Basic Charge to a level closer to the actual customer cost of  
14 providing service results in a more cost based recovery in the rate that reduces the  
15 subsidy between customers that exists in the current rate. The increased Basic  
16 Charge provides a more equitable recovery of fixed customer related costs from  
17 low use customers and helps to reduce the lost fixed costs created by customers  
18 with installed DG. The proposed settlement Basic Charge of \$24 is consistent with  
19 the Basic Charge for many other electric cooperatives in the region as reflected in  
20 the table below:

21

<b><u>Arizona</u></b>	
Sulphur Springs Valley Electric Cooperative, Inc.*	\$25.00
Navopache Electric Cooperative, Inc.**	\$24.84
Garkane Energy	\$22.00
Mohave Electric Cooperative, Inc.**	\$25.60
<b><u>Colorado</u></b>	
San Luis Valley Electric Cooperative, Inc.	\$29.75

25

1	Empire Electric Association, Inc.	\$30.73
	K.C. Electric Association, Inc. - Town	\$25.00
2	K.C. Electric Association, Inc. - Rural	\$30.00
	Gunnison County Electria Association	\$28.00
3	Delta Montrose Electric Association	\$25.00
	Grand Valley Power	\$30.00
4	Yampa Valley Electric Association	\$24.50
	Mountain Parks Electric, Inc.	\$29.00
5	Poudre Valley Rural Electric Association	\$24.50
	Morgan County Rural Electric Association	\$28.00
6	Highline Electric Association	\$28.17
	Mountain View Electric Association	\$34.50
7		
	<b><u>New Mexico</u></b>	
8	Northern Rio Electric Cooperative, Inc.	\$24.00
	Otero County Electric Cooperative, Inc.	\$26.00
9	Rio Grande Electric Cooperative, Inc.	\$35.00
	Roosevelt County Electric Cooperative, Inc.	\$25.00
10	Springer Electric Cooperative, Inc.	\$25.60

11 \*Open rate case pending order. Proposed customer charges are supported by staff.  
12 \*\*Pending completion of alternate streamline rate application

13 **Q. PLEASE DESCRIBE THE DEMAND RATE ELEMENT OF THE RATE**  
14 **DESIGN FOR RESIDENTIAL MEMBERS.**

15 A. The Demand Charge is set at \$0.00 per billing kW. The billing kW is defined as  
16 the highest 15-minute interval demand in the month. This is the same  
17 measurement of demand used by Trico in all of its other demand billed rates. The  
18 purpose of this initial demand charge is for use in educating the membership about  
19 demand rates and to provide Trico the necessary time to ensure that all customers  
20 are metered appropriately and the billing systems are in place to effect the billing  
21 of demand to each customer. Having the demand component in rates – and  
22 included in the Trico billing system – is important because it will accurately  
23 capture billing determinants for future rate cases. From a rate design perspective,  
24 this will allow for more accurate assessments of the impacts of any changes to the  
25 amount recovered by the various rate elements.

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The majority of Trico's Residential customers currently have metering installed that will accommodate demand metering. However, there are some customers whose meters will need to be updated to allow for demand metering. In addition, Trico will need to work with its billing provider to program the demand rate into the billing software and be able to show the billing demand kW and charge on the monthly bill. Trico will be able to have these changes accomplished and in place within six months of a decision in this proceeding.

Should Trico decide to apply a measurable demand charge in its next rate case, the demand charge will not be more than \$2 per kW per month subject to the terms of the agreement. The implementation of the demand charge will provide a mechanism for the recovery of fixed distribution demand costs based on the maximum monthly peak demand established by the customer. This is the most fair and equitable method of recovering fixed costs that are based on the size of the facilities required to provide service. As evidenced by the initial \$0/kW charge and the commitment to hold the first measurable demand charge to \$2/kW, it is Trico's intent to transition to a rate with a demand charge slowly. The demand billing kW to be shown on the customer's bill is an important component of the educational effort that will be undertaken with Trico members to demonstrate how demand rates work and what members can do to take full advantage of this rate design.

1 **Q. IS THE ADDITION OF A DEMAND CHARGE IN THE RESIDENTIAL**  
2 **AND GENERAL SERVICE RATE OVERLY COMPLICATED AND**  
3 **CONFUSING?**

4 A. Not at all. The demand charge is simply one additional billing component based  
5 on the customer's maximum peak consumption in a monthly billing period.  
6 Demand rates have been utilized for many years for commercial and industrial  
7 customers with great success. One of the primary reasons that demand rates have  
8 not been utilized in Residential rates is that the metering was not available due to  
9 the cost of installing demand meters. Another reason is that residential customers  
10 used to be relatively homogenous. As utilities like Trico have converted to more  
11 modern meters with demand metering capability, demand rates are now an option,  
12 particularly as the usage patterns of its members become more diverse. Other  
13 electric cooperatives have instituted demand rates for residential members, such as  
14 Mid-Carolina Electric Cooperative, Inc. in South Carolina.

15  
16 The application of demand rates will require a period of customer education to  
17 familiarize members with how the rate works but the concept is not a difficult one  
18 to understand and manage. While the primary objective of adding the demand rate  
19 component is to provide an equitable recovery of fixed distribution demand costs  
20 from all customers, there are opportunities for members to manage their loads to  
21 minimize the maximum peak demand and thus lower their monthly bills.

1 **Q. PLEASE DESCRIBE THE RATE DESIGN FOR THE GS 1 (SINGLE**  
2 **PHASE) AND GS 1 (THREE PHASE) RATE CLASSES?**

3 A. The rate design for the GS 1 rates is also a three-part rate that includes a basic  
4 charge, demand charge and energy charge. The Basic Charge is \$27.00 for the GS  
5 1 (Single Phase) class and \$35.00 for the GS 1 (Three Phase). The increase in the  
6 basic charge for these classes is also \$9 and is supported by the cost of service  
7 study. The Demand Charge is set at \$0.00 per kW and will function the same as  
8 the demand charge in the Residential rate.

9  
10 **Q. ARE THE PROPOSED INCREASES IN THE CUSTOMER CHARGE**  
11 **EXCESSIVE OR UNREASONABLE?**

12 A. No. The increase in the customer charge is \$9 per month. Under the proposed  
13 rates, the customer charge will continue to be considerably lower than the customer  
14 component of expense identified in the cost of service study for these rate classes.  
15 As my Direct Testimony explains, the issue of lost fixed costs created by customers  
16 with installed DG is significant and can only be effectively mitigated by changing  
17 the rate design to include higher fixed charges and revising the net metering policy.  
18 The larger basic service charge also helps address fixed cost recovery issues with  
19 seasonal or vacant homes. The change in the customer charge is a necessary step  
20 in reducing the subsidy between customers caused by the existing rate design.  
21 Additional rate changes will be required by Trico in the future to move the  
22 customer charge to a level where full recovery of the customer component of cost  
23 is achieved. A gradual approach to the resolution of this issue is not in the interest  
24 of the majority of Residential member consumers of Trico. The maximum increase  
25

1 possible for any Residential customer under the proposed settlement rates is \$9 per  
2 month.

3

4 **Q. WHY DOES THE SETTLEMENT INCLUDE A PROVISION TO FREEZE**  
5 **THE EXISTING RESIDENTIAL TIME-OF-USE RATE?**

6 A. The current wholesale pricing structure from AEPCO, Trico's primary power  
7 supplier, includes a fixed charge for capacity that does not vary based on the  
8 volume or the timing of energy consumed. As a result of this pricing structure,  
9 Trico's Residential Time-of-Use rate is not an effective rate and does not provide  
10 customers a meaningful opportunity to reduce costs while at the same time  
11 reducing the costs incurred by the cooperative. It is not in the best interest of the  
12 member, for Trico to allow new customers to take service on this rate. In fact, the  
13 settlement agreement includes a provision that will revise the applicability in the  
14 rate to indicate that the rate will be eliminated in the next rate filing. Freezing the  
15 rate is the first step in providing ample notice to members that the rate will be  
16 eliminated.

17

18 **Q. WHAT IS THE RATE DESIGN FOR THE REMAINING CLASSES IN THE**  
19 **SETTLEMENT AGREEMENT?**

20 A. The GS2, GS3, GS4 and other tariffs are as proposed by Trico in the original  
21 application, updated to reflect the additional revenue requirement associated with  
22 the increase in rate case expense. The basic charge in the GS2 and GS3 rate class  
23 have also been revised to reflect the same basic charge included in the GS 1 rate  
24 class to be consistent with the existing rate design structure. Rate Schedules IS1  
25 and IS 2 are being combined into one rate schedule and will be frozen as of the

1 date of the decision in this docket because these rates are the same and like the  
2 TOU rates, there is no justifiable cost reduction that results from interruption of  
3 load.

4  
5 **Q. PLEASE DESCRIBE THE PROVISIONS OF THE SETTLEMENT**  
6 **AGREEMENT WITH RESPECT TO NET METERING?**

7 A. The Agreement stipulates that the existing Net Metering Tariff will be frozen and  
8 will be available only to members whose DG interconnection agreement  
9 applications were received on or before May 31, 2016. This grandfathering of the  
10 existing Net Metering Tariff will allow existing DG customers to continue  
11 receiving the existing treatment with respect to compensation for DG energy  
12 including banking and payment at the full retail rate. The grandfathering of the Net  
13 Metering Tariff for existing customers will continue until a decision in Trico's next  
14 rate case with the expectation that grandfathering will continue for the remaining  
15 term of the member's interconnection agreement or for 20 years, whichever is  
16 shorter. This provides a sufficient time period for the customer to recover their  
17 investment in DG facilities.

18  
19 There will be no net metering provision or banking of exported DG energy for new  
20 members applying for interconnection after May 31, 2016. For these members, a  
21 new DG Energy Export Tariff will apply as a rider. This rider provides for the  
22 purchase of all excess energy generated by a member's DG system and delivered  
23 back to Trico at a rate of \$0.0770 per kWh. Any credit amount will be provided to  
24 the member on a monthly basis with any credit balance carried forward to the  
25

1 following billing period. Any credit balance remaining at year-end will be paid to  
2 the member at that time.

3  
4 **Q. HOW WAS THE \$0.0770 PER KWH EXPORT RATE DETERMINED?**

5 A. The export rates is a compromise amount that is equivalent to the power supply  
6 portion of the energy charge for the first tier of the proposed RS1 rate. The first  
7 block of the RS 1 rate is 800 kWh. The average RS 1 customer has 836 kWh  
8 monthly consumption and a median consumption of 750 kWh per month. Thus,  
9 the power supply component for the first block is fairly representative for the  
10 average residential customer. The \$0.0770 per kWh export rate also reflects a  
11 compromise amount that is roughly halfway between Trico's avoided cost  
12 (wholesale fuel and energy) of \$0.03662 per kWh and the full first block RS1 retail  
13 rate of \$0.11293.

14  
15 **Q. DOES THE SETTLEMENT AGREEMENT PROVISION WITH REGARD**  
16 **TO NET METERING STILL MITIGATE THE INEQUITABLE**  
17 **RECOVERY OF FIXED COSTS FROM TRICO MEMBERS?**

18 A. Yes, but only about half of what Trico had originally proposed. The elimination of  
19 the banking of kWh and the reduction in the export rate from full retail to \$0.0770  
20 per kWh will reduce the subsidy provided by other members caused by net  
21 metering and reduce the level of lost fixed cost caused by customers with installed  
22 DG. **Exhibit DWH – S1** is an updated version of Exhibit DWH – 8 which was  
23 originally filed with my direct testimony. Exhibit DWH – S1 provides a  
24 calculation of the lost fixed cost associated with serving a DG customer under  
25 Trico's existing Residential rate and existing net metering policy and the Original,

1 Amended and Settlement proposed rates and proposed export rate. The analysis  
2 also reflects the actual PV System data on line 6 provided from the sample of Trico  
3 DG customers. On Line 10 of Exhibit DWH – S1, the analysis shows that the lost  
4 fixed costs for the average DG customer under Trico’s existing rate and existing  
5 net metering policy is \$89.91 per customer per month. Trico’s originally proposed  
6 Residential rate in conjunction with the originally proposed net metering policy  
7 reduced that lost fixed cost subsidy to \$34.55 per customer per month (over a \$50  
8 per month reduction in the subsidy). The proposed rate in Trico’s amended filing  
9 reduced the lost fixed cost further to \$32.64 per customer per month. The proposed  
10 settlement rate in conjunction with the increased basic service charge and proposed  
11 export rate will result in a lost fixed cost from new DG customers of \$60.27 per  
12 customer per month (a \$29 per month reduction in the subsidy). While the  
13 reduction in lost fixed costs is not as much as Trico had originally proposed, the  
14 settlement rates and export rate do provide a meaningful reduction in the lost fixed  
15 cost subsidy and result in more equitable recovery of Trico’s fixed costs.

16  
17 Also provided as **Exhibit DWH – S2** is a calculation of the lost fixed cost recovery  
18 for the grandfathered DG customers. While the proposed Residential rate and  
19 proposed Export Rate for new DG customers provides a measurable reduction in  
20 the lost fixed costs (as demonstrated on Exhibit DWH – S1), the existing  
21 grandfathered DG customers served on the existing Net Metering tariff will  
22 continue to create a significant lost fixed cost situation. The proposed Residential  
23 rate with the increased customer charge does provide some mitigation in the lost  
24 fixed cost but only a small reduction from the lost fixed cost of \$89.91 per month  
25 under the existing rate and NM policy to \$81.72 per month under the settlement

1 rate and existing NM policy. The change in the grandfathered date to May 31,  
2 2016 increased the number of grandfathered DG customers by 359 which also  
3 increased the amount of the lost fixed costs.  
4

5 **Q. DOES THE EXPORT RATE PROVIDE A REASONABLE VALUE FOR**  
6 **THE EXCESS ENERGY PRODUCED BY MEMBERS WITH DG?**

7 A. Yes. As I have noted, Trico has higher fixed costs than typical IOU utilities and  
8 therefore the Trico member saves more per DG kWh offset – even though the cost  
9 of a DG system is not higher for the Trico member. This can result in a quicker  
10 “payback” period for Trico members than in lower cost utility areas. The typical  
11 DG customer in Trico’s service area consumes only about 40% of the generation  
12 produced from the DG facility and exports the remaining 60% of generation to  
13 TRICO. Therefore a new DG customer would be effectively compensated on a per  
14 kWh basis for the DG energy produced under the settlement rates at a value of  
15 \$0.09137 per kWh for all DG energy produced calculated as follows:  
16

17 DG energy consumed compensated at full retail = 40% x \$0.11293 = \$0.04517  
18 Excess energy delivered to Trico at export rate = 60% x \$0.07700 = \$0.04620  
19 Average compensation for DG energy = \$0.09137  
20

21 This level of compensation per kWh is significant as it is essentially equivalent to  
22 the total energy component of the Tucson Electric Power (TEP) Residential rate  
23 and adders that is provided to DG customers in conjunction with TEP’s net  
24 metering policy. Therefore, under the Settlement Agreement, the payback period  
25 for Trico members will still be equivalent to residential customers in TEP’s service

1 area. Maintaining parity with TEP with respect to the total compensation provided  
2 to new DG customers is very important to ensure that neither utility is perceived as  
3 providing a greater value for DG customer installations than the other.  
4

5 **Q. PLEASE DESCRIBE THE PROVISIONS IN THE SETTLEMENT**  
6 **REGARDING THE FILING OF TRICO'S NEXT RATE CASE?**

7 A. The signatories to the agreement agree that Trico's next rate case will utilize a test-  
8 year no earlier than the 12-month period ending June 30, 2018. This will allow  
9 Trico the opportunity to conduct the member outreach and demand-rate education  
10 program with its members and to gather and track the demand data necessary to  
11 implement the demand charge component of the rate. To ensure there is a gradual  
12 transition to the full implementation of the demand rate, Trico has agreed to limit  
13 the demand charge implemented in its next rate case to no more than \$2 per kW.  
14 Trico has also agreed to provide as part of its next application the following; a) a  
15 study of the impact of billing demand on a 15-minute interval versus a 60-minute  
16 interval; and b) discuss customer usage and demand profile to the extent available.  
17

18 **Q. WHAT ADDITIONAL PROVISIONS ARE INCLUDED IN THE**  
19 **SETTLEMENT AGREEMENT?**

20 A. Trico's purchase of Direct Assignment Facilities will not be completed until late  
21 2016 or early 2017. As part of the settlement agreement, the parties agree that  
22 Trico will provide as a compliance filing a notice of the completion of the  
23 acquisition of the DAF's.  
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The parties agree that the depreciation rates used by Trico in its application are reasonable and should be approved.

The parties agree that Trico will revise its DG interconnection agreements for leased and owned systems to incorporate language that customers may be charged a return trip fee for a return trip to inspect installations where the return trip is due to a customer installer issue. This change is necessary to mitigate the costs of providing the service.

The parties agree that the Trico's Rules and Regulations shall be revised as set forth in Attachment D of the settlement agreement. The modifications to the Rules and Regulations are needed to meet current operational needs and provide a better alignment with customer needs and ultimately provide better customer service. The Direct Testimony of Ms. Cathers provided a discussion of the proposed changes to the Rules and Regulations. No party opposed those changes, although Staff had some suggested modifications to the changes that Trico has agreed to and that are reflected in Attachment D to the settlement agreement.

**Q. ARE THE TERMS OF THE AGREEMENT IN THE PUBLIC INTEREST?**

A. Yes. The terms of the agreement provide a reasonable resolution to the issues in this proceeding.

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes, it does.

**Exhibit DWH – S1**

TRICO ELECTRIC COOPERATIVE, INC.

CALCULATION OF LOST FIXED COST RECOVERY  
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE RESIDENTIAL RATE

	Existing Rate	Original Proposed Rate	Amended Proposed Rate	Settlement Rate
		Export Rate	Export Rate	Export Rate
1 Energy Charge (Includes WPCA)	\$ 0.121161	\$ 0.117600	\$ 0.112800	\$ 0.112930
2 Purchased Power Energy Cost	\$ 0.030795	\$ 0.030795	\$ 0.030795	\$ 0.030795
3 Purchased Power Demand Cost	\$ 0.049487	\$ 0.049487	\$ 0.049487	\$ 0.049487
4 Remainder: Distribution Wires Component in Residential Energy Charge	\$ 0.040879	\$ 0.037318	\$ 0.032518	\$ 0.032648
5 Total Residential DG Customers at TY Adjusted	1,262	1,262	1,262	1,262

Lost Fixed Cost Calculation:

6 Monthly kWh Produced by 6.51 kW AC	995	995	995	995
7 PV System kWh Compensated at Full Retail	995	398	398	398
8 Purch Power Demand Lost Fixed Cost - Monthly	\$ 49.24	\$ 19.70	\$ 19.70	\$ 19.70
9 Distr. Wires Lost Fixed Cost - Monthly	\$ 40.67	\$ 14.85	\$ 12.94	\$ 12.99
10 Total Lost Fixed Costs - Monthly	\$ 89.91	\$ 34.55	\$ 32.64	\$ 32.69
11 Total Lost Fixed Costs Annual	\$ 1,361,667	\$ 523,264	\$ 494,333	\$ 495,116
		L10 x L5 x 12		

12 Monthly Energy Export (60% of Estimated PV generation)	597.0			
13 Lost Fixed Costs Associated with Export ( L12 x (\$0.0770 export rate - \$0.030795 PP energy))	\$ 27.58			
14 Total Lost Fixed Costs - Monthly L10 + L13	\$ 60.28			
15 Total Lost Fixed Costs Annual	\$ 912,854			

**Exhibit DWH – S2**

TRICO ELECTRIC COOPERATIVE, INC.

CALCULATION OF LOST FIXED COST RECOVERY  
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE RESIDENTIAL RATE- GRANDFATHERED CUSTOMERS

	Existing Rate	Original Proposed Rate Existing NM Tariff	Amended Proposed Rate Existing NM Tariff	Settlement Rate Existing NM Tariff
1 Energy Charge (Includes WPCA)	\$ 0.121161	\$ 0.117600	\$ 0.112800	\$ 0.112930
2 Purchased Power Energy Cost	\$ 0.030795	\$ 0.030795	\$ 0.030795	\$ 0.030795
3 Purchased Power Demand Cost	\$ 0.049487	\$ 0.049487	\$ 0.049487	\$ 0.049487
4 Remainder: Distribution Wires Component in Residential Energy Charge	\$ 0.040879	\$ 0.037318	\$ 0.032518	\$ 0.032648
5 Total Residential DG Customers as of May 31, 2016	1,621	1,621	1,621	1,621

Lost Fixed Cost Calculation:

6 Monthly kWh Produced by 6.51 kW AC								
7 PV System kWh Compensated at Full Retail	995	995	995	995	995	995	995	995
8 Purch Power Demand Lost Fixed Cost - Monthly	\$ 49.24	\$ 49.24	\$ 49.24	\$ 49.24	\$ 49.24	\$ 49.24	\$ 49.24	\$ 49.24
9 Distr. Wires Lost Fixed Cost - Monthly	\$ 40.67	\$ 37.13	\$ 32.36	\$ 32.36	\$ 32.36	\$ 32.36	\$ 32.36	\$ 32.48
10 Total Lost Fixed Costs - Monthly	\$ 89.91	\$ 86.37	\$ 81.60	\$ 81.60	\$ 81.60	\$ 81.60	\$ 81.60	\$ 81.72
11 Total Lost Fixed Costs Annual	\$ 1,749,019	\$ 1,680,097	\$ 1,587,194	\$ 1,587,194	\$ 1,587,194	\$ 1,587,194	\$ 1,587,194	\$ 1,589,710