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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

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

Arizona Corporation Commission

DOCKETED

MAY 04 2016

DOCKETED BY *[Signature]*

2015 MAY -4 P 4: 25

AZ CORP COMMISSION
DOCKET CONTROL

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

AMENDMENT TO APPLICATION

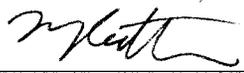
Trico Electric Cooperative, Inc. ("Trico" or "the Cooperative"), hereby submits an amendment to its Application in this docket, as reflected in the attached Supplemental Direct Testimony of Vincent Nitido and David Hedrick. The Amendment proposes a modification to rate design that would apply to all residential and small commercial members. Trico is filing this Amendment in light of recent developments in other dockets pending before the Commission that have occurred since the filing of Application.

The modified rate design still proposes an increase in the monthly charge from \$15.00 to \$20.00 for standard residential service. The modified rate design now includes a fixed monthly demand charge of \$4.00 based on a minimum billed demand of 2 kW at \$2.00 per kW-month. The modified volumetric energy rates are now slightly lower than originally proposed. Under the modified rate design, an average residential member using 837 kWh would see a monthly bill increase of \$1.94, from \$116.84 to \$118.80, or 1.66 percent, which is slightly lower than the bill impact under the original proposed rate design.

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RESPECTFULLY SUBMITTED this 4th day of May, 2016.

SNELL & WILMER, L.L.P

By 

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Docket Control
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Phoenix, Arizona 85007

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14
15 By Jaelyn Howard
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1 **Q. Please state your name and business address.**

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

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

7 A. I am Chief Executive Officer and General Manager of Trico.
8

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

10 A. Yes. I submitted Direct Testimony on October 25, 2015.
11

12 **Q. What is the purpose of your supplemental testimony?**

13 A. Trico is updating its proposed rate design to include a minimum demand charge for
14 residential and small commercial customers. We believe that three-part rates that include a
15 demand charge will be necessary in the future for fair and equitable allocation of the fixed
16 costs of our grid as new technologies emerge and electric service evolves. Although Trico
17 did not initially propose three-part rates in this docket, it is something we strongly
18 considered. We also anticipated proposing three-part rates in our next rate case. However,
19 given events in various Commission dockets since the filing of our rate case, we believe it
20 is important to introduce three-part rates in a very limited manner now to begin the process
21 of educating our members about their specific demand and about demand charges in
22 general.
23

24 **Q. What is Trico proposing?**

25 A. Trico is proposing for all its residential and small commercial customers a three-part rate
26 that includes a demand rate of \$2 per kW-month for the first 2 kW of usage with a
27

1 minimum demand of 2 kW and \$0.0 per kW-month for demand above 2 kW. Demand
2 would be based on the member's highest 15-minute non-coincident peak demand during
3 the month, which is consistent with the design of Trico's existing demand rates for
4 commercial customers. The volumetric energy rates would be slightly lower than
5 previously proposed. There would still be a \$20 monthly customer charge. In connection
6 with this proposal, Trico is proposing a minimum monthly 2 kW demand such that the
7 minimum monthly bill would be \$24 for all residential members that would include the
8 \$20 customer charge and 2 kW of demand at the \$2.00 per kW-month demand rate. David
9 Hedrick's Supplemental Direct Testimony provides more detail on the rate structure, the
10 minimum bill aspect and the bill impacts.

11
12 Under our proposal, our members will be able to see what their demand is on a monthly
13 basis between now and the next rate case. The rate design structure and the minimum bill
14 approach will ensure that there are no unintended or unexpected consequences on a
15 member's bill should they have an unusual high demand in a given month. Indeed, the
16 monthly bill for the average Trico member will be the same under this updated rate design
17 as under our initial two-part rate design.

18
19 In conjunction with this proposal, Trico will conduct parallel member education about the
20 demand element of energy usage. We believe this approach will prepare our members for
21 any modifications to three-part rates which would occur as part of our next rate case.

22
23 **Q. What events at the Commission have caused Trico to seek this change?**

24 A. Since the filing of our application in this docket on October 25, 2015, there has been
25 significant activity in various Commission proceedings regarding rate design issues and net
26 metering issues. In particular, Commission Staff and other parties have submitted
27

1 voluminous testimony in the UNS Electric rate case about mandatory three-part rates for
2 residential and small commercial customers. They also have submitted testimony about
3 potential modifications to net metering in both the UNS Electric rate case and the Sulphur
4 Springs Valley Electric Cooperative (“SSVEC”) rate case. Also, subsequent to our filing,
5 the Commission has undertaken a hearing in the Value of Distributed Generation docket
6 that is intended to develop a methodology to assess what compensation should be paid to
7 rooftop solar owners for excess generation produced by rooftop systems.

8
9 **Q. What is the significance of the UNS Electric rate case activity?**

10 A. There are two significant aspects of that rate case – three-part rates and net metering. First,
11 Commission Staff proposed mandatory three part rates for all residential and small
12 commercial customers. Staff noted that three-part rates have many advantages for all
13 customers including sending more accurate price signals, more accurately matching costs
14 and revenues, and more effectively incentivizing customers to reduce peak demand on the
15 system. Staff further stated that three-part rate designs better inform customers who are
16 considering adopting new technologies, including the impact of those technology choices
17 on their bill. According to Staff, three-part rate design makes significant progress towards
18 addressing the issues presented by the difficult transition to DG technologies. However, as
19 part of the move to three-part rates, Staff proposed a transition period that would allow for
20 customer education and keeping the rate case open to be able to address any unintended
21 consequences for “outlier” customers.

22
23 The opposition to three-part rates focused on potential customer confusion, the lack of
24 customer education, the potential for “outlier” results for some customers and unintended
25 consequences from atypical demand in a month. Moreover, there has been a significant
26
27

1 amount of misinformation about demand charges that has appeared in public comments in
2 the UNS Electric docket – not to mention the Trico rate case docket.

3
4 As a result, at least two Commissioners have raised concerns about jumping to three-part
5 rates that include a demand charge without sufficient education and without customers
6 having sufficient information about their own demand.

7
8 Second, Staff declined to take a position on net metering changes, noting that the Value of
9 Distributed Generation was scheduled and that the Staff's mandatory three-part rate
10 proposal addressed much of the concern about DG and the recovery of fixed grid costs.

11
12 **Q. What is the significance of the SSVEC rate case activity?**

13 A. Because three-part rates were not an option in that case, Staff addressed SSVEC's
14 proposed net metering modifications (which are similar to Trico's proposals). Although
15 Staff supported the elimination of kWh banking in favor of providing bill credits for excess
16 DG generation, Staff did not agree with SSVEC's proposal to compensate excess
17 generation at avoided cost. Staff indicated compensation should be somewhere between
18 avoided cost and retail rates.

19
20 **Q. Why is Trico proposing this modified rate design?**

21 A. There are two key reasons. First, Trico's member-elected Board of Directors believes
22 customer education and a sufficient amount of customer-specific demand information must
23 be provided to customers before the implementation of three-part rates, in order to ensure
24 members are adequately informed of the operation of the rates and how they can manage
25 their electric usage to provide the maximum benefit of such rates to themselves and the
26 Cooperative. Second, to the extent Trico is able to sufficiently mitigate the DG cost shift
27

1 and to provide for more equitable recovery of fixed costs from all of our members, it better
2 positions the Cooperative to encourage the development and application of demand-
3 reduction measures and new technologies, including DG.

4
5 Trico believes that three part rates that include a demand component are the most accurate
6 and equitable rate structure because they best reflect the components of electric service and
7 send the most accurate price signals to consumers. As the electric service landscape
8 evolves, three part rates will be absolutely necessary to equitably allocate the recovery of
9 fixed costs, to encourage customer behavior that can reduce future costs (and rates) and to
10 provide a level playing field to various current and emerging technologies.

11
12 Because Trico intended to propose meaningful three part rates in its next rate case, it has
13 become apparent that Trico should to take steps in this rate case to facilitate member
14 education about their demand and the structure of three part rates in a gradual manner -
15 without creating a situation where there may be unintended consequences.

16
17 Moreover, Trico's proposal will begin to provide more equitable recovery of fixed cost and
18 help to mitigate the cost shift because DG customers will be paying the 2 kW of demand
19 minimum. Trico's decision to forego demand rates initially was based in part on the hope
20 that the Commission would materially address the cost shift resulting from net metering.

21
22 **Q. How does Trico's proposal avoid unintended consequences in this initial transition to**
23 **three-part rates?**

24 **A.** Under our proposal, members will not be billed for their actual demand. As a result,
25 regardless of what their demand is for a given month, each member will pay only \$4.00 for
26 a 2 kW minimum of demand for that month. However, we intend to format the bill so that
27

1 customers can see what their actual peak demand was for the month. This information will
2 also help Trico develop the three-part rate proposals for the next rate case and better
3 understand potential bill impacts of future proposals.
4

5 **Q. Why is Trico proposing a demand rate of \$2.00 per kW-month?**

6 A. The \$2.00 per kW-month does not come close to covering the fixed costs of distribution
7 facilities. Associating demand with an actual rate helps begin to educate members on how
8 a demand rate is applied. The \$2.00 per kW-month rate, while not intended to recover a
9 substantial amount of Trico's fixed costs, is significant enough that members will likely
10 pay attention to the rate and begin to ask questions.
11

12 **Q. Why is 2 kW an appropriate amount to include as a minimum bill?**

13 A. The vast majority of our members have a non-coincident peak demand of more than 2 kW
14 in any given month. We did not want the minimum bill to recover a significant amount of
15 demand that was not actually being imposed on the Trico system but, at the same time, be
16 set at a meaningful level that members will pay attention to. It also provides some
17 mitigation of the cost shift imposed by DG members and other low use members who are
18 not paying their equitable share of the fixed costs. Moreover, this level results in a \$24.00
19 minimum bill for residential customers, which is actually \$3.00 less than the monthly
20 customer charge that Staff is proposing for SSVEC.
21

22 **Q. How is Trico's proposal educational for its members?**

23 A. Trico intends to provide significant member education to its members between now and
24 the next rate case. The information provided to members through education process will
25 be facilitated by having a monthly bill that includes the member's specific demand and
26 applies a demand rate to that demand. Members will be able to see their actual demand,
27

1 understand what actions may increase or decrease that demand and put education
2 information in context.

3
4 **Q. Will members still be able to save through energy efficiency?**

5 A. Yes. The proposed demand rate (and the limit on billed demand) will reduce the
6 volumetric energy charge only slightly. Reducing energy consumption will still save the
7 member money. At the same time, the member will be able to see its demand and begin to
8 understand how other energy efficiency approaches or changes in behavior could help save
9 even more once more robust three part rates go into effect in the next rate case.

10
11 **Q. Why not just undertake member education on demand rates before the next rate case
12 without changing rate design now?**

13 A. We believe this approach is more interactive with members and provides more incentive
14 for members to understand three-part rates and demand charges. Our approach will
15 provide information as part of an actual bill in the actual bill format in which demand
16 charges are imposed. Simply providing demand information can be easily ignored.

17
18 Moreover, this approach also allows the recovery of fixed costs from DG and other low
19 use customers who still use the grid. It helps to mitigate the cost shifts resulting from
20 recovering fixed costs through volumetric rates.

21
22 **Q. If the three-part rate design is adopted, is Trico still requesting modification to its net
23 metering tariff?**

24 A. Yes. As we have set forth in our Direct Testimony, the net metering tariff in combination
25 with our current rate design results in inequitable recovery of fixed costs from our
26 members. Our three-part rate proposal includes only a very nominal demand charge.

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Trico will still be recovering the majority of its fixed costs through volumetric rates. As a result, unless the net metering tariff is modified, DG members will continue to avoid paying their fair share of fixed costs and those fixed costs will be shifted to non-DG customers.

Moreover, the Commission needs to address the net metering cost shift problem now in order to grandfather existing DG members under the current net metering tariff. Right now, the amount of cost shift that would be “locked in” is manageable and would not result in an undue burden on the non-DG members. However, if the Commission delays, the adverse or inequitable impact of grandfathering on other members may become too great.

Q. Does this conclude your 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.)

SUPPLEMENTAL DIRECT TESTIMONY
OF DAVID HEDRICK
ON BEHALF OF
TRICO ELECTRIC COOPERATIVE, INC.

MAY 4, 2016

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SUPPLEMENTAL TESTIMONY

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 PRE-FILED TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. My supplemental testimony provides support for Trico’s request to amend its original filing to request approval of a three-part demand rate design for the Residential, Residential Time-of-Use (“TOU”) and General Service 1 rate classes.

Q. WHY IS TRICO PROPOSING A RATE DESIGN WHICH INCLUDES A DEMAND CHARGE FOR THESE RATE CLASSES?

A. As discussed in the Supplemental Direct Testimony of Vincent Nitido, the three-part demand rate design provides a more fair and equitable method of recovering the fixed costs of providing service, provides a step toward reducing subsidies between customers and reduces the impact of lost fixed costs from customers with installed DG. The events in other rate cases currently at the Arizona Corporation Commission (“Commission”) and discussions with Commission staff have also factored into the decision to request the three-part rate design.

1 **Q. PLEASE DESCRIBE THE PROPOSED THREE PART RATE DESIGN FOR**
2 **THE RESIDENTIAL, RESIDENTIAL TOU AND GENERAL SERVICE**
3 **RATES?**

4 A. Trico is proposing to revise the rate designs for these rate classes by including a
5 demand charge that consists of a \$2 per kW-month charge for the first 2 kW of
6 billing demand and \$0 per kW-month for all demand in excess of 2 kW. The
7 billing demand is defined as the member's highest 15-minute non-coincident peak
8 demand during the month. The minimum billing demand is 2 kW. The originally
9 proposed customer charges for each class remain the same. The energy charges
10 have been reduced to produce the same revenue requirement as originally
11 proposed.

12
13 **Q. WHY IS THE DEMAND RATE STRUCTURED IN THIS WAY?**

14 A. The rate is structured in this manner to allow for member education about the
15 demand rate in preparation for transition to a more complete implementation of the
16 demand rate in a future rate case. This approach reduces the fluctuation in member
17 impact and unintended consequences as a result of the change in rate design. The
18 \$2 per kW-month charge on a minimum of 2 kW of billing demand effectively
19 results in a \$4 fixed demand charge for every customer under the proposed rate.
20 This will allow members to see a minimum demand charge on their monthly bill
21 and also to see the actual monthly billing demand amount prior to being billed
22 based on those billing units. In Trico's next rate case, a charge for the excess
23 billing demand could then be implemented.

24
25

1 **Q. WHAT IS THE BASIS FOR THE 2 KW MINIMUM BILLING DEMAND?**

2 A. The sample data of approximately 18,000 residential customers indicates that the
3 average monthly billing demand is greater than 5 kW and approximately 2.3% of
4 residential customer bills have monthly billing demand less than 2 kW. The 2 kW
5 minimum was selected because it is considerably less than the average demand but
6 it is sufficient in combination with the \$2 per kW-month charge to recover a
7 portion of demand costs and convey the concept of the demand rate. The intent
8 was to introduce a minimal demand charge component that introduces the demand
9 rate to members, reflects a fair recovery of demand costs from all customers and
10 minimizes customer impact from the demand rate.

11
12 **Q. WHAT IS THE BASIS FOR USING THE MEMBERS 15-MINUTE NON**
13 **COINCIDENT PEAK (NCP) AS THE BILLING DEMAND?**

14 A. This measure of demand is utilized by Trico for all of its other demand rates. The
15 NCP demand is the maximum demand reading for any 15 minute interval in the
16 monthly billing period. As discussed in my Direct Testimony, Trico's purchased
17 power demand-related costs are fixed and do not vary based on consumption or the
18 time period of consumption. Trico's distribution demand-related costs are also
19 fixed and are established based on the total capacity requirements to serve load.
20 Based on the fixed nature of these costs, it is most appropriate to recover those
21 costs based on the NCP billing demand which ensures recovery of those costs from
22 the customers that cause those costs.

1 **Q. DOES THE USE OF THE NCP BILLING DEMAND HELP TO REDUCE**
2 **THE LOST FIXED COSTS THAT RESULT FROM MEMBER OWNED**
3 **DG?**

4 A. Yes. As reflected on Exhibit DWH-8 of my Direct Testimony, Trico's existing
5 Residential energy rate includes \$0.049412 per kWh of fixed purchased power
6 demand costs and \$0.040954 per kWh of fixed distribution wires costs. The total
7 lost fixed costs for a member with DG that produces an average of 922 kWh per
8 month is \$83.34 per customer. The application of the proposed demand rate based
9 on an NCP billing demand will provide a recovery of those fixed demand related
10 costs based on the member's actual peak demand which is reflective of the
11 member's use of Trico's distribution resources and purchased power demand costs.
12 Initially, the proposed demand rate will reduce the lost fixed costs by \$4 per
13 customer per month. As the cooperative more fully implements the demand rate in
14 future rate cases, the lost fixed costs will be further reduced.

15
16 Additionally, since the NCP billing demand will be applied to all residential and
17 small commercial customers, the demand rate will provide a recovery of lost fixed
18 costs associated with customers other than those with DG such as vacant homes or
19 customers that have otherwise reduced their energy usage.

20
21 **Q. WOULD A TIME BASED DEMAND RATE BE A VIABLE OPTION FOR**
22 **TRICO?**

23 A. No. Utilizing a time based demand or coincident peak billing demand as the
24 billing unit would allow consumers the ability to avoid fixed demand charges for
25 which there is no corresponding reduction in cost for Trico. This would not be

1 equitable and would result in a similar lost fixed cost situation that exists with the
2 current two-part rate.

3

4 **Q. PLEASE DESCRIBE ALTERNATE SCHEDULE H-2.1?**

5 A. Alternate Schedule H-2.1 provides the calculation of the proposed demand rate for
6 each of the rate classes affected. The first 2 kW of billing demand is calculated as
7 2 times the number of customer billing units reflecting the minimum of 2 kW per
8 customer. The customer charges remain as originally proposed and the energy
9 charges have been reduced slightly to produce an overall revenue requirement that
10 is slightly lower than originally requested.

11

12 **Q. HAVE YOU PROVIDED BILLING COMPARISONS UNDER THE
13 PROPOSED DEMAND RATE FOR EACH AFFECTED RATE?**

14 A. Yes. Attached as Alternate Schedules 4.0, 4.1 and 4.2 are comparisons of the
15 existing rate and the proposed demand rate for Residential, Residential TOU and
16 General Service 1.

17

18 **Q. HAVE YOU INCLUDED A REDLINE VERSION OF THE PROPOSED
19 TARIFF SHEETS?**

20 A. Yes. The redline versions of the proposed tariff sheets for each rate are attached.

21

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

23 A. Yes, it does.

24

25

Exhibit DWH – S1

TRICO ELECTRIC COOPERATIVE, INC.

DEVELOPMENT OF DEMAND RATES FOR RESIDENTIAL, RESIDENTIAL TOU AND GENERAL SERVICE 1 RATE CLASSES

	Billing Units	Alternate Proposed Demand Rate			Originally Proposed Rate	
		Power Supply	Distr. Wires	Total	Proposed Rates	Proposed Revenue
<u>Residential</u>						
Consumers	454,052		20.00	20.00	20.00	9,081,040
First 2 kW (Min of 2 kW)	908,104		2.00	2.00	0.00	-
Over 2 kW	-		0.00	0.00	0.00	-
First 800 kWh/Mo.	254,553,885	0.07700	0.03580	0.11280	0.11760	29,935,537
Excess kWh	125,377,286	0.08700	0.03580	0.12280	0.12760	15,998,142
WPCA						(27,938)
Total	379,931,171					54,979,319
<u>Residential TOU</u>						
Consumers	33,520		24.00	24.00	24.00	804,480
First 2 kW (Min of 2 kW)	67,040		2.00	2.00	0.00	-
Over 2 kW	-		0.00	0.00	0.00	-
kWh - On Peak	10,257,451	0.12240	0.07172	0.19412	0.19790	2,029,950
kWh - Off Peak	25,192,421	0.06240	0.01172	0.07412	0.07790	1,962,490
WPCA						-
Total	35,449,872					4,796,999
<u>General Service 1 - Single Phase</u>						
Consumers	16,397		23.00	23.00	23.00	377,131
First 2 kW (Min of 2 kW)	32,794		2.00	2.00	0.00	-
Over 2 kW	-		0.00	0.00	0.00	-
kWh	9,355,588	0.07580	0.05089	0.12669	0.13370	1,250,842
WPCA						-
Total	9,355,588					1,627,978
<u>General Service 1 - Three Phase</u>						
Consumers	1,465		31.00	31.00	31.00	45,415
First 2 kW (Min of 2 kW)	2,930		2.00	2.00	0.00	-
Over 2 kW	-		0.00	0.00	0.00	-
kWh	1,276,535	0.07580	0.05089	0.12669	0.13370	170,673
WPCA						-
Total	1,276,535					212,999

Exhibit DWH – S2

TRICO ELECTRIC COOPERATIVE, INC.
COMPARISON OF EXISTING RATE AND ALTERNATE DEMAND RATE
RESIDENTIAL

<u>kWh Usage</u>	<u>Billing kW</u>	<u>Existing Rate</u>	<u>Alternate Rate</u>	<u>Change</u>	<u>% Change</u>
Customer Charge		\$15.00	\$20.00	\$5.00	33.33%
First 2 kW (Minimum of 2 kW)		\$0.00	\$2.00	\$2.00	
Excess kW		\$0.00	\$0.00	\$0.00	
First 800 kWh/Month		\$0.121600	\$0.112800	(\$0.008800)	-7.24%
Next 800 kWh/Month		\$0.121600	\$0.122800	\$0.001200	0.99%
PPCA Factor, per kWh		\$0.000073	\$0.000000	(\$0.000073)	-100.00%
<hr/>					
50	2.00	\$21.08	\$29.64	\$8.56	40.61%
100	2.00	\$27.17	\$35.28	\$8.11	29.85%
300	2.00	\$51.50	\$57.84	\$6.34	12.31%
500	2.00	\$75.84	\$80.40	\$4.56	6.01%
800	2.00	\$112.34	\$114.24	\$1.90	1.69%
1,000	2.00	\$136.67	\$138.80	\$2.13	1.56%
3,000	2.00	\$380.02	\$384.40	\$4.38	1.15%
5,000	2.00	\$623.37	\$630.00	\$6.63	1.06%
837 Average	2.00	\$116.84	\$118.78	\$1.94	1.66%
750 Median	2.00	\$106.25	\$108.60	\$2.35	2.21%

Exhibit DWH – S3

TRICO ELECTRIC COOPERATIVE, INC.
COMPARISON OF EXISTING AND ALTERNATE DEMAND RATE
RESIDENTIAL-TOU

kWh Usage	Billing kW	On-Peak kWh 29%	Off-Peak kWh 71%	Existing Rate	Proposed Rate	Change	Percent Change
Customer Charge				\$19.00	\$24.00	\$5.00	26.32%
First 2 kW					\$2.00	\$2.00	
Excess kW					\$0.00	\$0.00	
Energy Charge, per On-Peak kWh				\$0.193200	\$0.194120	\$0.000920	0.48%
Energy Charge, per Off-Peak kWh				\$0.073200	\$0.074120	\$0.000920	1.26%
PPCA Factor, per kWh				\$0.000073	\$0.000000	(\$0.000073)	-100.00%
50	2	14	36	\$24.34	\$33.39	\$9.05	37.18%
100	2	29	71	\$29.81	\$38.89	\$9.08	30.46%
300	2	87	213	\$51.42	\$60.68	\$9.26	18.01%
500	2	145	355	\$73.04	\$82.46	\$9.42	12.90%
800	2	231	569	\$105.34	\$115.02	\$9.68	9.19%
1,000	2	289	711	\$126.95	\$136.80	\$9.85	7.76%
3,000	2	867	2,133	\$342.86	\$354.40	\$11.54	3.37%
5,000	2	1,445	3,555	\$558.77	\$572.00	\$13.23	2.37%
1,058 Avg	2	306	752	\$133.24	\$143.14	\$9.90	7.43%
698 Median	2	202	496	\$94.38	\$103.98	\$9.60	10.17%

Exhibit DWH – S4

TRICO ELECTRIC COOPERATIVE, INC.

**COMPARISON OF EXISTING AND ALTERNATE DEMAND RATE
GENERAL SERVICE 1**

Load Factor	Billing kW	kWh Usage	Existing Rate	Proposed Rate	Change	Percent Change
Customer Charge, Single Phase			\$18.00	\$23.00	\$5.00	27.78%
Customer Charge, Three Phase			\$26.00	\$31.00	\$5.00	19.23%
First 2 Billing kW per month			\$0.00	\$2.00	\$2.00	
Over 2 Billing kW per month			\$0.00	\$0.00	\$0.00	
Energy Charge, per kWh			\$0.133500	\$0.126690	(\$0.006810)	-5.10%
PPCA Factor, per kWh			\$0.000073	\$0.000000	(\$0.000073)	-100.00%
Single Phase						
10.00%	2.0	146	\$37.50	\$45.50	\$8.00	21.33%
20.00%	2.0	292	\$57.00	\$63.99	\$6.99	12.26%
30.00%	2.0	438	\$76.50	\$82.49	\$5.99	7.83%
40.00%	2.0	584	\$96.01	\$100.99	\$4.98	5.19%
50.00%	2.0	730	\$115.51	\$119.48	\$3.97	3.44%
Average	2.00	570	\$94.14	\$99.21	\$5.07	5.39%
Median	2.00	349	\$64.62	\$71.21	\$6.59	10.20%
Three Phase						
10.00%	2.0	146	\$45.50	\$53.50	\$8.00	17.58%
20.00%	2.0	292	\$65.00	\$71.99	\$6.99	10.75%
30.00%	2.0	438	\$84.50	\$90.49	\$5.99	7.09%
40.00%	2.0	584	\$104.01	\$108.99	\$4.98	4.79%
50.00%	2.0	730	\$123.51	\$127.48	\$3.97	3.21%
Average	2.00	871	\$142.34	\$145.35	\$3.01	2.11%
Median	2.00	546	\$98.93	\$104.17	\$5.24	5.30%

Exhibit DWH – S5

ELECTRIC RATES

Trico Electric Cooperative, Inc.
8600 W. Tangerine Road
Marana, Arizona 85658
Filed By: Vincent Nitido
Title: CEO/General Manager

Effective Date: _____

STANDARD OFFER TARIFF

RESIDENTIAL SERVICE SCHEDULE RS1

Availability

In the Cooperative's Certificated Area where its facilities are of adequate capacity and the required phase and suitable voltage are in existence and are adjacent to the premises served.

Application

The Residential Service Rate (RS1) is applicable for residential purposes in individual private dwellings and in individually metered apartments, condominiums, and similar residential units, when such service is supplied at one premise through one point of delivery and measured through one meter.

Not applicable to resale or standby. This rate may be applicable to three (3) phase service used for domestic purposes only. Three phase service is required for motors of an individual rating capacity of 10 H.P. or more.

Type of Service

The type of service available under this schedule will be determined by the Cooperative and will normally be:

120/240 volt single phase, or 120/208 volt three phase

Monthly Rate

STANDARD RATE RS1	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Customer Charge (\$/Customer/Mo)							
Single-Phase		\$5.23	\$0.98	\$6.33	\$7.46	\$20.00	\$20.00
Three-Phase		\$5.23	\$0.98	\$6.33	\$7.46	\$20.00	\$20.00
<u>Demand Charge (\$/kW)</u>							
<u>First 2 kW/month</u>	\$0.00				\$2.00	\$2.00	\$2.00
<u>Over 2 kW/month</u>	\$0.00				\$0.00	\$0.00	\$0.00
Energy Charge (\$/kWh)							
First 800 kWh/month	\$0.0770				\$0.035840	\$0.03584	\$0.11287
Over 800 kWh/month	\$0.0870				6	06	6
					\$0.035840	\$0.03584	\$0.12287
					6	06	6

RESIDENTIAL SERVICE SCHEDULE RS1

The Billing Demand shall be applied to the Customer's monthly metered demand as recorded by suitable metering device at the time of the Customer's highest 15-minute interval demand for the billing month. In no event shall the Billing Demand be less than 2 kW.

Minimum Monthly Charge

The greater of the following, not including any wholesale power cost adjustor or any other adder approved by the Arizona Corporation Commission:

1. The Customer Charge plus the Demand Charge;
2. \$1.00 per kVA of required transformer capacity;
3. The amount specified in the written contract between the Cooperative and the Customer

Tax Adjustment

To the charge computed in this rate schedule, including all adjustments, shall be added the applicable proportionate part of any taxes or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Cooperative and/or the price or revenue from the electric energy or service sold and/or the volume of energy purchased for sale and/or sold hereunder.

Wholesale Power Cost Adjustment

The Cooperative shall, if purchased power cost is increased or decreased above or below the base purchased power cost of \$0.081711 per kWh sold, flow through such increases or decreases to all classes of Customers.

In addition to the foregoing, all kWh sold to each Customer under this rate schedule shall be subject to an additional temporary wholesale power cost adjustment, if any, that may be charged the Cooperative by its supplier of electricity which consists of an additional surcharge, a temporary credit and/or a fuel bank surcharge.

Rules, Regulations and Line Extension Policy (RRLEP)

The RRLEP of the Cooperative as on file with the Arizona Corporation Commission shall apply to this rate schedule.

Upon application for service or upon request, the Cooperative will assist the Customer in selecting the rate schedule best suited to his requirements, but the Cooperative does not guarantee the Customer will be served under the most favorable rate schedule. Upon written notification of any material changes in the Customer's installation, load conditions or use of service, the Cooperative will assist in determining if a change in rates is desirable. No more than one (1) such change at the Customer's request will be made within any twelve (12) month period.

Contract

If service is requested in the Cooperative's Certificated Area and the provisions outlined in the Availability Clause of this rate tariff cannot be met, it will be necessary for the Cooperative and Customer to mutually agree, in a written contract, on the conditions under which service will be made available.

Service Availability Charge

A Service Availability Charge to be paid by the Customer to the Cooperative may be included in the contract to reimburse the Cooperative for its operating expenses with regard to idle or standby services in connection with the facilities constructed or installed pursuant to the contract based upon the Cooperative's estimate of its actual operating costs for such idle or standby services.

**RESIDENTIAL SERVICE
SCHEDULE RS1**

Renewable Energy Standard (RES) Surcharge

The Cooperative shall add to its bill a RES Surcharge in accordance with the approved RES tariff to help offset the costs associated with the Cooperative's programs designed to promote alternative generation requirements that satisfy the RES as approved by the Arizona Corporation Commission. Other charges may be applicable subject to approval by the Arizona Corporation Commission.

Demand Side Management (DSM) Programs; DSM Adjustment Mechanism

The Cooperative shall recover its cost for pre-approved DSM programs through a separate DSM adjustment mechanism which shall provide for a separate and specific accounting for pre-approved DSM costs.

ELECTRIC RATES

Trico Electric Cooperative, Inc.
8600 W. Tangerine Road
Marana, Arizona 85658
Filed By: Vincent Nitido
Title: CEO/General Manager

Effective Date: _____

STANDARD OFFER TARIFF

RESIDENTIAL TIME OF USE SERVICE SCHEDULE RS2TOU

Availability

In the Cooperative's Certificated Area where its facilities are of adequate capacity and the required phase and suitable voltage are in existence and are adjacent to the premises served.

Application

The Residential Time of Use Service Rate (RS2TOU) is applicable for residential purposes in individual private dwellings and in individually metered apartments, condominiums, and similar residential units, when such service is supplied at one premise through one point of delivery and measured through one meter.

Not applicable to resale or standby. This rate may be applicable to three (3) phase service used for domestic purposes only. Three phase service is required for motors of an individual rating capacity of 10 H.P. or more.

Type of Service

The type of service available under this schedule will be determined by the Cooperative and will normally be:

120/240 volt single phase, or 120/208 volt three phase

Monthly Rate

TIME-OF-USE RATE RS2TOU	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Customer Charge (\$/Customer/Mo)							
Single Phase		\$11.18	\$0.98	\$6.33	\$5.51	\$24.00	\$24.00
Three Phase		\$11.18	\$0.98	\$6.33	\$5.51	\$24.00	\$24.00
<u>Demand Charge (\$/kW)</u>							
First 2 kW per month	\$0.00				\$2.00	\$2.00	\$2.00
Over 2 kW per month	\$0.00				\$0.00	\$0.00	\$0.00
Energy Charge (\$/kWh)							
On-Peak kWh	\$0.1224				\$0.075500	\$0.075500	\$0.19412
Off-Peak kWh	\$0.0624				.7172	.07172	.79
					\$0.011724	\$0.01172	\$0.07412

			550	550	79
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The Billing Demand shall be applied to the Customer's monthly metered demand as recorded by suitable metering device at the time of the Customer's highest 15-minute interval demand for the billing month. In no event shall the Billing Demand be less than 2 kW.

**RESIDENTIAL TIME OF USE SERVICE
SCHEDULE (RS2TOU)**

Definition of On-Peak

April 1 through October 31: For this rate schedule, on-peak hours are 1:00 p.m. to 9:00 p.m., Monday through Friday. All other hours, including Saturday, Sunday and *Holidays, are considered to be Off-Peak.

November 1 through March 31: For this rate schedule, on-peak hours are 6:00 a.m. to 10:00 a.m. and 6:00 p.m. to 10:00 p.m., Monday through Friday. All other hours, including Saturday, Sunday and *Holidays, are considered to be Off-Peak.

Minimum Monthly Charge

The greater of the following, not including any wholesale power cost adjustor or any other adder approved by the Arizona Corporation Commission:

1. The Customer Charge plus the Demand Charge;
2. \$1.00 per kVA of required transformer capacity;
3. The amount specified in the written contract between the Cooperative and the Customer

Tax Adjustment

To the charge computed in this rate schedule, including all adjustments, shall be added the applicable proportionate part of any taxes or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Cooperative and/or the price or revenue from the electric energy or service sold and/or the volume of energy purchased for sale and/or sold hereunder.

Wholesale Power Cost Adjustment

The Cooperative shall, if purchased power cost is increased or decreased above or below the base purchased power cost of \$0.081711 per kWh sold, flow through such increases or decreases to all classes of Customers.

In addition to the foregoing, all kWh sold to each Customer under this rate schedule shall be subject to an additional temporary wholesale power cost adjustment, if any, that may be charged the Cooperative by its supplier of electricity which consists of an additional surcharge, a temporary credit and/or a fuel bank surcharge.

Rules, Regulations and Line Extension Policy (RRLEP)

The RRLEP of the Cooperative as on file with the Arizona Corporation Commission shall apply to this rate schedule.

Upon application for service or upon request, the Cooperative will assist the Customer in selecting the rate schedule best suited to his requirements, but the Cooperative does not guarantee the Customer will be served under the most favorable rate schedule. Upon written notification of any material changes in the Customer's installation, load conditions or use of service, the Cooperative will assist in determining if a change in rates is desirable. No more than one (1) such change at the Customer's request will be made within any twelve (12) month period.

**RESIDENTIAL TIME OF USE SERVICE
SCHEDULE (RS2TOU)**

Contract

If service is requested in the Cooperative's Certificated Area and the provisions outlined in the Availability Clause of this rate tariff cannot be met, it will be necessary for the Cooperative and Customer to mutually agree, in a written contract, on the conditions under which service will be made available.

Service Availability Charge

A Service Availability Charge to be paid by the Customer to the Cooperative may be included in the contract to reimburse the Cooperative for its operating expenses with regard to idle or standby services in connection with the facilities constructed or installed pursuant to the contract based upon the Cooperative's estimate of its actual operating costs for such idle or standby services.

Renewable Energy Standard (RES) Surcharge

The Cooperative shall add to its bill a RES Surcharge in accordance with the approved RES tariff to help offset the costs associated with the Cooperative's programs designed to promote alternative generation requirements that satisfy the RES as approved by the Arizona Corporation Commission. Other charges may be applicable subject to approval by the Arizona Corporation Commission.

Demand Side Management (DSM) Programs; DSM Adjustment Mechanism

The Cooperative shall recover its cost for pre-approved DSM programs through a separate DSM adjustment mechanism which shall provide for a separate and specific accounting for pre-approved DSM costs.

***Definition of Holidays**

Holidays are defined as New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a Holiday falls on Saturday, the preceding Friday is designated Off-Peak; if a Holiday falls on Sunday, the following Monday is designated Off-Peak.

ELECTRIC RATES

Trico Electric Cooperative, Inc.
8600 W. Tangerine Road
Marana, Arizona 85658
Filed By: Vincent Nitido
Title: CEO/General Manager

Effective Date: _____

STANDARD OFFER TARIFF

GENERAL SERVICE SCHEDULE GS1 GENERAL SERVICE LESS THAN 10 KW

Availability

In the Cooperative's Certificated Area where its facilities are of adequate capacity and the required phase and suitable voltage are in existence and are adjacent to the premises served.

Application

The General Service Less Than 10 kW Rate (GS1) is applicable for single and three phase service for more than one residence from a single metering point, where the service is used regularly for business, professional or other gainful purposes, and any considerable amount of electricity is used for other than domestic purposes, or electrical equipment not normally used in living quarters and has a monthly demand of less than 10 kW. All service shall be delivered at a single service location. The Cooperative reserves the right to meter in the most practical manner, either primary or secondary voltage.

Type of Service

The type of service available under this schedule will be determined by the Cooperative and will normally be:

120/240 volt single phase, 120/208 volt three phase, or 277/480 volt three phase

Monthly Rate

STANDARD RATE	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Customer Charge (\$/Customer/Mo)							
Single Phase		\$5.54	\$0.98	\$6.33	\$10.15	\$23.00	\$23.00
Three Phase		\$5.54	\$0.98	\$6.33	\$18.15	\$31.00	\$31.00
Demand Charge (\$/kW)							
<u>First 2 kW per Month</u>	\$0.00				\$2.00	\$2.00	\$2.00
<u>Over 2 kW per Month</u>	\$0.00				\$0.00	\$0.00	\$0.00
Energy Charge (\$/kWh)	\$0.0758				\$0.057905	\$0.05089	\$0.126693
					089	79	37

The Billing Demand shall be applied to the Customer's monthly metered demand as recorded by suitable metering device at the time of the Customer's highest 15-minute interval demand for the billing month. In no event shall the Billing Demand be less than 2 kW.

**GENERAL SERVICE
SCHEDULE GS1
GENERAL SERVICE LESS THAN 10 KW**

Minimum Monthly Charge

The greater of the following, not including any wholesale power cost adjustor or any other adder approved by the Arizona Corporation Commission:

1. The Customer Charge plus the Demand Charge;
2. \$1.00 per kVA of required transformer capacity;
3. The amount specified in the written contract between the Cooperative and the Customer.

Tax Adjustment

To the charge computed in this rate schedule, including all adjustments, shall be added the applicable proportionate part of any taxes or governmental impositions which are or may in the future be assessed on the basis of gross revenues of the Cooperative and/or the price or revenue from the electric energy or service sold and/or the volume of energy purchased for sale and/or sold hereunder.

Wholesale Power Cost Adjustment

The Cooperative shall, if purchased power cost is increased or decreased above or below the base purchased power cost of \$0.081711 per kWh sold, flow through such increases or decreases to all classes of Customers.

In addition to the foregoing, all kWh sold to each Customer under this rate schedule shall be subject to an additional temporary wholesale power cost adjustment, if any, that may be charged the Cooperative by its supplier of electricity which consists of an additional surcharge, a temporary credit and/or a fuel bank surcharge.

Rules, Regulations and Line Extension Policy (RRLEP)

The RRLEP of the Cooperative as on file with the Arizona Corporation Commission shall apply to this rate schedule.

Upon application for service or upon request, the Cooperative will assist the Customer in selecting the rate schedule best suited to his requirements, but the Cooperative does not guarantee the Customer will be served under the most favorable rate schedule. Upon written notification of any material changes in the Customer's installation, load conditions or use of service, the Cooperative will assist in determining if a change in rates is desirable. No more than one (1) such change at the Customer's request will be made within any twelve (12) month period.

Contract

If service is requested in the Cooperative's Certificated Area and the provisions outlined in the Availability Clause of this rate tariff cannot be met, it will be necessary for the Cooperative and Customer to mutually agree, in a written contract, on the conditions under which service will be made available.

Service Availability Charge

A Service Availability Charge to be paid by the Customer to the Cooperative may be included in the contract to reimburse the Cooperative for its operating expenses with regard to idle or standby services in connection with the facilities constructed or installed pursuant to the contract based upon the Cooperative's estimate of its actual operating costs for such idle or standby services.

**GENERAL SERVICE
SCHEDULE GS1
GENERAL SERVICE LESS THAN 10 KW**

Renewable Energy Standard (RES) Surcharge

The Cooperative shall add to its bill a RES Surcharge in accordance with the approved RES tariff to help offset the costs associated with the Cooperative's programs designed to promote alternative generation requirements that satisfy the RES as approved by the Arizona Corporation Commission. Other charges may be applicable subject to approval by the Arizona Corporation Commission.

Demand Side Management (DSM) Programs; DSM Adjustment Mechanism

The Cooperative shall recover its cost for pre-approved DSM programs through a separate DSM adjustment mechanism which shall provide for a separate and specific accounting for pre-approved DSM costs.