

ORIGINAL

OPEN MEETING AGENDA ITEM



0000082893

RECEIVED

BEFORE THE ARIZONA CORPORATION COMMISSION

7008 APR -3 P 4: 43

Arizona Corporation Commission

DOCKETED

APR - 3 2008

AZ CORP COMMISSION
DOCKET CONTROL

COMMISSIONERS

- MIKE GLEASON - CHAIRMAN
- WILLIAM A. MUNDELL
- JEFF HATCH-MILLER
- KRISTIN K. MAYES
- GARY PIERCE

DOCKETED BY

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. E-04204A-07-0593
 UNS ELECTRIC, INC. FOR APPROVAL OF ITS)
 RENEWABLE ENERGY STANDARD,) **UNS ELECTRIC, INC.'S**
 INCLUDING ITS DISTRIBUTED RENEWABLE) **COMMENTS**
 ENERGY PLAN AND RENEWABLE ENERGY)
 STANDARD TARIFF.)

UNS Electric, Inc. ("UNS Electric" or the "Company"), through undersigned counsel, hereby submits its Comments ("Comments") responding to the Arizona Corporation Commission ("Commission") Staff's Proposed Order ("Order").

I. INTRODUCTION.

UNS Electric has been a long-time proponent and developer of alternative, sustainable sources of energy to meet the needs of its customers, a position it proudly continues to support as part of its corporate culture.

The Commission has shown great leadership in adopting the Renewable Energy Standard and Tariff Rules ("REST") to provide a framework to financially support utilities with additional sources of funding in developing new renewable energy sources to serve customers. The Company applauds the Commission's recognition that there is a need for additional financial support in order to attain the Commission's policy goals to expand renewable energy use. The actual funding of the REST programs is provided through Commission approval of the REST Tariff, submitted by a utility in conjunction with a REST Implementation Plan.

47

1 UNS Electric has filed two REST Implementation Plans - (i) the Full Compliance
2 Opportunity Plan, and (ii) the Sample Tariff Plan - along with the associated REST Tariffs, to
3 provide a set of two REST solution alternatives for the Commission's consideration. The Full
4 Compliance Opportunity Plan provides the appropriate level of funding to afford a fair opportunity
5 for the Company to meet the annual renewable energy requirements of the REST, including the
6 residential distributed generation portion, but requires a REST Tariff cap level that could be
7 burdensome for many customers. The Sample Tariff Plan, adopts the REST rule sample tariff rate
8 and caps, which represent a moderate increase in monthly customer payments over the
9 Environmental Portfolio Standard ("EPS") surcharge. This Plan is expected to provide sufficient
10 funding to meet the overall REST annual renewable energy requirements, including the overall total
11 distributed generation requirements, but is expected to only provide 34.5% of the distributed
12 renewable energy from residential resources, instead of the 50% required in the REST rules.

13 Commission Staff has presented the Commission with an Order for its consideration that
14 presents a third REST program option. The Company appreciates the thoughtful work Staff has
15 performed in preparing its Order, and agrees with many of Staff's recommendations. However, UNS
16 Electric does have one significant exception, and a few important issues, that must be addressed for
17 the Commission's consideration during review of the Order. These concerns are addressed in greater
18 detail below.

19 Finally, in response to Staff's suggestion that UNS Electric implement the REST plan more
20 efficiently, the Company assures the Commission and Staff that it will administer whichever REST
21 Plan is approved as expeditiously and efficiently as possible to provide a high level of funding for
22 residential customer incentives.

23 **II. STAFF'S PROPOSED PLAN – THE SIGNIFICANT EXCEPTION.**

24 Staff has recommended that the Company's Full Compliance Opportunity Plan be rejected as
25 too expensive and burdensome on customers and has instead characterized UNS Electric's Sample
26 Tariff Plan as reasonable. However, Staff also proposed a third REST Plan ("Staff Plan"). Notably,
27

1 Staff did recommend that if the Staff Plan is not approved by the Commission, the Company's
2 Sample Tariff Plan should be approved.

3 The Staff Plan provides a level of REST funding that is much less than the funding that
4 would be provided by the Company's proposed Full Compliance Opportunity Plan. Although the
5 funding has been greatly reduced, Staff still expects full compliance with all provisions of the REST
6 annual energy requirements, including the residential distributed generation requirements. The
7 proposed funding reduction would be appropriate if the annual residential distributed energy
8 requirements were also reduced accordingly. However, the Staff Plan does not reduce that
9 requirement at all.

10 UNS Electric agrees with Staff that its proposed reduction of the incentive payments for
11 residential distributed renewable generation would save a significant amount of customer funds from
12 being spent in the Company's REST program. However, the reduction of residential incentive levels
13 to those proposed in the Staff Plan or the Company's Sample Tariff Plan will not provide the proper
14 financial incentive to install renewable energy systems to enough customers to allow the Company to
15 meet its REST residential distributed renewable energy requirements in 2008.

16 By example, UNS Electric offered that same Staff Plan proposed level of financial incentive,
17 \$3.00/watt DC, for photovoltaic ("PV") systems installed in 2007. In 2007, 22 customers reserved
18 just under 90 kW DC of PV at that incentive level. UNS Electric and Staff agree that 444 kW of PV
19 (with an estimated number of 148 customers) is needed in 2008 to meet the Company's REST
20 residential distributed renewable generation requirements. Based on recent actual experience, the
21 Company is absolutely certain the \$3.00/watt DC incentive proposed by the Staff Plan will not
22 provide the customer acceptance rates required without some additional incentives offered by
23 another entity, worth at least \$1.50/watt DC.

24 **III. NEED FOR ADDITIONAL PV INCENTIVE.**

25 The Company's experience and analysis shows that in order to meet REST policy goals for
26 distributed generation, an additional incentive is needed. At the present time, no other state or
27 federal residential incentives are available or expected to be implemented in the near future. UNS

1 Electric has direct relevant experience in this area as well, having provided a PV incentive program
2 for six years, referred to as SunShare Option 2, which provided an effective incentive level of about
3 \$4.50/watt DC. In its best year, 2006, SunShare Option 2 incentivized 290 customers to install
4 almost 800 kW DC of facilities, as compared to its 2008 REST residential PV needs of 2,014 kW
5 DC.¹ Thus, the Company is very skeptical that even a \$4.50/watt DC incentive level would induce
6 the necessary 148 customers to install enough PV energy systems that would allow the Company to
7 attain its REST residential distributed renewable generation requirements in 2008. While offering
8 higher incentive levels above \$4.50/watt DC would increase customer participation, it would also
9 increase the cost of the REST program to a level the Company did not feel was economically feasible
10 to the customers paying the monthly REST tariff.

11 UNS Electric spent considerable time analyzing the incentive levels needed to increase the
12 local solar energy systems market prior to developing its REST Implementation Plans. Solar
13 advocates have long stated that the average residential customer payback for a PV system needs to be
14 10 years or less for market acceptance of solar energy systems. When UNS Electric used that
15 payback time as baseline criteria for its analysis, with existing federal and state tax incentives, the
16 incentive required to meet this time frame is within the range of \$4.60/watt DC to \$5.50/watt DC.
17 Because the state and federal tax incentives have payment caps, very small systems need less
18 incentive - about \$4.60/watt DC - while midrange size systems of about 3 kW to 5 kW need a higher
19 incentive - around the \$5.50/watt DC level.

20 A \$3.00/watt DC incentive extends the payback time period to 25 years for the smallest
21 systems and at least a 30-year payback for the midrange systems. This again demonstrates the reason
22 current SunShare \$3.00/watt DC incentive only supported 89 kW DC of PV system installations in
23 UNS Electric's service territory in 2007. UNS Electric shared this payback analysis in mid-2007
24 with a member of the solar advocate community in Tucson, who was in general agreement that the
25 paybacks for the given incentive levels looked realistic, on average.

26
27 ¹ 2006 holds significance as the year in which the current federal tax incentives first became available.

1 **IV. NEED FOR ADDITIONAL SOLAR WATER HEATING INCENTIVE.**

2 In addition to the PV installations, an additional 616 kW equivalent representing an estimated
3 205 customers of residential solar water heating systems is needed to meet the Company's REST
4 residential distributed renewable generation requirements in 2008. Discussions with local solar
5 installers during several renewable energy fairs held in September 2007 dictated the need for a
6 relatively high incentive offering to achieve this level of installation demand. UNS Electric's Full
7 Compliance Opportunity Plan included an incentive (maximum of \$3,500) at a level that is double
8 the incentive level in the Staff Plan (maximum of \$1,750). While a full market impact analysis was
9 not performed on the solar water heating incentives, experience gained by Arizona Public Service
10 Company ("APS") and Salt River Project ("SRP"), with their solar water heating incentive programs,
11 indicates the Staff Plan incentive will not provide for commitment by customers for, and installation
12 of, 616 kW equivalent of solar water heating in UNS Electric's service territory in 2008. Local solar
13 installers estimated demand for solar water heaters in UNS Electric's service territory in 2007 to be
14 about 20 to 30 systems, far short of 205.

15 Based on the Company's market payback analysis and historic market performance for PV
16 systems, it will be impossible for the \$3.00/watt DC PV and maximum \$1,750 solar water heating
17 incentives in the Staff Plan to drive sufficient demand to meet the Staff Plan REST residential
18 distributed renewable generation requirements in 2008. Offering the same incentive levels and
19 essentially the same marketing funding level that achieved 22 SunShare PV customers in 2007 will
20 not result in 148 SunShare PV customers in 2008 or beyond. Therefore, UNS Electric strongly
21 recommends that the Commission reject the Staff Plan.

22 UNS Electric agrees with Staff that if the Staff Plan is not adopted, the Commission should
23 approve the Company's Sample Tariff Plan, and proposed Sample Tariff funding rate and caps.
24 Inherent in approval of the Sample Tariff Plan is recognition that UNS Electric will shift its 2008
25 REST residential distributed renewable generation requirements to commercial distributed renewable
26 generation, thus a waiver of the residential requirement in 2008 should be included in the final Order
27 as allowed in R14-2-1816. UNS Electric has included a working copy of the residential payback

1 analysis spreadsheet as Exhibit 1, attached hereto and incorporated herein. This spreadsheet was
2 provided to Staff in March 2008 in response to a data request.

3 **V. ZERO TILT ANGLE FOR PV SYSTEM INSTALLATIONS.**

4 Staff opines that the Company's proposed Renewable Energy Credit Purchase Program
5 ("RECPP") does not provide support for PV systems installed with less than a 10 degree tilt from
6 horizontal and recommends that UNS Electric revise its SunShare PV Off-Angle Shading Annual
7 Energy Derating Chart ("Derate Chart") to reflect support for zero angle installations. Staff is
8 correct that for an Up-Front Incentive ("UFI") project proposal, the Derate Chart does apply and does
9 not allow for an incentive for zero angle installations. However, UNS Electric provides an
10 opportunity for zero angle installations to apply for a Performance Based Incentive ("PBI") through
11 the Conforming Project Incentive provisions. A PBI pays an incentive only for actual energy
12 production metered from a renewable energy system. Installations of PV system modules with a
13 zero angle from horizontal historically have annual energy production rates much lower than those
14 installed with a 10 degree or higher tilt. The higher tilt PV system modules collect more annual
15 sunlight in higher latitude locations and allow for drainage of rain water, and the cleansing effect of
16 the rainwater on accumulated dirt as it runs off the modules. Some PV manufacturers have
17 historically recommended that their modules be installed with a minimum 10 degree tilt to prevent
18 pooling of water which can lead to module delamination over time. Also, zero tilt installations
19 typically are installed directly upon the roof, reducing backside module cooling and further reducing
20 annual energy output. While UNS Electric feels comfortable providing performance based financial
21 incentives for support of the installation of zero tilt systems, the Company does not feel it should
22 incur performance risk for these systems. UNS Electric thus proposes to offer only a PBI program
23 for zero angle modules, which provides the incentive for actual energy produced and metered.
24 Performance risk is then properly borne by the installing party. UNS Electric recommends no
25 changes be made to its proposed RECPP in this regard. UNS Electric will ensure that solar
26 developers in its service territory are aware that the Derate Chart only applies to UFI-supported
27

1 projects, and not to PBI-supported projects, and that a zero tilt installation can qualify for the PBI
2 program.

3 **VI. REWARDING EFFICIENT SOLAR COOLING SYSTEMS.**

4 Staff recommended that the Commission not grant to UNS Electric a waiver of the provisions
5 of R14-2-1803.B. UNS Electric continues to express concern that the provisions of R14-2-1803.B
6 reward inefficient thermal heat driven cooling systems by paying incentives based on the heat input
7 to the cooling device rather than paying incentives based on the useful cooling output actually
8 produced by the cooling device. It seems perverse in an era of increasing concern for energy
9 efficiency to reward extra heat production and rejection of heat to the atmosphere with financial
10 incentives when cooling in the conditioned space is the customers' energy need (ie: the cooling
11 energy delivered to the conditioned space is what should be given the incentive). UNS Electric has
12 thus requested a waiver of the language in R14-2-1803.B. That section currently reads:

13 *For Distributed Renewable Resources, one Renewable Energy Credit shall be created for*
14 *each 3,415 British Thermal Units of heat produced by a Solar Water Heating System, a Solar*
15 *Industrial Process Heating and Cooling System, Solar Space Cooling System, Biomass*
16 *Thermal System, Biogas Thermal System, or a Solar Space Heating System.*

17 UNS Electric does not request that the language of the rule be changed, but does ask that a waiver of
18 that language be granted, as allowed for in R14-2-1816, to support its proposed RECPP language for
19 Biomass/Biogas Space Cooling and Solar Space Cooling as follows:

20 *System must include a dedicated performance meter to allow for monitoring of the amount of*
21 *useful cooling produced. As an exception to the REST Rule R14-2-1803.B, energy*
22 *production will be calculated at one kW-hr per ton of metered cooling for systems with*
23 *capacity of 100 tons or less and one kW-hr per 1.33 tons of metered cooling for systems with*
24 *capacity of greater than 100 tons.*

25 It is the Company's belief, expressed numerous times before, that during and after proposed and final
26 REST rule adoption that the language of R14-2-1803.B rewards inefficient thermal cooling systems
27 and sends the wrong economic signal to developers. Arizona utility customers should not pay for the

1 installation of inefficient or ineffective renewable energy systems. UNS Electric requests a waiver of
2 that provision to support its RECPP language which it believes will send the proper incentive signals
3 for deployment of efficient thermal cooling systems.

4 **VII. UNIFORM CREDIT PURCHASE PROGRAM ADOPTION/IMPLEMENTATION.**

5 Staff recommends that upon adoption by the Commission of a Uniform Credit Purchase
6 Program (“UCPP”), the Company should develop a mechanism to incorporate UCPP procedures and
7 incentive levels for all eligible technologies in its proposed REST Plan for 2009 and later years. The
8 RECPP is the Company’s version of a UCPP. The Company fully accepts that it will incorporate
9 changes into its RECPP as needed to comply with the Commission-approved UCPP provisions.
10 However, given that the 2009 REST Implementation Plan is due for submission in less than three
11 months, by July 1st of 2008, and that continuity of customer incentive programs is very important for
12 long term success, UNS Electric requests that any changes needed to bring its 2009 RECPP into
13 compliance with a Commission-adopted UCPP be included in its annual 2010 Implementation Plan
14 filing, with program implementation at the beginning of a new program year. A mid-year incentive
15 program change could be confusing to installers and customers and expensive to revise marketing
16 and collateral material. The Company believes a mid-year change could be detrimental to long-term
17 development of the distributed renewable energy market.

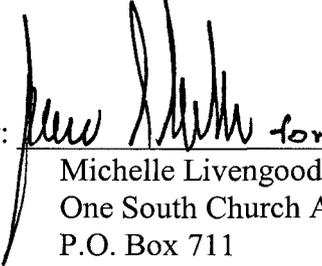
18 **VIII. CONCLUSION.**

19 UNS Electric generally agrees with and supports the recommendations of Staff in its Order.
20 UNS Electric appreciates the spirit of cooperation and dedication to timely review displayed by Staff
21 during its review of the Company’s REST Implementation Plan. However, UNS Electric requests
22 that the Commission reject Staff’s Plan and approve UNS Electric’s Sample Tariff Plan including the
23 associated Tariff, the RECPP, and the Customer Self-Directed Renewable Energy Option Tariff. If
24 the REST Implementation Plan is approved at the April 2008 Open Meeting, UNS Electric expects
25 to expeditiously provide notice to customers of the change in the renewable energy tariffs and start
26 billing the new tariff rate in conjunction with the June 2008 billing period. Thus, for 2008 REST
27 annual renewable energy compliance purposes, June 1st will be the date the REST program

1 commences. UNS Electric looks forward to the opportunity to expand its development of renewable
2 energy resources with approval of the Sample Tariff Plan.

3 RESPECTFULLY SUBMITTED this 3rd day of April, 2008.

4 UNS ELECTRIC, INC.

5
6
7 By:  for

Michelle Livengood
One South Church Avenue
P.O. Box 711
Tucson, Arizona 85702

10 and

11 Michael W. Patten
12 Roshka DeWulf & Patten, PLC
13 One Arizona Center
14 400 East Van Buren Street, Suite 800
15 Phoenix, Arizona 85004

Attorneys for UNS Electric, Inc.

16 Original and thirteen copies of the foregoing
17 filed this 3rd day of April, 2008, with:

18 Docket Control
19 Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

20
21 Copy of the foregoing hand-delivered/mailed
this 3rd day of April 2008 to:

22 Chairman Mike Gleason
23 Arizona Corporation Commission
24 1200 West Washington Street
Phoenix, Arizona 85007

1 Commissioner William A. Mundell
2 Arizona Corporation Commission
3 1200 West Washington Street
4 Phoenix, Arizona 85007

4 Commissioner Jeff Hatch-Miller
5 Arizona Corporation Commission
6 1200 West Washington Street
7 Phoenix, Arizona 85007

7 Commissioner Kristin K. Mayes
8 Arizona Corporation Commission
9 1200 West Washington Street
10 Phoenix, Arizona 85007

10 Commissioner Gary Pierce
11 Arizona Corporation Commission
12 1200 West Washington Street
13 Phoenix, Arizona 85007

13 Lyn Farmer
14 Chief Administrative Law Judge
15 Hearing Division
16 Arizona Corporation Commission
17 1200 West Washington Street
18 Phoenix, Arizona 85007

17 Christopher C. Kempley, Esq.
18 Chief Counsel, Legal Division
19 Arizona Corporation Commission
20 1200 West Washington Street
21 Phoenix, Arizona 85007

21 Ernest G. Johnson
22 Director, Utilities Division
23 Arizona Corporation Commission
24 1200 West Washington Street
25 Phoenix, Arizona 85007

24 C. Webb Crockett
25 Patrick J. Black
26 FENNEMORE CRAIG, PC
27 3003 North Central Avenue, Suite 2600
Phoenix, Arizona 85012-2913

By *Mary Appolite*

EXHIBIT

"1"

Residential UFI Program Options

