

ORIGINAL



0000141381

Court S. Rich AZ Bar No. 021290
Rose Law Group pc
6613 N. Scottsdale Road, Suite 200
Scottsdale, Arizona 85250
Direct: (480) 505-3937
Fax: (480) 505-3925
Attorney for Solar Energy Industries Association

RECEIVED

2013 JAN 11 P 3:11

ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP
CHAIRMAN

GARY PIERCE
COMMISSIONER

BRENDA BURNS
COMMISSIONER

SUSAN BITTER SMITH
COMMISSIONER

BOB BURNS
COMMISSIONER

**IN THE MATTER OF THE
APPLICATION OF TUCSON
ELECTRIC POWER COMPANY FOR
THE ESTABLISHMENT OF JUST
AND REASONABLE RATES AND
CHARGES DESIGNED TO REALIZE
A REASONABLE RATE OF RETURN
ON THE FAIR VALUE OF ITS
OPERATIONS THROUGHOUT THE
STATE OF ARIZONA.**

DOCKET NO. E-01933A-12-0291

**NOTICE OF DIRECT TESTIMONY OF
CARRIE CULLEN HITT**

Pursuant to the Administrative Law Judge's Procedural Order (p. 3) dated September 6, 2012, Solar Energy Industries Association ("SEIA"), by and through undersigned counsel, hereby provides notice of its filing of the attached Direct Testimony of Carrie Cullen Hitt in this docket.

Respectfully submitted this 11th day of January, 2013.

Court S. Rich
Rose Law Group pc
Attorney for Solar Energy Industries Association

Arizona Corporation Commission

DOCKETED

JAN 11 2013

DOCKETED BY

1 **Original and 13 copies filed on**
2 **this 11th day of January, 2013 with:**

3 Docket Control
4 Arizona Corporation Commission
5 1200 W. Washington Street
6 Phoenix, Arizona 85007

7 *I hereby certify that I have this day served the foregoing documents on all parties of record in
8 this proceeding by sending a copy by regular U.S. mail to:*

9 Steve Olea, Director
10 Utilities Division
11 Arizona Corporation Commission
12 1200 W. Washington St.
13 Phoenix, Arizona 85007

14 Janice Alward, Chief Counsel
15 Legal Division
16 Arizona Corporation Commission
17 1200 W. Washington St.
18 Phoenix, Arizona 85007

19 Lyn Farmer
20 Chief Administrative Law Judge
21 Arizona Corporation Commission
22 1200 W. Washington St.
23 Phoenix, Arizona 85007-2927

24 Terrance Spann
25 9275 Gunston Rd, Ste 1300
26 Fort Belvoir, Virginia 22060

27 Stephen Baron
28 J. Kennedy & Associates
570 Colonial Park Dr. Ste 305
Roswell, Georgia 30075

Kurt Boehm & Jody Kyler
Boehm, Hurtz & Lowry
36 E. Seventh St. Suite 1510
Cincinnati, Ohio 45202

Annie Lappe
Rick Gilliam
The Vote Solar Initiative
1120 Pearl St. - 200
Boulder, Colorado 80302

Kevin Higgins
215 South State Street, Ste. 200
Salt Lake City, Utah 84111

Nicholas Enoch
349 N. Fourth Ave.
Phoenix, Arizona 85003

Timothy Hogan
202 E. McDowell Rd. - 153
Phoenix, Arizona 85004

Michael Patten
Roshka DeWulf & Patten, PLC
One Arizona Center
400 E. Van Buren St. - 800
Phoenix, Arizona 85004

Gary Yaquinto
Arizona Utilitiy Investors Association
2100 North Central Avenue, Suite 210
Phoenix, Arizona 85004

Arizona Reporting Service, Inc.
2200 N. Central Ave. -502
Phoenix, Arizona 85004-1481

Daniel Pozefsky
1110 West Washington, Suite 220
Phoenix, Arizona 85007"

C. Webb Crockett
Patrick Black
Fennemore Craig PC
3003 N. Central Ave. - 2600
Phoenix, Arizona 85012-2913

Robert Metli
2398 E. Camelback Rd., Ste. 240
Phoenix, Arizona 85016

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

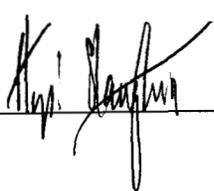
Cynthia Zwick
1940 E. Luke Avenue
Phoenix, Arizona 85016

Michael Grant
2575 E. Camelback Rd.
Phoenix, Arizona 85016-9225

John Moore, Jr.
7321 N. 16th Street
Phoenix, Arizona 85020

Michael Neary
111 W. Renee Dr.
Phoenix, Arizona 85027

Arizona Public Service Company
Leland Snook
P.O. Box 53999, Mail Station 9708
Phoenix, Arizona 85072



Thomas Mumaw
P.O. Box 53999, Station 8695
Phoenix, Arizona 85072-3999

Lawrence Robertson, Jr.
PO Box 1448
Tubac, Arizona 85646

Bradley Carroll
TEP
88 E. Broadway Blvd. MS HQE910
P.O. Box 711
Tucson, Arizona 85702

Jeff Schlegel
1167 W. Samalayuca Dr.
Tucson, Arizona 85704-3224

Travis Ritchie
85 Second St., 2nd Floor
San Francisco, California 94105

Rachel Gold
642 Harrison ST, FL 2
San Francisco, California 94110

January 11, 2013

Q. Please state your name and business address.

Carrie Cullen Hitt
PO Box 534
North Scituate MA 02060

Q. Please describe your professional experience and qualifications.

A. My experience and qualifications are described in my curriculum vitae, which is Attachment CCH-1 to this testimony. With respect to the matters to be decided in this case, I have extensive experience. As the former Vice President for Regulatory Affairs at Constellation, now a subsidiary of Exelon, I was involved in or oversaw participation in numerous cases throughout the US related to utility retail rates and cost recovery. In addition, I am familiar with policies and industry frameworks that set the framework for adequate development of renewable resources. With respect to solar issues, I am generally familiar with technical and economic characteristics of the solar PV industry. In addition, I have provided expert witness testimony before several state public utility commissions.

Q. Please describe your educational background.

A. I earned a Bachelor of Art's degree from Clark University and a Masters of Arts from Johns Hopkins School of Advanced International Studies.

Q. On whose behalf are you submitting this testimony?

A. I am submitting testimony on behalf of the Solar Energy Industries Association (SEIA).

Q. Please describe SEIA.

A. SEIA is the national trade association of the United States solar industry, encompassing all solar technologies, including photovoltaics (PV), concentrating solar power, solar heating and cooling, and other technologies. Through advocacy and education, SEIA and its 1,000 member companies work to make solar energy a significant energy source by expanding markets, removing market barriers, strengthening the industry, and educating the public on the benefits of solar energy.

SEIA's membership includes many companies with offices and facilities in Arizona. Solar generation in Arizona is ranked 3rd in the United States, producing 276 MW of installed solar power in 2011 and 838 cumulative MW to date.¹ In addition, solar companies boast approximately 21,900 total solar PV installations in state.²

¹ SEIA/GTM Solar Market Insight Report Q2 2012; Massachusetts CEC, available at <http://www.seia.org/research-resources/solar-market-insight-report-2012-q2>.

² *Id.*

Q. What is the purpose of your testimony?

A. To respond to the Company's proposal to modify the Large General Service (LGS-13) Rate Schedule, Large General Service (LGS-85N) TOU Rate Schedule, and Large Light & Power (LLP-90N) TOU Rate Schedule and the Proposed Lost Fixed Cost Recovery Mechanism (LFCR).

Q. Please summarize your testimony.

TEP is proposing significant changes to certain commercial rate plans. These changes severely impact existing solar customers, such as schools and businesses, who have already invested in solar energy. The tariff changes will stifle future solar developments by making it very difficult to attract financing for distributed solar energy in Arizona and jeopardizing the confidence of potential future customers seeking to invest in solar energy. In essence, the rate changes make solar energy less valuable for those who have already invested in it and at the same time deter new investments.

Existing solar customers on the LGS-85N TOU Rate Schedule should grandfathered into their existing rate schedules, unless they opt-out, and TEP should offer new solar customers a modified commercial rate designed to be revenue neutral for TEP. The new rate should have a higher, on-peak energy charge and lower demand charges that sends better energy conservation price signals and better aligns with the value solar energy provides.

With regard to the Proposed Lost Fixed Cost Recovery Mechanism (LFCR), TEP is proposing to implement a mechanism intended to keep the utility revenues whole with respect to reductions in sales related to two specific programs – energy efficiency and distributed generation. The LFCR should be modified such that the demand charge-related revenue reduction assumed is based upon actual data taken from customers – not a broad reaching 50% reduction assumption.

Q. How would you describe the proposed changes associated with the rate schedule by TEP?

A. The proposed rates reduce on-peak energy charges and dramatically increase the demand and customer charges. These changes not only remove a significant incentive for customer energy conservation but also dramatically reduce the value of solar generation, which tends to occur during the on-peak hours.³

For the LGS-13 rate it is estimated that total kWh charges for summer (May-Sept) are reduced by 44% and for the winter rate (Oct-Apr) by 40%. Regarding the LLP-90N rate, the summer (May-Sept) On-Peak/Shoulder-Peak is reduced by 30.87%, with similarly large decreases in energy charges for the LGS-85N tariff.

³ In the APS 2012 IRP document, Attachment D.3, APS lists solar energy as having a capacity value of 50% to 100% depending on the specific technology.

At the same time, the fixed customer charge for those on the LGS-13 rate increases by 142% with the demand charge increasing 103%. Similarly, the LLP-90N customer charge increases by 340% and demand charges increasing anywhere from 10% to 26%, while the LGS-85N customer charge increases by 196% and demand charges increase from 69% to 149%

Q. How does this impact customers with solar energy systems?

A. These rate changes negatively affect customers with solar energy systems. By dropping the per kWh energy offset rate, the economic value of the solar electricity being provided to the customer drops dramatically. In terms of the customers on the LGS-13 rate, the per kWh value of solar they expected from their solar energy systems will drop by around 40%. For many projects, this could completely erase all savings anticipated from the system. For those customers who might have financed their systems, they could now be paying more in financing than they are receiving in savings.

Q. To clarify, these rates would impact past purchasers of solar energy systems as well as future ones?

A. Yes. Customers on those rates purchased solar on the assumption of receiving some specified savings will be severely impacted. Some movements up or down in rates is anticipated, but the severity of decline in the kWh offset is particularly dramatic and unexpected.

For potential future customers, the changes undercut the value proposition of solar energy and instill uncertainty regarding the future financial savings expected over the systems multi-decade operating life.

Q. What type of customer is on these rate plans?

A. The LGS-13 could accommodate high schools, churches, and warehouses while LLP-90n could be for very large commercial operations such as a manufacturing facility or an office/retail complex.

Q. What other concerns do you have about the changes to these rate plans?

A. By changing the rate schedules to the degree proposed, Arizonan's ability to finance distributed generation systems is undermined. Unpredictable or wildly changing rates create more risk for financiers who provide capital to projects for schools and other entities. For example, if a bank made an arrangement with a church to provide upfront capital for a solar energy system in exchange for monthly payments over 20 years, the arrangement is likely to be structured so the monthly debt service payments are less than the savings expected to be provided by the church's solar system. Savings accrue to the church each month that slightly outweigh the financing cost of the solar energy system. However, when this new rate plan goes into effect, the kWh offset of the church's bill will drop by 40%, and the church may find itself "upside down" on the deal. In other words, due to the change in the rate structure, the church is

now paying much more to TEP and the bank than they were before the rate change. This increases the probability of default and the risk to the bank.

In a matter of months, potential solar customers will be reluctant to invest in a solar energy system because of the uncertain payback, and, as a result, financiers will escalate pricing to adjust for the increased risk.

Q. How would you resolve this issue you identified?

A. In the near term, I recommend grandfathering in existing solar customers to their original rate plans until the next rate case when TEP will have a chance to design a specific solar rate schedule for the impacted Customer classes described in this testimony. Going forward, I strongly recommend convening a workgroup to determine a solar friendly rate that properly captures the value of solar energy, namely through reduced fixed demand charges and increased energy rates that accurately value the time-of-use generation profile of a typical solar system. Upon design and implementation of such a rate, grandfathered customers would have the option to switch to the new rate or stay on their existing rate.

Q. Please describe the proposed Lost Fixed Cost Recover Mechanism (LFCR).

A. TEP proposed to estimate the lost revenue associated with sales reductions related to energy efficiency and distributed generation programs and develop a rate rider to recover these amounts from all customers.

Q. Do you oppose the LFCR?

A. No. I think a mechanism such as this could be helpful to address TEP's concerns about the volatility of revenue related to fluctuating sales levels. However, there is an assumption within the LFCR with which I do have concern.

Q. Please describe that concern.

A. Essentially, the LFCR attempts to isolate the rate component for each applicable rate class that recovers the utility's fixed costs. The LFCR mechanism implicitly assumes that half (50%) of the demand-based revenues will not be recovered from commercial customers with solar generation, and proposes to recover these revenues through the mechanism. However, this figure is not backed by analysis. One way to more accurately determine any demand charge-related revenue reduction associated with distributed generation or energy efficiency programs is to analyze a representative sampling of such customers over an extended period of time leveraging TEP's advanced metering infrastructure (AMI) network for near real-time interval demand reduction data.

Q. What is your recommendation?

A. TEP should conduct the representative sampling of energy efficiency and distributed generation customers and calculate demand-based revenues that will not be collected by commercial customers with solar generation that will be assumed within the LFCR mechanism.

Q. Does this conclude your Testimony?

A. Yes it does.

Attachment CCH-1

**Carrie Cullen Hitt
48 Booth Hill Road
North Scituate, MA 02066
chitt@seia.org**

PROFESSIONAL EXPERIENCE

**Senior Vice President, State Affairs, Solar Energy Industries Association
January 2013**

**Vice President, State Affairs, Solar Energy Industries Association
January 2012 – December 2012**

- Oversee all state activities for SEIA, including advocacy, relationships with local affiliates and other organizations
- Member of senior management team and a Board level committee
- Manage \$3.3m annual budget and four staff
- Presents to the Board and externally on a regular basis.

**President, The Solar Alliance
September 2008-December, 2011**

- Chief executive and operational officer of a 34 member not-for-profit national trade association.
- Coordinate policies and positions of association in multiple jurisdictions.
- Represent solar PV industry in state and national venues such as NARUC, NCSL, ALEC and NGA.
- Oversee work performed by consultants, lobbyists and regulatory attorneys across the U.S.
- Manage all administrative and business matters of the association, including quarterly board meetings, vendor contracts and a \$1.5million budget.

**Vice President, Sustainable Energy Solutions, Constellation Energy Resources
March 2007 – September 2008**

- Responsible for new product development for retail sustainability products, including renewable energy, greenhouse gas assessment and carbon offsets.
- Develop and implement market strategy, product margin and pricing.
- Manage team of 10 subject and functional experts, as well as the budget for product line.
- Oversee marketing and public relations campaign; operational/processing and sales support.
- Lead company external interface. Including relationships with NGOs and other standard setting parties.
- Direct internal GHG assessment and mitigation program.

**Vice President, National Government and Regulatory Affairs, Constellation NewEnergy
January 2004- February 2007**

**National Director, Government and Regulatory Affairs, Constellation NewEnergy
April 2003 - December 2003 - Baltimore, MD and Boston, MA**

- Directed public affairs initiatives for Constellation New Energy, the largest retail electricity company in the U.S. Developed strategy for all company political and regulatory activities in all U.S. and Canadian markets.
- Managed a \$7 million budget and staff of 15 located throughout the U.S. and Canada.
- Managed relationships with policymakers, company representatives and industry organizations. Represent the company at industry forums, including government officials and testimony before legislatures and regulatory agencies. Serve as an expert witness.
- Lead public affairs interface and analysis with holding company (Constellation Energy, Fortune 200) and all company affiliates.
- Member of the company's risk, sales commitment and stakeholder management committees. Reported to the President and CEO and served as an officer of the company.

Director, Product Development, Constellation NewEnergy, New England

March 2001 - May 2003 (under AES management) and August 1997-March 1999 - Boston, MA

- Represented the company in the New England and New York.
- Developed regulatory strategy for retail and wholesale operations, including ISO matters.
- Participated in various national industry associations. Managed renewable energy initiatives.
- Established and launched program for small commercial customers.

Director, Regional Business Development, Green Mountain Energy Company

April 1999 – March 2001 - Austin, TX

- Created and implemented business plan for the New England region. Primary focus was residential customers.
- Managed cross-functional project team, negotiated wholesale supply contract, and arranged for substantial investment from state renewable energy fund.
- Represented the company on regional and national regulatory matters.

Assistant Director, Harvard Electricity Policy Group

June 1995 – July 1997 - Cambridge, MA

- Served as administrator for a project focused on competition in the electricity industry in the US and other countries.
- Conducted research and authored reports for project participants, including state and federal policy makers, private and public companies and academics.
- Co-authored several published articles on issues such as wholesale market power.
- Participated in consulting projects for Japan and Thailand. Administered budget and managed participant communication.

**Senior Research Analyst, Joint Committee on Energy, Massachusetts Legislature
1991 – 1993**

- Analyzed and advised in various aspects of energy policy.
- Reviewed economic and environmental impacts of generation facilities.
- Wrote testimony, authorized reports and opinion pieces.

EDUCATION

M.A. International Economics, the School of Advanced International Studies, Johns Hopkins University, Bologna, Italy & Washington, DC 1995

B.A. Government & History, Clark University, Worcester, Massachusetts 1990

AFFILIATIONS

Member of the Advisory Council to the Interstate Renewable Energy Council

Member of the Board of Directors to the North Carolina Sustainable Energy Association

Formerly on the Board of the Alliance for Clean Energy, New York