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AZ CORP COMMISSION
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Attorneys for Intervenors IBEW Locals 387, 1116, and 769

BEFORE THE ARIZONA CORPORATION COMMISSION

**IN THE MATTER OF THE
COMMISSION'S INVESTIGATION OF
VALUE AND COSTS OF DISTRIBUTED
GENERATION.**

) Docket No.: E-00000J-14-0023

) **NOTICE OF FILING OF DIRECT
TESTIMONY OF SCOTT NORTHRUP**

Pursuant to the Administrative Law Judge's Procedural Order (p. 4) dated December 3, 2015, Intervenors, the International Brotherhood of Electrical Workers, AFL-CIO, CLC ("IBEW Locals") Local Unions 1116, 387, and 769, by and through undersigned counsel, hereby provide notice of their filing of the attached Direct Testimony of Scott Northrup in this docket.

RESPECTFULLY SUBMITTED this 25th day of February, 2016.

LUBIN & ENOCH, P.C.

Arizona Corporation Commission

DOCKETED

FEB 25 2016

Nicholas J. Enoch ET

Nicholas J. Enoch, Esq.
Attorneys for Intervenors

DOCKETED BY *AK*

1 Original and thirteen copies of the IBEW Locals' Direct Testimony filed this 25th day of
February, 2016, with:

2 Arizona Corporation Commission
3 Docket Control Center
4 1200 West Washington Street
Phoenix, Arizona 85007-2996

5 Copies of the foregoing transmitted electronically or mailed this same date to those identified on
the attached service list for this docket.

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1 **Q1. Please state your name and business address.**

2 A1. Scott Northrup. My business address is 4601 South Butterfield Drive, Tucson, Arizona
3 85714.

4 **Q2. Please describe your present position, background, and experience.**

5 A2. I am the Business Manager/Financial Secretary for Intervenor, International Brotherhood
6 of Electrical Workers, Local 1116. The position of Business Manager/Financial
7 Secretary is an elected union position, but due to the recent retirement of my predecessor,
8 Frank Grijalva, I was appointed by our Executive Board to my present position on
9 February 1, 2016.

10 Because all IBEW Local Unions also have a President, persons outside of our
11 organization commonly believe that the President is the principal officer of the Local.
12 This is not the case. Article 17, §§ 4 and 8 of the Constitution of the International
13 Brotherhood of Electrical Workers, AFL-CIO, provides that the Business
14 Manager/Financial Secretary is the “principal officer” of any IBEW Local Union.

15 Prior to becoming Business Manager/Financial Secretary, I was employed by TEP for
16 sixteen years in various positions, most recently as a Training Specialist. While
17 employed at TEP, I was an active member of IBEW Local 1116, and previously served as
18 the Local’s President for eight years.

18 **Q3. Are IBEW Locals 1116, 387, and 769 separate legal entities?**

19 A3. Yes. Additionally, our International Union and its constituent local unions, including my
20 own, are separate legal entities. However, the various IBEW local unions in the state of
21 Arizona meet on a regular basis to discuss issues of mutual concern. Generally speaking,
22 we are familiar with and supportive of the actions of each other. IBEW Locals 1116,
23 387, and 769 have chosen to collectively intervene in these proceedings. As a result, I
24 am testifying today on behalf of IBEW Local 1116 as well as IBEW Locals 387 and 769.

1 **Q4. Have you testified in other matters before the Arizona Corporation Commission?**

2 A4. No.

3
4 **Q5. What is IBEW Local 1116?**

5 A5. IBEW Local 1116 is a labor organization that serves as the exclusive representative for
6 approximately seven-hundred non-managerial Tucson Electric Power (“TEP”)
7 employees, including linemen/cablemen, substation electricians, electronics technicians,
8 equipment servicemen, field technicians, designers, heavy equipment and transport
9 operators, maintenance electricians, maintenance mechanics, and meter repairmen.
10 IBEW Local 1116 also represents approximately thirty-seven members working for Trico
11 Electrical Cooperative.

12 IBEW Local 1116 and TEP’s series of collective bargaining agreements (“CBA”) date
13 back to November 16, 1937, and its current CBA extends to December 31, 2018. IBEW
14 Local 1116 was a party to the 2008 TEP Rate Case Settlement Agreement, approved in
15 Decision No. 70628, and to the 2012 TEP Rate Case Settlement Agreement, approved in
16 Decision No. 73912, and to the ongoing TEP Rate Case in Docket No. E-01933A-15-
17 0322. IBEW Local 1116 was also involved in the 2009 Trico rate case. *See Trico*
18 *Electric Cooperative, Inc. General Rate Case*, 2009 Ariz. PUC LEXIS 186 (Aug. 6,
19 2009).

20 **Q6. What is IBEW Local 387?**

21 A6. IBEW Local 387 is the duly-elected and recognized exclusive bargaining agent for
22 approximately one-thousand-five-hundred employees of the Arizona Public Service
23 Company (“APS”). IBEW Local 387 is also the exclusive representative of employees at
24 Navopache Electric Cooperative, Inc., and of employees working for Unisource Electric
Workers in Nogales and for Graham County Electric Cooperative.

1 IBEW Local 387 and APS have a long series of CBAs dating back to 1945 concerning
2 rates of pay, wages, hours of employment, and other terms and conditions of
3 employment. *See generally Int'l Bhd. of Elec. Workers v. NLRB*, 788 F.2d 1412, 1413
4 (9th Cir. 1986). IBEW Local 387 intervened in Docket No. E-01933A-11-0224, among
5 many other proceedings before the ACC involving APS and other regulated utilities, and
6 was a party to the APS rate case settlement agreement dated January 6, 2012 and
7 approved in Decision No. 73183.

8 **Q7. What is IBEW Local 769?**

9 A7. IBEW Local 769 represents employees of subcontractors working for virtually all of
10 Arizona's utility companies, large and small. IBEW Local 769 is the exclusive
11 bargaining agent for all IBEW outside line workers in Arizona, and its scope of work also
12 includes teledata, street light, and trenching for APS and throughout the state of Arizona.
13 At any given time, IBEW Local 769 has between five and two-hundred of its bargaining
14 unit employees working for subcontractors of APS.

15 IBEW Local 769 intervened in Docket No. E-01933A-11-0224, among several other
16 proceedings before the ACC involving APS and other utilities, and was a party to the
17 January 6, 2012 APS rate case settlement agreement approved in Decision No. 73183.
18 IBEW Local 769 is also the exclusive bargaining representative of approximately 80
19 employees of UNS Electric Corporation in Mohave County.

20 **Q8. What is the purpose of your testimony?**

21 A8. I am testifying to share the position and perspective of our represented utility workers on
22 the cost and value of solar service. I am also testifying in support of the adoption of a
23 new price plan for rooftop solar customers, similar to that implemented by SRP in early
24 2015.

1 We believe that our members bring a unique and important perspective to this discussion.
2 As you know, Article XV, § 3 of the Arizona Constitution expressly recognizes the
3 employees of public service corporations as central stakeholders whose interests are on
4 par with those of patrons with respect to any potential Commission action. Specifically,
5 the Arizona Constitution provides that “[t]he corporation commission shall have full
6 power to, and shall . . . make and enforce reasonable rules, regulations, and orders for the
7 convenience, comfort, and safety, and the preservation of the health, of the employees
8 and patrons of [public service] corporations.”

8 **Q9. How are utility workers currently being impacted by net-metering?**

9 A9. In the last one-hundred years, utility workers, including those represented by the IBEW
10 Locals, built the North American grid, which has been called by IBEW International
11 President Edwin D. Hill “the largest and most complex machine in human history, the
12 key to our country’s economic future.” See The Electrical Worker Online, *How Will*
13 *Distributed Generation Change the Grid?*, (May 2015), available at

14 <http://www.ibew.org/articles/15ElectricalWorker/EW1505/SolarRooftop.0515.html>.

15 Distributed generation solar power promises to dramatically change the grid in the near
16 future. How that change occurs will impact the jobs and futures of thousands of IBEW
17 workers, including those in Arizona. The IBEW Locals’ principal concern is that solar
18 customers use and rely on the grid without contributing a fair share to the cost of its
19 maintenance, thereby requiring utilities to either absorb or shift the cost to other users,
20 and fundamentally destabilizing the environment in which utility workers do their jobs.

21 Regardless of how much expansion the solar power field experiences, for it and for all
22 “renewable energy to succeed on a large scale, the grid is indispensable. In truth the grid
23 won’t die, but rather must grow exponentially – in function, complexity, and usefulness.”
24 See Charles Bayless, *The Death of the Grid?*, Fortnightly (Dec. 2014), available at
[http://mag.fortnightly.com/article/The+Death+of+the+Grid%3F+1886505/238951/articl](http://mag.fortnightly.com/article/The+Death+of+the+Grid%3F+1886505/238951/article.html)
[e.html](http://mag.fortnightly.com/article/The+Death+of+the+Grid%3F+1886505/238951/article.html). The grid ensures that for solar users, energy is still available at night and in
inclement weather and when a solar system is being maintained or fails. It also allows

1 excess energy to flow back to the grid, among other important services. Thus, the grid is
2 essential to solar customers. Indeed, in its antitrust complaint against SRP, SolarCity,
3 America's largest installer of distributed solar energy systems, conceded that "solar
4 customers are unable to completely disconnect from SRP's grid—they still need power in
5 the evening hours and at other times when their energy demands exceed what their solar
6 energy systems produce[.]" See Complaint, Case No. 2:15-cv-00374-DLR (Doc. 1, p. 1,
7 ¶ 4) (D. Ariz. March 2, 2015).

8 Currently however, utilities compensate solar customers for their surplus electricity at full
9 retail value. Thus, they are excused from paying their fair share of the costs derived from
10 their use of the grid, including its maintenance and the transmission and distribution it
11 facilitates. Solar customers are compensated for the energy that they generate, but that
12 compensation does not account for the fact that less than half of the cost of providing
13 energy comes from generating it. See The Electrical Worker Online, *How Will*
14 *Distributed Generation Change the Grid?*, (May 2015), available at
15 <http://www.ibew.org/articles/15ElectricalWorker/EW1505/SolarRooftop.0515.html>. In
16 fact, thirty-seven cents of every dollar charged by utilities goes towards building and
17 maintaining the grid. *Id.* And regardless of the growth of solar, that fact may not change.
18 The Executive Director of the Harvard Electricity Policy Group, estimates that solar does
19 not avoid transmission costs and may actually increase distribution costs. Ashley Brown,
20 *Valuation of Distributed Solar: A Qualitative View*, 27 *The Electricity Journal* 10 (2014),
21 available at
22 <http://www.ksg.harvard.edu/hepg/Papers/2014/12.14/Brown%20%20Valuation%20of%20%20Distributed%20Solar%20%202011.14.pdf>.

23 Thus, regardless of how much solar grows, utilities will still need workers to build and
24 maintain the grid. The fact that these utilities will not receive a fair price for their
services jeopardizes job stability for utilities workers, and reduces utilities' ability to
provide a safe and efficient workplace for these workers. This is obviously an
unfavorable outcome for the IBEW Locals' members. The IBEW Locals also posit that

1 this outcome should concern the Arizona Corporation Commission, which is bound by
2 Article XV, § 3 of the Arizona Constitution to protect the employees of public service
3 corporations, as notably opposed to the interests of distributed-solar companies, many of
4 which are actually from California.

5 **Q10. To what degree do intermittency and non-dispatchability affect the value of solar?**

6 A10. In response to this question, posed by Commissioner Stump in his February 19, 2016
7 letter to the docket, the IBEW Locals assert that these drawbacks of solar not only reduce
8 its value, but also accentuate the benefit, along with the associated cost, of traditional
9 generation through the grid. By way of example, when a storm hits and it is raining and
10 the lines are down, solar customers not only rely on electricity produced by electric
11 utilities, they also rely on the skilled employees of those utilities, or their contractors, to
12 make all necessary repairs to the grid in short order. In other words, the utilities and
13 those working directly for or with them must be, and in fact are, prepared to jump into
14 action and get to work on behalf of everyone tied into the grid. This readiness to work is
15 in itself a costly, albeit necessary, expense that needs to be borne by everyone reliant on
16 the grid. The same cannot be said of those who install distributed solar energy systems.

17 **Q11. Are the IBEW Locals concerned about the regressive social costs currently imposed
18 by net-metering?**

19 A11. Yes. In many cases, the costs that solar customers are excused from paying are
20 reallocated to non-solar customers. Solar customers typically must be able to pay many
21 thousands of dollars for a solar unit, have a single-family home, and possess a good credit
22 score. Those without these abilities, including those living in apartments or multi-unit
23 low-income housing, cannot access rooftop solar power for their home. Thus, the cost
24 shift from solar users to non-solar users is actually a cost shift from affluent families to
low-income families. As the bargaining representative for utilities workers supporting
working class families in non-managerial jobs, this strikes the IBEW Locals as especially
unjustifiable.

1 **Q12. Left unchecked, how do the IBEW Locals estimate that net metering, in its current**
2 **state, will impact the value of solar power in the long run?**

3 A12. The IBEW Locals support clean energy and efforts to reduce carbon emissions.
4 Currently, however, rooftop solar is the least effective renewable energy source for
5 reducing carbon emissions. Ashley Brown, *Valuation of Distributed Solar: A Qualitative*
6 *View*, 27 The Electricity Journal 10 (2014), available at
7 <http://www.ksg.harvard.edu/hepg/Papers/2014/12.14/Brown%20%20Valuation%20of%20%20Distributed%20Solar%20%2011.14.pdf>. Preferential pricing for rooftop solar
8 results in solar occupying a disproportionate share of the energy market, making it less
9 likely that other more efficient forms of renewable energy are successful. This result is
inconsistent with the IBEW Locals' goal of supporting and advancing renewable energy.

10 **Q13. How would the IBEW Locals prefer that the concerns raised herein be addressed?**

11 A13. The IBEW Locals believe that utilities' mechanisms for pricing solar must accurately
12 account for its benefits. Moreover, they also must account for, as Commissioner Stump
13 referred to it in his February 19, 2016 letter to the docket, the "regressive social costs . . .
14 of solar, given that non-solar utility customers subsidize solar customers." At the same
15 time, any solution must distinguish between value and cost. Value considerations
16 pertinent to solar power, such as environmental benefit, may properly inform policy
17 planning, but should remain separate from costs considerations, which must effectively
18 recover outlays—the actual dollars and cents—expended by a utility. Ultimately, to
effectively and safely employ the workforce necessary to deliver cost-effective power to
the public, utility rates must be cost-based.

19 The IBEW Locals support the adoption of a plan similar to SRP's new Customer
20 Generation Price Plan, or E-27 plan. Rather than charging customers for power based on
21 how much energy they use, which fails to reflect an equal share of the fixed energy costs
22 used by a solar customer, the E-27 plan breaks down a customer's energy costs according
23 to the costs incurred by the utility in providing it, such as transmission, distribution,
24

1 customer service, and more. Solar customers are still able to send their surplus energy
2 back to the grid, and will receive a credit towards their energy charge for doing so.

3 **Q14. Does this conclude your testimony?**

4 A14. Yes.

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