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6 *Attorneys for Intervenors IBEW Locals 387, 1116, and 769*

BEFORE THE ARIZONA CORPORATION COMMISSION

9 **IN THE MATTER OF THE**
 10 **COMMISSION'S INVESTIGATION OF**
 11 **VALUE AND COSTS OF DISTRIBUTED**
 12 **GENERATION.**

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

**NOTICE OF FILING OF REBUTTAL
TESTIMONY OF SCOTT NORTHRUP**

14 Pursuant to the Administrative Law Judge's Procedural Order (p. 4) dated December 3,
 15 2015, Intervenors, the International Brotherhood of Electrical Workers, AFL-CIO, CLC ("IBEW
 16 Locals") Local Unions 1116, 387, and 769, by and through undersigned counsel, hereby provide
 17 notice of their filing of the attached Rebuttal Testimony of Scott Northrup in this docket.

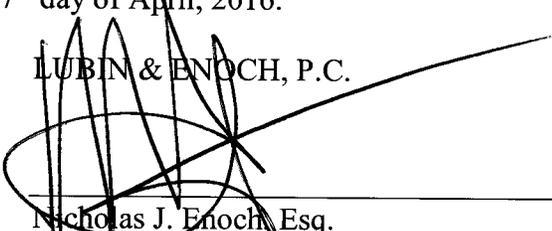
18 RESPECTFULLY SUBMITTED this 7th day of April, 2016.

19 Arizona Corporation Commission
 20 **DOCKETED**

21 APR 07 2016

22 DOCKETED BY 

LUBIN & ENOCH, P.C.


 23 Nicholas J. Enoch, Esq.
 24 Attorneys for Intervenors

1 Original and thirteen copies of the IBEW Locals' Rebuttal Testimony filed this 7th day of April,
2016, with:

2 Arizona Corporation Commission
3 Docket Control Center
1200 West Washington Street
4 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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7
8 /s/ Cristina Gallardo-Sanidad

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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. Are you the same Scott Northrup whose direct testimony was filed in this docket on**
5 **February 25, 2016.**

6 A2. Yes.

7 **Q3. What outcome do the IBEW Locals hope to see this Value of Solar docket**
8 **accomplish?**

9 A3. In short, equity. The IBEW Locals hope that a clear separation between tangible and
10 intangible costs and benefits is established through the Value of Solar docket. This
11 requires a segregation of the utility's cost of service from any societal and/or forward
12 looking benefits that are associated with solar DG. Doing so will facilitate the
13 identification of the revenue streams needed to fairly compensate the utility as well as the
14 customer. Incorporating intangible benefits into this calculation would invite: (i) a high
15 level of subjectivism; (ii) a focus on generalities; (iii) arbitrary and/or policy presumptive
16 determinations regarding what external considerations are more important than others;
17 and (iv) an opening of the door for discrimination. In addition, the IBEW Locals believe
18 that the intangible benefits would be more appropriately addressed through State and
19 local governments providing an economic value or incentive to consumers in the form of
20 some tax benefit. After all, secondary economic impacts are of the greatest benefit to
21 society at large.

22 **Q4. Are you aware of any tangible or quantifiable distribution system costs associated**
23 **with solar DG that are avoidable?**

24 A4. No. As I understand it, solar DG does not reduce the distribution costs of providing
service. The reason for this is due to rooftop solar DG's lack of reliability and its
intermittency (as explained in my previous testimony). Because of these factors, rooftop

1 solar customers must still rely on the power provided from the electric grid during the
2 times that the DG unit is not operating or when the DG unit provides insufficient
3 generation to serve the customers' demands. This means that the size of the facilities
4 required to provide service to a customer with DG is exactly the same as a standard
5 customer without DG. That is, the metering, transformer, and service drop at the
6 customer's service location is the same for all similarly situated customers, whether solar
7 DG or not. In fact, Nevada recently faced this exact same issue. In its decision, the
8 Public Utilities Nevada Commission found that DG was no longer economical for new
9 systems, and existing customers who expected modest savings from their solar
10 investments faced substantial added costs for electric services.

11 Environmental benefits, on the other hand, are non-quantifiable. While enthusiasm for
12 solar DG and other renewable resources is undoubtedly a positive goal, it really has no
13 place in a customer's utility bill. By their very nature, utility bills are designed to recover
14 the costs incurred in the provision of service and utilities to customers. As an economic
15 matter, this gives utilities an opportunity to earn a fair return on their capital (that they are
16 obliged to prudently manage), and as a result, the public has historically invested in them
17 with confidence.

18 Finally, a quantifiable detriment has been identified – the generation capacity of rooftop
19 solar will proceed to decline as it continues to be added. This is because the typical peak
20 hour for energy commences around 5:00 p.m. (when the workforce begins to arrive at
21 home) and continues into the subsequent hours. The problem is that rooftop solar is
22 contributing less during these peak times, yet the consumption and demand have not
23 declined. Conversely, they have increased, and the demand for energy after sunset will
24 continue to grow. Rooftop solar energy will have a diminishing impact on the capacity
needed to meet this demand because any mitigation rooftop solar can offer is only
possible until around 5:00 p.m.

1 **Q5. You previously testified about the regressive social costs related to net-metering and**
2 **solar DG; are you aware of any other related social impediments?**

3 A5. Yes. My previous testimony focused on the impact of solar DG on those living in
4 apartments or multi-unit low-income housing versus those affluent enough to have a
5 single-family home, possess a good credit score, and afford to pay thousands of dollars
6 for a solar unit. In addition to this, most rural areas are serviced by Cooperatives and
7 have a far lower number of customers per mile. The result is that these areas pay a higher
8 distribution cost of providing service per kWh. A higher level of distribution costs means
9 that those serviced by Cooperatives incur a greater amount of fixed costs due to
10 customers with solar DG. Many of the IBEW Locals' members live in these
11 communities and have been financially burdened by this imbalance in cost sharing. With
12 the approval of rates and charges that allow for an equitable recovery of the distribution
13 costs associated with providing service to customers with solar DG, those living in rural
14 areas (which also happen to be the most economically challenged in Arizona) pay only
15 their fair share of the costs. As Theodore Roosevelt explained, "I stand for the square
16 deal . . . But when I say that I am for the square deal, I mean not merely that I stand for
17 fair play under the present rules of the game, but that I stand for having those rules
18 changed so as to work for a more substantial equality of opportunity and of reward for
19 equally good service." A plan similar to SRP's new Customer Generation Price Plan, or
20 E-27 plan will accomplish this goal.

21 In addition to the negative impact that solar DG has had on rural areas, recent research
22 regarding this issue has shown that subsidies for rooftop solar, over the years, have led to
23 a significant loss in jobs and a decreased wealth for Arizona as a whole.¹ The root of this
24 problem is that money spent on DG depletes the amount of money available to spend in
other sectors of the economy. While the opposition may argue that rooftop solar creates
additional jobs, these jobs are temporary (only created by the installation of rooftop solar)
and worse, they are counteracted by what the ASU Study has referred to as their "long-

¹ Evans, Anthony, Tim James, and Lora Mwaniki-Lyman. "The Economic Impact of Distributed Solar in the APS Service Territory, 2016-2035." Report, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University, February 16, 2016. (ASU Study).

1 run/legacy effects.” This study predicts that over billions of dollars of lost gross state
2 product and thousands of “job years” (i.e., years of employment) are lost. This is a
3 significant social regression for Arizona and for the members of the IBEW Locals.

4 There is a further consideration to take into account when dealing with employees of
5 public service corporations, such as the members of the IBEW Locals. According to
6 Article XV, § 3 of the Arizona Constitution, employees of public service corporations are
7 central stakeholders with respect to the Commission’s power to “make and enforce
8 reasonable rules, regulations, and orders . . .” This is an added constitutional protection
9 that other types of employees, such as non-utility employees of solar companies, do not
10 have. This additional consideration seems to have been overlooked in the Commission
11 Staff’s direct testimony. According to the Staff, “secondary economics should not be
12 considered” and “[c]omparison of local job content can vary between technologies and
13 whether jobs are construction, operations or maintenance, sales and finance.” (Direct
14 Testimony of Howard Solganick, pg. 25). Similarly, RUCO seems to have omitted
15 taking this constitutional protection into consideration. According to RUCO, “[f]or the
16 sake of simplicity and rate making, RUCO recommends against attempting to quantify
17 benefits and/or costs related to larger macroeconomic impacts such as job losses or
18 gains.” (Direct Testimony of Lon Huber, pg. 26). While this may be true for other types
19 of employment, the Arizona Constitution requires that additional protection be given to
20 employees of public service corporations, and therefore any negative impact on their jobs
21 should be quantified and considered in this matter.

22 Finally, if non-solar customers are saddled with absorbing the fixed costs for rooftop
23 solar customers, a few problems come to mind. First, what if the non-rooftop solar
24 customers who are projected to absorb the fixed costs move away prior to realizing the
absorption? And second, what if the intangible benefits of rooftop solar do not
materialize? These two scenarios would result in economic burden shifting to other
undeserving groups. This would only serve to intensify the deleterious and inequitable
financial impact that solar DG has on Arizona citizens.

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Q6. Does this conclude your testimony?

A6. Yes.