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BEFORE THE ARIZONA CORPORATION COMMISSION

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DOUG LITTLE, Acting Chairman
BOB STUMP
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IN THE MATTER OF THE APPLICATION)
OF UNS ELECTRIC, INC. FOR THE)
ESTABLISHMENT OF JUST AND)
REASONABLE RATES AND CHARGES)
DESIGNED TO REALIZE A REASONABLE)
RATE OF RETURN ON THE FAIR VALUE)
OF THE PROPERTIES OF UNS ELECTRIC,)
INC. DEVOTED TO ITS OPERATIONS)
THROUGHOUT THE STATE OF)
ARIZONA, AND FOR RELATED)
APPROVALS.)

DOCKET NO.E-04204A-15-0142

REBUTTAL TESTIMONY OF CYNTHIA ZWICK ON
BEHALF OF THE ARIZONA COMMUNITY ACTION
ASSOCIATION

Enclosed please find the rebuttal testimony of Cynthia Zwick on behalf of the Arizona

Community Action Association in the matter of Unisource Electric, Inc.'s rate case.

RESPECTFULLY submitted this 19th day of January, 2016

Cynthia Zwick
Executive Director
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Arizona Corporation Commission

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REBUTTAL TESTIMONY OF
CYNTHIA ZWICK ON BEHALF OF THE
ARIZONA COMMUNITY ACTION ASSOCIATION

January 19th, 2016

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

2 A. My name is Cynthia Zwick. My business address is 2700 N 3rd St., Ste. 3040, Phoenix, AZ
3 85004.

4 **Q. What is your position at the Arizona Community Action Association?**

5 A. I serve as the Executive Director of Arizona Community Action Association (ACAA). I've
6 served in this position for over twelve years.

7 **Q. What is the purpose of your testimony today?**

8 A. The purpose of my testimony today is to address issues brought up in Staff's testimony on rate
9 design, specifically addressing Staff's recommendation on demand charges.

10 **Q. What were Staff's recommendations regarding demand charges?**

11 A. Staff recommended that all residential customers be migrated from two-part rates to three-part
12 rates, made up of a fixed charge for customer services, a volumetric charge for energy use, and a
13 demand charge calculated from the customer's peak demand in a given billing period.

14 **Q. Did Staff suggest that an exemption be provided for vulnerable customers?**

15 A. Yes.

16 **Q. Are low-income customers vulnerable?**

17 A. Yes.

18 **Q. How so?**

19 A. Low-income customers suffer myriad circumstances making their situations precarious and
20 vulnerable. Over a recent three-year period, almost one-third of all Americans were poor at least
21 once for two months or more.¹ Nearly one in five Arizonans is in poverty, and nearly thirty
22 percent of Arizonans are within 150% of the Federal Poverty Line.² Of the Arizonans in poverty,
23 35% are children, 15% of those in poverty are disabled, and 8% are seniors. The people who find
24
25
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27 _____
28 ¹ <http://www.census.gov/prod/2014pubs/p70-137.pdf>

² POVERTY STATUS IN THE PAST 12 MONTHS 2010-2014 American Community Survey 5-Year Estimates

1 themselves struggling have stretched their budgets to the limit. According to a recent national
2 survey, 56.3% of Americans have \$1,000 or less combined in their checking and savings
3 accounts. Most financial planners recommend having an emergency fund of at least \$1,000, but a
4 majority of Americans don't have that presently. What's more troublesome is that 24.8% don't
5 even have a tenth of that; they have less than \$100 combined in their checking and savings
6 accounts.³ Additionally, 38 percent of respondents said they would pay less than their full credit
7 card balance this month, and 11 percent said they would make the minimum payment—meaning
8 they would likely be mired in debt for years and pay more in interest than they originally
9 borrowed.⁴ Sixty percent of households experienced a financial shock in the previous year,
10 causing half of them to struggle to make ends meet.⁵ Low-income households are often unable to
11 access basic financial services, with thirteen percent of Arizonans unbanked and eighteen percent
12 underbanked. These households spend on average \$3,029 in fees and interest per year as they are
13 forced to work with alternative financial service providers.⁶

14
15 In addition to financial poverty, low-income people struggle with time poverty as well.
16
17 Decreased commuting time is correlated with escaping poverty and intergenerational mobility at a
18 time when the number of jobs within typical commuting distance for residents of major
19 metropolitan areas is falling.⁷ As poor residents shifted toward suburbs in the 2000s, their
20 proximity to jobs fell more than for non-poor residents, and residents of high-poverty
21 neighborhoods experienced particularly pronounced declines in job proximity.⁸ Many low-
22 income workers are required to take on multiple jobs, resulting in multiple commutes, exacting a
23

24 ³ <http://www.magnifymoney.com/blog/consumer-watchdog/store-credit-cards-deferred-interest-holiday-2015-study>

25 ⁴ <http://www.esquire.com/news-politics/news/a41147/half-of-americans-less-than-1000/>

26 ⁵ http://www.pewtrusts.org/~media/assets/2015/11/emergency-savings-report-2_artfinal.pdf?la=en

27 ⁶ <https://www.fdic.gov/householdsurvey/>
http://d3n8a8pro7vhmx.cloudfront.net/ufe/legacy_url/372/SOTD15.pdf?1448061430

28 ⁷ http://equality-of-opportunity.org/images/nbhds_paper.pdf

⁸ <http://www.brookings.edu/research/reports2/2015/03/24-people-jobs-distance-metropolitan-areas-kneebone-holmes>

1 profound toll on their daily schedules.⁹ Typically, these low-wage jobs are part-time with no
2 guaranteed hours, making it difficult for individuals to manage time effectively across work and
3 non-work areas of their lives. Many employers expect workers to be on-call and available if
4 needed, even sometimes for 12-hour shifts without advanced notice.¹⁰

5 **Q. In what ways could low-income customers be harmed by a demand charge?**

6 A. Demand charges are difficult to understand, and can cause bills to vary wildly. Demand charges
7 can lead to overcharging by failing to account for diversity of residential load. Moreover, the
8 means by which low-income customers could decrease demand charges – upgrade to high-tech
9 load control appliances or spreading their electric usage out over a larger period of time – are
10 much less accessible to them than the residential customer base at large, putting them at a further
11 disadvantage.

12 **Q. How is a demand charge difficult to understand?**

13 A. A demand charge, fining a customer for their maximum rate of energy use for a given hour in a
14 billing period, is a wholly new billing mechanism for most residential customers. A low-income
15 customer doesn't have the means or the time to study their electric bill or to monitor the
16 electricity consumption of every appliance in their home every hour of the day.

17
18 When customers in California were asked if they had a demand charge on their bill, 60% said
19 they weren't sure.¹¹ Given that so many customers don't even know whether they have demand
20 charges on their bill, the notion that customers will be able to optimize their kilowatt demand rate
21 in order to control their bills seems awfully far-fetched. Low-income customers are in the worst
22 position on this, having much tighter time constraints, as was discussed above, they would be
23 especially vulnerable to increased bill volatility from demand charges.

24 **Q. How does a demand charge cause bill volatility?**

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26
27 ⁹ <http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=2763&context=jssw>

28 ¹⁰ http://poverty.ucdavis.edu/sites/main/files/file-attachments/smith_cpr_policy_brief_employability.pdf

¹¹ <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M065/K932/65932012.PDF>

1 A. A demand charge, as proposed here, would be measured as the customer's maximum one-hour
2 demand in the billing month. A customer has limited control over when appliances run –
3 refrigerators, air conditioning, furnace, and water heaters all cycle automatically. If these are
4 running the same time as a customer needs to do laundry to have clean clothes for work the next
5 day, or needs to prepare dinner for their family, they could see a severe price spike from this
6 single electricity use event. Even adding a single kilowatt of demand, by running the microwave
7 at the wrong time, could add \$10 to a customer's bill under the current proposal. This could
8 happen regardless of how much capacity is available on UNSE's grid when the customer is using
9 electricity.
10

11 **Q. How might demand charges overcharge customers?**

12 A. Demand charges can overcharge customers by failing to account for diversity of load. On a given
13 distribution system, hundreds of customers may share a distribution feeder. The combined
14 demand of all of the customers affects the size of the distribution system, not the individual non-
15 coincident peak demands of single residential households. Some customers are early risers, using
16 significant amounts of hot water and electricity for cooking breakfast. Other customers may be
17 heavier evening users, skipping breakfast, instead making a large family dinner and showering
18 after work. In this case, these customers would be able to share capacity. However, if they were
19 charged for their non-coincident peak demand, they would each be charged separately for the
20 same capacity. Demand charges such as these ignore the diversity in residential customer load,
21 charging a customer using power for one off-peak hour per month the same as another customer
22 using power continuously for every hour of the month.¹² This is most dramatically displayed in
23 apartments, where the utility only sees the combined load of an apartment building; in this case,
24 charging customers for their maximum one-hour demand would result in a significant cost shift
25
26

27 _____
28 ¹² Lazar, Jim. "Use Great Caution in Design of Residential Demand Charges," **NATURAL GAS & ELECTRICITY**,
February 2016. DOI 10.1002/gas.21884

1 onto multifamily homes. Low-income families are more likely to live in apartments, meaning
2 that such a demand charge would result in a regressive cross-subsidy from low-income
3 households to more affluent families. More generally, low-income customers may be cross-
4 subsidizing more affluent customers with more efficient appliances. Low-income customers
5 already use much less energy than average residential consumers, minimizing the number of
6 electronic appliances they use. The best way for them to decrease their total demand would be to
7 buy newer, more efficient appliances with lower power demand. Many low-income customers
8 are forced to choose between buying food, prescriptions, or paying their utility bill; they can't
9 buy the latest model air conditioner to shave off a kilowatt or two. As a result, they're punished
10 for their lack of affluence through increased utility bills, paying higher charges to support larger
11 use customers. This would appear to violate the guiding principle of equity in ratemaking.

13 **Q. Can low-income customers shift their load to decrease demand?**

14 A. Not practically, no. As was discussed above, many low-income people work multiple jobs with
15 erratic schedules and long commutes. These people don't have the luxury of stretching out their
16 energy use to match some complicated rate scheme. They need to feed their families, launder
17 their clothes, shower, clean their homes, and they need to do it in the brief time they have
18 between obligations. A worker at a shift job can't show up late because they needed to wait for
19 their peak demand time to pass to use cheaper power. The urgency of life at the poverty line
20 means that low-income households lack the time to take advantage of such a rate plan as this.

22 **Q. Could low-income customers implement load management technology to decrease demand?**

23 A. Not feasibly, no. Upgrading to smart appliances such as smart thermostats, water heaters, or
24 other devices to automatically adjust load could cost hundreds, if not thousands of dollars. A
25 single person at the poverty line has an income of \$11,770; such a person couldn't possibly
26 allocate a significant share of their income to smart appliances when it is so difficult to simply
27 keep food on the table and a roof over their head.
28

1 **Q. Are low-income customers vulnerable to demand charges?**

2 A. Yes, they're in a position where they can't afford to upgrade to smart appliance to perform
3 automated load control and they lack the flexibility in time to spread out their demand to avoid
4 high fees. They are historically low-use customers, keen on conservation and the ability to save
5 money, but lacking the time and bandwidth to adjust to this new rate scheme.

6 **Q. How would low-income customers identify as vulnerable to demand charges?**

7 A. Enrollment in the CARES rate would demonstrate vulnerability, as would the receipt of bill
8 assistance on their accounts. With the income qualification documented, their vulnerability is
9 unambiguous and easily tracked as the CARES customers and bill assistance payments are
10 already tracked in the current system.

11 **Q. What sort of alternative pricing system would be appropriate?**

12 A. I believe this is the wrong question to ask about low-income ratepayers. Many are often unable to
13 fully pay off their bills, or must make impossible choices between food and clothes and
14 prescriptions every month. To seek "revenue stability" from low-income customers, either
15 through demand charges or increased fixed charges, is not only deeply regressive but also
16 unlikely to work. Increasing charges on customers who can barely afford to pay their bills now
17 will only precipitate greater problems with payments, forcing the company to pay more in
18 collections costs and ultimately writing off even more in bad debt. In order to maintain the
19 balance between low-income energy affordability and revenue collection, low-income customers
20 must be held harmless in this current pursuit to "modernize" rates.

21 **Q. What sort of protections should be in place?**

22 A. If any changes are implemented, low-income customers should be offered shadow billing
23 services, to show them how much they would have spent on their previous plan. Customers who
24 would have saved money on their previous plan should receive a credit for the difference. Any
25 change in rates should also be accompanied by a greater investment in energy efficiency and
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1 demand response in low-income communities to allow them to better adapt to any changes being
2 implemented.

3 **Q. Does this conclude your testimony today?**

4 **A.** Yes, it does. Thank you.
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