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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE – Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

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 DECISION NO. 75697 **OPINION AND ORDER**

DATES OF HEARING: March 1, 3-4, 7-11, 14-18, 21, and 23, 2016

PLACE OF HEARING: Tucson, Arizona

PUBLIC COMMENT: March 22, 2016, Nogales, Arizona
March 31, 2016, Kingman, Arizona
March 31, and April 18, 2016, Lake Havasu, Arizona

ADMINISTRATIVE LAW JUDGE: Jane L. Rodda

IN ATTENDANCE: Doug Little, Chairman (Hearing & Public Comment)
Bob Burns, Commissioner (Public Comment)
Tom Forese, Commissioner (Public Comment)
Andy Tobin, Commissioner (Public Comment)

APPEARANCES:

Mr. Michael W. Patten, SNELL & WILMER, L.L.P., and Mr. Bradley S. Carroll, on behalf of UNS Electric, Inc.;

Mr. Thomas L. Mumaw and Ms. Melissa Krueger, PINNACLE WEST CAPITAL CORPORATION, on behalf of Arizona Public Service Company;

Mr. Court S. Rich and Ms. Loren Unger, ROSE LAW GROUP, P.C., on behalf of The Alliance for Solar Choice;

Mr. Jason Y. Moyes, MOYES SELLERS & HENDRICKS, LTD, on behalf of Fresh Produce Association of the Americas;

Mr. Daniel W. Pozefsky and Mr. Jordy Fuentes, on behalf of the Residential Utility Consumer Office;

Arizona Corporation Commission
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Mr. Scott S. Wakefield, HIENTON & CURRY, P.L.L.C., on behalf of Walmart Stores, Inc.;

Mr. Robert J. Metli, MUNGER CHADWICK, P.L.C. and Mr. Eric J. Lacey, STONE MATTHEIS XENOPOULOS & BREW, P.C., on behalf of Nucor Corporation;

Ms. Meghan H. Grabel, OSBORN MALEDON, P.A., on behalf of Arizona Investment Council;

Mr. Timothy Hogan, ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST, on behalf of Southwest Energy Efficiency Project, Western Resource Advocates, Arizona Community Action Association, and Vote Solar;

Mr. Michael A. Hiatt and Ms. Katie Dittelberger, EARTHJUSTICE, on behalf of Vote Solar;

Mr. Patrick Black and Mr. Webb C. Crockett, FENNEMORE CRAIG, P.C., on behalf of Freeport Minerals Corporation and Arizonans for Electric Choice and Competition;

Mr. Lawrence V. Robertson, Jr., on behalf of Noble Americas Energy Solutions, L.L.C.;

Mr. Craig A. Marks, P.L.C., ARIZONA UTILITY RATEPAYER ALLIANCE, on behalf of Arizona Utility Ratepayer Alliance;

Mr. Jeffrey W. Crockett, CROCKETT LAW GROUP, P.L.L.C., on behalf of Sulphur Springs Valley Electric Cooperative;

Mr. Garry D. Hays, LAW OFFICES OF GARRY D. HAYS, P.C., on behalf of Arizona Solar Deployment Alliance;

Mr. Tom Harris, on behalf of Arizona Solar Energy Industries Association; and

Mr. Brian E. Smith and Ms. Bridget Humphrey, Staff Attorneys, and Ms. Janice Alward, Chief Counsel, Legal Division, on behalf of the Utilities Division of the Arizona Corporation Commission.

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DECISION NO. 75697

BY THE COMMISSION:

UNSE Electric, Inc. ("UNSE" or "Company") provides electric service to approximately 95,000 customers, of which 82,600 are residential, within Santa Cruz and Mohave Counties in Arizona.[1] On May 5, 2015, UNSE filed with the Arizona Corporation Commission ("Commission") an Application for a rate increase ("Application").

Intervention in this matter was granted to the Residential Utility Consumer Office ("RUCO"), Noble Americas Energy Solutions LLC ("Noble"), Nucor Corp. ("Nucor"), The Alliance for Solar Choice ("TASC"), Arizona Public Service Company ("APS"), Fresh Produce Association of the Americans ("FPAA"), Walmart Stores, Inc. ("Walmart"), Arizona Investment Council ("AIC"), Southwest Energy Efficiency Project ("SWEEP"), Western Resource Advocates ("WRA"), Vote Solar, Freeport Minerals Corporation ("Freeport") and Arizonans for Electric Choice and Competition (collectively "AECC"), Arizona Utility Ratepayer Alliance ("AURA"), Sulphur Springs Valley Electric Cooperative ("SSVEC"), Arizona Solar Deployment Alliance ("ASDA"), Arizona Solar Energy Industries Association ("AriSEA"), and Trico Electric Cooperative ("Trico").

The Application

UNSE's current rates were established as a result of a Settlement Agreement approved in Decision No. 74235 (December 31, 2013), based on a June 30, 2012 test year, and with rates effective January 1, 2014. The Company states that it filed the current Application due to increased costs associated with a substantial investment in plant since the last rate case, including in particular, the purchase of a 25 percent interest in the Gila River Power Plant #3 ("Gila River") for $55 million, which alone increased the Company's Original Cost Rate Base ("OCRB") by 26 percent.[2] The Company states that the Gila River acquisition increased its non-fuel operating costs by approximately $12 million per year, which was expected to be offset by lower purchased capacity and energy costs and a decline in base fuel rates of approximately $12.3 million in 2015.

In addition to increased revenues needed to recover operating expenses, including its authorized return on equity, UNSE asserted that it needs an updated rate design to rectify the under-recovery of

[1] Post-Hearing Updated Schedule G-1 filed April 4, 2016 ("UNSE Final Schedules").
[2] Ex UNSE-1 at 3.

fixed costs due to declining retail energy sales and the fact that under current rates many of its fixed costs are being recovered from volumetric per-kWh charges. UNSE's retail sales in the test year declined nearly 8 percent since the last test year, which UNSE attributes to the closure of several large customers since the last rate case, the effects of energy efficiency and distributed generation, and the slow pace of economic recovery in its service territory.

In its Application, UNSE sought an increase in gross test year revenues of $22.6 million.[3] Its proposed revenue requirement was based on a Fair Value Rate Base ("FVRB") of $355.7 million, which was the average of an OCRB of $272 million and a Reconstruction Cost New Less Depreciation ("RCND") Rate Base of $438.4 million. To determine its cost of capital, UNSE employed its 2014 test year actual capital structure which was comprised of 52.83 percent equity and 47.17 percent debt, with a cost of debt of 4.66 percent and proposed cost of equity of 10.35 percent. The Company calculated a Weighted Average Cost of Capital ("WACC") of 7.67 percent. UNSE proposed a Fair Value Rate of Return ("FVROR") of 6.22 percent, which assumed a return on its fair value increment of 1.45 percent.[4]

In its Application, UNSE proposed to offset the $22.6 million increase with a proposed $14.9 million reduction in fuel costs and revenues due to its acquisition of Gila River, lower power market costs, and adjustments to test year sales.[5] UNSE also proposed that $4.3 million in transmission costs currently being recovered through its Transmission Cost Adjustor ("TCA") be recovered in base rates. In addition, UNSE proposed a one-year credit to the Purchased Power and Fuel Adjustment Clause ("PPFAC") to reflect the accrued savings as a result of the Accounting Order related to the acquisition of Gila River (estimated at $9.3 million).[6] The combination of these proposals resulted in a revenue decrease of approximately $3.5 million, or 2.1 percent over test year adjusted retail revenue in the first year, and an increase of approximately $5.8 million, or 3.6 percent in year two.

The Company originally proposed a rate design that included: (1) increased basic service charges for both residential and small commercial customers (from $10 to $20 for the Residential Class

[3] Id. at A-1.
[4] Id. at 1 and 6
[5] Id. at 5.
[6] In Decision No. 74911 (January 22, 2015), the Commission authorized UNSE to defer the recovery of costs associated with its acquisition of the Gila River.

and from \$14.50 to \$30.00 for the Small General Service ("SGS") Class); (2) eliminating the third volumetric rate tier for residential customers; (3) an optional three-part rate structure for the Residential and SGS Classes that included a monthly service charge, a demand component, and a volumetric energy component; and (4) a mandatory three-part rate structure for partial requirements customers, including new users of solar arrays and other distributed generation ("DG") equipment.[7]

Additionally, to incentivize business development and retention in its service area, UNSE proposed an Economic Development Rate ("EDR") which would provide discounted electricity rates to new or existing businesses that meet certain qualifications, such as job creation or minimum load requirements. And in compliance with Decision No. 74689 (August 12, 2014) (approving the Fortis Settlement Agreement) UNSE also submitted a pilot program for a "buy through" tariff that, if approved, would be available to Large Power Service customers.[8]

UNSE also proposed to modify its net metering rider that would apply to net metered customers who submitted applications for interconnection after June 1, 2015. Under UNSE's proposal: (1) new net metered customers[9] would continue to receive a full retail rate offset for the energy they consume from their DG system; (2) new net metered customers would pay the currently approved and applicable retail rate for all energy delivered by UNSE, with applicable retail rates limited to the demand-based rate options; and (3) new net metered customers would be compensated for any excess energy their DG system produces and delivers to UNSE, with bill credits calculated using a new "Renewable Credit Rate" (a rate that reflects the current cost of utility scale solar energy). New net metered customers could carry over unused bill credits to future months if they exceed the amount of their current UNSE bill.[10]

UNSE also proposed to modify its Purchased Power and Fuel Adjustment Clause ("PPFAC") to reflect a percentage basis allocation instead of a per kWh allocation, and to modify its Lost Fixed Cost Recovery ("LFCR") mechanism to include adding fixed generation costs and 100 percent of non-generation demand charges (instead of 50 percent), as well as increasing the cap from 1 percent to 2

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[7] Ex UNSE-1 at 8.

[8] UNSE does not support approval of a buy-through tariff.

[9] Under the Company's proposal, "new" net metered customers would be those customers who submitted applications after June 1, 2015.

[10] Ex UNSE-1 at 9.

percent.

Further, UNSE requested authority to defer 100 percent of the Arizona property taxes above or below the test year level caused by changes in the composite property tax rate and changes in the Gila River valuation methodology. It also requested authority to defer all costs associated with appealing the Gila River property values, and to amortize the deferral balance over 3 years. Finally, the Company proposed modifications to its Rules and Regulations and to its Tariff to modernize and clarify areas of confusion.[11]

Overview of the Proceeding

Staff and Intervenor Direct Testimony

In its November 6, 2015 Direct Testimony, Staff described a number of adjustments to rate base and operating income, which resulted in a recommendation that UNSE be authorized a gross revenue increase of $18.1 million on an adjusted FVRB of $353,896,000.[12] Staff's recommended revenue increase was premised on using the Company's actual capital structure with a cost of equity of 9.5 percent, and a FVROR of 5.60 percent.[13]

In its Direct Rate Design Testimony filed on December 9, 2015, Staff recommended a mandatory transition of the Residential and SGS Classes (including DG customers) to three-part demand rates with a time of use ("TOU") component, in order to better and more accurately relate rates to underlying costs.[14] Staff did not recommended any changes to the current net metering tariffs.[15]

RUCO recommended various adjustments that resulted in a recommended gross revenue increase of $12.2 million, based on a Cost of Equity of 8.35 percent, and FVROR of 5.26 percent on an adjusted FVRB of $345,131,000.[16]

RUCO supported different rate options for DG and non-DG residential customers based on their different usages of the grid. RUCO recommended keeping non-DG residential customers on traditional two-part rates, and proposed three optional rates for residential solar DG customers, which would

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[11] Id. at 10.
[12] Ex S-1 Mullinax Dir at DHM-2.
[13] Ex S-3 Abinah Dir at 12; Ex S-1 Mullinax Dir at DHM-2.
[14] Ex Staff-5 Solganick Rate Dir at 3.
[15] Ex S-16 Broderick Rate Dir at 11.
[16] Ex RUCO-1 Michlik Dir at 4.

impact the current net metering scheme.[17]

Other than RUCO, Intervenors did not focus on the ultimate revenue requirement, although TASC and Walmart provided testimony on the cost of capital. TASC recommended a hypothetical capital structure of 50 percent debt and 50 percent equity and a Cost of Equity of 8.75 percent, and Walmart recommended a Cost of Equity of no more than 9.5 percent based on the Company's actual capital structure.[18] SWEEP recommended incorporating $5 million of energy efficiency costs in base rates rather than recovered in the current adjustor mechanism, which would have affected the revenue requirement, but not the bottom-line on ratepayers' bills.[19]

Intervenors, representing a wide array of interests, made a number of rate design recommendations:

- TASC, Vote Solar, and AURA believed the Company's rate proposals were discriminatory and would hinder the installation of solar DG. These intervenors objected to the imposition of demand charges on residential DG customers or any changes to the net metering tariff.[20]
- SWEEP objected to certain rate design changes such as increasing the basic customer charge and eliminating the third rate tier which it believed would negatively impact energy efficiency efforts.[21]
- WRA objected to treating DG and non-DG customers separately, objected to residential demand charges and recommended a minimum bill to address low-usage customers.[22]
- ACAA supported increasing eligibility for low-income discounts and advanced various proposals to hold low-income customers harmless from the rate increase, opposing in particular increased fixed charges.[23]
- Large commercial and industrial customers, represented by Walmart and AECC/Noble, in general supported the Company's Customer Cost of Service Study ("CCOSS") with some

[17] Ex RUCO-5 Huber Rate Dir at 13.
[18] Ex TASC-22 Woolridge Dir at 4; Ex Walmart-1 Chriss at 9.
[19] Ex SWEEP-1 Schlegel Dir.
[20] Ex TASC 19 Fulmer Dir; Ex TASC-20 Fulmer Rate Dir; Ex AURA-4 Quinn Rate Dir; Ex Vote Solar-6 Kobor Dir.
[21] Ex SWEEP-2 Schlegel Rate Dir.
[22] Ex WRA-1 Wilson Rate Dir at 2-3.
[23] Ex ACAA-1 Zwick Dir; Ex ACAA-2 Zwick Rate Dir. UNSE's low income program is entitled "Customer Assistance Residential Energy Support" or "CARES".

modification, and advocated for a more equitable revenue allocation between the larger commercial customers who they assert are subsidizing the Residential and SGS Classes; they also supported the EDR and buy-through tariff proposals with modifications.[24] Nucor objected to the Company's methodology for determining demand charges, and recommended changes to the Large Power TOU rates and Interruptible Rider.[25] FPAA, representing the produce industry in Santa Cruz County, objected to the implementation of demand charges on its members.[26]

- AIC, representing utility equity investors, and APS, a major electric utility in Arizona, supported the Company's proposal for residential demand charges and changes to net metering.[27]

Company's Rebuttal Position

In Rebuttal Testimony filed on January 19, 2016, UNSE accepted some of Staff's adjustments as well as Staff's recommended revenue increase of $18.5 million.[28] In accepting the lower revenue increase, the Company revised its revenue allocation, which reduced the amount of the decrease that had been proposed for the larger commercial and industrial classes.

The Company also accepted Staff's recommendation concerning mandatory demand charges for all residential and SGS customers, and proposed a plan that would transition to three-part rates by the spring of 2017.[29] Under UNSE's proposal, transitional rates that retained the current two-part rate design would remain in place until all residential and SGS customers were equipped with the smart meters necessary to implement demand rates, and several months of usage data could be collected.[30]

UNSE stipulated that Staff's proposed three-part rate structure would eliminate the need to specifically address the current Net Metering policy if properly designed and implemented in a timely manner.[31] Because not all parties supported the implementation of the three-part rates, UNSE continued to advocate that its net metering proposal be evaluated as part of this proceeding. [32]

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[24] Ex Walmart 4 Tillman Dir; Ex Walmart-2 Hendrix Dir; Ex AECC/Noble-1 Higgins Rate Dir;
[25] Ex NUCOR-1 Zarnikau Rate Dir.
[26] Ex FPAA-1 Jungmeyer Rate Dir; Ex FPAA-2 Simer Rate Dir.
[27] Ex AIC-C Hansen Rate Dir; AIC-A Yaquinto Rate Dir; Ex APS-6 Miessner Rate Dir.; Ex APS-3 Faruqui Rate Dir.
[28] Ex UNSE-12 Lewis Reb at 6.
[29] Ex UNSE-4 Hutchens Reb at 2.
[30] Ex UNSE-29 Dukes Reb at 11.
[31] Ex UNSE-26 Tilghman Reb at 3.
[32] Ex UNSE-4 Hutchens Reb at 12.

Surrebuttal Positions

In Surrebuttal Testimony filed on February 23, 2016, Staff made additional adjustments which reduced Staff's recommended base rate increase to $15.3 million, based on a FVROR of 5.63 percent, and an adjusted FVRB of $353,999,000.[33] Staff recommended a lower allocation of the revenue increase to the Residential and SGS Classes than being proposed by the Company.[34]

Staff supported the Company's three-part rate design proposal for the Residential and SGS Classes, but proposed mitigation measures to protect customers who adopted DG prior to June 1, 2015. Staff recommended keeping the existing Net Metering Tariffs.[35]

RUCO made additional adjustments and calculated a gross revenue increase of $17.205 million, based on a Cost of Equity of 9.13 percent, FVROR of 5.48 percent, and an adjusted FVRB of $353,755 million.[36] However, RUCO also stated that it would consider recommending Staff's Cost of Equity of 9.5 percent, if the overall revenue requirement was not greater than $15.1 million.[37] RUCO continued to advocate for its rate design options which distinguished between DG and non-DG residential customers.[38]

APS and AIC supported the Company's proposed three-part rate design for Residential and SGS Classes and its proposed net metering modifications. TASC, Vote Solar, AURA, ACAA, SWEEP, WRA opposed mandatory demand charges for residential ratepayers. FPAA opposed demand charges being imposed on its members. The larger commercial and industrial customers, Walmart, Nucor and AECC\Noble opposed Staff's recommended revenue allocation among the classes, the method for determining demand charges, changes to the EDR, and supported the buy-through tariff.

Company's Rejoinder Position

In Rejoinder Testimony filed on February 29, 2016, UNSE agreed to accept a gross revenue increase of $15.1 million, as long it was is "provided with a reasonable opportunity to earn a 9.5 percent

[33] Ex S-2 Mullinax Surr at Attachment DHM-1.
[34] Ex S-6 Solganick Surr at 5.
[35] Ex S-17 Broderick Surr.
[36] Ex RUCO-2 Michlik Surr at JMM-1
[37] Ex RUCO-4 Mease Surr at 21.
[38] Ex RUCO-6 Huber Surr.

return on equity."[39] The Company continued to argue that its mandatory three-part rate design and proposed modifications to its Net Metering Tariff were appropriate and in the public interest to send the correct price signals.[40] The Company continued to argue that its Net Metering proposal can be approved without awaiting the outcome of the Value and Cost of Distributed Generation docket ("Value of DG docket"),[41] although the Company also appeared willing to forego immediate net metering changes if its three-part rate proposal was adopted.[42]

Public Comments

The Commission conducted Public Comment Meetings in Nogales, Lake Havasu and Kingman, and took public comments at the commencement of the hearing. The Commission has also received thousands of written letters and emails from members of the public, including many individuals and businesses located outside of UNSE's service area, as it was widely perceived that the issues of three-part residential rates and changes in the net metering tariff had statewide implications. The vast majority of individuals making comments in this docket were either opposed to demand charges for residential customers, or to any changes in the net metering tariff, or both.

Company's Post-Hearing Position

In its Initial Post-Hearing Brief filed on April 25, 2016, UNSE continued to propose a 9.5 percent Cost of Equity and a gross revenue increase of $15.1 million, but because it appeared that the transition to three-part rates for residential customers would not be as smooth as anticipated, the Company withdrew its support for mandatory demand charges for the Residential and SGS classes.[43] Instead, as discussed herein, the Company offered a number of optional rates for non-DG residential customers, and mandatory three-part demand rates for DG customers, similar to its position in Direct Testimony. It continued to support revising its net metering tariff for new DG customers after June 1,

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[39] Ex UNSE-13 Lewis RJ at 3. In Decision No. 75485 (March 10, 2016), the Commission modified the original accounting order that allowed deferral of the Gila River acquisition costs and benefits, and determined that it was in the public interest to offset the deferred costs and benefits to avoid a "yo-yo" effect from the PPFAC credit. As a result, UNSE now proposes to reduce expenses by $3.1 million and flow the net benefits through the PPFAC. TEP, Staff and RUCO now agree that a $15.1 million revenue increase is reasonable. UNSE Initial Brief at 11. UNSE reserves its right to contest the merits of the specific adjustments in a subsequent rate case.

[40] Ex UNSE-5 Hutchens RJ.

[41] Docket No. E-00000J-14-0023.

[42] Ex UNSE-27 Tilghman RJ at 2.

[43] UNSE Initial Brief at 4.

2015.

Revenue Requirement

Rate Base

UNSE, RUCO and Staff were the only parties who made recommendations concerning rate base adjustments. These parties have agreed for the purposes of this rate case that the Company's FVRB should be $354,001,000. This compares with the FVRB recommended by Staff and RUCO in Surrebuttal Testimony of $353.999 million and $353.755 million, respectively,[44] and with the Company's original proposed FVRB of $355.729 million.[45]

In pre-hearing testimony, the issues affecting rate base accounts involved a $2.0 million reduction related to deferred depreciation expense related to Gila River supported by Staff; a reduction in Directors and Officers pre-paid insurance of $16,778 recommended by Staff; and RUCO's recommended adjustment for Net Operating Loss ("NOL") Carryforwards.[46]

The parties' determined the Company's FVRB by weighing its OCRB and RCND Rate Base 50/50.

Description	Adjusted OCRB (1,000s of Dollars)	Adjusted RCND (1,000s of Dollars)
Gross Utility Plant in Service	$664,701	$1,169,067
Less Accumulated Depreciation	296,961	561,911
Net Utility Plant in Service	367,740	607,156
Citizens Acquisition Discount	(97,156)	(172,847)
Less: Accum. Amort. Citizens Acq. Discount	(36,098)	(69,682)
Net Citizens Acquisition Discount	(61,058)	(103,165)
Total Net Utility Plant	306,682	503,991
Customer Advances for Construction	(3,833)	(4,268)
Customer Deposits	(4,428)	(4,428)
Other (ITC)	(422)	(422)

[44] Ex S-2 Mullinax Surr at 2 and Ex RUCO-2 Michlik Surr at JMM-1.
[45] Application at Schedules A & B.
[46] Ex RUCO-2 Michlik Surr at 304. RUCO withdrew its NOL adjustment based on UNSE providing additional Private Letter Rulings by the IRS on the topic.

Accumulated Deferred Inc. Taxes	(35,161)	(64,617)
Total Deductions	(43,844)	(73,735)
Allowance for Working Capital	7,455	7,454
Regulatory Assets	0	0
Regulatory Liabilities	0	0
Total Rate Base	$270,293	$437,710

No party to this proceeding objected to the FVRB finding agreed to by the Company, Staff and RUCO. The record supports finding that a $354,001,000 FVRB is fair and reasonable, and should be adopted in this case.[47]

Operating Revenue and Expenses

In their last rounds of pre-filed testimony, UNSE, RUCO and Staff proposed adjusted revenues and operating expenses as follows (in 1,000s):[48]

	UNSE[49]	RUCO[50]	Staff[51]
Adj TY Operating Revenues	$156,717	$158,714	$156,717
Adj TY Operating Expenses	$146,187	$150,041	$146,348
Adj TY Operating Income	$10,530	$8,673	$10,369

Ultimately, UNSE agreed to revenue and operating expenses that resulted in Adjusted Test Year Operating Revenues of $156,717,000 and Adjusted Test Year Operating Expenses of $146,187,000, producing Adjusted Test Year Operating Income of $10,530,000.[52] For purposes of this rate case, UNSE agreed to Staff's adjustments to Bad Debt Expense ($132,000), Injuries and Damages ($320,000), Incentive Compensation ($155,000), Directors and Officers Liability ($20,000), Gila River Deferred Costs ($3,100,000), OATT ($20,000) and Other ($10,000), and to RUCO's adjustments for Medical and Dental Insurance ($181,000), Wellness Incentive Programs and Spot Awards ($47,000),

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[47] ($270,293+$437,710)/2 = $354,001.
[48] No other parties submitted evidence on Operating Income except for SWEEP's proposal to include Energy Efficiency Costs as part of Operating Expenses.
[49] Ex UNSE-13 Lewis RJ at DBL-RJ-1.
[50] Ex RUCO-2 Michlik Surr at JMM-8.
[51] Ex S-2 Mullinax Surr at Sch C.
[52] UNSE Final Schedules at C-1 and Ex UNSE-48.

EEI Dues ($16,000), Rate Case Expense ($17,000) and Other ($1,000).[53]

SWEEP recommended that the Commission move the recovery of Energy Efficiency program costs (in this case, $5 million) to base rates.[54] Under SWEEP's proposal, the demand side management ("DSM") adjustor mechanism would remain intact and used as an adjustor to recover or refund any energy efficiency funding amounts above or below the $5 million being included in base rates.[55] SWEEP argues that it is unfair and illogical to single out only energy efficiency among the Company's many energy resources on the customer's bill.[56] UNSE acknowledges that SWEEP's proposal has no impact on customer bills, but believes that the DSM surcharge provides ratepayers with information on the investments being made in energy efficiency programs.[57]

Resolution

Although energy efficiency may be treated like other fuel resources in the integrated planning process, we believe it is important to provide information about the benefits of energy efficiency and the implications of using less energy. We believe that at this time, keeping the DSM adjustor as a separate line item is the best course of action, especially given all of the other rate design issues and changes that are being addressed in this proceeding. However, we do not rule out considering SWEEP's proposal in a future rate case.

The compromise position for this rate case reached among the Company, RUCO and Staff is reasonable. Thus, in the test year, we find that UNSE's adjusted Operating Income was $10,530,000, which resulted in a rate of return of 2.97 percent on its adjusted FVRB.

Cost of Capital

The Arizona Constitution requires the Commission to establish just and reasonable rates using the fair value of the Company's property used to provide service.[58] Thus, the Commission needs to determine a FVROR to apply to the FVRB. In recent years, the Commission has determined the

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[53] Ex UNSE-48.
[54] Ex SWEEP-3 Schlegel Surr at 16.
[55] Ex SWEEP-1 Schlegel Dir at 8-9; SWEEP/WRA/ACAA Reply Brief at 8.
[56] SWEEP/WRA/ACAA Reply Brief at 8. ACAA is sympathetic to SWEEP's request, however customers on the CARES rates are currently exempt from paying the DSM fee, so including this cost in base rates would raise low-income rates. ACAA stated that this can be addressed through the CARES rate design by not including any DSM costs for low income customers in the CARES rate, or through an adjustment of the CARES rates. SWEEP/WRA/ACAA Reply Brief at 10.
[57] UNSE Initial Brief at 61.
[58] Ex RUCO-3 Mease Dir at 31; Ex UNSE-22 Bulkley Dir at 57.

FVROR by applying the market Return on Equity ("ROE") and the cost of debt to the Company's OCRB based on the percentage of equity and debt in the Company's capital structure. The Commission then applies a rate of return on the "fair value increment" which is the difference between the OCRB and the FVRB. The fair value increment represents the appreciation in the value of the assets to their current value due to inflation. The sum of the OCRB and the fair value increment is the total fair value of the utility's property. The FVROR is the sum of the returns on each of the components: (1) equity capital; (2) debt capital, and (3) the fair value increment, weighted by the percentage of each in the FVRB.

The parties making cost of equity recommendations in this case, except for TASC, recommend using the Company's actual capital structure to determine the weighted average cost of capital ("WACC"). At the end of the test year, UNSE's total capital consisted of 47.17 percent debt and 52.83 percent equity.[59] The Company determined that the cost of debt is 4.66 percent, which no party disputes. TASC recommended using a hypothetical capital structure consisting of 50 percent equity and 50 percent debt.[60]

UNSE

In its Direct Testimony, UNSE proposed a cost of equity of 10.35 percent based on Ms. Bulkley's proxy group analysis and application of the Constant Growth and Multi-stage forms of the Discounted Cash Flow ("DCF"), the Capital Asset Pricing Model ("CAPM") and the Risk Premium approach. Ms. Bulkely asserted that the range of returns on the fair value increment should be between the risk-free rate and the Cost of Equity, and ultimately concluded that the return on the fair value increment should be 1.5 percent, based on 50 percent of her estimated risk-free rate of 3.01 percent.[61] Based on these costs and percentages, UNSE proposed a FVROR of 6.22 percent.[62]

In Rebuttal Testimony, the Company stated that it would not oppose using Staff's 9.5 percent cost of equity recommendations, and 0.5 percent return on the fair value increment, as long as the overall revenue increase and rate design provides UNSE with a reasonable opportunity to earn its

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[59] Ex UNSE-1 at Schedule D.
[60] Ex TASC-22 Woolridge Dir at 4.
[61] Ex UNSE-22 Bulkley Dir at 60-62.
[62] Id. at 57-62.

ROE.[63]

UNSE argues that the Commission should reject TASC's recommended hypothetical capital structure and recommended cost of equity of 8.75 percent.[64] UNSE argues that a hypothetical capital structure is used only when there is a significant variance from the proxy group. UNSE states that its actual capital structure is similar to the proxy groups used to estimate the cost of capital by the various cost of capital witnesses, and is comparable to the capital structure used in UNSE's last rate case. In addition, UNSE asserts that utility management should be given some discretion in determining the appropriate capital structure. UNSE's witness Grant testified that by having less debt in its capital structure, UNSE has improved its access to credit and more favorable rates.[65] UNSE notes that when it approved the Fortis merger, the Commission restricted UNSE's ability to pay dividends until equity reached at least 50 percent. UNSE contends this indicates that the Commission considers 50 percent equity to be a minimum target, not a specific target. USNE asserts that its actual 52.8 percent equity is only slightly higher than the minimum target and is a key component of maintaining the Company's investment grade credit rating.[66]

UNSE also disputes TASC's assertion that interest rates are falling. UNSE asserts that TASC witness Woolridge's testimony shows that Moody's A rated and Baa rated utility bond rates are increasing. In addition, UNSE asserts that credit spreads are increasing. By using a 4 percent risk free rate in his CAPM analysis, when his data suggests a risk-free rate of approximately 2.75 percent, UNSE claims that Mr. Woolridge acknowledges that rates will be increasing. In contrast, UNSE states that the Cost of Equity agreed to by the Company, Staff, and RUCO of 9.5 percent is at the low end of the authorized ROEs for Mr. Woolridge's proxy group.[67]

RUCO

In Direct Testimony, RUCO originally recommended a Cost of Equity of 8.35 percent based on its witness Mease's results from this DCF and CAPM models; a cost of debt of 4.66 percent, and using the Company's actual capital structure. RUCO recommended that the Commission adopt a

[63] Ex UNSE-23 Bulkley Reb at 79; UNSE Initial Brief at 16.
[64] UNSE Initial Brief at 13-14.
[65] Ex UNSE-9 Grant RB at 3.
[66] UNSE Initial Brief at 15.
[67] Ex UNSE-24 Bulkley RJ, Ex AEB-2. UNSE Reply Brief at 4.

WACC of 6.86 percent and a FVROR of 5.26 percent.[68] In Surrebuttal Testimony, Mr. Mease revised his recommendations to include a 9.13 percent cost of common equity, a 4.66 cost of debt, yielding a 7.17 percent WACC and a FVROR of 5.48 percent.[69]

At the hearing, RUCO agreed to adopt Staff's 9.5 percent cost of equity and 0.50 percent fair value increment.[70]

Staff

Staff recommended a 9.5 percent Cost of Equity and a 0.5 percent rate of return on the fair value increment based on the findings in UNSE's last rate case.[71] Staff also recommended that the Commission approve the capital structure proposed by the Company. Staff's recommendations resulted in a WACC of 7.22 percent, and a rate of return on the fair value increment of 0.5 percent, and a FVROR of 5.63 percent.[72]

Walmart

Walmart asserted that the 10.35 percent ROE proposed by the Company was too high, and that the Commission should not approve a ROE higher than the currently approved ROE of 9.5 percent.[73]

Walmart's witness Chriss acknowledged that Walmart could also accept the 9.5 percent cost of equity as agreed by UNSE, RUCO and Staff.[74]

TASC

TASC was the only party which provided evidence on the issue of the cost of equity that did not agree to accept a 9.5 percent cost of equity for the purposes of this rate case. TASC argues the proposed 9.5 percent cost of equity does not recognize financial improvements since the last rate case, such as UNSE's improved bond rating, from Baa3 to A3, and receipt of over $100 million in equity capital, which should have the effect of lowering the cost of equity.[75]

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[68] Ex RUCO-3 Mease Dir at ii.
[69] Ex RUCO-4 Mease Surr at ii. Mr. Mease appears to calculate a weighted average cost of capital of 7.17 percent, but utilizes 7.02 percent in his calculation of FVROR. Given RUCO's acceptance of Staff's recommended cost of equity and FVROR, we do not attempt to reconcile the discrepancy.
[70] RUCO Initial Brief at 1.
[71] Ex Staff-3 Abinah Dir at 2.
[72] Ex S-2 Mullinax Surr at DHM-1(Schedule D).
[73] Ex Walmart-1 at 4; Tr. at 782.
[74] Tr. at 782.
[75] TASC Initial Brief at 37-38.

TASC did not discuss the capital structure or FVROR in its post-hearing briefs, but in Direct Testimony, Mr. Woolridge proposed using a hypothetical capital structure comprised of 50 percent equity and 50 percent debt, in order to better match the capitalization of the proxy group.[76] Mr. Woolridge did not address the calculation of the FVROR.

TASC supports a cost of equity of 8.75 percent.[77] Its witness Woolridge utilized the DCF and CAPM in his analysis of UNSE's cost of equity. Mr. Woolridge's DCF analyses indicated ROEs of 8.7 and 9.0 percent, and his CAPM results were 8.1 percent and 8.3 percent. As a check on his result, he compared his results to the returns on equity of similar publicly held electric utilities as well as the proxy group used by UNSE's witness.

TASC criticizes Staff's use of the cost of equity utilized in the last rate case, because that return was the result of a settlement and not based on empirical analysis, and relies on outdated data that does not account for current market conditions.[78] TASC also criticizes UNSE's recommended ROE of 10.35 percent, which is almost 100 basis points over the Cost of Equity awarded in the last rate case, even though the Company has decreased its credit risk and interest rates remain at historic lows.[79] TASC believes that the UNSE witness "grossly" inflated the GDP growth rates and long-term projected 30-Year Treasury yield, and used an unrealistic overall stock market return which results in inflating her risk premium calculations.[80]

TASC also criticizes Ms. Bulkley's presentation of the ROE returns for 2012-2016 by lumping them into one chart that masks the recent trend that authorized rates of return have declined since 2012.[81] TASC argues that in determining a cost of equity, the Commission must look at the company's individual circumstances. According to TASC, investor risk is key to the authorized rate of return calculation and therefore UNSE's equity infusion from Fortis reduced investor risk and justifies a downward adjustment of the cost of equity from the Company's last rate case.[82]

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[76] Ex TASC-22 Woolridge Dir at 4.
[77] Id. at 26-27.
[78] TASC Initial Brief at 38-39.
[79] UNSE Initial Brief at 39.
[80] TASC Initial Brief at 39-40.
[81] TASC Reply Brief at 17-18.
[82] Id. at 18.

Resolution – Cost of Capital

Only TASC specifically disputes utilizing a Cost of Equity of 9.5 percent, recommending instead a Cost of Equity of 8.75 percent. The estimates for the Cost of Equity in this proceeding range from 8.75 percent by TASC to UNSE's 10.35 percent.[83] The agreed 9.5 percent is within the range and supported by the evidence. Although UNSE's financial metrics, such as its bond rating and capitalization, have improved since its last rate case due to the financial support of its parent Fortis, interest rates are rising, and UNSE faces significant risks from challenging economic conditions in its service area, declining energy sales, and a current rate design that requires substantial modification in order to comply with traditional principles of cost causation. A Cost of Equity of 9.5 percent is not unreasonable in this case.

UNSE did not provide a calculation of the FVROR or a direct calculation of the $15.1 million agreed revenue increase. Based on a Cost of Equity of 9.5 percent, cost of debt of 4.66 percent, and a return on the fair value increment of 0.5 percent, we calculate a FVROR of 5.63 percent.[84] Under the totality of circumstances in this case, a FVROR of 5.63 percent is reasonable.

Resolution – Authorized Revenue Increase

Based on the findings of FVRB and FVROR, we authorize a non-fuel revenue increase of $15,100,000, a 9.6 percent increase over adjusted test year revenues, as illustrated below:[85]

Adjusted Fair Value Rate Base	$354,001,000
Adjusted Operating Income	$10,530,000
Current Rate of Return	2.97%
Required Operating Income	$19,930,000
Required Rate of Return	5.63%
Operating Income Deficiency	$9,400,000
Gross Revenue Conversion Factor	1.6070

[83] TASC 8.75 percent, RUCO 9.13 percent, Staff 9.5 percent, Walmart 9.5 percent and UNSE 10.35 percent.
[84] UNSE's Final Schedule A-1 does not reconcile with the updated Schedule D-1 (Cost of Capital), appears to utilize an erroneous FVROR of 3.95 percent, and does not indicate how the utility calculated a $15.1 million revenue increase.
[85] We are not able to precisely reconcile a 9.5 percent Cost of Equity and rate of return on the fair value increment with the requested increase of $15,100,000. We find, however, that in this case, the deviation is de minimus, and does not alter the ultimate conclusion that a revenue increase of $15.1 million is supported by the record.

Increase in Gross Revenue Requirement	$15,105,800

No party objected to the proposed $15.1 million revenue increase. An increase of $15,100,000 comports with the lowest of the range of recommendations advanced by parties in this proceeding who addressed the revenue increase.

Revenue Allocation

UNSE

One of the goals in this rate case has been to achieve a better alignment of revenue recovery and cost causation. UNSE's CCOSS indicates that the large commercial and industrial classes are subsidizing the Residential and SGS Classes.[86] The CCOSS shows that despite a positive return for the Company as a whole, the Residential Class had a negative return and the SGS Class return was lower than the Company average, while the medium/large general service class and the Large Power Service ("LPS") Class contributed returns many times the Company average, at 17.55 percent and 31.48 percent, respectively.[87] Another way to show the current inter-class subsidies looks at the unitized rates or return ("UROR") for each class.[88] Under current rates the Residential Class has UROR of -0.13, the SGS Class has an UROR of 0.33, the MGS/LGS Class has a UROR of 3.51 and the LPS Class has a UROR of 6.04.[89]

UNSE proposed an allocation of the revenue increase that does not match the results of its CCOSS in that it does not achieve a UROR of 1.0 for each class. Rather, in the interest of gradualism UNSE proposed to take a step that would reduce, but not eliminate, the subsidy from the large commercial classes to the Residential Class. Of the $15.1 million revenue increase, UNSE would allocate $14,136,082 (93.6 percent) to the Residential Class; $1,528,313 (10.1 percent) to the SGS Class; a decrease of $83,000 (0.5 percent) to the Interruptible Power Service Class; an increase of

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[86] Ex UNSE-33 Jones RJ at 4.

[87] UNSE Final Schedules at G-1.Updated Schedule G does not reconcile precisely with the book values used to determine the revenue increase. UNSE indicates that the difference is due to a difference in billed revenues with booked revenues. This also affects the ability to compare Staff's Ex-18 (showing results of various allocation strategies) which is based on the CCOSS with the authorized increase.

[88] A common method to measure the degree of inter-class subsidy paid or received by a particular customer class is the measurement of UROR, or relative rate of return. A UROR of less than 1 indicates that a class is receiving a subsidy and a UROR above 1 indicates that a class is paying a subsidy. Ex S-5 Solganick Rate Design Dir at 21, Ex Walmart-4 Tillman Dir at 6; Tr. at 2795-96.

[89] Ex S-18.

$286,000 (1.9 percent) to the MGS Class; a decrease of $131,000 (0.86 percent) to the LGS Class; a decrease of $759,000, (5.0 percent) to the LPS Class; and an increase of $53,000 (0.35 percent) to the Lighting Class.[90]

UNSE asserts that Staff's proposal, which allocates less of the increase to the Residential Class, would require a larger "jump to parity" in the next rate case than proposed in this case, and that the Company's allocation would make a "two rate case jump" more fair, reasonable, and attainable. Ultimately, however, UNSE acknowledges that the revenue allocation is a policy decision for the Commission which must decide what level of cross-subsidization is appropriate and how quickly it would like to achieve a more equitable allocation of costs.[91]

Staff

Staff acknowledges that the Residential Class is currently being subsidized by the commercial classes. However, Staff claims that in order to bring the Residential Class to parity with the other classes would require the Residential Class receiving 127.6 percent of the total increase; and that to bring the SGS class to parity would require a class increase of 15.7 percent.[92] Given the magnitude of these percentages, Staff proposes a gradual transition toward the long-term goal of parity.[93] According to Staff, the relative size of each class limits the degree to which the Commission can increase cost allocations in a single rate case. When determining class revenue allocations, Staff believes that the Commission should consider each class' relative position to other classes, economic conditions for consumers, the business climate and past cost allocation practices.

Staff considered various methodologies of allocating the revenue requirement among the rate classes, and ultimately recommends increasing the Residential and SGS Classes by 50 percent of the amount needed to reach parity, and increasing all other classes by an equal 10.1 percent.[94] Thus, Staff would have the Commission move the Residential Class half way to bringing it to conformity with the actual cost of service, with a goal to eliminate inter-class subsidies by the Company's next rate case.[95]

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[90] UNSE Final Schedules at A-1.
[91] UNSE Initial Brief at 17; UNSE Reply Brief at 4-5.
[92] Ex S-18.
[93] Staff Initial Brief at 8-9.
[94] Staff Initial Brief at 9; Staff Reply Brief at 7-8.
[95] Tr. at 2792; Staff Reply Brief at 7.

Specifically, Staff would allocate $9,658,500 (64.0 percent) of the $15,100,000 revenue increase to the Residential Class; $1,183,250 (7.8 percent) to the SGS Class; $3,710,667 (24.6 percent) to the MGS/LGS Class; and $509,647 (3.4 percent) to the LPS Class.[96] Under Staff's recommendation, the Residential Class would have a UROR of 0.07, the SGS Class would have a UROR of 0.31, the MGS/LGS Class would have a UROR of 3.10, and the LPS Class would have a UROR of 5.34.[97]

Staff does not oppose AECC/Noble's proposed funding mechanism for the buy-through tariff, but does oppose the formula as a way to allocate the revenue increase.[98] Staff states that by allocating revenue based on the originally proposed $22.6 million increase, and then reducing the amount by half of the $7.5 million difference between the $22.6 million and the ultimately agreed-to $15.1 million, merely changes the bottom line allocation percentages. Staff believes that the traditional methodology, as used by Staff and the Company, is simpler, more direct, and accomplishes the same goal.

RUCO

RUCO agrees with Staff's position on allocating the revenue increase in this proceeding. RUCO notes that both Staff and the Company have proposals for moving rates closer to the cost of service, but Staff's proposal is a less aggressive transition.[99]

Walmart

Walmart argues that the Commission should attempt to eliminate subsidies between customer classes in order to send proper price signals and drive efficient use of system resources.[100] Walmart asserts that subsidies tend to perpetuate themselves by encouraging inefficient use of system resources and skew customer's evaluation of alternative supply options and energy efficiency efforts.[101] Walmart states that Staff's proposal to increase the Residential and SGS classes by 50 percent of the amount needed to reach parity in UROR, still allocates 24.6 percent of the incremental base revenue increase to the medium and large general service classes, and 3.4 percent to the large power class, and results

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[96] Ex S-18. The remaining $37,522 of the increase, or 0.2 percent, is allocated to the Lighting Class. Ex S-18 updates Solganick's Direct Testimony, Ex S-5 at Ex HS-4, to reflect the revised revenue increase of $15.1 million. It is the best illustration of various allocation options, but was prepared prior to the updated Final Schedules and does not precisely conform to the updated CCOSS.
[97] Ex S-18.
[98] Staff Reply Brief at 7-8.
[99] RUCO Reply Brief at 12.
[100] Walmart Initial Brief at 2.
[101] Ex Walmart-5 Tillman at 8.

in total inter-class subsidies of about $10.8 million.[102] Walmart notes that Staff's proposal only moves the UROR for the medium and large general service class slightly, from 3.51 to 3.10, and the UROR for the LPS Class from 6.04 to 5.34.

Walmart recommends that the Commission adopt a revenue allocation that moves the residential class 67.7 percent of the way to a UROR of 1.0.[103] This position would result in approximately $1.25 million less in revenue being recovered from the Residential Class than under the Company's proposed revenue allocation, but limits the revenue increases of the subsidizing classes to about 1 percent.[104] Under this proposal, the Residential Class UROR moves to 0.38, the SGS Class UROR moves to 0.54, the Medium/Large GS Class UROR moves to 2.39 and the LPS Class UROR moves to 4.13.[105] Walmart argues that decreasing subsidies to a greater degree in this proceeding will make the complete elimination of the inter-class subsidies in the next rate case more attainable.[106]

AECC/Noble[107]

AECC and Noble ("AECC/Noble") assert that the rate allocation proposed by UNSE in its Direct Testimony continues considerable inter-class subsidies, but is a step in the right direction of achieving a better alignment of class revenue and class cost of service. However, AECC/Noble assert that UNSE's latest proposal, that applies the entire $7.5 million reduction in the requested revenue requirement to the benefit of the Residential and SGS Classes, and to the detriment of the larger customer classes, and is a step backwards.[108]

AECC/Noble propose a different approach to revenue allocation than taken by the Company and Staff, by factoring in fuel cost reductions, which they assert result in additional cross-subsidies.[109] These intervenors assert that their proposed allocation methodology more closely aligns rates for the different customer classes with their cost of service, while adhering to the principle of "gradualism" when compared to either the UNSE or Staff proposals. A major component of their proposal is the

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[102] Walmart Initial Brief at 3;Ex S-18; Tr. at 2800
[103] Walmart Initial Brief at 4.
[104] Ex S-18.
[105] Id.
[106] Walmart Initial Brief at 4.
[107] These parties both sponsored the testimony of Kevin Higgins and filed joint briefs.
[108] AECC/Noble Initial Brief at 16.
[109] Id. at 15-18.

implementation of a "buy-through" program that would allow large customers an opportunity to purchase generation from third-party providers, without, they claim, harming the Company or its ratepayers. They state that the primary driver of their overall rate spread and buy-through proposal is not only to attract new or expanding businesses, but to help UNSE keep existing customers which will create jobs and support further economic development.[110]

AECC/Noble assert that the most equitable division of the $7.5 million revenue reduction in revenue is to apportion 50 percent to the subsidy-paying classes and 50 percent to the subsidy-receiving classes. Under this approach, the reduced revenue requirement results in an overall increase of 10.4 percent for Residential Class and 9.5 percent for SGS Class; a net decrease of 2.7 percent for the MGS/LGS Classes; and a 3.0 percent net decrease for the LPS Class.[111] Although the MGS, LGS and LPS classes would receive a rate decrease, they would still be subsidizing the subsidy-receiving classes.[112]

AECC/Noble argue that Staff's proposed revenue allocation is even worse than UNSE's, and would result in an inter-class cross-subsidy of nearly $11.9 million.[113] They argue that Staff's proposal to set increases to selected classes to half of what is required to attain parity without linking it to other measurements such as the system average increase, or the relationship to the increase levied on the subsidy-paying classes, is arbitrary and unreasonable. They assert that the inequity of Staff's position is illustrated by the fact that the MGS and LGS customers warrant a non-fuel rate reduction of 8.85 percent to attain parity, but wind up with a non-fuel revenue increase of 10.12 percent.

Furthermore, AECC/Noble assert that Staff's revenue allocation is incomplete and does not focus on the full bill impact on customers due to factors such as the Gila River acquisition, the reduction in base fuel costs and the absorption of the Transmission Cost Adjustor. According to AECC/Noble, when these factors are considered, the net impact on the subsidy-receiving classes are dramatically lower than the impacts of the non-fuel increases upon which Staff focuses.[114]

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[110] Id. at 1-3.
[111] Id. at 4-5.
[112] Id. at 5-6.
[113] AECC/Noble Initial Brief at 17, Ex AECC/Noble -2 Higgins Surr at 7. In the Company's direct case, the subsidy-paying classes provided approximately $9 million in subsidies to the subsidy-receiving classes. AECC/Noble Reply Brief at 2.
[114] AECC/Noble Initial Brief at 18 and Exhibit 3, Ex AECC/Noble-2 Higgins Surr, Table KCH-SR-4.

AECC/Noble assert that the URORs under the Company's and Staff's positions show a large disparity between the Residential/SGS and large commercial and industrial customer classes, and that neither proposal results in "fair and equitable rates for all customer classes under sound Cost-of-Service and Rate Design principles."[115] They urge that if the Commission is inclined to adopt either the Company's or Staff's allocation proposals, then the buy-through proposal becomes essential to retain existing large commercial and industrial customers.[116]

Nucor

Nucor is a member of the LPS industrial class. Nucor concurs with the Company's expressed goal to reduce inter-class subsidies. Nucor believes, however, that the revenue allocations proposed by the Company and Staff do not move in the right direction, and actually make the situation worse.[117] Noting that the CCOSS shows that currently the LPS class is providing a return of 27.95 percent, and thus provides a significant subsidy to other rates classes, Nucor argues that the LPS rates should be reduced, or at least not increased.[118] Nucor states it could support the Company's revenue allocation as expressed in Direct Testimony, provided the Company commits to further reducing such subsidies in subsequent rate cases.

Nucor strongly opposes Staff's recommendation to apply a rate increase to the LPS class.[119] Nucor also opposes the Company's revised revenue allocation as presented in its Rejoinder Testimony, because it would result in a 1.12 percent increase, and exacerbate the existing rate subsidy between the industrial and residential rate classes.[120] Nucor notes that even though the Company's requested overall revenue requirement decreased from $22.3 million to $15.1 million, the subsidy-paying customer classes are worse off in the Company's Rejoinder position.

Nucor notes that the Company's witnesses agree that energy rates can be a factor in whether industrial users locate in the UNSE's territory and that attracting large, high load-factor customers is one of the goals of the Company-proposed EDR.[121] Nucor argues that it is important to keep rates paid

[115] AECC/Noble Solutions Reply Brief at 5, citing Ex UNSE-31 Jones Dir at 8.
[116] AECC/Noble Solutions Reply Brief at 2-4.
[117] Nucor Reply Brief at 4-6.
[118] Ex UNSE-31 Jones Dir at 24.
[119] Nucor Initial Brief at 13.
[120] Id. at 13.
[121] Nucor Initial Brief at 16-17, citing Tr. at 2635-37 and 287-88, 292-94, and Ex UNSE-28 Dukes Dir at 31.

by the industrial energy customers as low as possible in order to maintain a viable business climate in the current difficult economy in UNSE's service area.

Nucor recommends the bill impacts to LPS and LPS-TOU be no higher than the values in the Company's original filing, which when including the fuel impact, increase the LPS-TOU customers 0.17 percent, and decrease the LPS customers -0.44 percent.[122] Nucor states it would not oppose the Revenue Allocation proposed by AECC/Noble's witness Higgins because it takes a meaningful step toward reducing inter-class subsidies.[123]

Resolution – Revenue Allocation

While no party objects to the overall base rate revenue increase of $15.1 million, there is little agreement on how to allocate the increase among the various rate classes. The problem of allocation is exacerbated by the current rate structure that has perpetuated significant inter-class subsidies for many years. Allocating less to one class requires increasing the allocation to another. In determining how to distribute the increase, we have to consider, at a minimum, the total amount of the increase, the relative size of the various classes, how aggressively the goal of parity (or closer parity) should be pursued, economic conditions in the service territory, and principles of equity and fairness. The parties' recommended allocations are illustrated below:

Customer Class	Current Adjusted TY Revenue[124] (000's)	UNSE[125] (000's)	Staff/ RUCO[126] (000's)	AECC/Noble[127] (000's)	Walmart[128] (000's)
Residential	$79,482	$14,135	$9,659	$17,419	$12,884
SGS	$12,673	$1,528	$1,184	$2,089	$1,578
Med/Large GS	$56,615	$72	$3,711	-$2,518	$556
LPS	$7,467	-$759	$510	-$1,080	$76
Lighting	$550	$53	$37	$28	$6

[122] Ex UNSE- 31 Jones Dir at Exhibit CAJ-2. Nucor believes these values should actually be reduced since they are based on the higher revenue requirement in the Application.
[123] Nucor Initial Brief at 18.
[124] UNSE Final Schedules G-1.
[125] UNSE Final Schedules A-1. Schedule A-1 does not reconcile with Schedule G.
[126] Ex S-18.
[127] Ex AECC/Noble 4.
[128] Ex S-18.

Sub Total	$156,787	$15,029	$15,101	$15,938	$15,100
Rider-14 Reserve				-$908	
Total	$156,787			$15,030	

Although most parties expressing an opinion seem to agree with Staff's proposal to reach parity over two rate cases, we reserve judgement on that specific goal at this time. We believe it will be important to assess conditions at the time of the next rate case to determine if parity can, or should, be achieved at that time. After careful consideration of all these factors, we find that significant progress toward parity among the classes is achievable, while giving appropriate consideration to all of the other factors. To reserve an option of reaching parity in the next rate case, we believe that Staff's proposal to move the Residential and SGS Classes 50 percent of the way to parity may not go far enough. We find that being slightly more aggressive than Staff's proposal will make the next step more attainable, as well as being more favorable to the subsidy-paying classes. Given the substantial size of the overall increase, however, we do not believe it is reasonable, or complies with principles of gradualism, to allocate as much of the increase to the Residential Class as urged by the large commercial and industrial users.

We recognize that the larger commercial and industrial users on UNSE's system are suffering through slow economic times, the same as the residential and SGS customers. The larger users have subsidized the Residential and SGS Classes for many years, and while some subsidization can be in the public interest, the subsidies for UNSE have become excessive, and it is time that the Commission take action to move to a more equitable allocation of revenue. To provide electric rates that more closely reflect the cost of service would assist these large electricity users, who are also employers, to be more competitive. Unfortunately, because of the relative sizes of the various classes and the large leap needed to achieve parity, to move as far as the large commercial and industrial classes urge would not be reasonable as the impact on the Residential Class would be too great. Consequently, we adopt the following allocation:

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	Total (000's)	Residential Service (000's)	Small General (000's)	Medium/Large General (000's)	LPS (000's)	Lighting (000's)
Incremental Revenue	$15,099	$11,7 90	$1,420	$1,821	$50	$18
% Incr. compared to revenue from Current Sales	9.96%	14.76%	11.2%	3.2%	.67%	3.3%
% of the Total Increase	100.0%	78.1%	9.4%	12.1%	0.33%	0.1%

We note that our approved allocation results in a 14.7 percent increase for the Residential Class, which is substantially greater than the increase allocated to the LGS and LPS Classes. We find the allocation of the revenue increase approved herein is in the public interest as it strikes a fair and reasonable balance of the competing interests.

Rate Design

Residential and Small General Service

UNSE

UNSE argues that its current residential rate design is flawed and antiquated because it collects a large amount of fixed costs through volumetric rates. UNSE supports Staff's proposal to implement a three-part rate design for all residential and small general service customers, however, after hearing the public comments in this docket, the Company is concerned that there is a high degree of customer confusion and misunderstanding concerning three-part rates, and that it will take much longer than the Company had originally anticipated to inform and educate customers about how three-part rates work and how ratepayers can manage their demand and achieve savings on their electric bills.[129] As a result, UNSE requests that the Commission adopt rate structures for non-DG residential and SGS customers that are similar to what the Company originally proposed in its Application.

UNSE proposed a monthly basic service charge under all rate options of $15 for residential customers. Under each of the two-part residential options, the volumetric energy rate would be comprised of two tiers, 0 to 400 kilowatt hours (kWh), and over 400 kWh. UNSE's proposed three-part rate has a single tier for all energy consumption. For the SGS Class, the monthly service charge for all rate options is $25, and under the two-part options, the volumetric energy rates would be

[129] UNSE Initial Brief at 4.

comprised of three tiers, 0 to 400 kWh, 401-7,500 kWhs, and over 7,500 kWhs. The on-peak hours under the Residential TOU options would run from 2-8 p.m. in the summer and 5-9 a.m. and 5-9 p.m. in winter.[130] UNSE's proposed options for non-DG Residential and SGS customers follows.[131]

A basic two-part rate:

Residential Service	Current Rates	Proposed Rates
Basic Service Charge	$10.00	$15.00
Energy Charge 0-400 kWh	$0.019300	$0.031500
Energy Charge 401-1,000 kWh	$0.034350	$0.046160
Energy Charge all additional kWs	$0.038499	$0.046160
Base Power Supply Charge all kWs	$0.064510	$0.055254
PPFAC	($0.022139)	($0.00000)

A two-part time-of-use ("TOU") rate:

Residential Service TOU	Current Rates	Proposed Rates
Basic Service Charge	$11.50	$15.00
Energy Charge 0-400 kWh	$0.030350	0.031500
Energy Charge 401-1,000 kWh	$0.030350	0.046160
Energy Charge all additional kWs	$0.030350	0.046160
Base Power Supply Charge summer on-peak all kWhs	$0.129605	0.111001
Base Power Supply Charge summer off-peak all kWhs	$0.039606	0.042800
Base Power Supply Charge winter on-peak all kWhs	$0.129605	0.091550
Base Power Supply Charge winter off-peak all kWhs	$0.031385	0.038568
PPFAC	($0.002139)	0.000000

A two-part super-peak TOU rate for residential customers:

Residential Service TOU Super Peak	Current Rates	Proposed Rates
Basic Service Charge	$11.50	$15.00

[130] Ex UNSE-31 Jones Dir at CAJ-3 sheet 102-1. UNSE's rate schedules attached to its Initial Brief do not indicate the on-peak hours.

[131] UNSE Initial Brief at Ex 1, based on UNSE's proposed revenue allocation.

Energy Charge 0-400 kWh	0.025000	0.031500
Energy Charge all additional kWs	0.035000	0.046160
Base Power Supply Charge summer on-peak all kWhs	0.170000	0.159790
Base Power Supply Charge summer off-peak all kWhs	0.039800	0.040810
Base Power Supply Charge winter on-peak all kWhs	0.150000	0.159790
Base Power Supply Charge winter off-peak all kWhs	0.038700	0.040810
PPFAC	($0.002139)	0.000000

A three-part rate that includes a monthly basic service charge, a demand charge and a volumetric energy charge:

Residential Service - Demand	Current Rates	Proposed Rates
Basic Service Charge	N/A	$15.00
Demand Charge 0-7 kW, per kW	N/A	$5.50
Demand Charge >7kW, per kW	N/A	$7.50
Energy Charge (kWhs)	N/A	$0.013800
Base Power Supply Charge Summer on-peak all kWhs	N/A	$0.055254
PPFAC	N/A	($0.00000)

And a three-part TOU rate that includes a monthly basic service charge, a demand charge and on- and off-peak energy charges:

Residential Service Demand TOU	Current Rates	Proposed Rates
Basic Service Charge	N/A	$15.00
Demand Charge 0-7 kW, per kW	N/A	$5.50
Demand Charge >7kW, per kW	N/A	$7.50
Energy Charge (kWhs)	N/A	0.013800
Base Power Supply Charge summer on-peak all kWhs	N/A	0.111001
Base Power Supply Charge summer off-peak all kWhs	N/A	0.042800
Base Power Supply Charge winter on-peak all kWhs	N/A	0.091550

Base Power Supply Charge winter off-peak all kWhs	N/A	0.038568
PPFAC	N/A	0.000000

UNSE proposed four options for the SGS Class:

A basic two-part rate:

Small General Service	Current Rates	Proposed Rates
Basic Service Charge	$14.50	$25.00
Energy Charge 0-400 kWh	$0.030176	$0.033780
Energy Charge 401-7,500 kWh	$0.041042	$0.044650
Energy Charge > 7,500 kWh	$0.076042	$0.079650
Base Power Supply Charge all kWs	$0.058241	$0.053290
PPFAC	($0.002139)	($0.00000)

A two-part time-of-use ("TOU") rate;

Small General Service TOU	Current Rates	Proposed Rates
Basic Service Charge	$16.50	$25.00
Energy Charge 0-400 kWh	0.030176	0.033780
Energy Charge 401-7,500 kWh	0.043176	0.044650
Energy Charge > 7,500 kWs	0.076042	0.079650
Base Power Supply Charge summer on-peak all kWhs	0.129605	0.109800
Base Power Supply Charge summer off-peak all kWhs	0.039605	0.045800
Base Power Supply Charge winter on-peak all kWhs	0.129605	0.108800
Base Power Supply Charge winter off-peak all kWhs	0.031385	0.040036
PPFAC	($0.002139)	0.000000

A three-part rate that includes a monthly basic service charge, a demand charge and a volumetric energy charge:

Small General Service - Demand	Current Rates	Proposed Rates
Basic Service Charge	N/A	$25.00
Demand Charge 0-7 kW, per kW	N/A	$6.50

Demand Charge >7kW, per kW	N/A	$8.50
Energy Charge (kWhs)	N/A	0.015340
Base Power Supply Charge all kWhs	N/A	0.053290
PPFAC	N/A	($0.00000)

And a three-part TOU rate that includes a monthly basic service charge, a demand charge and on- and off-peak energy charges:

Small General Service	Current Rates	Proposed Rates
Basic Service Charge	N/A	$25.00
Demand Charge 0-7 kW, per kW	N/A	$6.50
Demand Charge >7kW, per kW	N/A	$8.50
Energy Charge (kWhs)	N/A	0.015340
Base Power Supply Charge summer on-peak all kWhs	N/A	0.109800
Base Power Supply Charge summer off-peak all kWhs	N/A	0.045800
Base Power Supply Charge winter on-peak all kWhs	N/A	0.108800
Base Power Supply Charge winter off-peak all kWhs	N/A	0.040036
PPFAC	N/A	0.000000

UNSE calculated the following bill impacts based on its revenue allocations and proposed rate elements:[132]

Current Rates			
Customer Size	Billing kWh	Billing kW	Monthly Bill
Small	330	1.7	$37.33
Medium	664	3.1	$68.96
Large	1,144	5.2	$116.53
XLarge	2,162	9.2	$220.37
Mean	830	3.8	$85.16
Proposed 2-part Rates			

[132] UNSE Opening Brief at Ex 2.

Customer Size	Monthly Bill	$ Change	% Change
Small	$43.63	$6.29	15.9%
Medium	$76.48	$7.52	10.96%
Large	$125.15	$8.63	7.4%
XLarge	$228.39	$8.02	3.6%
Mean	$89.96	$8.10	9.5%
Proposed 3-part Rates			
Customer Size	Monthly Bill	$ Change	% Change
Small	$47.13	$9.80	26.2%
Medium	$77.90	$8.94	13.0%
Large	$122.60	$6.07	5.2%
XLarge	$219.30	-$1.07	-0.5%
Mean	$93.18	$8.02	9.4%

Thus, under the two-part rates, the average residential user, consuming 830 kWh /month would see a bill increase of $8.10, or 9.5 percent, if they select the two-part rates, and an $8.02, or 9.4 percent increase, under the optional three-part rates. A small consumer, using 330 kWh/ month would see a bill increase of $6.29, or 15.9 percent, under the two-part option and an increase of $9.80, or 26.2 percent, under the three-part option. Under either rate option, $5.00 of the increase would be due to the proposed increase in the monthly customer charge. Thus, for the small user, 79 percent of the increase under the two-part rate is due to the customer charge.

In this case, some parties criticized UNSE's use of the minimum system method to determine the basic customer charge because they claim it includes charges that are not appropriately recovered in the customer charge. UNSE argues, however, that the previous method to determine the monthly customer charge, the basic service method, does not use accurate cost causation assumptions or information, greatly underestimates the unavoidable fixed system costs needed to serve a customer, and also ignores the increasingly diverse use of the grid that makes recovery of fixed costs through volumetric rates inequitable.[133]

UNSE presented evidence that the fixed monthly cost to serve the average residential customer is approximately $55.[134] UNSE notes that by increasing its residential basic service charge from $10 to $15, it would still be recovering $40 per month through volumetric charges.[135] UNSE disputes concerns that increasing the basic service charge will reduce incentives to conserve energy because the volumetric rate, the driver for conservation, will also be increased, to provide "plenty" of incentive to conserve.

Some parties have criticized the proposal to eliminate the third volumetric tier because it would reduce the incentive for customers to adopt DG or Energy Efficiency ("EE"). UNSE argues that the third residential volumetric tier is a significant source of intra-class cross-subsidization and has contributed to the Company's inability to earn its authorized revenue requirement.[136] UNSE believes that the record is clear that eliminating the third tier better aligns rate design with cost-causation and reduces the excess recovery of fixed costs from those customers whose usage is in the third tier. Moreover, UNSE states the volumetric rate in its proposed second tier is almost the same as the rate in the current third tier, so customers will have the same incentive to conserve.[137] UNSE also believes that three-tiered rates are confusing, and not helpful, to customers who don't understand why they have to pay higher rates when they use more energy in the summer.[138]

UNSE argues that the record supports finding that DG customers are substantially different than non-DG customers, and to allow them to take service under any of the two-part rates would exacerbate the cost shift from DG customers to Non-DG customers.[139] According to UNSE, DG customers use the grid constantly, either producing their own energy and pushing the excess energy back into the grid, or using it to receive electricity when their DG systems are not producing.[140] UNSE asserts that DG customers place additional costs on the grid due to additional maintenance costs from reverse flow

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[133] UNSE Reply Brief at 6; Ex UNSE-35 Overcast RJ at 10.
[134] UNSE Reply Brief at 6; Ex UNSE-32 Jones Dir at 41.
[135] UNSE Reply Brief at 6.
[136] UNSE Reply Brief at 7; Ex UNSE-31 Jones Dir at 42.
[137] UNSE Initial Brief at Exhibit 1.The current third tier rate for usage over 1,000 kWh/month is $3.8408 cents/kWh; the proposed second tier rate for usage greater than 401 kWhs per month is $4.86160/kWh for residential service.
[138] Tr. at 669-70, 2715, 2755-56
[139] UNSE Initial Brief at 24.
[140] Ex UNSE-25 Tilghman Dir at 4-6.

caused by excess energy, and increased ancillary services such as load balancing, frequency support, voltage support, spinning reserves and non-spinning reserves needed due to the intermittent nature of solar DG and the utility's inability to monitor and control the solar DG systems.[141] Moreover, UNSE states, the intermittent nature of DG resources requires utilities to incur generation costs to address that intermittency. Furthermore, UNSE asserts that DG customers do not reduce the demand on the grid, and the Company must be prepared to meet DG customer demand at a moment's notice it their systems production slows or stops. In addition, UNSE claims that DG customers can cost more to serve due to increased reserve requirements, VAR requirements and reduced life of voltage devices.[142]

UNSE argues that solar DG customers are not like other low usage customers who have a low steady predictable load, regardless of weather or time of day. According to UNSE, the DG customer uses the grid constantly either taking electricity or pushing it back, and if a cloud affects their production, the utility must be ready to provide instantaneous service. In addition, UNSE claims that vacant homes don't all become occupied at the same time, but all DG homes in a neighborhood might need energy at the same moment when a cloud passes by or the sun sets.[143]

UNSE asserts vacant or seasonal homes pay a customer charge that helps cover minimum system costs, and their low power usage places minimal demands on the grid. UNSE asserts that many of the costs that solar DG impose on the system are demand-related costs, which justifies placing them on three-part rates. UNSE explains that two-part rates rely on energy charges to recover fixed costs, and are designed to recover costs based on the average consumption levels of full-requirements customers.[144] A three-part rate is appropriate for DG customers because they don't use as much energy, but impose similar demands as full-requirements customers.[145] UNSE states that it is not seeking to recover more fixed costs from DG customers than from non-DG customers, but attempting to have DG customers cover their fair share of the costs they impose on the grid. Given their different cost causation and load characteristics, UNSE argues that limiting them to certain rates is appropriate and

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[141] Id. at 4-6.
[142] Ex UNSE-34 Overcast Reb. At 26-27.
[143] UNSE Initial Brief at 26-27.
[144] Ex UNSE-28 Dukes Dir at 28.
[145] Tr. at 2919-30.

not discriminatory.[146]

The Company states that mandatory three-part rates for DG customer will reduce, but not eliminate, the cost shift on non-DG customers.[147] The Company's analysis shows that under two-part volumetric rates, and in conjunction with current net metering practices, DG customers avoid paying their fair share of grid costs, and are being subsidized by the 98 percent of customers without DG by an average of more than $642 per year for a 7kW solar PV system.[148] UNSE argues that even if solar DG customers represent only 2 percent of its residential customers, it is a growing number, and the problem of recovering a fair share of fixed costs from these customers' needs to be addressed before the problem gets worse, and while grandfathering the current DG customers is manageable.[149]

The Company argues that its proposed mandatory three-part rates for DG customers are not unduly confusing or burdensome, especially after an adequate transition period and customer education.[150] UNSE asserts that the solar advocates raise several concerns about demand rates, but do not offer specific solutions to the challenges created by DG and other issues regarding inequitable and inadequate recovery of fixed costs of the grid. UNSE states that the solar advocates previously argued that the cost shift UNSE is seeking to rectify must be addressed in a rate case, but now that UNSE has filed a rate case these same solar advocates now urge the Commission to delay addressing the cost shift until the Company's next rate case. UNSE believes the desire to wait conflicts with the solar advocates' insistence that all DG customers be grandfathered onto the current rate design and net metering tariff.[151] Furthermore, UNSE asserts TASC and Vote Solar are vague about which aspects of the rates should be grandfathered under their proposals.

UNSE appreciates RUCO's attempt at proposing rate designs to address the DG differences, but believes that RUCO's proposals are either too complicated as compared to the Company's three-

[146] UNSE Initial Brief at 27; Ex UNSE-34 Overcast Reb at 14-27.
[147] As discussed in detail below, the Company also proposes to modify its net metering tariff to (1) eliminate the "banking" of excess energy produced by a DG system to offset future energy usage and (2) compensate DG customers for exported energy at the Renewable Credit Rate ("RCR"). The RCR would be equivalent to the rate paid for utility scale solar resources under the most recent purchased power agreement entered into by UNSE's sister company, TEP.
[148] Ex UNSE-34 Overcast Reb at 15-19.
[149] UNSE Reply Brief at 8-9.
[150] Id. at 11.
[151] Id. at 9.

part rates, or do not sufficiently remedy the fixed cost recovery issues created by DG customers.[152] UNSE also criticizes the minimum bill and TOU proposals for not being sufficiently detailed to be adopted here and for not solving the fundamental fixed cost recovery issue because they perpetuate the volumetric recovery of fixed costs.

If the Commission desires to offer an option for DG customers in addition to three-part rates, UNSE recommends its two-part TOU rates, coupled with the elimination of banking for DG customers, and the implementation of an additional charge to cover the fixed costs of the second meter required of DG customers. Pursuant to the CCOSS, the fixed costs of a meter total $6.95, comprised of: (1) the meter ($1.58); (2) billing and collection ($4.37) (for DG production meters, the Company has costs of offsetting production from consumption and calculating credits); and (3) meter reading ($1.00).[153] The Company argues that based on the CCOSS and evidence in this docket, the extra meter costs can be assessed pursuant to Section 2305 of the Net Metering Rules (A.A.C. R14-2-2305).[154] UNSE states that the second meter creates fixed costs caused solely by DG customers, which arguably would be partly covered by a demand charge for DG customers. Thus, UNSE proposes that should the Commission desire a two-part rate option for DG customers, the DG customers would have a choice between: (1) the two-part TOU rate plus the $6.95/month charge or (2) one of the two three-part rate options. Under any option, UNSE argues, all kWh banking of excess DG system output should be eliminated.[155]

Staff

Staff continues to believe that a mandatory three-part rate design with a monthly customer charge, a demand component, and a volumetric energy charge is a viable and reasonable solution to the recovery of fixed costs and the mitigation of cross subsidies. However, without the full support of UNSE, Staff does not believe that mandatory three-part rates would be successful. Staff also continues to believe that it is not appropriate to distinguish between DG and non-DG customers in designing rates and that any rate design adopted should be applicable to all residential and SGS customers.

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[152] Id. at 12.

[153] UNSE Final Schedules at G-6-1, Sheet 1 of 1.

[154] Section 2305 provides that net metering charges shall be assessed on a non-discriminatory basis and the costs must be supported with cost of service studies and benefit/cost analyses.

[155] See Net Metering Section below for the Net Metering proposals.

Staff recommends adopting one of several alternative rate designs, with the choices including voluntary TOU and demand charge options. One of Staff's options would be a two-part rate for residential and SGS customers, with the elimination of the third volumetric tier, and a fixed customer charge of $15/month for residential and $25/month for SGS. Staff believes the larger customer charges under this option would improve revenue stability and greater recovery of fixed costs, and that the continuation of a two-part rate design would enable the Commission to ascertain the outcome of the Value of DG docket. [156] In the interim, Staff suggests, UNSE could create educational and informational programs to prepare for a transition to three-part rates sometime in the future.

Staff believes that offering a voluntary three-part rate that includes a demand charge may be helpful to give the Company and ratepayers experience with residential demand charges. Staff suggests that under this proposal the basic service charge could be less than under the two-part rate option in order to provide an incentive for voluntary customer migration. Staff believes that with this option, the Company should develop a customer information and education program to help customers determine whether they could benefit from voluntarily subscribing to a demand rate. In addition, Staff recommends that the Company develop a bill format to illustrate each customer's monthly (and twelve months) demand (both on-peak and off-peak) in order to educate customers about demand rates even if the customer hasn't selected a demand rate. Staff believes that even if mandatory demand rates are not approved in this case, it would be wise to prepare customers for an eventual transition in the future.

Staff would also support a rate design like that it is proposing in the pending SSVEC rate case (Docket No. E-01575-15-0312).[157] Under this proposal, the customer service charge increases each year contemporaneously with decreases in the energy charge. Staff states that this rate scheme would not only more accurately recover fixed costs through the service availability charge, but would also lessen rate shock because of the reduction of the volumetric charge.[158]

Staff would also support continuing with the Company's existing two-part rate design with

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[156] Staff Reply Brief at 3.

[157] Tr. at 3597. Staff Reply Brief at 4.

[158] Staff notes that the SSVEC proposal distinguishes between DG and Non-DG customers and sets a cut-off date that determines whether the new rate schedule applies. Staff does not support a separate rate schedule for DG customers, irrespective of the date of installation. The SSVEC plan also calls for a change in net metering. Staff opposes any change in net metering until a decision is issued in the pending Value of DG Docket. Staff Reply Brief at 4.

three tiers. Staff states that it would prefer eliminating the third volumetric tier, but notes that the existing three tiers have been operating for some time.[159]

Because many of RUCO's proposed rate options would require changes to net metering, and Staff recommends waiting for the conclusion of the pending Value of DG docket before altering net metering tariffs, Staff does not support RUCO's proposals at this time.[160] Staff acknowledges that a minimum bill option, as proposed by some, would make recovery of fixed costs more certain, but does so at the expense of eliminating customer ability to respond to price signals and not encouraging conservation.[161] Staff's witness Solganick also believes that a minimum bill is a public relations challenge.[162]

Using Staff's proposed revenue allocation, the impacts of moving from current rates to Staff's proposed two-part transition rates are illustrated below:[163]

Customer Size	Billing kWh	Current Bill	New Bill	$ Change	% Change
Small	330	$37.33	$41.32	$3.98	10.78%
Medium	664	$68.97	$70.59	$1.64	2.4%
Large	1,144	$116.53	$116.28	$(0.25)	-0.2%
XLarge	2,162	$220.37	$226.08	$5.71	2.6%
Mean	830	$85.16	$85.45	$0.29	0.3%

The impacts of moving from Staff's transition rates to Staff's proposed three-part rates differ by season as shown below:

Winter[164]					
Customer Size	Billing kWh	Transition Rate Bill	New Bill	$ Change	% Change
Small	294	$38.45	$40.34	$1.89	4.92%
Medium	560	$61.26	$61.93	$0.67	1.09%

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[159] Staff Reply Brief at 4.
[160] Staff Reply Brief at 6. *See* RUCO Initial Brief at 11, 13-15.
[161] Staff Reply Brief at 4.
[162] Staff Reply Brief at 6.
[163] Late-filed Staff Revised Schedule H-4.
[164] The difference in the current bill is due to different season seasonal averages

Large	914	$93.03	$90.14	($2.89)	-3.11%
XLarge	1,653	$171.17	$146.90	($23.27)	-13.60%
Winter Ave	669	$71.08	$70.75	($0.33)	-0.47%

Summer[165]					
Customer Size	Billing kWh	Transition Rate Bill	New Bill	$ Change	% Change
Small	386	$45.78	$50.56	$4.78	10.44%
Medium	813	$83.97	$87.82	$3.85	4.59%
Large	1,395	$143.35	$137.68	($5.67)	-3.96%
XLarge	2,472	$259.40	$228.13	($31.27)	-12.05%
Summer Ave	983	$99.25	$102.50	$3.25	3.27%

Staff recommended keeping the Rate Design portion of this docket open to address any unintended consequences from the new rate design.[166] Staff stated that it wants the ability to address any discrepancies between estimated and actual kW demands.

APS

APS is an electric utility that provides service to 1.2 million retail and wholesale customers throughout Arizona. APS firmly believes that the record in this proceeding establishes that demand rates are a fair and equitable rate design that is superior to the two-part volumetric rates traditionally employed for residential customers, and specifically, that universal demand rates are appropriate in the UNSE service territory.[167] APS asserts that three-part rates reduce intra-class subsidies, better track cost of service, improve the efficient use of the grid and encourage new behind-the-meter technologies. Furthermore, APS asserts that even if universal demand rates are not ultimately adopted for UNSE in this case, it does not mean that demand rates are inappropriate, especially for rooftop solar customers,

[165] The difference in the current bill is due to different season seasonal averages
[166] Staff Initial Brief at 14. Staff did not revisit this recommendation after UNSE withdrew its mandatory residential demand charges. We presume, given the multitude of new rate options, that Staff has not changed its position.
[167] APS Reply Brief at 1-2.

or that universal demand charges should not be implemented in other utility service territories.[168]

APS has had optional residential demand rates for thirty years, with more than 117,000 customers choosing to participate in a three-part demand rate with a TOU feature. APS provided evidence that its customers have been able to respond to demand rates to their advantage.[169] An APS analysis of 1,000 customers who had recently switched from a two-part TOU rate to a demand rate with a TOU feature, found that 60 percent saved on their demand and energy, on average saving between 2-3 percent on monthly demand, and that those customers who actively managed their demand achieved demand savings of 10-20 percent.

Moreover, APS argues there is substantial evidence in the record to support treating solar rooftop customers as a separate rate class.[170] APS points to RUCO's witness Huber's testimony that at times solar customers' demand can spike randomly which requires the utility to react quickly to procure energy in the spot market to meet the intermittent demand. Mr. Huber testified that it is prudent to treat solar customers differently because no other utility customers have the same profile or use the grid in the same fashion. In addition, APS believes rooftop solar customers' ability to export electrons onto the distribution system distinguishes them from energy efficiency efforts.[171]

AIC

AIC agrees that public policy favors transitioning all residential customers to a three-part demand rate sooner rather than later in order to provide an equitable solution to fixed cost recovery and to reduce cross-subsidization issues.[172] AIC supports mandatory residential demand rates because they eliminate customer and technology biases inherent in the current rate structure, and move toward a rate design that is "neutral, agnostic, and unbiased toward technology and lifestyle choices of customers."[173] AIC claims the public interest requires that rate design must allow the utility the opportunity to recover its investment in the power grid while also allowing customers who choose to install cost-effective

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[168] On June 1, 2016, APS filed its rate case which includes a proposal for residential demand charges. *See* Docket No. E-01345A-16-0036.
[169] APS Reply Brief at 2-3.
[170] Id. at 3.
[171] APS Reply Brief at 3-4, Tr. at 2267 and 2274; Ex UNSE - 34 Overcast Reb at 14-20 and Ex UNSE-26 Tilghman Reb at 19.
[172] AIC Reply Brief at 3.
[173] AIC Initial Brief at 2-5; AIC Reply Brief at 8. After the Company withdrew its proposal for mandatory universal residential demand rates, AIC did not change its support for such rates.

behind-the-meter technologies the opportunity to save money. AIC argues that the current two-part rate design, with fixed costs recovered in volumetric charges, do not meet that standard. AIC denies that a demand charge is a fixed charge, but rather recovers fixed costs through a per kW rate, and incentivizes customers to smooth their load and become more efficient for the utility to serve.

AIC criticizes TASC and Vote Solar for their characterization of UNSE's revenue problem as one of a slow economy, loss of major customers, snowbirds and vacant homes. AIC argues that TASC and Vote Solar miss the point that the Company's proposals are not about declining revenue generally, but rather the specific issue of under-recovery of fixed costs and the corresponding cost shift associated with an outdated rate design. AIC asserts that regardless of how the Company's sales are doing, the current two-part residential rates do not adequately reflect cost causation and thereby allow certain customers to avoid paying their fair share of fixed costs.[174]

Citing the use of demand charges in the commercial sector and APS's decades of voluntary residential demand charges, AIC asserts that three-part demand rates are not a wild experiment that will result in unintended consequences, but a proven effective tool for linking rates to the actual cost of service.[175] AIC notes that recent advances in metering technology allows use of demand rates in the residential market, which means that it is no longer necessary to be restricted to the less efficient two-part rates. AIC charges that opponents of residential demand charges do not explain why taking advantage of technological advances and modernizing residential rates is inappropriate.

AIC asserts that a demand charge that reflects the cost of service is nether volatile nor unmanageable, and that intervenor concerns that customers will need to "perfectly manage" their demand to avoid volatile charges are overstated.[176] According to AIC, these demand rates were designed to avoid bill fluctuations and allow for customer flexibility by using a one hour interval and only measuring demand during an on-peak period (as compared to the typical 15 minute interval for commercial customers). AIC believes that customers can manage their electricity use on a demand rate, just like they do on TOU rates, but demand rates will also provide customers "with another way to save

[174] AIC Reply Brief at 4-5.
[175] Id. at 5-10.
[176] Id. at 7-8.

money on their electricity bill."[177] AIC explains that on a two-part rate, customers only save by reducing total consumption, but on a three-part rate customers save both by reducing total consumption and reducing maximum demand. Citing APS' witness Faruqui's testimony and APS's experience with demand charges, AIC claims there is no reason to think that customers are not able to respond to the demand charge signal such that the demand charge will act as a fixed charge.[178]

According to AIC, TASC is concerned that demand charges will impact customers' lifestyle choices, but AIC claims that TASC and Vote Solar fail to explain why rates should not affect lifestyle choices when those choices affect the cost to serve.[179] In response to intervenor claims that DG customers may have greater difficulty anticipating their demand because of weather, AIC counters that this is exactly why demand charges are appropriate and necessary, since fluctuating and uncertain DG demand places a higher burden on the grid relative to their lower energy consumption, which results in non-DG customers bearing the costs of the fixed charges in their volumetric energy charges. AIC asserts that demand charges will shift some, but not all, of the cost of DG customer demand back to the DG customer.[180]

AIC states further that demand charges will not disproportionately impact low-income customers, as demand charges are agnostic to income or even monthly consumption. AIC notes that low-income customers are not low usage customers by default, and there is no empirical evidence that shows that low income customers will fare worse overall under a three-part rate, or won't have the same opportunities to save by reducing maximum demand and/or reducing consumption as other customers. AIC claims that the arguments that low income customers will be adversely affected by demand charges ignore the additional $17 flat discount being proposed for CARES customers.[181] AIC asserts that the cross-subsidies inherent in the two-part rates disproportionately disadvantage low income customers because these customers are less likely to be able to afford to invest in DG systems and thus are paying subsidies in their rates to those higher income customers able to invest in DG.

Additionally, AIC rejects the argument that residential demand rates will kill the solar

[177] AIC Reply Brief at 8, Ex APS-4 Faruqui Surr at 13.
[178] AIC Initial Brief at 14; Ex APS-4 Faruqui Surr at 7 & 9-10; Ex APS-3 Faruqui Dir at 15.
[179] AIC Reply Brief at 8.
[180] Id. at 9.
[181] AIC Reply Brief at 10. UNSE's current proposed CARES discount is $16.

industry.[182] AIC claims that the evidence shows that solar DG customers can save on their bills both by avoiding the energy charge and by moderating their demand and smoothing their load, and AIC argues that there is no logical reason why the solar industry cannot market their products given the continued savings potential. Furthermore, AIC argues that the Commission's ratemaking obligation is to balance the interests of the utility and its customers in a manner that serves the public interest and not to prop up the economic well-being of a single industry.[183] AIC argues that ultimately, demand charges will have a positive long-term effect on the solar industry because removing misaligned subsidies that artificially inflate the cost of DG solar will allow market forces to spur innovation to the benefit of consumers.[184]

AIC argues that the proposed alternatives to the three-part rates, such as minimum bills, TOU and RUCO's optional rates, do not effectively address the fundamental flaws in the current rate design, nor achieve the key public policy objectives as well as the three-part rate design because the price signals they send are not as closely related to costs.[185] Under the minimum bill concept, customers would be charged the greater of the minimum bill amount or their bill under the standard two-part rates. AIC argues that the minimum bill does not reflect customer demand costs and would apply to all customers regardless of their usage, demand, or load factor, and would perpetuate the current problems with intra-customer cost-shifting. AIC believes that the lack of correlation would continue to misalign price signals and customer behavior, would not reward reductions in demand or improvements in load factor, and would be "highly unfriendly" to new technologies. AIC believes that in order to assist in the recovery of fixed costs, the minimum bill would need to be higher than any benchmark being proposed by its proponents in this case.[186]

AIC supports including a TOU component as part of the three-part rates design, but claims that TOU energy rates, by themselves, are not a viable alternative because they do not adequately reflect

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[182] AIC Initial Brief at 11-14.
[183] Id. at 12.
[184] AIC Initial Brief at 13. AIC points to the testimony of Vote Solar witness Kobor who argued that demand charges should not be implemented because "enabling technologies" that could help customers manage demand are uncommon, costly and not widely adopted. Ex Vote Solar-6 Kobor Dir at 35. AIC asserts that demand charges might incentivize the development of these technologies.
[185] AIC Initial Brief at 5-10.
[186] Ex APS-7 Miessner Surr at 11. APS's witness Miessner estimates the minimum bill would need to be in the range of $30 for small homes, $70 for medium-sized homes and $150 for large homes. *Id.* at 14.

infrastructure and capacity costs that vary over time or with consumption.[187] AIC submits that a TOU energy rate without a demand component does nothing to resolve the problem associated with recovering demand-related costs through energy charges because DG and other low load factor customers will continue to pay less than their fair share of demand-related costs.[188] Furthermore, AIC claims, TOU rates to not provide incentive for customers to reduce their demand.

AIC also asserts that RUCO's rate design proposals discussed during the hearing do not address the fundamental flaw with existing rates because they perpetuate the two-part rate option.[189] According to AIC, both RUCO's "Non-Export Option" and "RPS Bill Credit" would allow DG customers to choose any of the Company's traditional two-part rates, but under two-part rates DG customers avoid paying their fair share of demand-related costs. Citing the testimony of its witness Hansen, who compared the costs of the "RPS Bill Credit" option and the "Advanced DG TOU" option for customers who use no DG, and those to receive at least 50 percent of their energy needs from DG and actively manage demand, shows that the Advanced DG TOU Option would increase customers' bills between 19 to 290 percent under each scenario.[190] Consequently, AIC concludes virtually no DG customer would select the "Advanced DG TOU," which leaves only the "RPS Bill Credit" option, and no effective customer choice. AIC believes that RUCO's additional options, as explained in its post-hearing brief, are too late to be sufficiently analyzed and do not address the cost-shift nor incentivize innovation of behind-the-meter technologies as well as the three-part rates endorsed by Staff. [191]

AIC argues that demand charges should be implemented before DG penetration grows. AIC believes that a voluntary opt-in demand pilot would not operate the same as a universal mandatory

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[187] Ex APS-7 Miessner Surr at 15-16.
[188] AIC Initial Brief at 8, citing Ex APS-7 Miessner Surr at 16 and Ex AIC-D Hansen Surr at 8.
[189] At the hearing, RUCO supported treating DG customers as a separate class and advanced three options for DG customers:

(1) The "non-Export Option" under which DG customers could select any of the Company's standard rates but would not be allowed to export power to the grid;
(2) The "Advanced DG TOU Option" under which DG customers would pay a three-part rate consisting of a minimum bill, a flat base energy rate ($0.084/kWh), a peak-hours demand charge ($19.50/kWh incurred between 2 and 8 p.m.), and could export power to the grid and receive credit dependent upon whether the customer exchanges Renewable Energy Credits ("REC") with the Company; and
(3) The "RPS Bill Credit Option" under which DG customers could select any of the Company's standard rates and receive a credit that is based on the amount of renewable capacity added over time (starting at $0.11/kWh). But customers must exchange RECs with the Company.

[190] Ex AIC-D Hansen Surr at 14-16; AIC Reply Brief at 9.
[191] AIC Reply Brief at 11.

residential demand rate and thus would not provide additional useful information that cannot already be gleaned from APS's experience with a voluntary demand rate program. AIC states that by the time the new rates go into service, UNSE will have access to about nine months of usage data that customers can utilize to adjust their behaviors. AIC alleges that delay will hurt everyone as more and more people will be making the decision to go solar based on "broken" two-part rates, which will make the "fix" harder in the future.[192]

AIC agrees with Staff and APS that customers are capable of understanding demand rates and that UNSE's proposed customer education program is sufficient.[193] Even so, AIC supports Staff and the Company's position that the transition period to three-part rates should be flexible to that the Company can educate customers and overcome misconceptions about the proposed rate design.

RUCO

RUCO argues that a universal three-part rate is not warranted, and that the Company has not met its burden of demonstrating that the proposed three-part residential rates are just and reasonable.[194] RUCO firmly believes that the DG partial requirements customers should be their own rate sub-class.[195] RUCO states that it appreciates the Company's post-hearing position to return to its opening position, however, RUCO is concerned that the partial requirements customers are only given one rate option under the Company's latest proposal.

RUCO asserts that rate discrimination does not require that every customer in the rate class be subject to the same rates as long as there are distinguishing characteristics.[196] RUCO argues that the record shows that partial requirement DG and full requirements customers are not similarly situated, and a solution that would impact only 2 percent of the Company's residential ratepayers is preferable to affecting every customer.[197]

Although UNSE is close to having the smart meters in place to implement three-part rates for all residential customers, RUCO states that the Company has not collected sufficient data on customer

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[192] Id. at 11-12.
[193] Id. at 12.
[194] RUCO Initial Brief at 3-4.
[195] RUCO Reply Brief at 1.
[196] RUCO Initial Brief at 5, *citing* A.R.S. §40-334 and *Town of Wickenburg v. Sabin*, 68 Ariz. 75 (1948). RUCO notes that distinctions are made all the time between ratepayers in the same Class, citing the low income tariffs.
[197] RUCO Initial Brief at 6.

usage to design appropriate universal three-part rates.[198] RUCO notes that the Company expects to have the infrastructure to measure demand installed for all customers by the end of 2016, but that is not soon enough to collect the data needed to inform the decision making in this rate case.[199] RUCO believes that the lack of data is of particular concern in light of the extraordinary amount of opposition to the three-part rate proposal from the public at large.[200]

RUCO argues that the demand charge discussed at the hearing is not properly designed because it does not distinguish between the seasonality of the utility's costs—as a high electricity demand in January would cost a ratepayer the same as a high electricity demand in August. Because the utility's system costs differ during these times, having the same rate sends the wrong price signal to the customer.[201] RUCO states a primary reason for implementing three-part rates is to recover the costs driven by demand which varies significantly based on the season and time of day.

RUCO is also concerned that the Company has no history or experience offering a three-part rate to residential ratepayers and has not yet developed customer tools to help ratepayers manage their demand. RUCO believes this lack of experience raises doubt about the Company's ability to implement such an ambitious plan. RUCO suggests that it may be better to offer an optional three-part rate in order to start developing the data, experience, and infrastructure needed to consider universal implementation in three-part rates in the future.

RUCO proposes several rate options for the partial requirements DG customers:[202]

(1) Non-Export Option. Under this option, DG customers can choose any of the Company's traditional rates offered for full requirement customers, but are not allowed to export any excess power generated to the grid. However, RUCO is open to allowing exports at the Market Cost Comparable Convention Generation ("MCCCG") rate.

(2) Advanced DG TOU Option. This option is a three-part rate, with a minimum bill and a TOU demand rate during the summer. The rate includes a minimum bill (not a fixed charge), volumetric rates, and a demand charge component. The export rate for excess power to the grid for customers who

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[198] Id. at 7-8.
[199] Id. at 7.
[200] Id. at 8.
[201] RUCO Initial Brief at 9. The Company's post-hearing demand charges do not have a seasonality feature either.
[202] RUCO Initial Brief at 11.

exchange renewable energy credits ("RECs") is 8.5 cents per kWh ($.085/kWh), equal to the self-consumption rate. For those DG customers who do not exchange RECs, the export rate is the MCCCG rate.

(3) RPS Bill Credit Option. Under this option, customers can select any of the Company's traditional rates; the credit rate for new DG customers decreases over time as the Company's portfolio of renewable capacity increases. The credit rate would start at 11 cents per kWh and go no lower than the MCCCG rate. The reductions are based on pre-determined tranches in order to provide certainty to the ratepayers choosing this option. RUCO states that the bill credit would be applied every month and be fixed for 20 years from the date the system was installed to assure certainty for new DG adopting customers.

If mandatory three-part rates are not adopted, RUCO proposed four additional rate options:[203]

(1) Traditional Two Part Rates with a Market Based Export Option. In the event the Non-Export option above is not found to be appropriate, this option would be available for all residential ratepayers. For DG customers with a PV system that produces less than 25 percent of their annual load, full net metering would be preserved for generation exports. For partial requirement DG customers who produce more than 25 percent of their annual load, generation exports would be compensated at a market-based rate, calculated at the average wholesale price for that month. Compensation for excess power would be paid monthly, with no banking. RUCO asserts that the lower than MCCCG generation export rate, for the partial requirement DG customer who produces more than 25 percent of their annual load, is justified because it is more than offset by the rate for self-consumed generation.[204]

Residential Service	Current	UNSE Proposed	RUCO Recommended
Customer Charge	$10.00	$15.00	$12.50
Energy Charge 1st 400 kWh	$0.019300	$0.030100	$0.028600
Energy Charge 401-1,000 kWhs	$0.034350	$0.040100	$0.051000

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[203] Id. at 13-15.

[204] RUCO Initial Brief at 13-14 and Attachment A. Note: UNSE and RUCO support differing allocations of the revenue increase and thus, their rates cannot be directly compared with precision.

Energy Charge all add'l kWhs	$0.038499	$0.058100	$0.057300
Base Power Supply Charge all kWhs	$0.061700	$0.055090	$0.055090
PPFAC	($0.003488)	Varies	Varies

(2) Three-Part Rate Option. RUCO proposes an optional three-part rate that would be available to all residential ratepayers and includes a $12.50 customer fixed charge. Full net metering would be preserved under this option and the rate includes a tiered TOU demand charge, with the on-peak summer demand charge over 30 percent higher than the on-peak winter demand charge. The demand charge includes two tiers, one below 4 kW and one above 4 kW. RUCO believes this option sends a better cost-based price signal than Staff's three-part rate proposal which maintains the same demand charge with no tiers or price differential for seasons. In the future, RUCO would like to see even more seasonality built into the rate design.

Three-Part Residential TOU	Current	UNSE Proposed	RUCO Recommended
Customer Charge	N/A	$15.00	$12.50
Demand Charge			
0-4 KW Summer	N/A	$5.00	$4.00
>4 kW Summer	N/A	$5.00	$12.00
0-4 kW Winter	N/A	$5.00	$4.00
>4 Winter	N/A	$5.00	$8.00
Summer On-peak, kWh	N/A	$0.105800	$0.124450
Summer Off-peak, kWh	N/A	$0.042830	$0.045000
Winter On-peak, kWh	N/A	$0.086300	$0.064400
Winter Off-peak, kWh	N/A	$0.038610	$0.035000
Base Power Supply Charge, all kWhs	N/A	$0.015340	$0.013300
PPFAC			
Summer On-peak, kWh	N/A	Varies	Varies
Summer Off-peak, kWh	N/A	Varies	Varies

Winter On-peak, kWh	N/A	Varies	Varies
Winter Off-peak, kWh	N/A	Varies	Varies

(3) Volumetric TOU Option. RUCO proposed this option in response to the solar industry's expressed desire for rate options other than a universal three-part rate. This optional volumetric TOU rate would be available to all residential ratepayers. Under this option, full net metering is preserved, but in order to address the fixed cost recovery issue, the fixed charge is increased to $19.00. RUCO believes that this option makes a sizeable contribution to reducing the cost shift.[205]

Residential Volumetric TOU Option	Current	UNSE Proposed	RUCO Recommended
Customer Charge	N/A	N/A	$19.00
Base Power Supply Charge, all kWhs	N/A	N/A	$0.035040
Summer On-peak, kWh	N/A	N/A	$0.145000
Summer Off-peak, kWh	N/A	N/A	$0.032500
Winter On-peak, kWh	N/A	N/A	$0.105000
Winter Off-peak, kWh	N/A	N/A	$0.013300
PPFAC			
Summer On-peak, kWh	N/A	N/A	Varies
Summer Off-peak, kWh	N/A	N/A	Varies
Winter On-peak, kWh	N/A	N/A	Varies
Winter Off-peak, kWh	N/A	N/A	Varies

(4) Full Requirement Customer TOU Option. This option would be available only to full requirements customers and includes a $12.50 customer fixed charge. RUCO states it was built based on the Company's existing residential TOU rate and seeks to improve the low participation rate by offering a shorter window for on-peak, and two tiers instead of three, to alleviate some of the Company's concerns. On-peak summer hours are reduced from six hours to three (4-7 p.m. instead of 2-8 p.m.) and winter peak is from 6-9 a.m. and 6-9 p.m. (rather than the current four hours each). RUCO

[205] RUCO Initial Brief at 14-15.

believes that a simpler offering, including a TOU rate with a shorter on-peak period will simplify customer communications, boost enrollment, and increase overall effectiveness.[206]

Full Requirement Residential TOU Option , all kWhs	Current	UNSE Proposed	RUCO Recommended
Customer Charge	N/A	N/A	$12.50
Energy Charge 1st 400 kWhs	N/A	N/A	$0.034000
Energy Charge, all add'l kWhs	N/A	N/A	$0.050000
Base Power Supply Charge, all kWhs			
Summer On-peak, kWh	N/A	N/A	$0.150000
Summer Off-peak, kWh	N/A	N/A	$0.045000
Winter On-peak, kWh	N/A	N/A	$0.090000
Winter Off-peak, kWh	N/A	N/A	$0.035000
Base Power Supply Charge, all kWhs	N/A	N/A	$0.040000
PPFAC			
Summer On-peak, kWh (4-7 p.m.)	N/A	N/A	Varies
Summer Off-peak, kWh	N/A	N/A	Varies
Winter On-peak, kWh (6-9 a.m. and p.m.)	N/A	N/A	Varies
Winter Off-peak, kWh	N/A	N/A	Varies

RUCO states that evaluating its proposals as standalone rates does not provide the full picture of the interworking of all the rates. RUCO disagrees with criticisms of its proposals on the grounds that they reach behind the meter. RUCO argues that partial requirements solar DG customers use the grid for backup services, voltage and frequency regulation, in-rush current, spinning and non-spinning reserves and other ancillary services, the costs of which are being borne primarily by full-requirements customers, such that what happens behind the meter is very much the business of all residential ratepayers and highly relevant to designing appropriate rates.[207] In any case, RUCO states its "Non-

[206] RUCO's Initial Brief at 15. *See* RUCO Reply Brief at 8-10.
[207] RUCO Reply Brief at 3.

Export" rate option does not look behind the meter.

In response to criticism that the Non-Export option does not capture any benefits of exporting excess generation to the grid, RUCO explains that is why it modified this option to pay for exported energy at a market-based rate.[208]

RUCO notes that the solar advocates criticize its "Advanced DG TOU" rate because it contains a demand charge component; and because the proposed $.085/kWh rate was not based on the actual value of solar.[209] RUCO responds that the Advanced DG TOU rate is optional and available to all residential customers, so the partial and full requirements customers are treated the same. RUCO asserts that its recommended market rate was a good faith attempt to capture the value of solar and is only 1 cent/kWh lower than the TASC sponsored calculation using the same benefit categories. RUCO argues that its proposals are a step in the right direction and waiting for the completion of the Value of DG docket is not an option for this case.[210]

RUCO also rejects claims that changing a rate would prevent partial requirement customers from self-consuming their own generated power.[211] RUCO believes that to make such arguments appear calculated to stir solar supporters to action and are not productive. RUCO argues that having the ability to change the accounting method for compensating exported power is central to developing fair and reasonable rates.

RUCO believes that its RPS Bill Credit option would be the most popular initially. Under this option, the credit rate starts at or near the current retail rate and decreases over time based on the Company's REST compliance. RUCO claims that this option provides a window of time for solar companies to be profitable, while providing time to develop a technology offering to maximize the potential sales to customers on the other rate option. Contrary to claims that this option could cause customers to lose money on their DG investments, RUCO states this rate actually provides stability because the credit rate will be known by all parties at the time of installation and will be locked in for

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[208] RUCO Reply Brief at 4. RUCO states that its modified Non-Export Option preserves benefits of the exported energy for residential ratepayers, and while the original non-export option treated partial and full requirement customers the same, the modified rates would not.
[209] RUCO Reply Brief at 4.
[210] Id. at 5.
[211] RUCO Reply Brief at 6, *citing* Vote Solar Initial Brief at 44.

that customer for 20 years, which RUCO believes is a benefit to the solar industry because it solves the need for future grandfathering. RUCO states that the RPS Bill Credit could be modified by the Commission to serve as a "glide path" for compensating energy exports and the Commission could use the RPS Bill Credit framework to increase or decrease the current retail rate, to meet the future credit rate set by the value of solar methodology.[212]

RUCO reiterates that it firmly believes that rate options designed specifically for partial requirement customers that address unique issues presented by these customers is the preferred option. However, if the Commission determines as a matter of policy that partial and full requirement customers should be treated the same, RUCO proposes the following optional rates available to all residential customers:

1. Residential Service
   - Hourly net credit export rate at 6 cents/kWh. This creates the same blended rate as the advanced DG rate and the volumetric TOU proposed by RUCO.
   - Banking is modified to an hourly net credit export rate based on hourly consumption/production that is paid monthly.
   - A grid access charge, similar to that of APS, may be prudent
2. Residential Three-part TOU
   - Customers on this rate keep the current form of banking and net metering.
3. Residential Volumetric Two-part TOU
   - Customers on this rate keep the current form of banking and net metering.

RUCO also provides an option only available to Energy Efficiency participants. To qualify for this rate, a customer must be enrolled in a pre-programmed thermostat of demand side management ("DSM") energy efficiency program offered by the Company. This rate features a 3 hour peak window.[213]

RUCO proposes that DG customers who had an application submitted prior to the date of a final order in this case, should be fully grandfathered with existing rates and net metering

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[212] RUCO Reply Brief at 7.
[213] Id. at 8-12.

compensation. RUCO continues to support a fixed charge of $12.50. The Residential Volumetric Two-part TOU rate carries with it a $19 fixed charge.

For partial requirement customers on the standard Residential Service, the current banking mechanism would be modified from a kWh-for-kWh exchange, with excess power rolling forward to future months to an hourly net credit export rate based on hourly consumption/production that is paid monthly. However, RUCO proposes that if it is found to be true that there are tax implications using this method, solar DG customers would have two other rate options to choose from. RUCO claims that banking of excess energy by residential solar DG customers is the exact problem this rate case is trying to solve, and must be addressed. RUCO asserts that the TOU structure reduces the need to end banking at this juncture, however, the switch could still take place on RUCO's TOU rates with little to no impact on the economics of solar adopters.

RUCO contends that DG customers have additional costs that non-DG customers do not. DG customers in the Company's territory have two meters. RUCO believes this cost should be paid by the DG customer. Based on the CCOSS, RUCO recommends implementing a $6.95/month metering charge for DG customer with a link to RECs.

TASC

In its Initial Brief, TASC argued extensively that the proposed mandatory residential demand charges are not in the public interest because they are unprecedented, volatile, punitive, confusing, and the specific proposal was rushed and its implementation was not well thought out.[214] In addition, TASC asserted that the docket lacks significant or substantive analyses, with no studies done to determine the amount of peak demand to be shifted or comparing impacts between potential TOU rates and demand rates in UNSE's territory. Furthermore, TASC argues that at the time of the hearing, there was no proof-of-revenue analysis presented for the three-part rate design.[215] TASC also criticized the Company's inability to show that it had an effective game plan for educating customers about demand charges or tools in place to assist ratepayers in managing their demand.[216] TASC argued that demand charges are volatile and burdensome and require an extreme level of diligence to avoid substantial bill

[214] TASC Initial Brief at 12-22.
[215] Id. at 15.
[216] Id. at 15-16.

impacts if a consumer experiences even one hour with greater-than-normal demand for that month. TASC asserts that the proposed peak hours (6 hours per day in summer and 8 hours per day in winter, excluding weekends and holidays) impose an "unconscionable" burden on ratepayers each month.[217] TASC also claims that demand charges are particularly difficult for solar customers to manage because of the unpredictability of the weather. Moreover, TASC argued that the demand charges do not even solve UNSE's real problem of declining retail sales.[218]

TASC argues that UNSE's post-hearing position, that would have demand charges apply only to DG solar customers, unreasonably discriminates against DG customers, violates procedural and substantive due process, and would render DG solar uneconomical.[219] TASC argues that the combination of the post-hearing changes to rate design and the net metering tariff prevents TASC and other intervenors from formally examining any evidence of projected bill impacts, any new cost of service information justifying the newest proposal, and any proposed educational programs for the new demand rates. TASC argues that UNSE continues to fail to meet its burden to support its proposed rate design. Consequently, TASC believes the most reasonable approach is to deny any requested rate design changes to residential, small commercial, and DG customers. TASC recommends that if the Commission desires to explore new rate designs, it should order the Company to propose pilot rates, which would allow the Company to experiment with rates, educational materials and needed customer support, and to seek implementation of new rate designs in its next rate case.

In order to treat DG customers differently than its non-DG customers, TASC argues that UNSE has the burden to demonstrate that differential treatment is just, reasonable, and nondiscriminatory, and must also conduct solar-specific cost-of-service studies using actual data and benefit/cost analyses to prove disparate treatment is warranted.

TASC observes that DG customers have never been subject to the demand charges, and have no greater understanding of three-part rates or ability to control their demand than their non-DG counterparts. TASC asserts that the demand charge volatility stems from the fact that demand charges will be based on brief snapshots of time for each ratepayer's monthly usage, and argues that one-hour

[217] TASC Initial Brief at 18. The proposed peak hours were 2-8 p.m. in summer and 5-9 a.m. and 5-9 p.m. in winter.
[218] TASC Initial Brief at 19-20.
[219] TASC Reply Brief at 1.

with higher than usual demand could result in higher bills.[220] TASC argues that it is unfair and unjust to adopt a rate design that could see a residential customer's diligent electricity usage wiped out by one hour in the month. TASC asserts that under UNSE's proposal, a DG customer will have to constantly be aware of simultaneous use of appliances, but will not have access to real-time information to aid them.[221] TASC argues that in addition to the volatility and burdensome nature of demand charges, a DG customer must also take into account the unpredictability of the weather on a daily basis. As a result, TASC believes DG customers would face an impossible challenge to manage their loads. TASC believes the evidence shows that adapting to demand charges would be problematic for all customers, but even more so for DG customers because of the volatility of their load due to weather.[222]

TASC argues that under Commission Rules, in order to impose higher charges on DG customers than all other customers with similar load characteristics, or customers in the same rate class as the DG customer would qualify for if not participating in net metering, UNSE carries the burden of proof and must support the differential treatment with "cost of service studies and benefit/cost analyses."[223] TASC asserts that UNSE has failed to submit the requisite studies or analyses needed to support differential treatment of DG customers. TASC also asserts that the Company provided no evidence to support its claim that DG causes considerable challenges to the grid, and could not identify a single cost that the Company has incurred as a result of the implementation of DG systems.[224]

TASC asserts that UNSE has focused on DG as causing "cost shifts," but ignores that the actual cause of its declining revenue can be traced to the recent loss of its largest commercial customer, a high number of "snowbirds" that visit seasonally, the growing number of vacant homes, and the lagging economy in its service territory.[225] According to TASC, the evidence shows that 75 percent of the Company's decline in retail sales is due to the loss of industrial and mining customers, and 19 percent is due to sluggish economic conditions. TASC states that DG customers account for only 6 percent of the total sales decline,[226] such that singling out DG customers does not even address the problem that

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[220] TASC Reply Briefs at 4-5, citing Tr. at 361.
[221] TASC Reply Brief at 4.
[222] Id. at 5.
[223] TASC Reply Brief at 6, citing A.A.C. R14-2-2305.
[224] TASC Reply Brief at 6-7.
[225] Id. at 7.
[226] Id. at 8.

UNSE claims that it is trying to solve.

TASC argues that in changing its rate proposals and proposing four different proposals over the course of this proceeding, UNSE has violated the intervenors' procedural due process right to notice and to be heard.[227] Further, TASC claims that UNSE's actions have deprived the public and all intervenors of substantive due process because the timing of UNSE's latest rate proposal deprives intervenors the opportunity to present witnesses and evidence bearing on the proposal, or even time to assess the proposals.

Vote Solar

Vote Solar opposes mandatory demand charges for residential consumers and the Company's proposed changes to net metering as expressed at the hearing, as well as the proposed increase in the monthly customer charge, and elimination of the upper residential tier.[228] Vote Solar recommends that the Commission consider TOU rates and a minimum bill concept in order to address the issues caused by low-usage customers.

Vote Solar argues that UNSE's post-hearing rate proposals that single out solar customers are discriminatory and violate the law. Vote Solar also asserts that the proposals are unnecessary, duplicative and unjust as UNSE's solar customers are a negligible cause of declining sales, costs shifts and grid impacts. Vote Solar believes minimum bills and time-of-use rates are better options to address UNSE's concerns. If the Commission were to adopt UNSE's proposals for solar customers, Vote Solar insists it is essential to grandfather all existing customers as of the decision date.[229]

One of the justifications for singling out solar customer is the alleged cost shift and need to improve fixed cost recovery, but Vote Solar states the evidence shows that solar customers are a negligible cause of these problems compared to customers without solar. Vote Solar calculated that the Company's approximate 1,800 residential net metering customers comprise only 2 percent of the total residential customers, that DG is only responsible for 6 percent of the decline in retail sales, and responsible for only 3 percent of the decline in usage-per-customer.[230] Thus, Vote Solar asserts it would

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[227] TASC Reply Brief at 14-16; *Iphaar v. Indus Com'n of Arizona*, 171 Ariz. 423, 426 (App. 1992).
[228] Vote Solar Initial Brief at 55-56.
[229] Id. at 1.
[230] Ex UNSE-3 Hutchens Dir at 5; Ex Vote Solar-6 Kobor Dir at 9 & 12.

be unjust and discriminatory to single out the minority of customers for "punitive rate treatment" while allowing the customers who actually cause the majority of the problem to avoid these rates. Vote Solar argues that UNSE has failed to substantiate the claim that DG causes numerous grid impacts and that those parties claiming that DG and net metering create huge subsidies have not quantified the alleged "huge subsidies" or how DG actually impacts UNSE.

Vote Solar argues that UNSE's proposed demand charges would discriminate against new solar customers, violate prohibitions in the Arizona Constitution and Commission Rules against discriminatory rate treatment, and that none of UNSE's most recent arguments for singling out rooftop solar for separate treatment and demand charges have merit. According to Vote Solar, UNSE has claimed there are several differences between DG Solar and Non-DG customers including that they use the grid differently and create costs by exporting power; and they are different than other low-usage customers as their demand can spike suddenly due to the weather. Vote Solar responds by arguing that: (1) UNSE fails to recognize the benefits of solar DG such as avoided energy costs, avoided generation costs, and avoided transmission and distribution costs; (2) the low percentage of solar DG means that any operational differences in contributions to lost fixed cost recovery are negligible; and (3) UNSE must stand ready to serve seasonal and newly occupied vacant homes as well as solar customers. Vote Solar states that 66 percent of UNSE's residential bills do not fully recover fixed costs, and with solar customer bills accounting for just 2 percent of the bills causing a cost shift, it is unjust and discriminatory to single out these customers.

Vote Solar also asserts that RUCO's claim that solar customers are different than other customers, which justifies different rate treatment, is arbitrary, unjust and discriminatory. Vote Solar claims that merely listing how one type of customer differs from another doesn't automatically justify disparate rate treatment, as there are a wide variety of customer types such as rural versus urban, apartment dwellers versus single family homes, those with central air conditioning versus those without, that are not placed in separate rate classes.[231]

Vote Solar asserts that UNSE's demand charge proposal for DG solar remains fatally flawed

[231] Vote Solar Reply Brief at 6.

because: (1) there is no evidence that residential customers can effectively respond to a demand charge; (2) the demand charge would cause significant bill increases to low-usage customers; and (3) the demand charge would not accurately reflect cost causation.[232] Vote Solar states there is nothing about solar customers that allows them to respond to demand charges any better than other residential customers, and every argument against mandatory demand charges made to date in this case remains applicable if only solar customers are required to pay the charges.[233] Vote Solar criticizes RUCO for supporting a mandatory demand charge for solar customers at the same time it highlights why the demand charge is poorly designed. Vote Solar also criticizes AIC for claiming that a demand charge will not act like a fixed charge, when UNSE's own witness Overcast has characterized demand charges as fixed charges in a recent article.[234] Vote Solar notes that the findings of APS' witness Faruqui about customers' abilities to respond to demand charges involved optional charges. Similarly, Vote Solar states that APS' and AIC's claims that APS has had residential demand charges for years resulting in customer savings involve optional rates. Finally, Vote Solar asserts that it is unclear how UNSE would provide safeguards, education and mitigation measures to transition customers to the new demand rates.

AURA

In its Initial Brief, AURA argued that because the three-part rate design was not raised until Staff proposed it in Direct Testimony, there has been insufficient time to fairly consider this radical rate redesign. Thus, AURA claimed that not only did the timing of the proposals create due process concerns concerning adequate notice and time to prepare, UNSE failed to submit sufficient evidence to allow the Commission to evaluate the effect of the cost shifts. AURA argued that to fairly evaluate a rate redesign of this magnitude, UNSE needs to collect and analyze at least one year of customer data from its new meters. In addition, AURA asserted UNSE needs to develop and submit a comprehensive customer education proposal. Thus, AURA generally recommended that UNSE utilize its transmission rate design until its next rate case. Alternatively, AURA recommended a second phase of this case to evaluate rate design.[235]

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[232] Vote Solar Initial Brief at 26-34 and Reply Brief at 7-9.
[233] Vote Solar Reply Brief at 7.
[234] Vote Solar Reply Brief at 7-8, Tr. at 1485.
[235] AURA Initial Brief at 1-2. AURA had three recommendations in its Initial Brief: (1) to reject the residential rate proposal in favor of the transition rates; (2) alternatively, split the proceeding into two phases with phase one determining the revenue

After UNSE withdrew its proposal of mandatory residential three-part rates, and assuming the Commission does not require mandatory three-part rates for residential customers, AURA recommends: (1) UNSE's rebuttal two-part rate design ("transition" rate) as the permanent rate design as it best tracks costs to serve residential customers; (2) the customer charge be set at RUCO's proposed $12.26 with any reduction in revenues spread over the usage charges; and (3) given the pendency of the Value of DG docket, consideration of any changes to net metering be deferred to UNSE's next rate case.[236]

AURA's Reply Brief did not specifically address UNSE's post-hearing modifications to its residential rate design that would treat DG and non-DG customers differently, but AURA is on record as opposing the singling out of solar customers for demand charges. AURA criticizes UNSE for singling out residential DG customers without performing a cost-of–service study to determine if they actually have different characteristics. AURA provided the testimony of Mr. Alston who opines that UNSE's original rate design for DG customers was so severe that it would eliminate the economic benefits of installing residential solar systems and would be more difficult for customers to understand than TOU rates.[237] AURA asserted that UNSE provided virtually no empirical data to support its rate design. Furthermore, AURA's witness Rubin compared the UNSE rate designs and concluded that the rebuttal position two-part rate design more equitably recovers costs and reduces intra-class subsidization.[238]

AriSEIA

AriSEIA believes that mandatory demand charges are inappropriate for residential service in general, and for the UNSE service territory in particular. AriSEIA states that the implementation of residential demand charges in this case would be a live social experiment with far-reaching consequences and a difficult path back in case of failure.[239] AriSEIA asserts that as an alternative to demand charges, TOU tariffs should be considered, as TOU rates have been shown to be effective in

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requirement and two-part rates, with phase 2 considering three-part rates after UNSE has collected at least a year's worth of data; and (3) if the Commission adopts UNSE's three-part rates, to hold customers harmless during an 18 month transition period.

[236] AURA Reply Brief at 2.

[237] AURA Initial Brief at 5-6.

[238] Id. at 9-11.

[239] AriSEIA Initial Brief at 8. AriSEIA did not file a Reply Brief.

reducing peak loads. AriSEIA also advocates customer choice and seems to support giving ratepayers a choice between two-part TOU and three-part demand rates.

SWEEP/WRA/ACAA

When UNSE was proposing mandatory demand charges for residential customers, SWEEP/WRA/ACAA[240] focused on the disparate bill impacts the proposal (demand charges plus an increased customer charge) was expected to have on moderate and lower usage customers. SWEEP's analysis indicates that for consumers using 687 kWhs per month the overall increase would be 14 percent; but for those using 340 kWhs/month the increase would be 26.7 percent, and for those using 109 kWhs/month the increase would be 34.2 percent.[241] They assert that demand charges for lower usage customers are going to appear like fixed charges to these customers to the extent that the customers cannot reduce demand. These intervenors argued that UNSE's claim that it is currently not recovering its fixed costs because per-customer usage is declining does not warrant the extreme reaction of imposing demand charges on residential users, and that it is premature to say that the Company could not recover its costs of service based on traditional volumetric charges.[242]

SWEEP/WRA/ACAA argue that the Commission should reject increases to any fixed charges or the establishment of new ones, such as a demand charge.[243] According to these parties, increasing either the customer charge, or imposing a demand charge, will reduce volumetric rates which gives customers less control over their bills and reduces the incentive to lessen consumption. These parties argue there is no justification to increase the basic customer charge, and deviating from the basic customer method of determining this charge allows the Company to move as many costs as possible out of volumetric rates and into a fixed charge.[244] SWEEP/WRA/ACAA believe that the Commission has historically used the "basic customer method" for determining the basic service charge, which involves determining those costs associated with customer service and which vary with the number of

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[240] These parties are represented by the same counsel and filed joint briefs.

[241] SWEEP/WRA/ACAA Initial Brief at 5. The dollar increase would be $9.65 for those using 687 kWhs, $9.97 for those using 340 kWhs, and $6.57 for those using 109 kWhs.

[242] SWEEP/WRA/ACAA believe it worth noting that in 2015, UNSE's actual return on equity was 7.4 percent, which although below the authorized rate of return, the original revenue request would have resulted in over a 12 percent rate of return on equity in 2015 using only volumetric charges for residential customers (reduced to 10.8 percent under the reduced agreed revenue requirement). Tr. at 508 and 522. SWEEP/WRA/ACAA Initial Brief at 7.

[243] In their Reply Brief, SWEEP/WRA/ACA consider the universal residential three-part rate proposal to be moot.

[244] SWEEP/WRA/ACAA Initial Brief at 10.

customers, regardless of power usage, such as meters and service line drops.[245] They assert that the customer fixed charge should not include grid related costs of transmission and distribution plant which are driven by customer usage and demand. They note that the calculations of three parties in this proceeding have determined that the customer charge should not be increased, with two of the three recommending a reduction.[246]

After the Company's withdrawal of its proposed universal mandatory residential demand charges, SWEEP/WRA/ACAA note that the proposed fifty percent increase in the customer charge, from $10 to $15, would still have a large impact on lower-usage customers, many of whom, according to these parties, are low income. They note that customers would see an annual $60 increase in their bills without even turning on a single light. They suggest that the simplest and most appropriate way to assist lower income customers is to reject the increase in the basic service charge.[247]

SWEEP/WRA/ACAA assert that the rationale for imposing demand charges on larger commercial customers, who have predictable loads, does not necessarily apply to residential customers who have more variety in their usage patterns. Relying on AURA's witness Rubin's analysis, these parties argue that the record supports a finding that volumetric rates do a better job of recovering the costs of service than the demand rates.[248] They argue that demand charges will cause confusion and will not provide residential customers a real opportunity to save on their bills.[249]

SWEEP is a public interest organization that is dedicated to advancing energy efficiency as a means to promote customer benefits, economic prosperity, and environmental protection in Arizona and five other states. Specifically (and independent of WRA and ACAA), SWEEP recommends: (1) the customer charge be reduced to $4.32; (2) rejecting mandatory residential demand charges; (3) denying the three-part rate design as proposed based on insufficient data to develop appropriate rates;

[245] SWEEP/WRA/ACAA state that this method is consistent with principles established by Professor Bonbright in his *Principles of Public Utility Rates*. SWEEP/WRA/ACAA Initial Brief at 9.

[246] SWEEP calculated the customer costs would be $4.32, Vote Solar calculated the costs at $7.50, and RUCO recommended the current charge should not be increased. Ex SWEEP- 3 Schlegel Surr at 3; Ex Vote Solar-6 Kobor Dir at 61; and Ex RUCO-6 Huber Surr at 24.

[247] SWEEP/WRA/ACAA Reply Brief at 3.

[248] SWEEP/WRA/ACAA Initial Brief at 13, citing Ex AURA-1 Rubin Surr at 17.

[249] SWEEP/WRA/ACAA Initial Brief at 14-19. They assert that the idea that customers only have to remember to run their appliances one at a time is overly simplistic, as the same amount of demand will be created by running the appliances one after another during the same hour peak period.

(4) if three-part rates are adopted, the Commission should ensure consistency with system coincident peak demand; (5) UNSE should use TOU rates as an effective alternative to three-part rates; (6) if residential demand charges are adopted, the Company must provide information and effective tools for customers; (7) retaining tiered rates for residential customers to discourage wasteful energy use; (8) recovering energy efficiency costs in base rates rather than in an adjustor mechanism because energy efficiency is an important part of UNSE's energy resource portfolio; (9) treating all energy resources equitably in terms of disclosure and transparency on customer bills; [250]and (10) modifying the cost-effectiveness test for energy efficiency.[251]

WRA is a nonprofit organization that states it protects the West's land, air and water through conservation programs, including Clean Energy. WRA recommends: (1) not approving separate rate structure for non-DG and solar DG customers; (2) denying demand charges for residential customers as they are difficult to understand, will act like fixed charges, and will likely increase bills for low income customers; (3) considering a minimum bill to recover a portion of fixed costs not otherwise recovered form very low usage customers; (4) implementing TOU rates for all residential customers to send price signals about the cost of generation; and (5) retaining the current customer charge of $10.[252]

Specifically concerning the Company's latest proposal with five rate options for residential customers, SWEEP/WRA/ACAA recommend that the Commission reject the proposal to eliminate the three-tiered structure and instead approve the transition rates proposed by the Company with a $10 basic service charge.[253] SWEEP/WRA/ACAA assert that the three-tiered rate structure promotes energy conservation and elimination of waste, and that its elimination would have high usage customers paying proportionately less, and low usage customers proportionately more.[254] ACAA is against removing the third tier because it would disproportionately affect low-income customers since 75 percent of the CARES customers use less than 1,000 kWh, compared to 69 percent of the customers

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[250] SWEEP believes the bill should be simplified with fewer cost categories with supplemental information on costs and energy resources provided on the web and via quarterly bill inserts or other communications to avoid singling out energy efficiency for inequitable or selective treatment.

[251] SWEEP/WRA/ACAA Initial Brief at 17-15.

[252] Id. at 25-30.

[253] Ex UNSE-33 Jones RJ, CAJ-RJ-2 Sch H-3at 1.

[254] SWEEP/WRA/ACAA provide an alternative residential rate schedule if the Commission does not elect to adopt the transitional rates. SWEEP/WRA/ACAA Reply Brief at 6.

on the RES-01 tariff. ACAA states that eliminating the third tier would redistribute these costs among the low-use customers who are already doing everything they can to conserve to keep their bills low.

SWEEP/WRA/ACAA generally support rate options as long as customers are provided sufficient information to make informed choices and given adequate tools to implement the choices. Thus, they assert that any TOU or three-part rate option must be accompanied by education and information materials. These intervenors support TOU rates, but do not support the Company's specific proposed TOU rates because the summer on-peak of 2:00 p.m. to 8:00 p.m. and the two four hour winter peak periods are too long.[255] They assert that the on-peak periods should only be three hours long so that customers can adjust their schedules and energy use.[256] They propose the following residential TOU rates with a $10 basic service charge, and shorter on-peak periods (summer on-peak 4-7 p.m.; winter on-peak 6-9 a.m. and p.m.) and a three-tier energy charge:[257]

Basic Service Charge	$10	
Energy Delivery		Tier Limit
0-400 kWh	$0.034000	400
401-1,000 kWh	$0.050000	1,000
Over 1,000 kWh	$0.063000	
Base Power	**Summer**	**Winter**
On-Peak	$0.150000	$0.090000
Off-Peak	$0.043500	$0.043100
PPFAC	0.0000%	

<u>Analysis and Resolution – Residential and SGS Rate Design</u>

We find the following from Bonbright's <u>Principles of Public Utility Rates</u> to be particularly relevant as we consider the myriad rate design proposals in this proceeding:

> The administration of *any* standard or system of rate making has consequences, some of which are costly or otherwise harmful; and these consequences may warrant the rejection of one system in favor of some other system admittedly less efficient in the performance of its recognized economic functions. Thus an

[255] SWEEP/WRA/ACAA Reply Brief at 6.

[256] *Citing* RUCO's Initial Closing Brief at 15 ("More simplified offerings, including a TOU rate with a shorter on-peak period, will simplify customer communications, boost enrollment, and insure overall effectiveness.")

[257] Based on the Company's revenue requirement.

> elaborate structure of rates designed to make scientific allowance for the relative cost of different kinds of service may possibly be rejected in favor of a simpler structure more readily understood by consumers and less expensive to administer. And thus a system of rate regulation that would come closest to assuring a company of its continued ability to earn a capital-attracting rate of return may be rejected in favor of an alternative system that runs less danger of removing incentives to managerial efficiency. The art of rate making is an art of wise compromise.[258]

Utilities have traditionally used two-part volumetric rates, consisting of a fixed customer charge, and an energy charge based on kWhs sold, to recover the costs of serving residential customers. Until fairly recently, the load characteristics of residential customers were relatively homogeneous, such that the simple two-part rates, designed based on average consumption assumptions, did an adequate job of recovering the costs of service. The short-coming of two-part rates is that if customers use fewer kWhs, for whatever reason, including energy efficiency products, a desire to protect the environment, or to save money, these rates do not recover all of the costs of service. The Commission recognized this effect when energy efficiency and DSM programs were approved by enacting the LFCR, which was intended to compensate the Company for the lost revenues associated with EE and DG. The LFCR collects these costs by means of a percentage of bill charge. Thus, residential customers as a class pay extra when sales decline. Low usage customers do not contribute as much to lost fixed cost recover as other because their utility bills are smaller.

Some parties in the this case have argued for the implementation of three-part residential rates, comprised of a fixed customer charge, a demand charge, and a volumetric energy charge, in order to better align cost recovery and cost causation. As they were recommended in this case, a demand charge would be incurred based on the highest one hour KW use during peak periods. Because the demand charge would recover some of the fixed costs associated with investment in capacity formerly being recovered in the energy charge, the energy charge portion of the rate is reduced. UNSE attempted to design the three-part rates in this case such that they would be revenue neutral, in that the customer using the average number of kWh's annually would see the same total bill for the month, but the revenues would be recovered partly from a new demand charge in addition to the basic customer charge and the energy charge.

[258] Bonbright, James C., Principles of Public Utility Rates. New York, Columbia University Press, 1961, p. 37-38.

Until recently, the technology to implement three-part rates for the residential class has not been widely available. UNSE, however, expects to have smart meters, able to measure demand, installed for all of its residential customers by the fall of 2016. We do not disagree with those who have argued in this case that a three-part rate design can better align revenue recovery with cost causation. However, the devil is in the details.

Demand charges, although used for many years in a commercial context, are a new concept for most residential customers. APS has had a voluntary residential demand charge for many years, which for certain customers, generally with high usage, has worked well, allowing them to save money. In order for customers to understand how demand charges work and how they can manage their energy consumption to save money, or at least not incur a bill increase, requires education and tools available to monitor their load. Although the necessary meters that can measure demand are close to being ubiquitous in UNSE's service areas, an education plan has not been formalized, nor have tools for managing load been made available.

Thus, we concur with those parties who argue that this is not the time for this utility to require all residential and SGS customers to transition to mandatory three-part rates. The public distrust or antipathy to the proposal has convinced the Company and the Commission that any transition to three-part rates will require a massive public education effort before we can say with any degree of certainty that mandatory residential demand rates in UNSE's service territory are in the public interest. This does not mean that another utility, under different circumstances, cannot make a convincing argument that mandatory residential demand charges can be in the public interest. Our decision in this case applies only to UNSE at this point in time.

Even though we do not approve mandatory residential or SGS demand rates, we believe that the time is ripe for a more modern rate design. Before turning to mandatory three-part residential rates, however, we find that the better, more tempered path to modernity is to move more customers to TOU rates or three-part rates. Appropriately designed TOU rates or three-part rates should allow better recovery of costs, and send the correct signals about the cost of service and encourage customers to shift their loads to off-peak times. By shaving the peak, the utility and its ratepayers can save on investments in generation, transmission and capacity.

In general, we find that the various options offered by UNSE in its Initial Brief (a standard two-art rate, two-part TOU rate, three-part rate and three-part TOU rate), modified to reflect the revenue allocations approved herein and other adjustments discussed below, are reasonable. In order to allow better recovery of costs and encourage residential customers to move to rates other than traditional two-part rates, we direct UNSE to file rate schedules for the Residential Class for review by the parties and Commission approval that conform to the following principles:

1. Customers will remain on their current rate plans with rate design modified to match the rate options proposed by UNSE in its Initial Brief (except that residential DG customers shall have the same rate options as non-DG customers until further order of the Commission), and as adjusted below until final rate schedules are approved by the Commission (with a target implementation date of the March 2017 billing period).
2. All residential rates will have a \$15 basic service charge for the transition period.
3. The TOU peak periods will be shortened to 3-7 p.m. in the summer, and 6-9 a.m. and 6-9 p.m. in the winter.
4. The Super Peak TOU rate will be eliminated due to the shortened time period for the standard TOU rate and those customers will be moved to the standard TOU rate.
5. The two-part TOU rate will be the default rate for <u>new</u> residential customers starting with the implementation date for the final rates.
6. The Company will file a customer communications plan with the Commission by September 30, 2016, that is designed to educate customers about their rate options and how they can manage their bills.
7. Starting with the implementation date for the final rates, the \$15 basic service charge for the standard non-TOU two-part rate will remain at \$15. The basic service charge for all other residential rates will decrease to \$12. (with corresponding revenue neutral increases to per-kWh energy charges)

We anticipate that final rates which conform to these guidelines can be implemented by the March 2017 billing period. However, neither the Commission nor parties to this proceeding have had the opportunity to review and analyze the final rate schedules discussed herein. A second Commission Order approving the final rates is necessary in order to avoid unintended rate impacts or consequences. In the event the proposed rates produce unanticipated results, the Commission has the right and opportunity to require revisions to UNSE's proposed final rates and/or a different implementation date in order to protect the public interest. In order to assist the Commission in its review, UNSE shall file a bill impact analysis with the proposed rate schedules, and Staff, RUCO and other interested parties to this docket, shall have the opportunity to review the proposed rates and education plan, and provide comments if any. We believe the March billing cycle is a reasonable target for the implementation of the final rate schedules. In order that the new rates can be implemented during the March 2017 billing cycle, any comments on UNSE's revised rate schedules shall be filed by interested parties by September 30, 2016, and Staff shall file a Proposed Order addressing approval of the final rates or request a hearing by October 28, 2016. Any comments on the proposed customer communications plan shall be filed by interested parties by October 28, 2016, and Staff shall prepare a Proposed Order addressing the communications plan for Commission consideration by November 30, 2016.

Because we adopt a different revenue allocation than either Staff or the Company, until UNSE files new rate schedules and proof of revenue that conform to our authorizations herein, we cannot provide an exact bill impact analysis. However, as the allocation to the Residential Class we adopt is more than Staff's proposal and less than the Company's proposal, the bill impacts under the transition rates are expected to fall between the estimates provided by those parties. We estimate that under the approved two-part rates, an average residential customer using 830 kWhs a month would see a monthly bill of approximately $97.32, an increase of $4.20, or 4.5 percent, over current rates.

The SGS Class rates will be treated the same as the Residential Class rates except that: (1) the TOU periods will not change in order to remain consistent with the MGS Class TOU periods and (2) the initial basic service charge will be $25 for all SGS rates initially and the basic service charge for rates other than standard two-part SGS rate will decrease to $20 starting with the implementation of final rates (expected to be no later than the March 2017 billing period).

The appropriate rate design and effective date of any new rate design affecting DG Residential and SGS customers will be discussed in the Net Metering Section of this Decision.

CARES

UNSE

UNSE proposes a single fixed discount of $16 per month for CARES customers and a single fixed discount of $28 per month for CARES-Medical customers. Under UNSE's proposal, CARES customers will take service under the residential tariffs and the discounts will be applied to the bills. UNSE states that the proposed discounts are based on bill impacts and designed to provide a similar bill discount as the CARES customers currently receive. UNSE also proposes to keep the CARES-Medical rate frozen.[259] UNSE states that the CARES discounts will result in an overall subsidy of approximately $1.3 million, which is approximately twice the existing subsidy. The revenue lost from the CARES discount is recovered in the rates of the Residential Class. Under this scheme, CARES customers will no longer need a special rate, which UNSE asserts will give these customers experience with standard rates. UNSE believes that this approach is simpler and easier to understand than the current structure and should provide for a smoother transition to standard rates when economic situations improve for these customers.[260]

The Company opposes increasing CARES eligibility from 150 percent to 200 percent of the federal poverty level because it would increase the cost of the program which would be passed on to other residential customers.[261]

ACAA requested that 10 percent of the Warm Spirits funds be provided to the agencies that distribute the funds to cover the costs of program delivery. UNSE agrees to provide such funding.[262] ACAA requested that the Company add information to its disconnection notice that notifies customers about agencies providing bill assistance in their area, weatherization agencies, and the CARES discount. UNSE agrees to incorporate such information as part of an upcoming bill re-design project.[263] ACAA also requests that the Company streamline the CARES enrollment process by automatically enrolling customers who are already enrolled in other low income assistance programs and by increasing certain training for the Company's customer service representatives. UNSE believes that the proposals "are worth further study."[264]

UNSE disagrees that the Fortis settlement agreement requires "holding low income customers harmless" from rate increases, but rather commits UNSE to "support . . . low income assistance programs at or above the current levels."[265] UNSE states that the proposed CARES discount that more than doubles the assistance provided to CARES customers clearly meets the intent of the Fortis

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[259] UNSE Initial Brief at 59.
[260] Id. at 60.
[261] Id.
[262] Ex UNSE-20 Smith Reb at 5.
[263] UNSE Initial Brief at 61, Ex UNSE-20 Smith Reb at 7.
[264] UNSE Reply Brief at 36.
[265] Id.

Settlement.

In addition, UNSE disagrees that CARES customers should be treated differently than other customers with respect to deposits, and that all customers should fund Commission-mandated energy efficiency programs through the DSM surcharges. UNSE states there is no prohibition on low income customers participating in energy efficiency programs.

Staff

Staff supports UNSE's extended CARES plan which increases the monthly discount for qualifying CARES customers and CARES medical customers.[266] Staff notes that the increased discounts will cost $1.3 million and would take effect upon the implementation of the three-part rates, and are intended to offset the proposed expected rate increases in this case.[267] Staff believes the discount would be transparent under the Company's proposal. Staff sates further that it commits to monitor the CARES program during the final phase of rate design.

ACAA

ACAA is a nonprofit agency that works with organizations and individuals to develop and implement strategies to address and ultimately eliminate poverty across Arizona. ACAA provided information and recommends: (1) low income households in UNSE's service territory are in a vulnerable state as the poverty levels in Mohave and Santa Cruz Counties are higher than the statewide average and any additional increase in electric rates will exacerbate the existing hardship for these households; (2) participation in UNSE's CARES program is under-subscribed based on ACAA estimates and UNSE needs to take steps to improve outreach and streamline the application process;[268] (3) the CARES rate should ensure that CARES customers are held harmless; (4) CARES customers should be held harmless from UNSE's proposed deposit rule which would allow the Company to collect deposits more frequently;[269] (5) CARES eligibility should be expanded up to 200 percent of the

[266] Staff Initial Brief at 17. Staff refers to a $17 discount, but the proposal in UNSE's updated schedules is $16.

[267] Staff Initial Brief at 17. Staff made its statement before UNSE withdrew the demand charge proposal of all residential customers. Staff did not address the CARES program in relation to UNSE's revised rate proposals.

[268] ACAA supports auto-enrollment in the CARES program and states that based on the experience of SRP, ACAA anticipates an increase in participation of approximately 3.4 percent, or 210 customers. SWEEP/WRA/ACAA Reply Brief at 10.

[269] ACAA appreciates that UNSE incorporated several of ACAA's suggestions into its proposal, such as maintaining the deferred payment plan length at six months, modifying the termination notice to include contact information to bill assistance, and providing a program delivery budget for agencies distributing Warm Spirit funds.

Federal Poverty Guideline; and (6) the current exclusion of the DSM surcharge for CARES customers should be maintained.[270]

ACAA recommends that if the Company's modified rate proposal is selected, the CARES rate will need to be enlarged in order to provide a similar level of protection to low-income customers. According to ACAA, the two-part CARES rate proposed by the Company in its Initial Brief results in an 11 percent increase for the CARES customer class, and in order to hold the CARES class harmless, the CARES discount would need to be $23/month instead of the $16/month proposed by UNSE. ACAA states that the CARES-Medical discount could remain at $28/month.[271]

ACAA does not believe that Staff's proposal to "monitor the CARES program during the final rate design development" is clear.[272] ACAA recommends at a minimum, such monitoring should include enrollment, bill impacts and total revenue collected, comparing actual results to expectations. ACAA states there must be tools available to increase assistance to CARES customers in the event adverse impacts from any changes in rates are greater than expected.[273]

ACAA requests a separate CARES rate instead of the proposed discount off the standard residential rate. ACAA supports RUCO's CARES rate (a monthly fixed charge of $6.13).[274] ACAA believes that the RUCO proposal does the best job of protecting low-income customers. However, ACAA would modify the CARES program such that in lieu of the current CARES discount (percentage based on usage, with a flat discount for customers over 1,000 kWh) there be a flat discount of $12 per month for CARES customers and $24 per month for CARES-Medical customers.[275] ACA also agrees with RUCO's suggestion that CARES customers remain on a separate rate structure, as they have unique needs and concerns.

Analysis and Resolution – CARES

Lagging economic opportunities in the areas of the state served by UNSE have resulted in a

[270] SWEEP.WRA/ACAA Initial Brief at 30-35.
[271] SWEEP/WRA/ACAA Reply Brief at 9.
[272] Id.
[273] Id. at 8.
[274] RUCO Initial Brief at Attachment A.
[275] SWEEP/WRA/ACAA Reply Brief at 8. ACAA notes that the Company proposed a flat discount to decrease the administrative burden of CARES. ACAA references a $12 discount for the CARES discount, however, the Company is currently proposing a $16 discount for CARES and $28 for CARES-Medical. UNSE Initial Brief at Exhibit 1.

population that is particularly susceptible to rising costs of living. The Fortis merger Decision requires UNSE to support low income programs at or above levels at the time of that Decision. In this case, UNSE proposed a low income budget of $1.3 million, which is an increase over the last rate case, and intended to maintain the current discount to CARES customers, and which we believe meets the obligation in the Fortis merger Decision. We find that the Company's proposed funding of the CARES program is reasonable. Any increase in the low income program, either by expanded eligibility, or greater discounts, is borne by the remainder of residential ratepayers. Given the amount of the authorized rate increase on the residential class, we do not believe that it is prudent to further burden the residential class. Further, considering the revenue allocations authorized herein, UNSE must determine the appropriate discount for the CARES customers, and such discount must reflect the greater of a budget of $1.3 million or an amount necessary to maintain the current level of discount received by CARES customers.

ACAA argues that the CARES class should continue to be exempt from the DSM surcharge, while UNSE argues the charge should apply because the CARES class is eligible to benefit from DSM programs. Because they are currently exempt from the charge, CARES customers in essence receive an additional discount on their bills. Thus, when UNSE calculates the appropriate discount under the new rates approved herein, it should include the current DSM discount as part of the calculation and adjust the overall discount accordingly. Under this approach it would be appropriate to assess the DSM surcharge to CARES customers.

ACAA believes that a separate CARES rate, as opposed to a discount on regular residential rates, best serves the needs and concerns of the low income customers. It is not clear, however, which needs and concerns are not served under a discount if the end result is a bill that is approximately the same. We find that the Company's proposal is reasonable and promotes transparency.

We are disappointed by the low participation in the CARES program vis-a-vis the apparent need in the community. Thus, we believe that ACAA's suggestion to streamline enrollment through an automatic process when customers seek other financial assistance has merit. The Company should investigate how to implement such automatic enrollment. If such program is not implemented before UNSE's next rate case, the Company should address why an automated or streamlined process could not be implemented, or was not cost effective, in its next rate application and provide supporting direct testimony.

ACAA also opposes the proposed change to the Company's deposit rules. The Company proposes the following language regarding residential deposits:

> ~~4.~~3. Residential Customers – The Company may require a residential Customer to establish or reestablish a deposit if the Customer becomes ~~became~~ delinquent in the payment of ~~three (3)~~ two (2) or more bills ~~within a twelve (1) consecutive month period,~~ or has been disconnected from service during the last twelve (12) months, ~~or the Company has a reasonable belief that the Customer is not credit worthy on a rating from a credit agency utilized by the Company.~~[276]

The use of the permissive "may" gives the Company flexibility in the operation of this provision. Ms. Smith testified that the Company considers the individual circumstances of its customers in designing repayment plans in the case of delinquencies.[277] The change gives the Company more flexibility in dealing with delinquencies and to gain more control over bed debt expense. It does not appear that the change from three to two months will have a substantial effect on low income ratepayers. We find the proposed language reasonable.

Rate Design - Large Commercial and Large Power Service

UNSE

UNSE states that in this rate case it seeks to modernize its rate structure to more closely match revenue recovery with cost of service. As part of this effort, the Company proposes to redesign the current LGS and LPS tariffs to more appropriately recover fixed costs in the fixed portion of rates. Thus, UNSE proposes to increase the basic service charges for the non-residential classes to be closer to levels indicated by the CCOSS.

The Company proposed to create a new MGS Class that will contain most of existing LGS customers because the current LGS class contains a wide range of customer load sizes. The design for the new MGS rate is proposed to be the same as the current and new LGS rates, with a 75 percent

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[276] UNSE Initial Brief at Exhibit 3, Section 3(B)(3)
[277] Tr. at 632 & 638; Ex UNSE-21 Smith RJ at 6; Ex UNSE-20 Smith Reb at 4.

ratchet. The new LGS rates will not be changed, except that the rates will be recalculated to blend about 10 of the largest former LGS customers and about 7 of the former LPS customers (those who take LPS service at less than 69kV-distribution level voltage). UNSE agreed with Staff's recommended modification to these rates.[278] The LPS Class will not undergo a rate design change, but will only be available to customers taking service at greater or equal to 69 kV.[279] The Company accepted Staff's suggested modifications to the LPS tariff.[280]

UNSE seeks to freeze enrollment in the current Interruptible Power Service ("IPS") rate. The provisions of the tariff will be unchanged for those customers currently being served under this rate, with the rates increased to reflect the authorized revenue and allocations in this case.[281] In its place, UNSE proposed an interruptible rider similar to that approved for TEP.[282] UNSE states this will result in a rate that is more cost-based, can be offered in a manner more consistent with TEP, and allow for a more consistent application of the rate.[283] The rider provides for a customer to pay standard tariff rates, but allows the customer to designate a portion of their load as interruptible and receive a credit on their bill for the amount of capacity offered. UNSE states that this results in a more cost-based credit for the real value of interruptible capacity in the year it is offered and protects the remaining customers.[284]

UNSE proposed several changes to its service fees, to which Staff made several recommendations that are acceptable to the Company.[285] UNSE requests that the Commission approve the service fees recommended by Staff.[286]

In UNSE's last rate case it proposed a 100 percent demand ratchet for large and medium general services customers, but settled for a 75 percent ratchet. Decision No. 74235 approved the demand

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[278] UNSE Initial Brief at 37; Ex S-5 Solganick Rate Dir at 36.
[279] UNSE Initial Brief at 37.
[280] Ex S-5 Solganick Rate Dir at 36.
[281] UNSE Initial Brief at 38.Prusuant to the Settlement agreement approved in Decision No. 74235, UNSE was required to evaluate options to redesign its IPS Tariff.
[282] Ex UNSE-31 Jones Dir at CAJ-3, Rider R-12 Interruptible Service.
[283] Rider-12 is available to customers taking service over 1,000 kW (either TOU or non-TOU) and willing to subscribe to at least 500 kW at a contiguous facility.
[284] Ex S-5 Solganick Rate Dir at 41. Staff accepted the Company's proposed new Interruptible Rider-12 and has not opposed freezing the current IPS rate. Staff recommends the existing IPS tariff be eliminated in the Company's next rate case, which the Company agrees to propose in its next rate case.
[285] UNSE Initial Brief at 39, Ex S-5 Solganick Rate Dir at 46-47; Ex UNSE-32 Jones Reb at 22.
[286] Ex UNSE-31 Jones Dir at 69-73 and Exhibit CAJ-3; Ex S-5 Solganick Rate Dir at 46-47; Ex UNSE-32 Jones Reb at 22; UNSE Initial Brief at 39.

ratchet in an effort to stabilize demand revenue and more closely align cost recovery with the cost causer.[287] In this case, UNSE seeks to continue the 75 percent demand ratchet for the medium and large general services customers. UNSE explains that the demand ratchet looks at the "maximum demand used for billing purposes in the preceding 11 months, and will apply if the demand that month is 75 percent of that level or lower." When the ratchet applies, the demand charge is set at the 75 percent level, and thus, UNSE states operates as a type of minimum demand charge, but allows the customer to reduce that minimum charge by reducing maximum demand during the rolling 11 month period. UNSE claims that the alternative to a ratchet is to assign the costs to other customers or to create a seasonal rate that recovers the costs with higher charges.[288] UNSE is not proposing any changes to the methodology for demand charges to the LPS class approved in the last rate case.

The Company states that it evaluated Nucor's proposal to use the 4 coincident peak ("4CP") method, but continues to believe that industrial demand rates should combine costs based on both the system's non-coincident peak and coincident peak. UNSE states that it has proposed to reduce the differential between on-peak and off-peak rates to better reflect the difference between the marginal cost of energy purchased on-peak versus off-peak. The Company states that it does not incur a substantial difference in the marginal cost of such purchases, and Nucor's TOU rate proposal ignores the actual differential between the marginal costs. UNSE asserts the current off-peak energy rate is basically the same as the current marginal cost of energy and, as a result, there was no contribution to the Company's margin from LPS TOU off-peak energy sales.[289] UNSE states that Nucor's proposal would allow Nucor to pay less than the marginal cost of energy during off-peak periods and push such recovery onto other customers.[290] UNSE also asserts that Nucor's proposal to modify the Interruptible Rider would benefit Nucor, but not provide any material benefits for the Company and its other customers.

UNSE asserts that it is sympathetic to the issues raised by FPAA and has tried to work with the organization to find solutions to the demand ratchet applied to its class of service. UNSE states,

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[287] Decision No. 74235 at 22-23.
[288] UNSE Initial Brief at 40.
[289] UNSE Initial Brief at 37, Tr. at 2616-18 and 2620-23.
[290] UNSE Reply Brief at 28.

however, that FPAA is mistaken that its members do not contribute to the Company's system peak, as the FPAA group peak is in June, which is the same as the typical system peak in the Santa Cruz area. Given this fact, UNSE finds it hard to justify giving an intra-class subsidy to FPAA members when their load characteristics are similar to other customers in the class.[291] UNSE states that each of FPAA's offered solutions (to treat it as a separate class, offer economic incentives, eliminate the ratchet) would result in a cost shift to other customers.

UNSE states that it has worked with FPAA to design a seasonable rate that would allow FPAA members to save money based on their characterization of their consumption patterns. The Company analyzed a number of scenarios including: (1) no demand ratchet with a high summer kW charge and a lower winter kW charge; (2) a kW ratchet that is calculated strictly on summer kW demand; and (3) a higher kW charge that focused strictly on the peak months of June, July and August. UNSE states that when these options are applied to the actual usage of the FPAA member accounts, only a few of those accounts would realize some savings, and that based on historical usage habits, most of the produce accounts would have experienced an increase as the result of these rate designs.[292]

UNSE suggests that if the Commission makes a policy decision to offer a non-cost based rate option to address FPAA's concerns, the Company could create a second MGS rate tariff that would reflect an increased basic service charge (from $100 to $150 for those who opt in). The customers would also receive a credit equal to 50 percent of the standard MGS kW rate multiplied by the amount that measured kW is less than the ratchet demand for the summer months (May-Oct). UNSE states that of the 55 produce customers identified on the MGS standard rate, 32 of them could save an average of approximately $1,600/year with this proposal. The total savings realized by the MGS class is estimated at $300,000/year, which the Company proposes should then be collected from other customers through the PPFAC.[293]

Nucor

Nucor operates a steel mill facility in Kingman that produces coil rebar and wire rod products. Nucor states that for electric arc furnace-based steel mills, electricity is a very important input and is

[291] Id. at 28-29.
[292] UNSE Initial Brief at 43.
[293] Id.

typically one of the highest variable costs in steel production. To stay economically viable in a competitive world market, Nucor schedules its operations, when feasible, during UNSE's off-peak periods. Nucor purchases most of its electricity through UNSE's Large Power Service Time of Use (LPS-TOU) tariff.[294]

Nucor asserts that the demand charge applicable to large industrial energy consumers should be based on a customer's contribution to system peak demand, in other words, that within the LPS rate class, customers should pay their share of the demand-related costs allocated to the LPS class based on each customer's contribution to the Company's coincident peaks in the four summer months (June, July, August and September) of the previous year (aka the "four coincident peak method" or "4CP"). In addition, Nucor recommends that the current differential between on-peak charges and off-peak energy charges in the LPS-TOU tariff should be maintained, and the Interruptible Rider should be redesigned to be available to all industrial energy consumers regardless of when they operate.

Nucor raised the same issue of the demand charge calculation in the Company's last rate case. At that time, the Commission did not adjust the demand charge, but the Settlement Agreement approved in the last rate case contained a directive to UNSE to evaluate the impact of switching to a 4CP method of determining an industrial customer's demand, although UNSE was not required to endorse such switch.[295] Nucor states the Company presented the required evaluation, but did not propose any meaningful changes to the method used to calculate industrial customers' demand charges.

UNSE proposed the following demand charge calculation for an LPS-TOU customer:

1. The greatest measured 15 minute interval demand read of the meter during the on-peak hours of the billing period;
2. One-half of the greatest measured 15 minutes interval demand read of the meter during the off-peak hours of the billing period;
3. The greater of (1) or (2) above during the preceding 11 months; or
4. The contract capacity or 500 kW, whichever is greater.

Nucor submits that there is no dispute that capacity-related or demand-related costs, are directly related to investment in generation and transmission capacity to meet the system peak demand.[296] Nucor argues that UNSE's proposed demand charge calculation, however, has nothing to do with LPS-TOU

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[294] Nucor Initial Brief at 2.
[295] Decision No. 74235 (December 31, 2013) Exhibit A at 15.2/
[296] Nucor Initial Brief at 5.

customers' contribution to the system peak. Thus, Nucor argues that UNSE's proposed demand charges for industrial users do not reflect cost causation and are not just and reasonable.

Nucor argues that the UNSE proposed criteria represent an inaccurate price signal for LPS-TOU customers and contribute to significant intra-class subsidies. First, Nucor argues the on-peak period in the first criterion is too broad, as it encompasses 3,096 on-peak hours in the summer and an additional 3,024 winter hours, when system demand is not very high.[297] Nucor argues that if an LPS customer's individual demand peaked in one of the on-peak hours of low system demand, the resultant charge would be a poor measure of that customer's contribution to the system peak.

Nucor asserts that the second criterion, based on one-half of the highest hourly use by the customer during the off-peak period, is arbitrary and not based on the consumer's contribution to the system peak. Nucor claims that UNSE could not explain how this criterion was connected to the Company's ratemaking principles.[298] Nucor argues that a non-coincident peak demand measurement is not a useful or accurate basis for calculating an industrial TOU customer's contribution to system cost.[299] Nucor explains that because industrial customers, who are served at transmission voltage, do not cause distribution level investment, it is not appropriate to recover costs based on non-coincident peak demand.

Nucor states the third criterion is a "ratchet," and although it is not uncommon for utilities to use demand ratchets to achieve stability in their collection of revenues, the ratchet should be based on justifiable and accurate methods of calculating a customer's contribution to system peak. Nucor argues that since neither of the first two criteria are good measurements of demand-related cost causation, neither is the ratchet.[300]

Nucor suggests that the fourth criterion should be eliminated because according to the Company, no customers have a contract capacity, and it is not clear how a simple "500 kW minimum" reflects a customer's contribution to the system peak.[301]

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[297] Ex Nucor-1 Zarnikau Dir at 12-13.
[298] Tr. at 2611-13 and Tr. at 2658-59.
[299] Nucor submits that for a distribution level customer, there may be some merit to using a non-coincident peak demand measurement to design a demand charge, as these customers cause distribution-related costs related to the customer's maximum demand, regardless of when that maximum occurs. Nucor Initial Brief at 10.
[300] Nucor Initial Brief at 10.
[301] Ex Nucor-1 Zarnikau Dir at 13-14.

Nucor recommends using the industrial customer's contribution to the coincident peak in the four summer months as a proxy for its contribution to system peak. Alternatively, Nucor proposed that a customer's contribution to the "top 20 hours" of highest demand in the previous year could be used. Nucor states that its proposed change will not affect how costs are allocated among rate classes and would only improve how costs are recovered from the customers within the class, which is a significant step toward reducing intra-class subsidies.[302]

In its Initial Brief, UNSE stated that Nucor's suggested changes to its LPS tariff structure are unnecessary and inappropriate, and modifying the demand rate and off-peak prices would simply shift more costs to other customer classes or would increase other parts of Nucor's bill. Based on these statements, Nucor believes that UNSE may not understand Nucor's proposal.[303] First, Nucor explains, its proposal is designed to reduce intra-class subsidies within the LPS and LPS-TOU class, and would not shift costs to other customer classes, but only align prices within the LPS rate class. Nucor claims it has demonstrated, without dispute, that its proposed change to a 4CP-based demand charge would reduce the intra-class subsidies within the LPS rate class by properly aligning demand charges with cost causation. Nucor states that it currently subsidizes other customers within the LPS class because Nucor consumes relatively little energy during on-peak periods and thus has little impact on the utility's need for generation and transmission capacity.

Second, Nucor believes that the Company's argument that redesign of the demand charge could increase other parts of Nucor's bill is inaccurate because Nucor's proposal only affects the recovery of demand-related costs among the LPS and LPS-TOU class. Nucor states that the Company appears to suggest that it could move demand-related costs so they might be recovered through other charges (e.g. energy or customer charges). Nucor strongly opposes any such reclassification or shifting of costs, and states that it would be absurd, and completely contrary to cost-causation ratemaking, to argue that demand related fixed costs should be collected through an energy or customer charge.

In addition to redesigning the demand charge, Nucor also recommends that the Company improve and clarify the LPS-TOU tariff, the proposed Interruptible Rider, and the proposed Economic

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[302] Nucor Initial Brief at 11.
[303] Nucor Reply Brief at 2-4.

Development Rider. Nucor advocates keeping the current differential between the on-peak energy charges and the off-peak energy charges in the LPS-TOU tariff. Currently, the LPS-TOU Power Supply Charge, Base Power price during on-peak periods in the summer is $0.12358 per kWh, and the price in off-peak periods is $0.024716 per kWh—a ratio of 5 to 1. During the winter, the current charges are $0.093880 per kWh during the on-peak period and $0.022105 per kWh during the off-peak period, resulting in a ratio of roughly 4.25 to 1. UNSE proposes the summer Power Supply Charge Base Power price to be $0.125220 per kWh on-peak and $0.033410 per kWh off-peak, a differential of 3.7 to 1. The proposed winter charges are $0.09211 on-peak and $0.030410 off-peak, resulting in a differential of about 3 to 1.[304] Nucor notes that UNSE is proposing to increase the off-peak charges, while keeping the on-peak charges close to the existing charges. Nucor states the reduction in the difference between on and off peak will reduce the incentive for customers on this tariff to move consumption to off-peak periods. Nucor argues that the Company has not provided adequate justification for reducing the LPS-TOU on-peak/off-peak charge ratio.

Nucor also recommends that the Interruptible Rider be redesigned so that it is available to all industrial customers, regardless of when they operate.[305] Nucor considers the proposed Interruptible Rider (R-12) to be a step in the right direction, but believes that it will be of limited value to UNSE's system. Nucor states that it (and maybe other industrial users) have loads which could be interrupted during emergencies at the utility's request, but that these loads are not always available "around the clock" as defined under the Rider R-12. Nucor suggests that a potentially more effective program would be a "peak rebate program" under which industrial customers would be notified by the utility when a load reduction would be valuable to maintain reliability or for economic reasons. This would allow industrial customers an opportunity to voluntarily reduce load in return for a payment or bill credit. Under Nucor's proposal, participation in this option would be limited to customers not otherwise interruptible, and there would be no obligation on the customer to participate in the requested reduction. Nucor proposes that compensation should be based on an even split of the savings between the utility and the participating load, with the savings being the cost avoided by the customer's action.[306]

[304] Using rates in UNSE Initial Brief at Exhibit 1.
[305] Nucor Initial Brief at 20.
[306] Id. at 21.

Alternatively, Nucor suggests the Rider R-12 could be modified to allow for participation from industrial customers that operate on shifts or predominately during off-peak period, with the compensation adjusted appropriately.[307]

Fresh Produce Association of the Americas

FPAA members comprise the bulk of the produce industry in Nogales, Arizona, and the evidence indicates their operations are an important economic driver in Santa Cruz, County.[308] FPAA intervened in this proceeding because after UNSE's last rate case, many of its members experienced significantly higher electric bills as the result of the application of newly implemented demand ratchets. FPAA opposes UNSE's request for an additional rate increase on the newly proposed Medium General Service Class, and asks that the Commission consider FPAA members' unique load profiles as it evaluates the proposed rate design in this matter.

In the last rate case, in addition to a 9 percent increase, the Commission approved a new LGS[309] tariff that included a ratcheted demand provision that would adjust the monthly billing demand to the maximum of either the monthly metered demand or 75 percent of the greatest demand in the preceding 11 months. That rate was approved as part of a settlement agreement, and prior to that Decision, UNSE had not used a demand ratchet to recover fixed costs from its large commercial customers. FPAA states that being unfamiliar with demand ratchets and not suspecting the impact it would have on FPAA members, FPAA did not intervene in the last rate case.[310] FPAA states that since the rates approved in Decision No. 74235 went into effect on January 1, 2014, many FPAA customers have experienced a rate impact of 20 to 30 percent due to the demand ratchet. FPPA estimates that the proposed increases in UNSE's non-fuel rate components (the basic service charge, the demand charge and energy delivery charges) will result in an additional rate increase of at least 2-5 percent for the typical FPAA member.[311]

FPAA asserts that the demand ratchet imposed on the LGS and MGS classes is unfair and

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[307] Nucor witness Zarnikau testified that a customer with a largely predetermined fixed schedule could provide the Company with expected load information on specific days/times and the Company could adjust a bill credit according to the value of the interruptibility of the load. Ex Nucor-1 Zarnikau Dir at 23-29.
[308] Ex FPAA-1 Jungmeyer Dir at 5-6.
[309] At that time FPPA members would be considered part of the large general services class. The medium general services class was created in the current proceeding.
[310] FPAA Initial Brief at 2.
[311] Id.

punitive to counter-seasonal, low-load factor customers. FPAA asserts that demand charges should reflect a customer's contribution to the overall system peak. FPAA provided testimony that it claims shows that its members generally do not contribute to UNSE's overall system peak demand the same way as the rest of the businesses in the MGS/LGS class. FPAA members provide refrigeration services primarily from October through June, and the facilities go almost dormant from July through September, such that the overall demand of the industry has high peaks in the winter and valleys in the summer.[312] Thus, FPAA alleges that its members do not contribute to UNSE's peak like other members of its class, and when it is charged with the same demand ratchet formulas as the rest of the members of its class, it asserts that it subsidizes the rest of the class during the summer.[313]

FPAA argues that its members' load characteristics are unique to UNSE's system and warrant unique rate treatment. FPAA notes that in Texas, there is a minimum load-factor threshold for industries such as the seasonal produce industry, below which demand ratchets cannot be applied.[314] FPAA believes there is no reason why a similar approach could not work in Arizona. In addition, FPAA asserts that demand ratchets discourage investment in energy conservation technologies, such as large solar distributed generation installations, because counter-seasonable users aren't able to offset high winter usage with the excess solar generation in the summer, because the credits are swept or reset in the fall when operations are starting to ramp up, and the ratchet causes an FPAA member to feel the effect of one month of high demand for the entire year.[315]

FPAA does not believe that UNSE's expressed concerns, that removal of the demand ratchet for FPAA members would cause unfair shifts onto other customers, are valid, because FPAA claims that it is already cross-subsidizing other members of the LGS class by paying disproportionately higher bills during July, August and September. FPAA asserts that a demand ratchet may be appropriate for class members who contribute to the utility's peak periods, but not for FPAA members who do not.[316]

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[312] Tr. at 3005-3007.
[313] FPAA Initial Brief at 6.
[314] The Texas Public Utilities Commission ruled that "the unique characteristics of seasonal agricultural customers" warranted an exemption to the establishment of generic ratcheted distribution charges for these customers, and allowed for rates to be designed to recover distribution charges without the use of a demand ratchet. Texas PUC Order No. 40, Docket No. 22344. FPAA Replay Brief at 2.
[315] FPAA Initial Brief at 8-9.
[316] FPAA Reply Brief at 3.

FPAA does not believe that UNSE's proposal in its Initial Brief of an optional MGS rate under which customers would "receive a credit equal to 50 percent of the standard MGS kW rate multiplied by the amount that measured kW is less than the ratchet demand for the summer months," goes far enough to reverse the negative effects of the ratchet on these customers.[317] FPAA believes that UNSE can recover its fixed costs without a ratchet and cites the experience of APS which does not apply a ratchet to customers the size of FPAA members.[318]

Analysis and Resolution – Large Commercial and Industrial Rate Design

Besides the revenue allocation concerns discussed earlier, the issues raised by the large and industrial customers regarding UNSE's proposed rate design included Nucor's objection to the determination of demand charges as applied to the customers served under the LPS-TOU tariff, and FPAA's objection to the calculation of demand charges applied to its members in the MGS.

UNSE used a modification of the Average and Excess Demand Method to prepare its CCOSS.[319] Nucor argues that the determination of demand charges as they relate to the LPS Class should be based on the industrial customers' contribution to the system peak demand, which occurs in the four summer months (the 4CP months).

Under the Average and Excess Demand Method of a class cost of service analysis, the average demand for each customer class is calculated by dividing the total class annual energy (KWh) consumption by the number of hours in the year (8,760). In other words, class average demand represents the level of demand that would be placed on the system if all customers within a class used energy at a constant rate for all hours throughout the year for a 100 percent load factor. The system average demand is calculated as the aggregate of the individual class average demands. The system excess demand is defined as the system coincidental peak, the highest hourly demand in the year, less the system average demand. The system excess demand is allocated to the classes to determine the excess demand for each class. In the generic version of the Average and Excess Demand Method, the proportion of the system excess demand allocated to each class, i.e., class excess demand, is calculated as the excess of non-coincident peak hourly demand over the average hourly demand for the class

[317] Id.
[318] Id. at 4.
[319] Ex UNSE-31 Jones Dir at 25.

divided by the aggregate of the excesses of non-coincident hourly demands over the average hourly demands for all classes. UNS used a modified version of the Average and Excess Demand Method that allocates the system excess demand to the customer classes using the 4-CP method, a method that was widely accepted by other parties in this case.[320]

The purpose of demand ratchets is to provide for more uniform revenue collections throughout the year, and stabilize revenue recovery, as customers are not able to shift load from a high cost billing period to a lower cost billing period. Demand ratchets may not be equitable for customers that do not have significant energy use during the system peak months, or whose peak consumption occurs during off-peak hours. Ratchets can send incorrect pricing signals by redirecting cost recovery away from the periods in which the cost is incurred.

Nucor does not seem to object to the use of a ratchet, but believes that the proposed ratchet in this case does not reflect Nucor's contribution to UNSE's system peak as measured by the 4CP method. Nucor may be correct, as neither the peak measured during the on-peak or off-peak in the current or prior 11 months necessarily aligns with the Average/4CP method used to allocate costs in the CCOSS. Under UNSE's proposal, the ratchet that determines the billed demand units could be based on one-half of Nucor's peak demand during off-peak hours in a month not included in the 4-CP calculation 11 months prior. UNSE's proposed rate design for the LPS TOU tariff does not seem to provide a good matching of cost causation and revenue recovery. To better align the ratchet with the Average and Excess/4CP CCOSS, the ratchet should capture demand placed on the system during the on-peak hours in the four coincident peak months (June, July, August, and September) which represent excess demand costs. Thus, in the four CP months (June through September), the demand charge would be calculated as the greater of:

1. The average of the on-peak demand measured in each of the most recent 4-CP months, where the on-peak demand id defined as the highest measured 15-minute reading of the demand meter during the on-peak hours of the month; or
2. One-half of the greatest measured 15 minute interval demand read of the meter during the

[320] Nucor argues that the determination of demand charges as they relate to the customers served under the LPS-TOU tariff should be based on the industrial's contribution to the system peak demand, which occurs in the four summer months (the 4CP months).

current billing period and the preceding 11 months; or

3. The greater of the contract capacity of 500kW.

During the other eight, non-CP months, the demand charge would be calculated based on the greater of:

1. One-half of the customer's greatest measured 15 minute interval demand read of the meter during the current billing period and the preceding 11 months; or
2. The greater of the contract capacity or 500 kW.

The first criteria would better align the ratchet with the excess component of the CCOSS and the second criteria better aligns the ratchet with the average component of the average and excess/4CP CCOSS. UNSE arbitrarily chose a 50 percent factor to apply to the second criteria, and we do not alter this component, but note that it is an example of rates that might not align with the cost of service.[321] Nucor's proposal to use the customer's contribution to the coincident peak in four summer months to determine demand charges is too simplistic. Under this proposal, the Company may under-recover demand-related costs from customers who either normally place demands on the system during off-peak times or can shift load to off-peak times. Customers that cause the peak should fund the cost of peaking facilities, but customers that have average demands at various times throughout the year should participate in funding the facilities required to provide average demand, even if those customers contribute only nominally to the system hourly peak demand. Thus, UNSE should revise the demand formula in the LPS-TOU tariff as set forth above. The fourth criteria, referencing the greater of contract capacity or 500 kW, does not affect any current UNSE customer. The 500kW appears to reflect a minimum demand. We do not object to the provision.

We do not find that the evidence in this case supports Nucor's position that the difference between on-peak and off-peak energy rates should be greater. UNSE witness Jones testified that the Company increased the off-peak rate because the current off-peak rate was too low when compared to the Company's marginal cost of energy, and the difference between on- and off-peak power is not that

[321] The purpose of the 50 percent factor is intended to provide a "break" to those customers who create demand during the off-peak. Tr. at 2612-13.

great.[322] UNSE's proposed LPS-TOU rates better reflect its costs. Nor are we persuaded that Nucor has presented a sufficient case for expanding the Interruptible Power Class. UNSE has not needed to implement interruptions under its current IPS tariff, and we do not have the data to evaluate the revenue implications of Nucor's proposal. Under current conditions, UNSE does not appear to have a need to expand its ability to interrupt load.

UNSE's latest proposal for FPAA members is to design a seasonal rate that would allow FPAA customers to save money based on the characterization of their consumption. UNSE states that it proposed an alternative MGS rate tariff that would shift $300,000 to other customers via the PPFAC. UNSE did not include this tariff with the other tariffs attached to its brief. Suggesting that UNSE and FPAA attempt to reach an agreement concerning a tariff for the produce industry in Santa Cruz County was an attempt to encourage a rate design that would collect the appropriate costs caused by these customers in a fair and equitable manner, and not only to find a solution that would result in saving money for FPAA members. We do not believe it is reasonable to shift $300,000 of costs attributable to FPAA members to other ratepayers. FPAA does not appear to accept the proposal in any case,[323] but has not put forward an alternative for our consideration, except to support the AECC\Noble revenue allocation. Many of FPAA's concerns regarding competing with Texas are associated with matters over which the Commission does not control, such as tax incentives. We are sympathetic to all ratepayers who face rising costs, but we have a responsibility to all customers, as well as the utility, to approve fair and equitable rates.

UNSE has indicated that it analyzed a number of options for the MGS class, including (1) no demand ratchet with a high summer kW charge and a lower winter kW charge; (2) a kW ratchet that is calculated strictly on summer kW demand; and (3) a higher kW charge that focused strictly on the peak months of June, July and August, but that when applied to the accounts of FPAA members did not produce savings.[324] Neither UNSE nor FPAA presented any other reason why these options were not fair except that they did not save the customers money. We cannot evaluate these options, or see their

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[322] Tr. at 2620-21. UNSE proposes a differential in the summer on- and off- peak rates of $0.091790 ($0.125200-$0.033410) and $0.061700 ($0.092110 - $0.030410) in winter. Current rates provide a summer differential of $0.098864 and a winter differential of $0.071775.

[323] FPAA Reply Brief at 3.

[324] UNSE Initial Brief at 43.

bill impacts, but can presume FPAA did not prefer them. Nevertheless, we give strong consideration to the economic value the FPAA's members bring to UNSE's service territory. We also understand that their usage characteristics are different than what is typical given their low demand in July, August, and September. We thus direct UNSE to develop a new rate design for seasonal agricultural customers that does not rely on a demand ratchet. The proposal will include a definition of "seasonal agricultural customers" and may include seasonal demand charges, on and off peak demand charges and/or TOU rates. This new rate design for seasonal agricultural customers will be submitted with the other rate schedules for final rates as discussed elsewhere in this Order.

Demand ratchets may be characterized as a substitute for rates that actually reflect cost cassation. A rate structure that includes seasonal, multi-tiered demand, and seasonal TOU energy rates, would more accurately match cost causation with revenue recovery compared to the use of ratchets. Except for Nucor, which didn't object to demand ratchets as much as objecting to how the ratchet was calculated, and FPAA who does object to ratchets, no other party suggested eliminating ratchets. But as demonstrated by FPAA's experience and Nucor's testimony, demand ratchets are problematic and can create inequitable results. In addition, there seem to be disparities between cost causation and cost recovery in rate classes other than LPS and MGS, but no party intervened to identify any problems. However, without an adequate alternative in this record, we decline to eliminate the existing demand ratchet structure, at this time.

In UNSE's next rate case, we direct the Company to seriously consider designing rates that match cost causation, as measured by its CCOSS, with revenue recovery, and to evaluate methods of revenue recovery that do not involve ratchets. Seasonal, and on- and off-peak demand charges are examples of alternatives to ratchets. It may be appropriate for the LGS and MGS classes, for example, to have a demand portion of their rate comprised of a standard demand charge plus an incremental charge, if the maximum demand occurs in a period other than off-peak, or the partial peak period in summer. In the winter, there may not be an incremental peak demand charge. Such rates would recognize the differences in costs among generation sources, and between seasons throughout the year. Such rates could send proper cost signals all year, unlike ratchets.

In addition, the Company should evaluate consistency in other rate components, such as TOU rates, as the differential in on- and off-peak rates for the LPS-TOU Class is being narrowed, but the on- and off-peak differential for the LGS and MGS TOU rates are being increased in summer and decreased in winter. There may be supportable reasons for the different treatment, but the various designs should be based on cost causation, and should be consistent, fair, and equitable, and not merely self-serving.

Economic Development Rider ("EDR")

UNSE

UNSE proposes a discount-based economic development program that reduces the electric billing for existing or new customers that add or expand load within the Company's service territory. Under the Company's proposal, any lost non-fuel revenues resulting from discounts provided to customers through the EDR would be borne by UNSE, and the Company will not seek recovery of any lost non-fuel revenues in future rate cases.[325] The proposed EDR provides that it is available "for commercial or industrial standard offer customers with a projected peak demand of 1,000 kW or more and a load factor of 75 % or higher for the highest 4 coincident-peak months in a rolling 12-month period."[326] The EDR would provide a discount that phases out over five years, to customers that qualify under existing Arizona economic development tax credits.[327] To qualify, a customer must be a new customer or be expanding existing operations. UNSE proposed the load and load factor requirements in order to help ensure that the new customer does not increase costs for the system. In addition, the proposed discount is higher for customers that "infill" in areas with existing facilities, as UNSE has lost 45 MW of industrial load in recent years and it would be highly beneficial to attract new industrial customers to utilize the existing facilities.[328]

UNSE believes the tariff language is sufficient as proposed and does not support suggestions from Nucor that the tariff needs clarifications. Nor does the Company agree with FPAA that it should be modified to allow more flexibility in the qualifying load factor.[329]

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[325] Ex UNSE-29 Dukes Reb at 25.
[326] Ex UNSE-31 Jones Dir at CAJ-3.
[327] The discount starts at 20 percent in year 1, and declines to 2.5 percent in year 5.
[328] UNSE Initial Brief at 44.
[329] UNSE Reply Brief at 26.

AIC

AIC strongly supports the EDR because encouraging economic development in UNSE's service area will benefit the Company and its customers.[330] AIC believes that attracting new businesses to locate in rural Arizona is difficult, and this Rider might allow smaller communities to compete for customers. AIC notes that UNSE has sufficient capacity to accommodate the discounts for new businesses and the program targets those customers that UNSE can most efficiently serve. In addition, AIC asserts that because UNSE is piggybacking onto the State's economic development tax credits for eligibility, the Company mitigates administrative costs related to implementing the tariff.

Walmart

Walmart recommends approving the EDR because attracting large, high-load factor customers to UNSE's electric system drives down the cost per unit for all customers, and promotes external economic benefits in the communities where those customers locate.[331]

Nucor

Nucor believes that as proposed by the Company, the new EDR qualification criteria are not clear, and must be clarified so that current or prospective customers can make business decisions with confidence.[332] Nucor states that the rider needs to clarify how the minimum load factor requirement should be calculated, and how the requirement that load factors be calculated for "the highest 4 coincident-peak months in a rolling 12-month period" would be implemented. Nucor advocates that the EDR should be revised to clarify that the calculation of the customer's monthly load factor in the summer months is based on the customer's billing demand.

Nucor claims that it is not clear which measure of the Customer's Peak Demand should be used in the formula to determine load factor. Nucor states that for an LPS or LPS-TOU customer, the current options for measuring demand under current tariffs could include the customer's highest demand during a peak period, the customer's highest demand during an off-peak period, the customer's contribution to the monthly or annual system peak, the contract capacity or the 500kW minimum in part 4 of the Billing Demand section of the tariff. Nucor asserts that without clarifying the demand

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[330] AIC Initial Brief at 29; AIC Reply Brief at 20-21.
[331] Walmart Initial Brief at 4.
[332] Nucor Initial Brief at 22.

measurement under the EDR, the Company's new incentive may not achieve its intended result.

Nucor also believes that it is unclear how the Company intends to implement the requirement that load factors be calculated for "the highest 4 coincident-peak months in a rolling 12-month period." Nucor asserts that different interpretations could lead to widely varying results – for example, is it the average load factor for the four months, or that in each month the load factor exceeds 75 percent; which months are the coincident peak months; and how will the rolling calculation operate? Nucor suggests that Rider-13 EDR be clarified to provide that the calculation of the monthly load factor in the summer months is based on the customer's billing demand, and that the load factor be calculated according to the customer's total load and not just the new incremental load.[333]

FPAA

FPAA submits that UNSE's EDR rider should be flexible enough to include FPAA members. Because FPAA members typically only reach a load factor of 45 percent, even during their peak operating periods, they would not qualify for the EDR as proposed, which requires a load-factor of 75 percent. FPAA encourages the Company to explore modifying the EDR to try to accommodate FPAA members.[334]

Staff

Staff states that assuming that "the energy cost are not significant," Staff supports this limited program. Staff's support does not extend to any request to recoup the lost incremental revenues in a future rate case, without "supporting record."[335]

Analysis and Resolution - EDR

There is no opposition to the adoption of an Economic Development Rider. UNSE's shareholders will absorb any lost incremental revenues. If this program is successful, the Company and its ratepayers should benefit from adding high load factor, low-cost customers. Thus, we approve Rider-13 as presented. If there are any ambiguities, we do not believe they are sufficiently great to undermine the tariff, and may allow for some flexibility in its application, as some parties have sought in this proceeding. The proposed load factor requirements are appropriate to ensure that any new or

[333] Id. at 25.
[334] FPAA Initial Brief at 10.
[335] Staff Initial Brief at 16.

expanded business is a low-cost addition to the system. As UNSE has offered this program voluntarily and its shareholders are in essence paying for the program, absent unreasonable discrimination or provisions contrary to the public interest, UNSE should be allowed to design its parameters. All stakeholder interests will benefit if the Rider is successful which is an incentive to design and administer an effective program.

Buy-Through Tariff (Alternative Generation Service)

UNSE

As part of the settlement agreement in the UNS Energy merger with Fortis, UNSE agreed to propose a "buy-through" tariff available to LPS customers. Consequently, UNSE proposed Experimental Rider 14, Alternative Generation Service ("AGS"). UNSE proposed that the AGS would be available for a maximum of 10 MW of peak load, that it be available for no more than four years, and that it be available only to LPS and LPS-TOU customers with peak demands of 2,500 kW or more.[336] UNSE modeled the tariff after the APS experimental AG-1 tariff, but the Company recognizes that the Commission has not yet evaluated the APS tariff and UNSE believes that tariff may be flawed. UNSE does not believe that the "buy through" tariff that it has proposed is in the public interest because it would benefit only a narrow group of industrial and commercial customers at the expense of other customers, and it is premature before the APS model is evaluated.

If the buy-through tariff is approved, UNSE argues that it should be capped at 10 MW. UNSE asserts that Walmart's proposal to extend the cap to 150 MW is too large for a Company of UNSE's size as it would include up to 85 percent of UNSE's purchased power and would encompass UNSE's lowest cost resources [337] If the tariff is adopted, UNSE argues that the proposed management fee of $0.004 per MWh should be approved. UNSE states the management fee is intended to compensate the Company for the cost of administering the program and because it is a new tariff, the costs cannot be known with certainty. UNSE states its estimate is the best available.

UNSE argues that Freeport/AECC/Noble and Walmart push for a special deal in order to "hoard" much of UNSE's low-cost purchased power resources, while forcing other customers to rely

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[336] Ex UNSE-31 Jones Dir at 56-57.
[337] UNSE Initial Brief at 48.

on higher-cost resources, but if the market turns, and prices increase, the Company believes that they will expect UNSE to stand ready to provide all the power they need. UNSE asserts this scheme is not in the public interest and should be rejected.[338] UNSE argues that the AECC/Noble funding mechanism would increase rates for all other customers in the MGS, LGS and LPS class and that Walmart's proposed expansion would increase the average cost of power for all other customers as well as expand a flawed tariff.[339]

UNSE claims that a buy-through tariff is a poor economic development tool to retain large customers, as it shifts costs to other customers and does not generate new revenue or increase efficiency for the system. In contrast, UNSE argues its proposed Economic Development Rider is specifically designed to shield customers from the costs of the program, while augmenting revenue and increasing efficiency by attracting high load factor customers. In addition, UNSE asserts that if competitiveness and affordable rates are the concern, adopting a more balanced class revenue allocation, which will benefit all commercial and industrial customers, is the best solution.

Walmart

Walmart asserts that an AGS program would not harm other non-AGS customers, but rather would replace the Company's own wholesale market purchases with the energy purchases of the customers participating in AGS, and shift the risk of the wholesale purchases from the Company's ratepayers to the AGS customers.[340] Walmart believes there is ample evidence in Arizona from the experience of APS's AG-1 program, and in various other jurisdictions, that permitting customers to choose their generation service is an effective way for customers to manage their electricity requirements to better suit their business needs.[341]

Walmart recommends that the AGS not be limited to only LPS and LPS-TOU classes, but should be available to all commercial and industrial customers classes. Walmart asserts that allowing a significant number of customers the opportunity to participate in AGS would attract more generation service providers and create a more robust and vibrant marketplace from which AGS customers would

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338 UNSE Reply Brief at 24.
339 Id. at 25.
340 Ex Walmart-2 Hendrix Dir at 9. Walmart Initial Brief at 5.
341 Walmart Initial Brief at 5.

obtain their electric generation service.[342]

In addition, Walmart recommends that the program cap be set at 150MW, rather than 10 MW. Walmart believes that the 10MW limit is arbitrary and not supported by the Company.[343] Walmart states that a 150 MW cap is appropriate because the Company already purchases 175 MW from the wholesale power market, and allowing 150 MW to participate in the AGS program shelters other ratepayers from market risk and volatility related to the Company's wholesale purchases.

Walmart also recommends that the threshold for a customer's participation be set at 1,000 kW. Walmart asserts this minimum size would ensure that the participant is sufficiently large to be a sophisticated user of electricity and would not need any consumer protection requirements. Further, Walmart recommends that customers be allowed to aggregate utility accounts within its corporate family to meet the peak demand threshold, which would allow customers to leverage economies of scale to reduce their generation supply costs.[344] Walmart asserts that limiting the term of the program to only four years eliminates the ability of customers to purchase long-term contracts, especially for off-site renewable contracts like solar and wind, due to the length of contract term needed by renewable developers to build new projects.[345]

Walmart states that UNSE has not provided any documentation that supports its proposed management fee of $0.0040 per kWh, and argues that the Commission should approve a cost-based management fee for the AGS.[346]

AECC/Noble

AECC/Noble strongly support a buy-through option which they claim will provide economic incentives to retain large customers, as evidenced by the success that AECC member Freeport Minerals Corporation has experienced in APS' AG-1 program. Thus, AECC/Noble propose to modify certain components of UNSE's Experimental Rider 14. AECC/Noble argue that program eligibility requirements should be expanded to ensure that customers in all subsidy-paying classes have the opportunity to participate in the generation power market. They propose that customers with a total

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342 Id.
343 Id. at 6.
344 Id. at 6-7.
345 Ex Walmart-2 Hendrix Dir at 7-8
346 Walmart Initial Brief at 7.

minimum peak load size of 1MW should be allowed to aggregate several smaller loads into the 1MW minimum threshold, provided that each aggregated site is owned by the same entity.

In addition, AECC/Noble assert that several of UNSE's pricing components, including its unbundled rate design, should be modified. Specifically, they assert that the proposed management fee and continuation of certain generation demand charges are confiscatory. They note that the proposed \$0.004/kWh management fee is six times greater than the \$0.0006/kWh management fee charged by APS for AG-1 service and should be reduced to a more reasonable amount in the range of \$0.0006/kWh and \$0.0012/kWh.[347]

AECC/Noble also claim that the proposed reserve capacity charge is higher than reasonable. They assert that by imposing fixed generation charges for services that a buy-through customer would not utilize, UNSE is proposing a pricing feature that does not exist in the APS AG-1 program, and they claim would in effect be a stranded cost charge. AECC/Noble assert that while a stranded cost charge may be appropriate when customers are allowed to permanently leave the utility's system for market participation, such is not the case under the buy-through proposals in this case.[348] Finally, AECC/Noble argue that the \$20 per MWh mark-up charge to the Dow Jones Electricity Palo Verde Daily Index price for replacement power is excessive and should be reduced to no greater than \$4 per MWh.

AECC/Noble assert that UNSE's unbundled rate design is seriously flawed because they believe it attempts to recover fixed generation related costs in the Local Delivery component of the demand charge. To do so, they assert, is contrary to the fundamentals of proper unbundled rate design.[349] AECC/Noble's witness Higgins provided testimony that the Local Delivery demand charge and Generation Capacity demand charge are "entirely inconsistent" with the Company's CCOSS.[350] AECC/Noble argue that by shifting generation costs onto the Local Delivery charge, which the buy-through participants would still have to pay, any potential savings to these customers would be lost.

[347] AECC/Noble Initial Brief at 8.
[348] Id. at 8-9.
[349] Id. at 9-11.
[350] AECC/noble Initial Brief at 10, Ex AECC-1 Higgins Dir at 25. Mr. Higgins' analysis shows that the CCOSS indicates that for the LPS class, the transmission demand cost is \$3.58 per KWMonth compared to a transmission demand charge of \$3.58 per KWMonth, while the Distribution/Delivery Demand Cost is \$0.57 per kWMonth compared to a Demand Charge of \$0.29 per KWMonth, and the Generation Demand Cost is \$9.33per KWMonth compared to an unbundled generation demand charge of \$8.61 per KWMonth.

They assert that a well-designed unbundled tariff is essential to implementing a buy-through program since as participants purchase their generation from third parties, it is important that the other services they receive from the utility reflect the costs of those services.

AECC/Noble propose to fund the buy-through program in the amount of $908,000 annually, such funding to be taken directly from the eligible customers classes (MGS. LGS and LPS) portion of the 50 percent share in the $7.5 million reduction of requested revenue increase.[351] Thus, according to AECC/Noble Solutions, if the buy-through program were not fully subscribed, the revenues set aside that turn out to be superfluous would be deferred and returned to the eligible classes through a rate adjustor like the PPFAC, or in a future regulatory proceeding.[352]

AECC/Noble assert that concerns about the buy-through program having potential negative impacts on the Company or its customers are not supported by the record in this proceeding. They note that UNSE and AIC contend that the $908,000 may not be sufficient to cover the Company's potential non-fuel lost generation revenue, but AECC/Noble claim that the critics fail to specify how this amount would result in under-recovery given the Company's estimates of lost non-fuel generation revenue. AECC/Noble also claim that their funding solution places all cost responsibility for a buy-through on program-eligible customers. They state that UNSE witnesses confirmed that 10MW represents a small percentage of the Company's overall market purchases for generation in relation to its peak period and average demand, and that any "returning customer could be integrated into the UNSE system within a year."[353] In addition, in response to criticism that the AECC/Noble funding mechanism will actually harm those customers in the eligible class who do not win the lottery to participate in the program, AECC/Noble point out that under their revenue allocation scheme, these customers are still better off than under either the UNSE or Staff revenue allocation proposals.[354]

AECC/Noble argue that concerns about potential flaws in the APS AG-1 program, over the appropriate management fee or under-recovery of generation revenue, are not grounds for rejecting the

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[351] AECC/Noble Initial Brief at 11, Ex AECC-1 Higgins Dir at 6. AECC states that the $908,000 funding is greater than the $331,200 identified by UNSE because AECC/Noble Solutions propose different reserve capacity charges and unbundled rates.

[352] AECC/Noble state that their proposed funding mechanism can work with any revenue spread allocation ultimately adopted by the Commission.

[353] Tr. at 2021-2023.

[354] ACC/Noble Initial Brief at 13.

proposed modified buy-through tariff in this proceeding.

Furthermore, AECC/Noble dismiss claims that the buy-through tariff raises "serious questions about discrimination," as they believe the same can be said about the Company's proposed EDR.[355] AECC/Noble believe that neither the buy-through nor the EDR constitute "unreasonable discrimination" which is the only form of rate discrimination which is unlawful. AECC/Noble note that the Company and AIC appear to be using a double standard when evaluating the proposals made by AECC/Noble as compared with other constituencies, seeking to eliminate inter-class subsidies between DG residential and non-DG residential, for example, but not making any meaningful move with the subsidies provided by the large commercial and industrial classes; being willing to absorb the lost non-fuel revenues associated with the EDR, but unwilling to absorb costs associated with a buy-through program; and implementing rate choice options for residential customers, but not for the commercial and industrial classes.[356]

Nucor

Nucor states that it does not oppose the adoption of a buy-through tariff, provided that it is part of a broader set of changes that will reduce inter-class subsidies, and that safeguards are implemented for non-participating customers.[357] Nucor states that, from its point of view, the buy-thorough tariff as proposed by the Company (or modified by Mr. Higgins on behalf of AECC and Noble Solutions) is a workable option.

AIC

AIC states that the proposed buy-through rate is not ready for "primetime." AIC shares concerns about the customer-to-customer cost shift, and that the tariff may require those customers who would be eligible to participate, but who do not or cannot, to incur more costs so that others may participate. AIC points to evidence that UNSE's lowest cost power is purchased power, and if UNSE's largest customers are able to purchase in the wholesale market themselves, the average power cost for the Company's remaining customers increases, with the result that the mere existence of the buy-through

[355] AECC/Noble Reply Brief at 5-6.
[356] Id. at 6-7.
[357] Nucor Reply Brief at 7.

tariff will increase electric bills for every other customer.[358] AIC argues that AECC and Noble have not provided a "single justification" or urgency for implementing the proposed buy-through tariff now, as opposed to waiting until the Commission has substantively reviewed the APS version.

AIC recommends that the Commission wait to assess the data presented in the APS pilot buy-through program before implementing a buy-through rate for other Arizona utilities.[359]AIC notes that APS has claimed that its experimental tariff has serious flaws resulting in alleged net losses of $16.8 million. AIC also questions the equity of AECC/Noble funding mechanism for the buy-through program as it would reserve $908,000 of the revenue reduction agreed to in this case (increasing rates to the eligible customer class) to allow a few to participate.[360] AIC claims that large customers have other options, such as entering into special contracts with the utility, or self-generation, to achieve cost savings without imposing higher costs on other ratepayers.

Staff

Staff does not address the buy-through proposal in post-hearing briefs, except to mention that it did not generally oppose AECC/Noble's funding mechanism.[361]At the hearing, however, Staff's witness Broderick expressed the opinion that the buy through tariff is not "ready for prime time now."[362]

Analysis and Resolution – Buy-Through Tariff

UNSE is a vastly different, and much smaller utility, with many fewer large customers, than APS. Because UNSE's lowest cost power is purchased power, we have concerns that a buy-through tariff may adversely impact UNSE's other customers by increasing the cost of power. Because of UNSE's small number of large commercial and industrial end users, an APS-type program may not be appropriate for this utility. We understand that the industrial users are frustrated with paying rates that provide subsidies to the Residential Class, but we are attempting to take an incremental step to reducing inter-class subsidies in this case, and in doing so, we must balance the interests of all of UNSE's customers. We therefore decline to adopt the proposed buy-through tariff in this proceeding.

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[358] AIC Reply Brief at 19.
[359] AIC Initial Brief at 25-26.
[360] Id. at 27.
[361] Staff Reply Brief at 8. Staff is opposed to the AECC/Noble allocation of revenue methodology.
[362] Tr. at 3619.

Net Metering

UNSE

UNSE states that its Net Metering Tariff should be modified to reflect the reality of the services being provided. It proposes a new Rider-10, Net Metering for Certain Partial Requirements Service (NM-PR) that would apply to those customers who submitted interconnection applications June 1, 2015, or after.[363]

UNSE claims that the current net metering tariff is unfair to 98 percent of customers because the export price for DG solar power sent to the grid is higher than (approximately double) the wholesale or market cost of solar power, and because the current "banking" feature seriously distorts the price signals sent to the customer, while shifting costs to other customers, and leaving other fixed costs unrecovered. UNSE states that its modified net metering tariff would not eliminate the subsidy and cost shift, but would mitigate it significantly. According to the Company, the subsidies to solar DG are not fully eliminated because volumetric rates will still be recovering fixed costs, and DG customers, with their lower volumetric sales, will still be avoiding a portion of the fixed costs allocated to them.

Under the proposed Rider-10, new net metered customers would pay the proposed and applicable retail rates for all energy delivered by UNSE. The applicable retail rates would be limited to the demand based rate options. In addition, new net metered customers would be compensated for any excess energy their DG system produces and delivers to UNSE with bill credits calculated using the Renewable Credit Rate ("RCR"). New net metered customers could carry over unused bill credits to future months if they exceed the amount of their current bill.[364]

UNSE proposed a RCR of 5.84 cents per kWh, which is equivalent to the most recent utility scale renewable energy purchased power agreement ("PPA") connected to the distribution system of UNSE's affiliate Tucson Electric Power ("TEP"). UNSE argues that this rate is a reasonable proxy for a market rate. UNSE proposes that the RCR should be adjusted annually, with the Company filing an annual RCR filing as part of its annual REST filing based on the most recent comparable utility scale PPA. The Company notes that TASC objects to the RCR because of alleged uncertainty whether it

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[363] Rider-10 would not apply to customers who submitted interconnection applications before June 1, 2015. UNSE Initial Brief at 30.

[364] UNSE Initial Brief at 31.

will be reset periodically, and Vote Solar suggests that customers should be able to lock in their rate for 20 years. [365] UNSE states that it is open to the suggestion that customers could lock in a rate, or that the rate would be reset in each rate case. UNSE explains that its concern is not how often the RCR is set, but that the rate should reflect the fact that DG solar is a wholesale power resource that should be priced at a wholesale rate. [366]

Currently, DG solar customers can push excess energy onto the grid in the winter and shoulder months when the utility's cost of power is lower, and bank credits until the summer months when the utility's energy costs are much higher. UNSE asserts that eliminating the banking option for excess energy, and simply purchasing the excess energy from the customer during their billing cycle, will send more accurate price signals to the net metering customers about their true energy costs, and will help to partially alleviate the bypass of fixed cost recovery that occurs when customers self-generate a portion of their energy requirements.

The current net metering tariff requires the utility to buy all the solar DG excess power, regardless of whether the utility needs it, and compensates the excess solar at a retail rate no matter when the excess power is received. It treats kWhs delivered during a less valuable off-peak period the same as kWh's delivered during a system peak, even though they have different values. UNSE asserts that a credit at the full retail rate makes no sense as a utility would never voluntarily buy energy at such an inflated price. In essence, UNSE claims, the difference between the retail and wholesale rates is a subsidy received by the solar DG customer at the expense of non-DG customers.[367] UNSE states that the retail rate makes even less sense when the issues that reduce the value of solar are considered, such as line losses, intermittency, phase in-balances, and reverse flow, which increase the wear and tear on the distribution equipment.[368]

UNSE argues that the banking option sends the wrong message to customers and should be eliminated, because it gives the incorrect impression that energy produced today can be saved for use

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[365] TASC Initial Brief at 10; Vote Solar Initial Brief at 19.

[366] UNSE Reply Brief at 19. UNSE notes that at least when Staff was proposing three-part residential rates, Staff witness Broderick supported eliminating banking and replacing the retail rate with an RCR of at least $0.07 per kWh which is near the mid-point between the retail rate and the short-term avoided cost rate for UNSE. See Staff Initial Brief at 15-16.

[367] USNE Initial Brief at 32, Tr. at 2737 and 2758-59

[368] UNSE Initial Brief at 33, Tr. at 1074-84.

months later, essentially conveying the message that their excess energy can be stored on the UNSE's system.[369] UNSE also asserts that banking amplifies the lost fixed cost recovery caused by DG systems because a "net zero" customer will not pay volumetric charges, which are intended to recover fixed costs, and thus do not contribute to their fair share of fixed costs. UNSE states that DG customers are still using the grid (at night, when their demand peaks, as well as for ancillary services), but they avoid paying their fair share to such an extent that current rates are not just and reasonable.[370]

UNSE states that the solar advocates' support for banking is ironic given their support for TOU pricing. TOU rates recognize that costs vary dramatically throughout the day. USNE states they also vary by season, and that a kWh of power produced at noon on a bright spring day (when system use would be moderate and DG at its maximum production) has a different value than a kWh produced at 5 p.m. on a hot August day (when solar DG output is low and the system is near its peak). Correspondingly, a kWh produced in the middle of winter, banked, and then used to offset a kWh consumed from the utility during the summer peaks, has a different value than a kWh produced in the summer. UNSE argues that banking ignores these realities.[371]

UNSE states that the volumetric retail rate includes many fixed costs that do not change regardless of whether DG is purchased or not, and that the only costs the utility avoids from purchasing DG energy are the variable costs of power (fuel and purchased power). UNSE states it cannot avoid incurring the fixed costs of power generation because it must keep those generation assets standing ready to provide power when DG solar is not available. Likewise, UNSE asserts, the costs of poles, wires, and transformers are not avoided when the utility buys DG solar power. UNSE characterizes purchased DG solar as simply a type of wholesale power that does not avoid these fixed costs. UNSE states that it could have proposed the wholesale power costs included in the PPFAC as a reasonable proxy for the value of the excess DG energy, but has instead proposed the higher cost of wholesale solar power in order to recognize the environmental benefits of solar.

Although some parties claim that DG solar provides additional value to the grid beyond the value provided by utility scale solar, UNSE argues that the supposed additional value of DG solar is

[369] Ex UNSE-28 Dukes Dir at 20.
[370] UNSE Initial Brief at 34, UNSE Reply Brief at 17.
[371] UNSE Reply Brief at 17.

illusory.[372] UNSE states that claims that "environmental externalities" must be considered in valuing DG solar is misplaced because the comparison is not with fossil fuels, but between two different solar resources, each of which provide the same environmental benefits.[373] UNSE also disputes claims that rooftop solar creates savings in generation, transmission and distribution capacity, because solar customers have similar demand (i.e. use similar amounts of capacity) as non-DG customers.[374] UNSE states that although solar DG customers use less energy generated by the utility, their peak use remains similar, so they still need all the power plants, wires, poles and transformers that a regular customer needs. Because rooftop solar's output is low when the system peaks in the late afternoon and early evening, UNSE disputes many of the claims by TASC and Vote Solar about the value of DG solar, including lower generation and transmission costs, avoided line losses, reduced need for ancillary grid services, benefits of geographic diversity, and employment gains.[375] UNSE claims that electricity from rooftop panels is just electricity, and there is no justification for paying DG twice as much as utility scale solar when the environmental benefits are the same.[376]

In response to TASC's claim that lowering the price of exported rooftop power would raise some sort of tax issue,[377] UNSE asserts that the Commission should not base net metering policies on an unsupported claim regarding what the I.R.S. may or may not do.[378] Further, instead of waiting for the conclusion of the Value of DG docket, UNSE argues that the time to fix net metering is now because the timing of the Value of DG docket is unknown and the current UNSE proceeding is a rate case. UNSE notes that TASC and Vote Solar have previously argued that net metering issues must be addressed in a rate case, where there can be a comprehensive examination of revenue allocation and consideration of all rate designs, but now press for additional delay.[379]

UNSE argues that the Net Metering Rules (A.A.C. R14-2-2306(C)) do not require a "one-to-one retail rate offset" as claimed by TASC and Vote Solar. UNSE argues that Rule 2306(C) requires

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[372] Id. at 14.
[373] Id.
[374] Ex UNSE-34 Overcast Reb at 9-12.
[375] UNSE Reply Brief at 15-16.
[376] Id. at 16.
[377] TASC Brief at 12.
[378] UNSE Reply Brief at 17.
[379] TASC Initial Brief in the TEP Net Metering Docket (Docket No. E-01933A-15-0100) dated May 15, 2015 at 1; Vote Solar Brief in the Docket No. E-01933A-15-0100 dated May 15, 2015 at 1-2.

that the "net kWh supplied by the Electric Utility" shall be billed in accordance with the "standard rate schedule," and says nothing about whether the offset should be done on a one-to-one basis, or any other ratio.[380] Similarly, UNSE argues that A.A.C. R14-2-2302(11) does not require a one-to-one offset, but merely states that "net metering" means "service to an Electric Utility Customer under which energy generated by [the customer] . . . may be used to offset electric energy provided by the Electric Utility." UNSE asserts that the offset ratio or rate is not specified in the definition of "net metering." UNSE points out that the rules allow that tariffs "may include seasonally and time of day differentiated avoided cost rates for purchases from Net Metering Customers, to the extent that Avoided Costs vary by season and time of day."[381] In response to claims that separate rates for DG customers would violate A.A.C. R14-2-2305,[382] UNSE states this rule simply requires that rate changes applying only to net metering customers "[s]hall be fully supported with cost of service studies and benefit/cost analyses." UNSE states that it fully complied with this requirement when it submitted the proposed changes in the context of a rate case with a full cost of service study and extensive testimony.[383]

Because it is proposing to eliminate the "banking" provision of the current net metering scheme, the Company requests a waiver of A.A.C. R14-2-2306.[384] UNSE does not believe that the rest of its net metering proposals are inconsistent with the Commission's Net Metering Rules, and thus do not require a waiver in order to be adopted. However, UNSE recognizes that there is disagreement on how to interpret the rules, and the Company therefore seeks a waiver of any other provision of the Net Metering Rules that the Commission finds necessary in order to allow Riders R-10 and R-11 to go into effect.[385]

Finally, UNSE argues that the Commission does not require a specific rule to grant a waiver of the Net Metering Rules. UNSE states that beginning in 2004, with the slamming and cramming rules, the state's Attorney General began to refuse to certify rules that contained waiver provisions, and thus

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[380] UNE Reply Brief at 19.
[381] A.A.C. R14-2-2307(C).
[382] *Citing* Ex Vote Solar-6 Kobor Dir at 50.
[383] USNE Reply Brief at 20.
[384] Rule 2306(D) provides: "If the electricity generated by the Net Metering Customer exceeds the electricity supplied by the Electric Utility in the billing period, the Customer shall be credited during the next billing period for the excess kWh generated. That is the excess kWh during the billing period will be used to reduce the kWh supplied (not kW or kVA demand or customer charges) and billed by the Electric Utility during the following billing period."
[385] UNSE Initial Brief at 35; UNSE Reply Brief at 20.

for a number of years, the Commission did not include waiver language provisions in new rules. Despite this, however, the Commission continued to allow waivers of these rules based on case law findings that the Commission can always waive application of its own rules, even without an express rule allowing a waiver. [386] UNSE notes that during the process of approving the Net Metering Rules, Staff confirmed the Commission's ability to waive the rules if the circumstances warrant.[387] Moreover, UNSE states that tariffs are given the force of law, and UNSE's Rules and Regulations provide that when there is a conflict between the Rules and Regulations and Commission Rules, the Rules and Regulations (i.e. tariff) will apply. Historically, and in this case specifically, UNSE has sought and is seeking changes in its Rules and Regulations, which are in effect waivers of the provisions of the Arizona Administrative Code.[388]

Staff

Staff opposes UNSE's proposal to use a single PPA to establish the RCR, and also opposes any change in net metering absent the adoption of three-part rates.[389] Thus, Staff recommends making no changes to net metering until the Commission's Value of DG docket concludes.[390]

At the hearing, when both Staff and the Company were proposing mandatory three-part residential rates, Staff was recommending no change to net metering tariffs provided the three-part rates were adopted.[391] However, at that time, if two-part rates were to be maintained, Staff was recommending modifications to net metering, with an RCR to compensate exported energy of at least \$0.07 per kWh.[392]

RUCO

RUCO takes an integrated approach to rate design, as its net metering proposals are intricate parts of its overall rate design proposals.

RUCO proposes several rate options for the partial requirements DG customers:[393] (1) a <u>Non-</u>

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[386] UNSE Reply Brief at 21-22.
[387] *Citing* statements by Commission Chief Counsel Kempley at May 11, 2008 Open Meeting, Docket RE-00000A-07-0608 Open Metering Transcript at 24-25 and 32; and June 5, 2008 Hearing Transcript, Docket RE-00000A-07-0608 at 95
[388] UNSE Reply Brief at 22-23.
[389] Staff Reply Brief at 8-9.
[390] Staff Reply Brief at 9.
[391] Ex S-17 Broderick Surr at 11; Staff Initial Brief at 14.
[392] Staff Initial Brief at 15; Tr. at 3713.
[393] RUCO Initial Brief at 11.

Export Option, under which DG customers can choose any of the Company's traditional rates offered for full requirement customers, but are not allowed to export any excess power generated to the grid, or can export excess power at the MCCCG rate; (2) an Advanced DG TOU Option which includes a three-part rate, with a minimum bill and a TOU demand rate during the summer and an export rate for excess power to the grid for customers who exchange renewable energy credits ("RECs") of 8.5 cents per kWh ($.085/kWh), equal to the self-consumption rate (for those DG customers who do not exchange RECs, the export rate would be the MCCCG rate); (3) a RPS Bill Credit Option under which customers can select any of the Company's traditional rates, and the credit rate for new DG customers decreases over time as the Company's portfolio of renewable capacity increases (the credit rate would start at 11 cents per kWh and go no lower than the MCCCG rate).

If mandatory three-part rates are not adopted, RUCO proposed four additional rate options:[394]

> (1) Traditional Two Part Rates with a Market Based Export Option under which DG customers with a PV system that produces less than 25 percent of their annual load, full net metering would be preserved for generation exports; and for partial requirement DG customers who produce more than 25 percent of their annual load, generation exports would be compensated at a market-based rate, calculated at the average wholesale price for that month. Compensation for excess power would be paid monthly, with no banking.

(2) Three-part Rate Option available to all residential ratepayers with a $12.50 customer fixed charge, and full net metering would be preserved, with a tiered TOU demand charge, with the on-peak summer demand charge over 30 percent higher than the on-peak winter demand charge; and

(3) Volumetric TOU Option available to all residential ratepayers, with the preservation of full net metering, but an increased fixed charge of $19.00.

APS

APS asserts that demand rates alone are not enough to address the cost shift caused by rooftop solar. APS claims that the subsidy to rooftop solar was never cost-based, but was a policy decision made at the time the Net Metering Rules were approved in order to encourage the fledgling rooftop

[394] Id. at 13-15.

solar industry. Now that the solar industry is a multi-billion dollar industry, APS believes that the policy decision has outlived its usefulness and should be revisited. APS supports UNSE's proposal to eliminate "banking" and netting against future usage of the excess energy produced by the rooftop customers. APS argues that by banking and offsetting future energy usage, the rooftop solar customer is using the grid as a free battery and receiving the full retail rate for exported energy.[395]

APS supports the UNSE proposal to replace banking with a mechanism that gives the rooftop solar customer an immediate bill credit for any exported energy at the RCR. APS asserts that the current net metering scheme grossly over compensates rooftop solar customers for the value of their exported energy, at the expense of non-rooftop solar customers who must pay retail for the excess power. APS believes that the RCR option is a reasonable step forward when coupled with demand rates to minimize both parts of the cost shift.

APS asserts that the solar industry's claims that demand rates will kill the solar industry are overstated and is belied by APS witness Welch's study that shows that: third party leasing providers have experienced declining installation costs and improved federal subsidies at the same time they have increased the prices they charge customers; third party leasing providers experienced project returns of 40 percent in 2015; and third party solar leasing providers have headroom to adjust to changes in rate structures while maintaining project returns.[396] In any case, APS argues the claims of the solar industry must be weighed against the increasing costs being imposed on non-solar customers from the unfair allocation of fixed cost recovery.

AIC

AIC asserts that UNSE's proposed changes to the Net Metering Rules are in the public interest. AIC states that the Net Metering Rules were originally intended to incentivize early adopters of DG solar, not to create huge subsidies that shift costs from one group of customers to another. AIC argues that as the cost of solar systems declines, and with the extension of the federal tax credit, there is no need for UNSE customers to pay more for DG solar than they would pay for any other solar energy the Company could procure on the market.[397] AIC asserts that the proposal to use the most recent utility

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[395] APS Reply Brief at 5.
[396] Tr. at 3144, Ex APS– 5 Welsh Surr at 4-5; APS Reply Brief at 6.
[397] AIC Initial Brief at 15-16.

scale solar contract price as a benchmark for the compensation of excess DG energy is a better reflection of the cost of energy than the current retail rate. AIC claims that the retail rate overcompensates DG customers for the excess energy they produce because it embeds fixed costs associated with maintenance of the grid, but DG customers don't incur these fixed costs. Thus, AIC claims, DG customers are credited for both the costs they avoid (e.g. fuel) and costs that they don't (poles, meters, wires, etc.).[398]

AIC believes that the proposed RCR is a fair, market-based proxy rate that appropriately compensates customers who export excess distributed solar energy to the grid.[399] AIC argues that while not an exact proxy, utility-scale solar prices provide a more accurate reflection of the actual cost to produce solar than the retail rate. It is AIC's opinion that because the retail rate has no relation to the value of DG, and overcompensates DG customers for excess energy, non-DG customers must absorb those costs and pay more for solar energy than the Company could procure on the open market. Further, AIC asserts, by using the most recently negotiated rate, the proposed RCR recognizes that energy prices fluctuate. AIC argues that the utility-scale rate is a generous compensation because utility-scale is a more efficient resource than rooftop solar. AIC claims that using the utility-scale rate as a proxy for DG solar will incentivize solar DG to improve productivity.

AIC claims that intervenors who argue that DG solar provides greater benefits than utility-scale solar (such as higher generation capacity due to geographic diversity, greater avoided distribution costs, greater grid services and greater local employment benefits) and is thus more valuable, provide no substantive support for the claimed values. AIC claims that UNSE and APS witnesses refuted the claims of the solar industry witnesses.[400]

In addition, AIC argues that modifying the Net Metering Rules will not prevent UNSE from meeting its Renewable Energy Standard ("RES") requirements, nor will it "kill" the solar industry. AIC agrees with the Company that if it needs additional DG solar to meet its RES requirements it can seek

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[398] Id. at 16.

[399] AIC Initial Brief at 17-20. UNSE proposes to compensate excess DG energy based on the Company's most recently negotiated PPA for utility-scale solar energy, which at the time of the hearing was $0.0584/kWh based on a recent agreement with TEP. Ex UNSE-25 Tilghman Dir at 7.

[400] AIC Initial Brief at 18-20, citing testimony of APS Witness Brown (Ex APS-1 at 36-37) and UNSE Tilghman (Ex UNSE-26 at 14).

incentives or other transparent subsidies during its RES Implementation Plan proceedings. AIC argues that providing any necessary subsidies in a transparent fashion would allow the Commission and non-solar customers to better appreciate the magnitude of the solar subsidy that the DG carve-out requires, and far better than when the subsidy is embedded in utility rate design.[401]

Moreover, AIC argues that the current rate structure and net metering tariffs enable solar DG lessors and vendors to retain most of the margin in a DG solar transaction, and pass very little onto the solar DG customers. AIC charges that solar rooftop providers seek to prevent any changes to rate design or the Net Metering Rules in order to preserve their lucrative returns and shield themselves from competition. AIC argues against claims that changing the Net Metering Rules will reduce solar jobs because the Solar Foundation National Solar Job Census (upon which such claims are based) cannot be relied upon to provide data on solar jobs in Arizona or the UNSE service territory, and does not address the impacts of proposed changes in this docket.[402] Further, AIC criticizes intervenors for not considering the effect on job creation in the broader economy, or comparing jobs created by net metering with jobs created under competitively priced solar.

AIC argues that statements that UNSE is proposing to eliminate net metering are misleading, as under the Company's proposal DG customers will still receive bill credits at the full retail rate for energy that they produce that offsets their usage.[403] AIC argues that there is no legal or logical prohibition in the Commission's rules that preclude changes to the Net Metering Rules.

AIC notes that the REST Rules (A.A.C. R14-2-1802 (M)) defines net metering as:

> a system of metering electricity by which the Affected Utility credits the customer at the full retail rate for each kilowatt-hour of electricity produced by an Eligible Renewable Energy Resource system installed on the customer-generator's side of the electric meter, up to the total amount of electricity used by that customer during an annualized period, and which compensates the customer-generator at the end of the annualized period for any excess credits at a rate equal to the Affected Utility's avoided cost of wholesale power.

AIC claims that a plain reading of this definition shows that net metering customers must receive credit at the full retail rate for energy that they use to offset their consumption, but are entitled to compensation for any excess credits at year end only at a rate equal to the avoided costs of the utility.

[401] Tr. at 1352.
[402] AIC Initial Brief at 23, *citing* Ex Vote Solar-6 Kobor Dir at 55; Ex TASC-21 Fulmer Surr at 10.
[403] AIC Reply Brief at 13-15.

AIC notes that some intervenors rely on the lack of an explicit waiver provision in the Commission's Net Metering Rules (Article 23) to claim that the Commission cannot change the existing Net Metering Rules. However, AIC asserts that the REST Rules (Article 18) (on which TASC and Vote Solar rely for the proposition that the full retail rate credit must apply to excess energy) expressly contains such a provision.[404]

While A.A.C. R14-2-2306(D) authorizes DG customers to "bank" credits, AIC argues the Commission has the authority to grant a partial waiver. AIC states that Article 18 and Article 23 are related, as the Commission enacted the rules in Article 23 pursuant to the express directive and authorization contained in Article 18 that they adopt net metering rules and tariffs.[405] AIC argues that it makes little sense to conclude that the Commission has authority to design and implement Net Metering Rules and tariffs pursuant to Article 18, but no authority to waive them pursuant to that same article.[406]

AIC further asserts that the intervenors' claims that UNSE is seeking to eliminate net metering (rather than seeking a waiver) is based on the self-serving view that "net metering" can only mean the exact program currently in place and any change to a credit rate ceases to be "net metering." AIC argues the principle concept behind net metering is that DG customers should be allowed to receive appropriate credit for electricity generated by DG systems that is available to the grid.[407] AIC further argues that the proposed changes in this case preserve this key objective as DG customers will continue to receive value for the excess energy they generate, but at a "more appropriate market-based price."[408]

AIC points out that when various utilities filed to modify their net metering tariffs in separate dockets, the solar industry intervenors argued that such changes should be made in a rate case. AIC notes that this proceeding is a rate case. AIC asserts that suggestions to wait for the conclusions of the Value of DG docket is a self-serving delay tactic to preserve the status quo. AIC believes that the outcome of the generic Value of DG docket is amorphous and not designed to calculate a value for

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[404] A.A.C. R14-2-1816 allows a utility to petition the Commission for a waiver from the REST Rules.

[405] A.A.C. 14-2-1811 instructs the Commission to adopt rules and standards for net metering and establish net metering tariff.

[406] AIC Reply Brief at 15.

[407] See A.A.C. R14-2-2302(11).

[408] AIC Reply Brief at 15.

solar DG once and for all. AIC claims that delaying consideration of the proposed net metering changes will make the task of "righting" prices more difficult.[409]

TASC

TASC opposes UNSE's proposed modifications to its net metering tariffs, and argues that net metering must remain at the retail rate.[410] TASC claims that its witness Fulmer prepared the only full analysis of the costs and benefits of DG solar in this docket, finding the benefits of DG solar to be between 10-14 cents per kWh.[411] TASC argues that UNSE's analysis is flawed by not including all benefits, not using actual usage data, extrapolating from utility-scale data, limited to short-term benefits, and not looking at load reductions due to sources other than DG solar.[412]

Because the proposed RCR rate is less than half of TASC's claimed value of solar, TASC argues that it would undercompensate DG customers for their exported power. Furthermore, TASC asserts that when UNSE sells the exported power back to other non-DG customers at the retail rate, it would receive a 100 percent markup over the RCR.

TASC believes the RCR could create substantial uncertainty as the Company proposes to update the rate periodically. TASC notes that utility power purchase agreements from utility-scale suppliers are entered into for long term fixed prices, but UNSE seeks to subject its customers to constantly adjusting prices. TASC claims utilities have an incentive to game the system to create uncertainty, discourage the DG customer and DG installations, while increasing their own utility-scale projects and having the ratepayers pay for them. TASC claims that once a DG customer is locked into a purchase or lease agreement of a DG system, a new adjusted RCR would make the investment untenable. TASC states no rational investor would implement DG in such an environment.[413]

TASC asserts that utility scale solar is not the same as DG solar and should not set the proxy price for DG solar.[414] TASC claims that the Commission has already recognized that the two resources are not the same, when it adopted a "carve out" in the REST Rules, which require 30 percent of the

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409 AIC Reply Brief at 15-17.
410 TASC Initial Brief at 9.
411 TASC Initial Brief at 6-7; Ex TASC-21 Fulmer Surr at 30-47.
412 TASC Initial Brief at 7.
413 TASC Reply Brief at 9.
414 Id. at 10.

overall renewables to come from DG solar or other distributed resources.[415] TASC notes that there is no market for DG exports except for the utility, and DG customers would have no choice but accept the variable pricing regime under UNSE's proposal, while utility scale producers operate in a competitive market. TASC argues that as such, the only fair rate to use for net metering is the full value the utilities receive from the DG customers.

TASC claims that DG solar has added value not found in utility scale solar including: avoided energy, avoided generation capacity, avoided transmission costs, and avoided distribution costs. In addition, TASC states that solar DG offers the same emissions savings as central solar PV, but without the potential habitat, visual and cultural impacts associated with utility-scale solar.[416] TASC asserts that the geographic diversity of dispersed DG provides added reliability and offsets issues of intermittency that utility-scale solar cannot otherwise mitigate. Further, TASC asserts that DG solar, as a whole, enables an electric utility to defer or avoid the need to invest in capital plant that would be rate-based and lead to increased rates. TASC argues all these factors support the conclusion that DG solar is worth more to a utility and its ratepayers than utility scale solar.[417]

TASC urges the Commission not to value DG solar in a piecemeal fashion, and argues that the Value of DG docket is the only appropriate venue to determine the methodology for accounting for costs and benefits of DG and any changes to net metering.[418] TASC claims that there is no urgency that cannot wait for the Commission to complete the process in the Value of DG docket that is currently underway and is expected to create a methodology to value DG exports in utility rate cases.

TASC argues that the only way to implement the RCR, or other proxy rate, for exported power is through a rulemaking because unlike other Commission Rules, the Net Metering Rules do not include a waiver provision.[419]

Vote Solar

Vote Solar argues that the Commission should not approve UNSE's net metering proposal because to-date solar DG has had a negligible impact on UNSE's issues of cost recovery, to do so

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[415] A.A.C. R14-2-1805(B).
[416] TASC Reply Brief at 10-11, Ex TASC 21, Fulmer Surr at 31-32.
[417] TASC Reply Brief at 11.
[418] TASC Initial Brief at 8.
[419] TASC Initial Brief at 7.

would violate the Commission's Net Metering Rules, and moreover, the proposal is flawed.[420]

Vote Solar argues that solar DG is a negligible cause of UNSE's declining sales, responsible for only 3 percent of the decline in usage-per-customer, only 5 percent of the low-usage bills (300 kWh or less) and just 2 percent of the alleged cost shift.[421] Vote Solar asserts that UNSE has not quantified any grid impacts or related expenses attributable to solar DG.[422] Thus, Vote Solar believes that given the low DG penetration and its negligible impacts on the grid, on reduced sales, and on the cost shift, that UNSE's speculation about future impacts is not warranted and there is no need to change the current DG rate or the net metering program.

Vote Solar states that compensation at the retail rate and banking of excess energy are fundamental principles of net metering that are codified in Commission rules, but UNSE and others suggest that the parties fighting to retain net metering need to justify these existing net metering policies.[423] Vote Solar argues that it is inappropriate to grant UNSE's net metering proposal because it would amend or revisit the statewide Net Metering Rules in the context of a UNSE-specific rate case; and UNSE's request for a "partial waiver" of the rules is actually an attempt to eliminate net metering for all future DG customers. In addition, Vote Solar argues that the net metering request should also be rejected because it would be duplicative to eliminate net metering and require a demand charge.[424]

Vote Solar argues that both the REST and Net Metering Rules give customers the right to receive the full retail rate for DG exports and to bank the excess energy because "net metering" is defined as the energy produced by a net metering customer and delivered to the grid that "may be used to offset electric energy provided by the [utility] . . . during the applicable billing period."[425] In addition, according to Vote Solar, A.A.C. R14-2-1802(M) (part of the REST Rules) requires compensation at retails rates by defining net metering as a system of metering electricity by which the [utility] credits the customer at the full retail rate for each kilowatt-hour of electricity produced . . . ." [426]

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[420] Vote Solar Reply Brief at 9.
[421] Vote Solar Initial Brief at 5-8.
[422] Id. at 8-10.
[423] Vote Solar Reply Brief at 10.
[424] Vote Solar notes that when UNSE was proposing demand charges for all residential customers, it conceded that it would not need to address the current net metering policy. Ex UNSE-26 Tilghman Reb at 3. Staff also supported no change to net metering when it was supporting demand charges. Staff Initial Brief at 7.
[425] A.A.C. Rule R14-2-302(11).
[426] A.A.C. R14-2-1802(M).

Vote Solar also notes that the Commission's Rules prohibit singling out net metering customers for punitive or discriminatory rate treatment, and that utilities can't charge the net metering customer any additional fees or charges, or impose any equipment or other requirements, unless the same is imposed on customers in the same rate class that the net metering customer would qualify for if they didn't have generation equipment.[427] Furthermore, Vote Solar argues, the Net Metering Rules state any increased charge must be justified with cost of service studies and benefit/cost analyses.[428]

Vote Solar argues that the proposed RCR rate is flawed and should be rejected because: (1) it would unreasonably conflate distributed solar and utility-scale solar; (2) it would subject net metering customers to undue pricing uncertainty and volatility; (3) UNSE did not analyze the value of DG and whether the RCR would appropriately compensate DG exports; and (4) it would be premature to approve UNSE's proposal before the Commission completes the pending Value of DG docket.

Vote Solar argues that comparing distributed solar to utility-scale solar is not an "apples to apples" comparison as there are significant differences between the two resources, including that numerous geographically-dispersed solar systems provide benefits that a single centralized utility-scale facility does not, such as greater capacity benefits, greater avoided distribution costs, and greater local employment benefits.[429] Other differences, according to Vote Solar, include the restraints placed on distributed generation in the rules that are not faced by utility-scale facilities, and the fact that utility-scale facilities can market their energy to multiple entities while rooftop solar only has one potential purchaser. Vote Solar asserts that because of these differences, it would be unreasonable to compensate solar customers for excess energy based on utility-scale wholesale prices.

Vote Solar also opposes RUCO's alternative proposals.[430] Although Vote Solar believes the new alternatives set forth in RUCO's Initial Brief are an improvement over the options proposed at the hearing, they remain flawed. Vote Solar states that although RUCO's TOU option for solar customers does not include a demand charge, it unfortunately includes a $19 customer charge that Vote Solar believes is "punitive" and unrelated to cost causation. Vote Solar also believes the RUCO proposals

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[427] A.A.C. R14-2-2305 and R14-2-1801(M).
[428] A.A.C. R14-2-3205.
[429] Ex Vote Solar-6 Kobor Dir at 30.
[430] Vote Solar Reply Brief at 12-13.

remain overly complicated and have not been subject to discovery and a full analysis by the other parties. Vote Solar states there is no evidence that the penetration of DG solar is increasing, and thus there is no need to dramatically alter the rate design in the near-term. If the Commission determines that the rate design for residential and small commercial needs to be revised, Vote Solar believes that minimum bill and/or TOU proposals would be better options.

Vote Solar asserts that although UNSE focuses on solar customers, the ultimate concern appears to be declining sales and cost recovery caused by the closure of several of UNSE's large industrial customers, the slow pace of economic recovery, and large number of seasonal customers and vacant homes. Vote Solar argues that UNSE's claims that minimum bills do not send appropriate price signals seems to assume that the demand charges send more accurate signals. But, as UNSE's witness Overcast testified, the proposed demand charge does not reflect cost-causation either.[431] Vote Solar states that UNSE's Initial Brief did not explain the Company's "significant reservations" with the concept of a minimum bill, but, through testimony, Mr. Jones stated that it could be a move in the right direction.[432]

Grandfathering Net Metered Customers

UNSE

UNSE supports grandfathering DG customers who submitted completed interconnection applications by June 1, 2015, on the existing net metering tariff. These customers would not be limited to the three-part residential rate, but would have the option to select any residential tariff. The Company acknowledges that this proposal locks in the existing cost shift, but states that it is sensitive to the significant economic decisions that certain customers made, particularly those who also received upfront incentives to install their systems.[433] UNSE asserts that the June 1, 2015, date is reasonable because three months earlier, new DG customers were provided a written notice that they were required to sign, acknowledging that the rate could be changed in the future.[434]

UNSE argues the June 1st date is not retroactive ratemaking, as it is not the effective date of the new rates, but is the cut-off for customers who are exempt from the new rate. UNSE asserts that no

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[431] Vote Solar Reply Brief at 14; Vote Solar Initial Brief at 33; Ex UNSE-34 Overcast Reb at 29 & 31.
[432] Ex UNSE-32 Jones Reb at 43.
[433] UNSE Initial Brief at 35.
[434] UNSE Reply Brief at 23.

customer will be charged the new net metering rate until it receives Commission approval.[435]

UNSE believes that grandfathering provides more appropriate relief to DG customers than Staff's proposed 15 percent bill credit for pre-June 1, 2015 DG customers. UNSE also opposed Staff's post-June 1, 2015 mitigation of a $400 per kW subsidy which UNSE states would be paid by non-DG customers through the REST or some other similar mechanism.[436]

Staff

In pre-filed testimony Staff proposed a partial bill credit for existing DG customers rather than a traditional grandfathering. Staff states that it is not necessarily opposed to some form of grandfathering as a mitigating factor, but is concerned that any form of grandfathering must clearly define the elements of the current rate design that are included in the grandfathering (such as whether it includes the basic service and energy charges which change after each rate case); establish a fair and reasonable date for identifying the affected DG customers; define how long the facility is grandfathered based on lifespan or other factors; and not impede the Commission's ability to address rates for these customers in the future. [437]

AIC

AIC agrees with UNSE and Staff that June 1, 2015, is a reasonable cut-off for grandfathering existing DG customers because UNSE notified its customers that it would seek changes to the net metering scheme effective after this date, and any customer submitting an application after that date cannot argue that they reasonably relied on the continuation of the current net metering scheme.[438] In addition, AIC argues that existing DG customers should not be able to claim that they are being retroactively deprived of a full retail rate for excess energy because they are well aware that rates and incentives change over time, and part of the risk of installing solar is that it might not turn out to be as economically advantageous as customers thought. AIC asserts that UNSE cannot be forced to insulate DG customers from any changes in rates, or to guarantee them a rate of return on their investment.

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[435] Id.
[436] UNSE Reply Brief at 23-24 *citing* Ex UNSE-33 Jones RJ at 13, Tr. at 3709-11.
[437] Staff Reply Brief at 8.
[438] AIC Reply Brief at 17

RUCO

RUCO recommends that the Commission fully grandfather early adopting DG customers through June 1, 2015, at their current rates.[439] RUCO argues that, currently, the cost shift for partial requirement DG customers is manageable, and that it is important for the integrity of the Commission that it protect the benefit of the bargain for these early–adopters of DG. RUCO argues that the Commission should reject Staff's proposal to provide a partial bill credit, and rather fully grandfather these existing DG customers. RUCO argues that Staff's proposal is not fair as it does not provide those who adopted DG prior to the cutoff date with the deal they bargained for and may require them to pay back upfront incentives in order to remove their systems.[440]

TASC

TASC asserts that it is essential that the Commission fully grandfather existing net metering customers and not adopt the proposed effective date of June 15, 2015. TASC claims that mandatory demand charges imposed on DG customers who installed solar since June 15, 2015, would undermine their investment. TASC argues that the Company's proposed cut-off date is retroactive ratemaking, and contrary to numerous examples of Commission precedent for protecting customers from rate changes that would retroactively disadvantage them.[441] In addition, TASC argues that the proposed effective date is arbitrary and only serves to further the Company's antipathy towards DG customers. According to TASC, the Company has failed to justify why implementing retroactive rates on a small number of DG customers is sound or just or reasonable.[442]

Vote Solar

Vote Solar recommends that if the Commission makes any changes to the rate design affecting solar customers or the net metering rules that make solar less economical, it is imperative to fully grandfather existing solar customers. Vote Solar is adamant that UNSE's proposals would make solar DG less economical, to the detriment of existing solar customers and to the growth of DG.[443] Vote Solar acknowledges that under UNSE's new proposals, some customers would experience substantial

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[439] RUCO Initial Brief at 17.
[440] Id. at 16-17.
[441] TASC Initial Brief at 25-29.
[442] TASC Reply Brief at 13.
[443] Vote Solar Initial Brief at 48.

bill savings, but Vote Solar claims the analysis is not complete as it does not show how those bill savings would compare to solar customers' current bill savings.[444]

Vote Solar argues that it would be unfair to use a grandfather date of June 1, 2015, as it would have been impossible for solar customers who applied to install systems between June 1, 2015 and the date of a Decision in this matter to determine how the proposed rate and tariff modifications would affect them. Vote Solar states that until there is a final Decision in this case, solar customers cannot know how the new rates will affect them.

AriSEIA

AriSEIA believes that if there is any change in net metering policy, the changes should only affect customers who sign a contract after the final Decision in this docket is approved, and that all grandfathering provisions should remain in effect for 20 years after the system receives permission to operate.[445]

Analysis and Resolution – Net Metering

UNSE claims that under current rate designs, solar DG customers are, as a group, not paying their fair share of the costs incurred to serve them due to the unique characteristics of the way they depend on the grid.[446] In addition, the Company claims that solar DG is being subsidized by non-DG customers under current net metering tariffs, which operate to credit excess solar DG production at retail rates, and allow DG customers to bank excess solar for future credits.

The Commission opened the Value of DG docket specifically to address methodologies for determining the value and costs of solar DG to be used in rate proceedings. The hearing in the Value of DG docket commenced after the conclusion of the hearing in this case with many of the parties to this docket participating in both dockets. The Value of DG docket will not result in a specific rate that will be applicable to UNSE. It is anticipated, however, that the Value of DG docket will yield

[444] Vote Solar Reply Brief at 15, fn 70.
[445] AriSEIA Initial Brief at 8.
[446] When a UNSE customer opts to install rooftop solar, that customer essentially changes from a full-requirements customer to a partial requirements customer. These customers remain dependent on the grid for their electric needs when their demand is greater than their self-generation and when their systems are not producing electricity. They are different from full-requirements low-usage customers because their demand on the grid can fluctuate widely and the utility must be ready to service them instantaneously. The total load of the house does not change, nor do the utility facilities that were installed to serve that customer. The partial requirements customer may use less energy, but require the same capacity for delivery or production and transmission.

significant new information about how DG solar should be compensated.

We believe that the public interest favors consistent application of the results of the Value of DG docket. As a result, we will keep the net metering and rate design portions of this docket open pending the conclusion of the Value of DG docket. Thus, shortly after the conclusion of that docket, a second phase of this docket will be convened in order to apply the findings of the Value of DG docket to UNSE. In the second phase of this proceeding, in addition to determining the appropriate net metering tariff for UNSE for any new DG customers who file applications for interconnection after the effective date of the Decision that comes out of phase two of this proceeding, the Commission will also consider the Company's request to require DG customers to take service under three-part demand rates due to their status as partial requirements customers. In the interim, DG customers will be treated the same as non-DG customers under the various rate options.

We also note that currently the record in this case is not sufficient to determine the value or cost of DG solar for UNSE or to approve a specific rate for excess DG energy produced by UNSE's DG customers. For example, UNSE alleges that there are costs associated with DG solar in the form of increased wear and tear on the system and voltage regulation; however, UNSE has not yet quantified these costs in the record of this docket. TASC provided estimates of the value of DG solar but other parties have challenged the premises of the analysis and accuracy of those calculations. Furthermore, we have concerns about whether the proposed RCR, which depends on a single utility-scale PPA rate, is a reasonable proxy for the market price of excess solar DG. Other proposals were presented as late as the briefing stage of the proceeding when RUCO submitted several additional alternatives. However, none of the options were considered during the hearing; nor were they subject to cross-examination. Thus, even without the Value of DG Docket, additional proceedings, including a hearing, would be necessary in order to authorize any change to the current net metering tariff.

While we believe it is important to incorporate the results of the Value of DG docket into our consideration of the DG issues specific to UNSE, we also believe that the second phase of this proceeding should not be unnecessarily delayed. Thus, we direct the Hearing Division to convene a procedural conference in this docket nor more than 10 days after an Order is issued in the Value of DG docket. We also direct that pre-filed testimony and the hearing (if necessary) for the second phase of this docket be scheduled to commence as quickly as possible. In no case should a final Commission determination of the DG issues in this docket take place later than the March 2017 Open Meeting. If a Commission Order is not issued in the Value DG docket in a timeframe that allows for such resolution of this docket, the Commission will reconsider whether the Value of the DG docket must be completed before the second phase of this docket commences.

As RUCO has correctly noted, the "the Value of Solar docket focuses on deriving a methodology to calculate...dollar value[s], not a methodology for a rate design/compensation structure" (RUCO Exceptions, p.1). As the Commission awaits the conclusions of the Value of DG docket, which will inform our decision-making in phase two of this proceeding, we acknowledge the principles that generally guide our decision-making as we embark upon modernizing our ratemaking processes. Just and reasonable rates in the public interest involve rates that ensure fair compensation to solar DG customers, while being tempered by the non-firm nature of energy and DG users' reliance on the grid. We acknowledge that retail rates embed fixed costs associated with maintenance of the gird, costs which must be borne by all ratepayers. We reject claims that different rate treatments based on differences between DG and non-DG customers are inherently arbitrary, unjust and discriminatory. Mere adherence to the status quo, as Arizona moves into an era dominated by the challenges and opportunities of increased distributed generation on the gird, is unlikely to serve the public interest.

Furthermore, we are concerned that outdated rate designs may contribute to under-recovery of fixed costs and may not adequately reflect cost causation. Sending correct price signals to customers, avoiding misaligned subsidies and incentivizing efficiencies and innovation are critical if peak system load is to be reduced and efficient use of system resources is to be achieved—goals which benefit all ratepayers. Moreover, in light of the existence of a cost-shift from DG to non-DG customers, we urge the swift completion of the Value of DG docket so that equity for all customers – solar and non-solar alike- may be attained before the cost-shift increases as DG penetration grows. As a matter of principle and of policy, requiring the purchase of excess solar DG power whether it is actually needed and compensating excess solar at the retail rate no matter when the excess power is received, or treating kWhs delivered during less-valuable off-peak periods the same as kWhs delivered during a system peak, may not represent efficient use of system resources or an equitable long-term solution for all ratepayers. Public policy should not be ossified and competition, choice, innovation and market-based solutions are the preferred approach as we enter a new era dominated by customer-sited technologies and the gird upgrades and innovations that enable such technologies to exist and flourish. Potentially modernizing net metering policies based on data-drive conclusions reached in the Value of DG docket is part and parcel of the mission of ensuring rates that are just and reasonable and in the public interest.

We believe that deferring consideration of the mandatory three-part rates applicable to solar DG is warranted in order to consider the treatment of DG solar in a holistic manner and to avoid having multiple classes of DG customers, each subject to different rate treatment, due to the timing of when they elected the solar option. However there is one aspect of the DG rate design that we believe should be modified at this time. The record in this docket reflects that each DG customer requires a second meter, and that there are additional fixed costs associated with that second meter. The additional cost for the meter is $1.58. (See UNSE Updated Schedule G-6-1, Sheet 1 of 1, filed on April 4, 2016, a copy of which was also attached to UNSE's reply brief as Exhibit R-1.) This meter-related cost for the second meter required by DG customers is not being paid directly by DG customers and is currently being passed on to non-DG customers. It is appropriate for each DG customer to bear the cost of that customer's second meter. Therefore, UNSE is directed to include a $1.58 monthly charge in its Net Metering Rider to be applied to new DG customers. The revenue from this charge shall be credited to the LFCR to ensure that the charge is revenue neutral to UNSE.

Further, UNSE asserts in its reply brief that there are additional fixed costs associated with the second meter, including meter reading ($1.00) and billing and collection ($4.37) for UNSE's "costs of offsetting production from consumption and calculating credits." (UNSE Reply Brief, at 12-13.) We expect the Value of DG of docket to provide general guidance on the fixed costs of a second meter for DG customers, but company-specific testimony may also be necessary in determining the appropriate amount. Therefore, we direct the parties in Phase Two to provide testimony evaluating the other foists for the second meter required by DG customers.

Because solar DG represents such a small percentage of UNSE's current customers, and consequently a small portion of the lost fixed cost revenues, deferring a final decision on DG rates will not be a significant burden on UNSE, especially considering the revenue increase we have authorized herein. We take this action with the intent that the second phase of this proceeding will convene promptly following a Decision in the Value of DG docket. To encourage a prompt resolution of these matters, we direct our Hearing Division to docket a Recommended Opinion and Order in the Value of DG docket with sufficient time to be considered at the Commission's October 2016 Open Meeting.

Finally, we do not believe that the Company's proposed June 1, 2015 date for determining which DG customers should be subject to newly proposed rate options or net metering treatment is reasonable. Therefore, going forward, any DG customer who files an interconnection agreement prior to the effective date of a Decision in phase two of this proceeding shall be treated the same as a DG customer who filed for interconnection prior to that date.

We recognize that these issues will continue to persist for the foreseeable future, both in the second phase of this case and in other rate cases. We will therefore provide specific guidance in an effort to be helpful as we move forward through these issues.

In this Decision, we have rejected the Company's proposal to establish a grandfathering date that precedes the date of the Commission order. We emphasize that this result should be regarded as our default policy. Although we recognize that each unique rate case may warrant different results, we believe that the applicable grandfathering date should not generally precede the date of the relevant Commission Decision.

Furthermore, when implementing a new rate design or new net metering tariff for new DG customers, there should be a transition schedule so that changes are phased in, rather than implemented all at once. For example, in the upcoming second phase of this proceeding, parties should address how to phase in any changes to the export rate, to banking, to the implementation of demand charges, or to any other significant changes to net metering or rate design that would be applicable to new DG customers. This approach would be more consistent with traditional principles of regulatory gradualism.

Finally, we direct the parties in Phase Two to provide testimony evaluating 1) RUCO's rate options as discussed in pages 45-53 of this Order and 2) the following specific proposal, or other proposals that may emerge in the interim, which would be intended to apply if the Value of DG were found to be less than the retail rate.

The Company will collect from all customers a system benefit charge, which will be assessed as a kWh charge across all customer classes. The system benefit charge will be calculated by multiplying the kWhs exported from new net metering customers by the retail rate. This calculation is intended to mirror the calculation that occurs now under the Company's current net metering tariff for existing DG customers.

The funds collected in the system benefit charge will be applied to compensate new DG customers for their net metering exports at the value of DG rate ultimately determined in Phase Two of this proceeding. If the value of DG rate is less than the retail rate, there will be remaining funds, which will be applied as follows:

1. One quarter of the funds will be used for the development of programs that support new energy efficiency and demand reduction technologies that are designed to reduce system peak demand.
2. One quarter of the funds will be used for the development of energy storage devices that can be applied to reduce system peak demand.
3. One quarter of the funds will be credited to the Company's PPFAC to reduce the balance of fuel and purchased power costs to be collected from customers.
4. One quarter of the funds will be for the benefit of the Company's shareholders, and will be specifically applied to fixed cost recovery, and synchronized with the LFCR.

This system benefit charge shall remain in place for ten years. After the fifth year, the amount collected that exceeds the amount necessary to compensate new DG customers for their kWhs exports at the Value of DG rate will be reduced by twenty percent every year, until these excess amounts are extinguished.

Adjustor Mechanisms

PPFAC

UNSE

UNSE proposes revisions to the PPFAC that would change the rate from a "per kWh rate" to a "percentage based rate." UNSE believes that a percentage based rate is more equitable, provides a more accurate price signal, and does not result in disparate percentage bill impacts when the PPFAC rate changes.[447] UNSE asserts that the current PPFAC methodology is applied on a dollar per kWh basis equally across all customer classes and rate schedules and has no relationship to the customer's original base power supply rate. UNSE claims that its new proposal would be more consistent with cost-of-service ratemaking principles. The Company disagrees with Staff that the proposed change adds complexity, and notes that other surcharges, such as the LFCR, are currently assessed on a percentage basis.[448]

Because the Company would need to file a revised PPFAC Plan of Administration ("POA") to reflect the changes if its position is adopted, UNSE requests that the revised POA be required as a compliance filing in this docket.[449]

Staff

Staff supports continuing the current PPFAC methodology because it is simpler. Staff states that, as proposed, each customer class rate schedule has an unbundled rate component entitled Base Power, and TOU rate schedules have separate Base Power rates for on-peak and off-peak times, and seasonal rates have additional Base Power rates. Because UNSE proposes that the PPFAC rate be set as a percentage to be applied to the Base Power Component(s) of each rate schedule, Staff believes that it adds unnecessary complexity, and may shift costs among customer classes.[450]

RUCO

RUCO is concerned that the proposed change may shift costs between rate classes and may expose the ratepayers to more risk, and consequently, recommends that the Commission deny the Company's request to modify the current PPFAC.[451]

Analysis and Resolution – PPFAC

The Company has not presented a compelling reason for changing the current method of allocating fuel costs among the various rate classes in the PPFAC. Therefore, for the reasons set forth by Staff and RUCO, we decline to adopt UNSE's proposed PPFAC modifications.

In Direct Testimony, Staff recommended a base cost of power of $0.053288 per kWh, which

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447 UNSE Initial Brief at 54-55.
448 UNSE Reply Brief at 34.
449 UNSE Initial Brief at 55 and UNSE Reply Brief at 35.
450 Staff Initial Brief at 17.
451 RUCO Initial Brief at 19.

results in a total expense of $85,303,919 based on test year sales of 1,600,809,167 kWh.[452] Staff used the available actual costs from January through August 2015 and UNSE's forecasted costs of September through December 2015. UNSE recalculated the base cost of power to be $0.053689 per kWh using actual costs from January through December 2015, and proposed to update the base cost based on actual costs prior to establishing new rates.[453] The PPFAC will be re-set to zero when the new rates are established, and will vary monthly according to the provisions of the PPFAC POA. It is reasonable to adopt the position of UNSE and Staff, which would require UNSE to update the base cost of fuel and purchased power (resetting the PPFAC to zero) immediately prior to establishing new rates in this matter, based on Staff's methodology as proposed in the Direct Testimony of Staff witness Keene. It is also reasonable to require UNSE to file a revised PPFAC POA for Commission review and approval.

LFCR

UNSE

We recognize that when fixed costs are partially recovered from the volumetric energy charge, and sales of energy decline, a utility may be unable to recover all of its fixed costs. In a 2010 Policy Statement, the Commission was supportive of the use of a decoupled rate structure to address the problem.[454] At that time, the Commission encouraged utilities to develop customer rate designs that support energy efficiency and work well in tandem with decoupling (or alternative mechanisms). UNSE has a partial decoupling mechanism in the form of the LFCR. The LFCR was first approved as part of the settlement approved in Decision No. 74235.

Although the LFCR is a critical component of providing an opportunity for the Company to recover its fixed costs, UNSE claims that its LFCR does not address the entire fixed cost problem.[455] By excluding the recovery of fixed generation costs and 50 percent of the remaining non-generation demand costs, UNSE argues it cannot recover all lost fixed costs resulting from compliance with

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[452] Ex S- 7 Keene Dir at 9.
[453] Ex S-9 Keen Surr at 3.
[454] "Final ACC Policy Statement regarding Utility Disincentives to Energy Efficiency and Decoupled Rate Structures." December 29, 2010, Docket Nos. E-00000J-08-0314 and G-00000C-08-0314.
[455] UNSE Initial Brief at 52.

Commission policies.[456] The Company proposes to modify the LFCR by increasing the amount of fixed generation costs which it says are "necessary to meet current and anticipated load," as well as non-generation demand costs, and increasing the cap to 2 percent. UNSE states that fixed generation costs are significant and have been rising, and that when volumetric sales decline, the fixed costs associated with generation are not being recovered. Because UNSE is obligated to meet the load of its customers, it argues that generation fixed costs should be part of the LFCR recovery. UNSE claims that the proposed changes would better address the impacts of the continuing expansion of the Commission-mandated renewable and energy efficiency programs. UNSE notes that any wholesale sales from its generation assets are already credited against the PPFAC and, if there is any concern about double recovery as a result of the LFCR, the Company would credit any excess back to customers.[457]

The Company also proposes to simplify the LFCR charge into a single line on the bill, rather than to split the charge into EE and REST components. Finally, the Company proposes to eliminate the fixed charge option in the LFCR because no customers have opted to the use this option.[458]

The Company argues that opposition to the proposed changes is based on unrealistic, or inaccurate, assumptions and speculation that the Company has flexibility to adjust its power purchases to match its short-term needs.[459] Rather than denying recovery, of its generation costs based on speculation, UNSE asserts the Commission can simply require the Company to credit the PPFAC to the extent it sells wholesale power at a cost in excess of its fixed costs recovery to ensure there is no double recovery.[460]

UNSE states that it is experiencing increased DG and EE deployment that will soon result in lost fixed cost revenues that exceed the 1 percent cap (particularly if the LCFR is revised to include recovery of fixed generation costs and a portion of lost demand rates). UNSE states that the increased cap will avoid undue deferral of excess amounts and provide better temporal matching for recovery of lost fixed cost revenues. In response to Staff's opposition, which assumes lower fixed cost losses resulting from DG, UNSE states that keeping the cap would not eliminate LFCR recovery, but simply

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[456] Id.
[457] UNSE Reply Brief at 33.
[458] UNSE Initial Brief at 52.
[459] Id. at 53.
[460] Id.

defer it, and customers will eventually pay the amount due under the LFCR.[461]

In response to RUCO's claim that including fixed generation costs would turn the LFCR into a "full decoupler" that would shift risk to the residential customers,[462] UNSE argues that the issue is not about risk, but the fundamental principle of ratemaking that rates must recover the prudently incurred costs of providing utility service.

TASC has suggested that the LFCR is "likely unconstitutional."[463] However, the Company asserts that the LFCR was established in a rate case with a full fair value finding, and thus complies with all requirements of the Arizona Constitution.[464] UNSE states that the LFCR helps it recover its fixed costs and thereby helps ensure that the Commission meets it constitutional obligation to approve just and reasonable rates.

Furthermore, UNSE asserts, to the extent the LCFR is considered an adjustor mechanism, it also meets all the requirements that courts have set for such mechanisms-- i.e. it is set in a rate case, based on specific costs, and does not change the rate of return. UNSE claims that the recent court of appeals decision in *Residential Util. Consumer Office v. Arizona Corp. Comm'n*,[465] does not invalidate the LFCR. UNSE claims that the LFCR is different that the System Improvement Benefit ("SIB") mechanism that was found to violate the fair value requirement in the recent RUCO case. The SIB involved utility plant added between rate cases, with annual surcharges that increase rates based on the added rate base. UNSE states that the LFCR does not have either feature because the rate base, operating expenses and rate of return remain unchanged, and the LFCR simply adjusts the volumetric rates to account for some of the reduced kWh volume.[466]

RUCO

RUCO asserts that including generation losses is contrary to the design and purpose of the LFCR and argues that the Commission should reject the Company's proposal to include generation

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[461] Id. at 54.
[462] RUCO Initial Brief at 18.
[463] TASC Initial Brief at 36-37.
[464] *Simms v Round Valley Light & Power Co.*, 80 Ariz. 145, 151,(1956)(The Arizona Constitution requires the commission to find the fair value of a utility's property and use such finding as a rate base for calculating just and reasonable rates).
[465] 238 Ariz. 8 ¶ 50, 355 P.3d 610, 620 (App. 2015) *cert. granted* Feb 9, 2016.
[466] UNSE Reply Brief at 31-2.

losses in the LFCR.[467] RUCO argues the LFCR was not designed to recover lost generation fixed costs as it is not a full revenue decoupling mechanism. RUCO contends that to treat it as such shifts risk to the residential customers. RUCO agrees with Staff that the Company's purchased power program has a significant amount of flexibility, which allows it to adjust its purchases to match its short-term needs, and purchased power is not affected if energy is delivered to a new or existing customer or sold off system.

Staff

Staff did not address the LFCR in its post-hearing briefs. In its pre-filed testimony, however, Staff recommended that the Commission reject the Company's proposed changes to the LCFR, except it agreed that the Company should be permitted to eliminate the Fixed Charge Option.[468] Staff believes that the Company's purchased power program has a significant amount of flexibility that would allow the Company to adjust its purchases to match its short-term needs. Staff states that the LFCR is not designed to compensate for non-specific sales losses or business climate changes, nor was it intended to shift risk to customers.

Staff believes the current LFCR, which provides for the recapture of a portion of distribution costs collected in the volumetric rates, is sufficient when the Company also collects distribution costs from demand charges that do not fluctuate with declining sales as much as volumetric charges. Staff opposed the increase in the cap because the mechanism has not yet reached the 1 percent cap, and if the other changes to the LFCR are not adopted, then there is no need to increase the cap.

Vote Solar

Vote Solar opposes UNSE's proposed modifications to the LFCR.[469]Vote Solar provided testimony that because UNSE can avoid the fixed generation costs associated with DG and EE, those costs should not be included in the LFCR.[470]

TASC

TASC argues that the proposed LFCR mechanism should be denied as unconstitutional

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[467] RUCO Initial Brief at 17.
[468] Ex S-5 Solganick Rate Dir at 52-57; Ex S-6 Solganick Surr at 14.
[469] Vote Solar Reply Brief at 14.
[470] Ex Vote Solar-6 Kobor Dir at 46.

pursuant to the recent decision of the Arizona Court of Appeals that found a SIB mechanism was unconstitutional.[471] TASC believes that the SIB and the LFCR are substantially similar for purposes of constitutional analysis, as they allow a utility to increase rates and revenue between rate cases, and if the SIB is ultimately found to be unconstitutional, the LFCR would likely be as well. TASC argues that given the uncertainty that surrounds the use of adjustor mechanisms, the Commission should refrain from expanding its reach.

Analysis and Resolution – LFCR

UNSE has not met its burden to show that its proposed changes to the LFCR mechanism are in the public interest. The LFCR mechanism is not intended to operate as a full de-coupler mechanism, but rather to collect the lost fixed cost revenues associated with Commission-mandated programs such as Energy Efficiency and DG. However, we will allow UNSE to eliminate the fixed charge option in its LFCR given that no customers have chosen this option.

Transmission Cost Adjustor - TCA

UNSE

UNSE is not seeking modification of its Transmission Cost Adjustor, but states that it has not agreed with Staff on a final version of a POA. UNSE requests that the Commission require the filing of a final TCA POA as a compliance item in this Order.[472] The actual TCA rate will be set near to zero as the revenues currently being recovered through the TCA are now being recovered through base rates.

Staff

Staff does not discuss the TCA in post-hearing briefs. Staff's pre-filed testimony indicates that at that time, Staff and the Company still had disagreements concerning the TCA POA. Staff recommended that the Company provide an updated POA for the TCA before the conclusion of the proceeding.[473]

Analysis and Resolution

We direct UNSE to file a revised TCA POA for Staff's review. Staff should prepare a

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[471] TASC Initial Brief at 36; Residential *Utility Consumer Office ("RUCO") v Arizona Corp. Comm'n*, 238 Ariz. 8 (App. 2014), cert granted Feb. 9, 2016.
[472] UNSE Initial Brief at 56.
[473] Ex S-12 Van Epps Surr at 2.

Recommended Order addressing the Company's filing, and any interested party to this proceeding may file comments on UNSE's filing or the proposed Staff Order.

Property Tax Deferral

UNSE

UNSE requests that the Commission grant it authority to defer two types of property tax expenses for two issues. First, the Company requests a deferral of the legal costs, as well as the property tax reductions that may be obtained from the property tax appeal, for the Gila River plant. UNSE states that the appeal would result in substantial savings that will benefit ratepayers for decades. Second, UNSE requests authority to defer property tax expenses that result from tax rates that are higher or lower than the test year. UNSE states that its effective tax rate is constantly increasing, leaving it with unrecovered tax expenses year after year. Neither type of deferral would change rates in this case, but would allow UNSE to request recovery in a future rate case.

UNSE is currently disputing the Arizona Department of Revenue ("ADOR") $50 million property tax valuation of Gila River. UNSE claims a value of $29 million, with the difference due to different interpretations of property tax law. The plant has an estimated remaining life of 35 years, so UNSE claims that a successful appeal would benefit ratepayers for many years, and under UNSE's proposal ratepayers would begin to benefit immediately from a successful appeal, without waiting for a new rate case.[474]

UNSE argues that it is not certain that if it prevails in the appeal that it will be awarded legal fees, and even if it is, the award will be less than the actual legal costs. USNE argues that deferral of the legal fees is needed to compensate the Company for its legal expenses, and any legal fees recovered from ADOR will be credited against the deferral. The Company argues that RUCO's proposed cap on costs is not reasonable because UNSE cannot know how long the case will take. UNSE could avoid 100 percent of the legal costs by not appealing, and ratepayers would be responsible for 100 percent of the property tax expense.

UNSE also argues that a deferral for the changes in property tax rates is reasonable and in the

[474] Ex UNSE-15 Rademacher Reb at 8.

public interest. Property tax expense is a function of property valuation and tax rates. When property values fall, taxing authorities have compensated by raising property tax rates. These effects can cancel each other out, but because UNSE is constantly making capital improvements, the value of its property typically rises, thus, the Company is hit with both increasing valuations and increasing tax rates. The result was that in the last rate case, the level of property tax expense approved for recovery in rates fell short of UNSE's actual tax payments.[475] USNE asserts that unless some type of deferral or other relief is granted, it will never "catch up," and rates will never recover the full amount of property taxes paid on property serving customers. Thus, the Company requests deferral of 100 percent of the property taxes above or below the test year caused by increases or decreases in the composite tax rate. UNSE claims that this will not allow UNSE to timely recover all property tax expenses, but the Company believes it is a step in the right direction.[476]

UNSE provided a sample calculation to be performed each year until UNSE's next rate case:[477]

1) Test Year Assessed Value	$59,950,520
2) Gila Assessed Value Reduction – Successful Appeal*	$3,780,000
3) Adjusted Assessed Value (1-2)	$56,170,520
4) Actual Composite Rate **	12.5000%
5) Test Year Composite Rate	11.2370%
6) Deferral Change in Composite Rate (3x(4-5))	$709,411
7) Deferral: Gila Value Reduction (2x5)	($424,760)
8) Deferral Appeal Expenses**	$25,000
9) Total Deferral (6+7+8)	$308,651

*$21 million possible reduction in full cash value multiplied by 18 % assessment ratio

**For illustrative purposes only

UNSE states that RUCO's claim that Mohave County property tax rates have not increased is

[475] UNSE states that the composite property tax rate approved in the last rate case, based on 2012 tax bills, was 10.0087 percent, but the tax rates in effect in 2013 – 2015 were higher at 10.7666 percent to 11.5599 percent. UNSE Initial Brief at 58.

[476] UNSE Initial Brief at 59.

[477] Ex UNSE-14 Rademacher Dir at 19.

based on a review of the primary tax rate between 2014 and 2015, and ignores the trend of increasing rates from 2010 to 2014, as well as other components of the Company's overall Mohave County property tax rates. UNSE states that its composite tax rate has increased 15.5 percent from 2012 to 2015.[478]

RUCO

RUCO recommends a 50/50 cost sharing between the Company and ratepayers for any benefits resulting from a successful appeal of the Gila River valuation, and also recommends that a cap be placed on the costs to protect ratepayers.[479] RUCO does not dispute that ratepayers would benefit from an appeal of the Gila River property taxes. RUCO believes that a successful appeal would provide equal benefits to the Company and ratepayers.[480]

RUCO opposes granting the Company an accounting order for property taxes above or below the test year level. RUCO asserts that it is not the case in Mohave County that, as property values have declined, tax rates have increased. In addition, RUCO argues that although APS was granted such a deferral order, it was bargained for as part of a settlement which reduced the cost of equity by 100 basis points. RUCO doesn't believe there is any reason to depart from the traditional method of accounting for property taxes in UNSE's case.

Staff

Staff did not address this issue in post-hearing briefs, but in pre-filed testimony recommended accepting the Company's property tax deferral because it allows for recovery of items that are beyond the control of the Company and balances the interest of consumers and shareholders.[481] Staff believes it was a reasonable compromise because the legal costs would be offset by the benefits.[482]

According to Staff, because UNSE's book value of assets rises with its annual capital expenditures, when a taxing authority raises tax rates, UNSE's tax payments increase, and the test year level of property taxes will fall short of actual tax payments. Staff notes that the Commission approved a property tax deferral for APS in 2012, but Staff claims UNSE's request differs somewhat from that

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[478] UNSE Reply Brief at 37-38.
[479] RUCO Initial Brief at 19.
[480] RUCO Reply Brief at 13
[481] Ex S-1 Mullinax Dir at 30-34.
[482] Tr. at 595.

approved for APS.[483] For example, UNSE proposed recovery of 100 percent of any property tax increase or decrease, whereas the APS deferral has limits on the percentage increase in the property tax rate; and the UNSE proposal would recover both positive and negative balances over the same three-year period, while the APS deferral required the Company to recover positive balances over ten years, and negative balances to be refunded over three years. Further, Staff points out that UNSE is requesting a property tax deferral related to the Gila River valuation methodology and cost of appealing, and although UNSE plans to appeal the Mohave County valuation of Gila River, in the interim it must make tax payments based on the higher valuation.

Analysis and Resolution – Property Tax Deferral

The proposed deferral appropriately balances the interests of the ratepayers and shareholders. The Company is not required to appeal the Gila River valuation, and in the event of a successful appeal, ratepayers will benefit over the life of the plant. The benefits of the lower valuation would be substantial and it is fair that the costs of obtaining those benefits should be considered. In addition, with the periodic nature of rate cases, but the annual assessment of property taxes, there is always a lag in recovering these expenses. They are not an expense over which the utility has any control, and UNSE provided evidence that composite property tax rates have increased over recent years.[484] A deferral of the increased expense attributable to a change in the composite tax rate is reasonable. Thus, we concur with Staff that the Company's deferral proposal should be adopted.

Other Requested Approvals

Approval of Depreciation Rates

UNSE proposed new depreciation rates based on an updated depreciation study.[485] The proposed rates are lower for many asset accounts and result in an overall decrease in depreciation expenses. No party to the docket opposed the proposed depreciation rates. UNSE requests that the Commission approve the proposed depreciation rates. We adopt UNSE's proposed depreciation rates.

Approval of Revisions to USNE's Rules and Regulations

UNSE proposed revisions to its Rules and Regulations in an effort to modernize the tariff, bring

[483] Decision No. 73183 (May 24, 2012).
[484] Ex UNSE-14 Rademacher Dir at 16.
[485] Ex UNSE-7 White Dir Exhibit REW-1.

them closer to the Rules and Regulations of its sister company, TEP, and clarify areas that have caused undue confusion.[486] UNSE believes that it has resolved all of Staff's concerns, but not all of ACAA's concerns. UNSE does not agree with the following requests by ACAA with respect to its Rules and Regulations:

1. ACAA requested that CARES customers be held harmless from the modifications regarding deposits in Subsection 3.B.3. UNSE believes equitable treatment among customers regarding deposits is appropriate, and states that it takes significant efforts to provide workable solutions for its customers who face challenges in paying bills or deposits. (We addressed this dispute under our discussion of the CARES option).

2. UNSE does not agree with ACAA's request to excuse customers who file for bankruptcy form providing a deposit. UNSE states that Subsection 3.B.2 is consistent with the approved Rules and Regulations of other Arizona utilities, and that a deposit on a post-petition account is an appropriate assurance of payment under 11 U.S.C. § 366.

3. In Subsection 12.H, ACAA requested the use of a current limiting device as an alternative to disconnection for low-income customers. UNSE states that this provision has been withdrawn in response to Staff's concerns.[487]

Staff

Staff has reviewed UNSE's proposed modifications to its Rules and Regulations and made suggested revisions throughout the hearing process. UNSE submitted a red-lined version to Staff reflecting the agreed revisions. Staff states that with one minor exception, Staff has determined that the revised Rules and Regulations are acceptable.[488]

Analysis and Resolution – Rules and Regulations

ACAA did not address the bankruptcy deposit issue or the current limiting device in post-hearing briefs. Thus, it is not clear if these issues remain in dispute. In any event, we find UNSE's proposals concerning these issues to be reasonable. We are not aware of any remaining dispute between the Company and Staff concerning the Rules and Regulations. Consequently, we approve the final

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[486] UNSE Initial Brief at 63-64.
[487] Tr. at 683-84.
[488] Staff Initial Brief at 16. Staff's Brief did not identify the minor exception.

version submitted with UNSE's Initial Brief with one change: we direct UNSE to leave the installment period over which outstanding balances may be paid at 6 months instead of the 3 months UNSE had proposed (at Sheet Number 911-5, Section 11, I. 2., c.), and direct the Company to file a clean version as a compliance filing.

Plans of Administration for REST and DSM surcharges

Staff requested that UNSE submit a new POA for its REST surcharge and its DSM surcharge. The Company states that it submitted both POAs, but that the Company and Staff have not yet agreed upon final versions of either. UNSE requests that the Commission order the Company to submit final versions of the REST and DSM POAs as compliance items within 60 days of the Decision in this docket, for Commission review and approval. The Company states that it will continue to work with Staff to refine the draft POAs that were submitted.[489]

* * * * * * * * * *

Having considered the entire record herein and being fully advised in the premises, the Commission finds, concludes, and orders that:

FINDINGS OF FACT

1. On May 5, 2015, UNSE filed with the Commission an Application for a rate increase. Accompanying the Application and its attendant Schedules, UNSE filed the Direct Testimony of David Hutchens, Terry May, Michael Sheehan, Carmine Tilghman, Kenneth Grant, Ann Bulkley, Ronald White, Jason Rademacher, David Lewis, Dallas Dukes, Craig Jones, and Denise Smith.

2. On June 3, 2015, the Company filed an amendment to the Application.

3. On June 4, 2015, Staff notified the Company that its Application met the sufficiency requirements of the Arizona Administrative Code ("A.A.C.") and classified the Company as a Class A utility.

4. On June 9, 2015, after consultation with Staff and RUCO, UNSE filed a Motion for Procedural Schedule which proposed a schedule for the hearing.

5. By Procedural Order dated June 22, 2015, the proposed schedule was adopted and the

[489] UNSE Initial Brief at 64.

matter was set for hearing to commence on March 1, 2016, at the Commission's Tucson office.

6. Intervention was granted to RUCO, APS, WRA, Vote Solar, TASC, Nucor, Noble, Walmart, SWEEP, AECC, ACAA, AIC, AURA, ASDA, SSVEC, Trico, FPAA, and AriSEIA.

7. On July 16, 2015, AIC filed a Motion for Leave to Intervene and to Supplement the Procedural Order to Clarify Application of the Ex Parte Rules.

8. By Procedural Order dated, August 13, 2015, it was ordered that A.A.C. R14-3-113 (ex parte rule) applies to individual members of intervening membership organizations.

9. On September 9, 2015, UNSE filed a Notice of Mailing and Publication indicating that notice of the hearing was mailed to its customers as a bill insert beginning on August 1, 2015, and ending on August 31, 2015; published in newspapers of local circulation in UNSE's service territory on August 3, 2015, August 4, 2015 and August 5, 2015;[490] and also placed in the Mohave County Library District Lake Havasu in Lake Havasu, Arizona; the Mohave County Library District Kingman in Kingman, Arizona; and the Nogales-Rochlin Library in Nogales, Arizona on August 12, 2015.

10. On September 18, 2015, UNSE filed Supplemental Information In Support of Application, comprised of schedules to the proposed revised PPFAC POA.

11. On November 5, 2015, ACAA filed the Direct Testimony (except that related to rate design and cost of service) of Cynthia Zwick. On November 6, 2015, Direct Testimony (except that related to rate design and cost of service) was filed for: Steve Chriss by Walmart; Mark Fulmer and J. Randall Woolridge by TASC; Jeffrey Michlik and Robert Mease by RUCO; Jeff Schlegel by SWEEP; and Howard Solganick, Barbara Keene, Elijah Abinah, Donna Mullinax, Candrea Allen, and Eric Van Epps by Staff.[491]

12. On December 9, 2015, Direct Testimony on Rate Design and Cost of Service was filed by: ACAA for Zwick; Walmart for Chris Hendrix and Gregory Tillman; RUCO for Lon Huber; AECC and Noble for Kevin Higgins; Nucor for Jay Zarnikau; AURA for Patrick Quinn and Thomas Alston; AIC for Gary Yaquinto and Daniel Hansen;[492] WRA for Kenneth Wilson; SWEEP for Mr. Schlegel; FPAA for Lance Jungmeyer and Kent Simer; APS for Charles Miessner and Ahmad Faruqui; Vote

[490] The *Kingman Daily Miner*, *Nogales International*, *Santa Cruz Valley Power Pak*, and *Today's News-Herald*.
[491] SWEEP filed an Errata to its November 9, 2015 testimony on November 9, 2015.
[492] On December 21, 2015, AIC filed a corrected copy of Mr. Hansen's testimony that included all exhibits.

Solar for Briana Kobor; and Staff for Mr. Solganick and Thomas Broderick.

13. On January 19, 2016, UNSE filed the Rebuttal Testimony of Mr. Hutchens, Mr. Grant, Ms. Bulkley, Mr. Lewis, Mr. Rademacher, Mr. Sheehan, Mr. Tilghman, Mr. Dukes, Mr. Jones, Ms. Smith, and H. Edwin Overcast; and ACAA filed the Rebuttal Testimony of Ms. Zwick.

14. On January 21, 2016, UNSE filed a Motion for Preliminary Pre-hearing Conference, seeking to schedule witnesses prior to the Pre-Hearing Conference to facilitate planning. On January 22, 2016, Staff filed a Response to the Motion, supporting the Company's request.

15. By Procedural Order dated January 25, 2016, in lieu of scheduling a preliminary pre-hearing conference, the parties were directed to confer and submit a proposed witness schedule prior to the Pre-hearing Conference set for February 26, 2016.

16. On January 26, 2016, AURA filed a Motion to Extend Procedural Schedule. AURA sought to extend the filing of Surrebuttal Testimony and the hearing in this matter for approximately two months because UNSE's Rebuttal Testimony adopted Staff's recommended rate design, which included mandatory residential demand charges. AURA argued UNSE's modified rate design was an abrupt change of position which warranted additional time for discovery and preparation. RUCO filed a Response to AURA's Motion on January 26, 2016, supporting the request.

17. On January 27, 2016, UNSE filed an Opposition to AURA's Motion, arguing that its acceptance of Staff's recommended rate design that was first advanced on December 9, 2015, is not sufficient grounds to delay the rate case.

18. On January 27, 2016, ACAA, Vote Solar, SWEEP and WRA filed Responses to AURA's Motion, supporting the requested continuance.

19. On January 28, 2016, AIC filed its Opposition to AURA's Motion.

20. On January 29, 2016, ARUA filed a Reply in Support of its Motion.

21. By Procedural Order dated January 29, 2016, AURA's Motion to Extend the Procedural Schedule was denied on the grounds that acceptance of Staff's recommendations in Rebuttal Testimony is not unusual and the prospect of mandatory residential demand rates was made an issue in the case since at least December 9, 2015 when Staff filed its rate design testimony. In addition, it was found that as a practical matter, delaying this rate case would adversely affect a number of proceedings

involving many of the parties to this case scheduled before the Commission throughout 2016.

22. On January 29, 2016 and February 3, 2016, the Sun City Homeowners Association ("SCHOA") and the Property Owners and Residents Association of Sun City West ("PORA"), respectively, filed requests to intervene. On February 2, 2016, UNSE filed an Opposition to SCHOA's Intervention Application.

23. By Procedural Order dated February 5, 2016, the requests to intervene were denied on the grounds that neither SCHOA nor PORA represent ratepayers who reside within UNSE's service territory; residential ratepayers were already adequately represented by other intervenors; and the requests were not timely. These entities were informed that they could file public comments.

24. On February 16, 2016, after conferring with the parties to the proceeding, the Company filed a Proposed Witness Schedule.

25. On February 18, 2016, Staff filed a Request for an Extension to File Surrebuttal Testimony from February 19, 2016 to February 23, 2016.[493]

26. By Procedural Order dated February 19, 2016, Staff's requested extension was granted for all affected parties, and the filing deadline for Rejoinder Testimony was extended to February 29, 2016.

27. On February 19, 2016, Surrebuttal Testimony was filed by Walmart for Mr. Tillman and Mr. Hendrix.

28. On February 23, 2016, Surrebuttal Testimony was filed by: ACAA for Ms. Zwick; RUCO for Mr. Huber and Mr. Michlik; AECC and Noble for Mr. Higgins and Michal McElrath; Nucor for Dr. Zarnikau; TASC for Mr. Fulmer and Mr. Woolridge; SWEEP for Mr. Schlegel; WRA for Mr. Wilson; AURA for Mr. Quinn, Mr. Alston and Scott Rubin; FPAA for Mr. Simer; APS for Mr. Miessner, Dr. Faruqui, Cory Welch and Ashley Brown; AIC for Mr. Yaquinto and Mr. Hansen; Vote Solar for Ms. Kobor; and Staff for Mr. Solganick, Ms. Keene, Ms. Mullinax, Yue Liu, Ms. Allen, Mr. Van Epps, and Mr. Broderick.

29. A Pre-Hearing convened on February 26, 2016, as scheduled in the June 22, 2015 Rate

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[493] Responses to Staff's request were filed on February 19, 2016 by APS, AIC, AECC and Noble.

Case Procedural Order. Appearing through counsel at the Pre-hearing Conference were: UNSE, APS, TASC, FPAA, RUCO, Walmart, Nucor, AIC, SWEEP, WRA, ACAA, Vote Solar, AECC, Noble, AURA, SSVEC, ASDA, and Staff. The parties discussed the hearing schedule and the pre-filed proposed witness schedule was discussed, modified and adopted. TASC notified the parties that it was considering identifying an expert witness to address the issues raised by an APS witness in Surrebuttal Testimony.[494] UNSE and APS requested that TASC identify any potential new witness as soon as possible.[495]

30. On February 29, 2016, UNSE filed the Rejoinder Testimony of Mr. Hutchens, Mr. Grant, Ms. Bulkley, Mr. Lewis, Mr. Sheehan, Mr. Tilghman, Mr. Dukes, Mr. Jones, Mr. Overcast and Ms. Smith.

31. On February 29, 2016, TASC filed a Motion to Strike APS Surrebuttal Testimony of Ashley Brown and Corey Welch and Motion to Continue Surrebuttal Testimony, on the grounds the testimony of the two witnesses were not disclosed until they filed Surrebuttal Testimony.

32. The hearing convened as scheduled on March 1, 2016, before a duly authorized Administrative Law Judge at the Commission's Tucson offices. The proceeding commenced with public comment.[496] The pending Motion to Strike was discussed and denied.[497] The hearing reconvened on March 3, 2016 and concluded on March 23, 2016. At the conclusion of the hearing, the ALJ took the matter under advisement, pending the filing of Final Schedules, late-filed exhibits and Closing Briefs.

33. On March 3, 2016, TASC filed an Expedited Motion for Expedited Responses to Discovery Requests Served on APS. The same date, APS filed a Response to Supplement Record Regarding TASC's Expedited Responses to Discovery Request. On March 8, 2016, the Expedited Motion was discussed on the record, at which time the parties reported they were attempting to reach a consensual resolution.[498]

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[494] February 26, 2016 Pre-Hearing Conference Transcript at 25.
[495] *Id.* at 29-31.
[496] At the commencement of the hearing, the Commission was in the process of scheduling additional Public Comment meetings in locations within UNSE's service area, but had not yet finalized the details.
[497] Hearing Transcript ("Tr. at 120-136.
[498] Tr. at 260-1.

34. On March 8, 2016, TASC filed an Expedited Motion to Compel in which it sought an order requiring UNSE to respond to TASC's Data Request 10.1. The Motion was discussed and granted on the record on March 8, 2016.[499]

35. By Procedural Order dated March 9, 2016, the Commission ordered UNSE to publish public notice of three Public Comment Meetings scheduled for March 22, 2016, in Nogales, Arizona, and on March 31, 2016 in Kingman and Lake Havasu, Arizona.

36. On March 24, 2016, UNSE filed a Notice of Publication indicating that Notice of the Public Comment Sessions was published in newspapers of local circulation on March 15, 2016, and March 16, 2016.

37. The Commission conducted Public Comment Meetings in Nogales on March 22, 2016 and in Kingman and Lake Havasu on March 31, 2016. The Commission determined that additional public comment should be conducted, and set a second Public Comment Meeting in Lake Havasu on April 18, 2016. By Procedural Order dated April 6, 2016, the Commission scheduled the Public Comment Meeting and ordered UNSE to publish public notice.

38. On April 4, 2016, UNSE filed Late-Filed Exhibits UNSE-45 to UNSE-47 regarding a revised SGS rate; Late-Filed Exhibit UNSE-48, providing a revenue requirement spreadsheet; and Updated Schedules.

39. On April 13, 2016, Commissioner Burns filed a Letter in the docket requesting additional information from the parties concerning alternative rate designs to mandatory three-part residential rates, the cost of equity if three-part rates are not adopted, and a discussion of the reasonableness of the proposed transition time to three-part rates.

40. On April 18, 2016, a second Public Comment Session convened in Lake Havasu, Arizona.

41. On April 20, 2016, UNSE filed a Notice of Publication indicating that it had the public notice of the April 18, 2016 Public Comment meeting published in the *Today's New-Herold*, a newspaper of general circulation in UNSE's service territory on April 12, 2016.

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[499] Tr. at 817-823.

42. On April 22, 2016, Staff filed a notice of the initiation of settlement discussions to commence at a date and time to be determined, and inviting all parties to participate in the settlement efforts.

43. On April 25, 2016, Staff filed Notice of Settlement Discussions for April 28, 2016, at the Commission's offices, with a conference bridge available.

44. On April 25, 2016, Opening Briefs were filed by UNSE, RUCO, AIC, AURA, Vote Solar, SWEEP/WRA/ACAA, Nucor, Walmart, APS, AECC/Noble, TASC, FPAA and Staff.[500]

45. On April 25, 2016, Chairman Little filed a Letter in the docket, expressing concern about the public reaction to the proposed three-part rates for residential customers and encouraging the parties to explore alternative rates not involving mandatory demand charges, and suggesting consideration of a renewable credit rate for net metering customers that could be fixed for a period of time.

46. On April 28, 2016, Commissioner Forese filed a Letter in the docket seeking additional information on the severe health and economic conditions in UNSE's territory and the adequacy of the low-income programs.

47. On May 10, 2016, Commissioner Stump filed a Letter in the docket encouraging the parties to discuss a market-based aggregation credit approach to net metering along the lines of a proposal in Maine or RUCO's RPS Bill Credit Option, or other market-based approach.

48. On May 11, 2016, Reply Briefs were filed by UNSE, APS, AECC/Noble, TASC, RUCO, AURA, Nucor, Vote Solar, AIC, TASC, FPAA, AriSEA, and Staff.

49. UNSE is an Arizona public service corporation engaged in the generation, transmission and distribution of electricity to approximately 93,000 customers in Mohave and Santa Cruz Counties, Arizona.

50. UNSE is wholly-owned by UniSource Energy Services, Inc., which is a wholly-owned subsidiary of UNS Energy Corporation and an indirect wholly-owned subsidiary of Fortis, Inc. UNSE is an affiliate of UNS Gas Inc. and TEP.

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[500] SSVEC filed a Notice that it would not be filing post-hearing briefs.

51. UNSE's current rates were established in Decision No. 74235 (December 31, 2013), based on a test year ending June 30, 2012, with rates effective on January 1, 2014.

52. For purposes of this proceeding, the Company, Staff, and RUCO reached accord that UNSE's adjusted test year OCRB is $270,293,000, and that the fair value of the Company's jurisdictional rate base for the test year is $354,001,000. No party objected to the agreed FVRB. We concur with the parties that for purposes of this rate case, UNSE's FVRB is $354,001,000.

53. In the test year, UNSE had adjusted Operating Revenues of $156,717,000, and adjusted Operating Income of $10,530,000, resulting in a rate of return on its FVRB of 2.97 percent.

54. In the test year, the Company had a capital structure consisting of 47.17 percent long-term debt and 52.83 percent equity.

55. Using The Company's actual capital structure is appropriate for establishing rates in this matter.

56. A return on common equity of 9.50 percent and an embedded cost of long-term debt of 4.66 percent are appropriate estimates of the cost of capital for purposes of this rate case.

57. A FVROR of 5.63 percent on UNSE's FVRB produces rates that are just and reasonable.

58. It is reasonable to authorize for UNSE an increase in its non-fuel revenue requirement of $15.1 million, an increase over test year revenues of 9.6 percent.

59. The various rate options offered by UNSE in its Initial Brief for residential customers (a standard two-part rate, two-part TOU rate, three-part rate and three-part TOU rate) and for SGS customers, as modified to be available to both non-DG and DG customers until further order of the Commission, and to reflect the revenue allocations and other adjustments approved herein, are reasonable.

60. In order to encourage residential and SGS customers to move to rates other than standard two-part rates, it is reasonable to authorize the rate plan process described herein.

61. It is reasonable to require UNSE to prepare and submit a customer communications plan with the Commission by September 30, 2016 that is designed to educate customers about their rate options and how they can manage their bills, and to permit interested parties to file comments on that plan by October 28, 2016.

62. Because we adopt a different revenue allocation than either Staff or the Company, until UNSE files new rate schedules and proof of revenue that conform to our authorizations herein, we cannot provide an exact bill impact analysis. However, we estimate that under the transition two-part rates, an average residential customer using 830 kWhs a month would see a monthly bill of approximately $97.32, an increase of $4.20, or 4.5 percent, over current rates.[501]

63. The Value of DG docket is currently open and actively considering and evaluating methodologies for determining the value and costs of solar DG to be used in rate proceedings. A consistent application of the eventual findings and conclusions of the Value of DG docket promotes good public policy and is in the public interest.

64. It is reasonable to hold the net metering and rate design portion of this docket for the Residential and SGS Classes open for a second phase of this proceeding to commence shortly following the conclusion of the Value of DG docket in order that the findings in that docket can be applied to UNSE's net metering tariffs, and to consider whether DG customers who submit applications for interconnection after the effective date of the Decision in phase two should be transitioned to mandatory three-part demand rates or be assessed charges for the required second meter.

65. Until the conclusion of the second phase of this proceeding, and future order of the Commission, it is reasonable to treat DG customers the same as non-DG customers in terms of rate options, except that DG customer who submit interconnection applications after the effective date of this Decision shall incur a charge of $1.58 associated with the second meter required by DG customers.

66. The Company's proposed June 1, 2015 date for determining which DG customers shall be subject to newly proposed rate options or net metering treatment is not reasonable. Going forward, any DG customer who files an interconnection agreement prior to the effective date of a Decision in phase two of this proceeding shall be treated the same as a DG customer who filed for interconnection prior to that date.

67. It is reasonable to update the base cost of power based on actual costs prior to establishing new rates, and to re-set the PPFAC to zero when the new rates go into effect. It is also

[501] The ultimate TOU and optional demand rate options adopted after the transition period will be designed on a revenue neutral basis such that the revenue collected from the Residential Class will not be changed, but individual customers will experience different impacts based on their usage patterns.

reasonable to require UNSE to file a revised PPFAC POA for Commission review and approval.

68. It is reasonable to approve the Rules and Regulation changes attached to UNS Electric, Inc.'s Initial Brief.

69. It is reasonable to direct UNSE to file a revised TCA POA for review and approval by the Commission.

70. It is reasonable to require UNSE to file a Plan of Administration for the Demand Side Management adjustor for review and approval by the Commission.

71. It is reasonable that UNSE's LFCR mechanism shall continue in effect without the proposed modifications by UNSE, except that the fixed rate option should be eliminated. It is reasonable to require UNSE to file a proposed Plan of Administration for the LFCR mechanism for review and approval by the Commission.

72. It is reasonable that UNSE's REST mechanism shall continue and to require UNSE to file a proposed Plan of Administration for the REST mechanism for review and approval by the Commission.

73. It is reasonable that at the effective date of the new rates approved in this Decision, the TCA rate shall be reset to zero, or as close to zero as practicable, and to require the Company to file a final Plan of Administration for the TCA for review and approval.

74. It is reasonable for UNSE's proposed Rider R-10, Net Metering for Certain Partial Requirements Services (NM-PRS) and Rider R-11, Renewable Credit Rates, as well as recommendations by other parties regarding UNSE's proposed tariff based on the conclusions of the Value of DG docket, to be considered as part of phase two of this proceeding.

75. It is reasonable for UNSE's Rider-12 Interruptible Service to be approved.

76. It is reasonable for UNSE's Rider R-13, Economic Development Rider, to be approved, and effective on the effective date of the rates approved herein.

77. It is reasonable for UNSE's Rider-14, Alternate Generation Service, to be denied.

78. It is reasonable that UNSE should be authorized to defer for future recovery, the following: (1) one hundred percent of the property taxes above or below the test year amount of property taxes, caused by increases or decreases to UNS Electric Inc.'s composite property tax rates;

and (2) all property tax savings derived from appealing the property tax value of Gila River Unit 3, together with all attorney's fees, taxable costs, legal expenses and all other costs associated with the appeal process.

79. It is reasonable to provide options to solar DG customers that also benefit ratepayers who choose not to employ solar. Following the structure of RUCO's declining RPS Credit Option, a fixed-bill credit mechanism can be adaptable to the outcome of the Value of DG docket. Therefore, its implementation now will benefit solar DG adopters and non-solar adopters. Until the 2017 REST Implementation Plan decision later in 2016, or the outcome of the Value of DG docket, the credit rate and decline schedule shall follow the structures in RUCO's proposal. In addition, solar customers may select whether the bill credit applies to all solar production or just solar exports. However, there will be no guarantee of the future offset value on production not compensated through the bill credit mechanism. Parties are also requested to address the long-term feasibility of this operation in phase two of this proceeding.

CONCLUSIONS OF LAW

1. UNSE is a public service corporation within the meaning of the Arizona Constitution, and A.R.S. §§ 40-203, -204, -221, -250 and -361.

2. The Commission has jurisdiction over UNSE and the subject matter of the Rate Application.

3. Notice of the Rate Application and hearing was provided in accordance with the law.

4. UNSE's FVRB is $354,001,000.

5. A FVROR of 5.63 percent is fair and reasonable in this case.

6. The rates and charges authorized herein are just and reasonable and should be approved.

ORDER

IT IS THEREFORE ORDERED that UNS Electric, Inc. shall file, as soon as possible, and no later than by August 31, 2016, a revised schedule of rates and charges consistent with the discussion herein, a typical bill analysis, and a proof of revenue showing that based on the adjusted test year level of sales, the revised rates will produce no more than the authorized increase in gross revenues.

IT IS FURTHER ORDERED that the revised schedule of rates and charges shall be effective for all services provided on and after the date UNS Electric, Inc. files with Docket Control revised schedule of rates and charges, which shall be no later than September 1, 2016, and shall remain in effect until further order of the Commission.

IT IS FURTHER ORDERED that any comments on UNS Electric, Inc.'s revised schedules of final rates and charges shall be filed by any interested party by September 30, 2016, and that Staff shall file a Proposed Order for approval of the final rates or a request for a hearing by October 28, 2016.

IT IS FURTHER ORDERED that UNSE Electric, Inc. shall prepare and submit a customer communications plan by September 30, 2016, that is designed to educate customers about their rate options and how they can manage their bills, and that interested parties shall file any comments on the plan by October 28, 2016, and Staff shall submit a Proposed Order addressing the communications plan for Commission consideration by November 30, 2016.

IT IS FURTHER ORDERED that the net metering and residential and SGS DG rate design portion of this docket shall remain open.

IT IS FURTHER ORDERED that phase two of this proceeding to consider any proposed changes to UNS Electric, Inc.'s net metering tariffs and proposed rate options for Residential and SGS DG customers shall commence shortly after the issuance of an Order in the Value of DG docket.

IT IS FURTHER ORDERED that UNS Electric, Ins. shall notify its affected customers of the revised schedules of rates and charges authorized herein, including the plan to transition to Time-of-Use rates and other rate options, by means of an insert in its next regularly scheduled bill and posting on its website, in a form acceptable to the Commission's Utilities Division.

IT IS FURTHER ORDERED that the Rules and Regulation changes attached to UNS Electric, Inc.'s Initial Brief as Exhibit 3 (except that the installment period over which outstanding balances may be paid shall remain at 6 months) are approved, and UNS Electric, Inc. shall file in this docket, revised Rules and Regulations consistent with this Decision, as a compliance item by August 31, 2016.

IT IS FURTHER ORDERED that the revised depreciation rates set forth in Dr. White's Direct Testimony (Ex UNSE-7 White Dir) are approved, to be in effect on and after September 1, 2016.

IT IS FURTHER ORDERED that the revised Miscellaneous Service Charges proposed by Mr. Jones (Ex UNSE-31 Jones Dir at 69-71) are approved, and UNS Electric Inc. shall file the revised

Miscellaneous Service Charges in its revised schedules of rates and charges.

IT IS FURTHRE ORDERED that UNS Electric, Inc. shall by September 30, 2016, file a Plan of Administration for the Demand Side Management adjustor and a revised Plan of Administration for its Transmission Cost Adjustor for review and approval by the Commission.

IT IS FURTHER ORDERED that Lost Fixed Cost Adjustor Mechanism shall continue in effect, and USNE Electric, Inc. shall file no later than September 30, 2016, a proposed Plan of Administration for the Lost Fixed Cost Adjustor Mechanism for review and approval by the Commission.

IT IS FURTHER ORDERED that UNS Electric Inc.'s Renewable Energy Standard and Tariff mechanism shall continue and UNS Electric, Inc. shall file no later than September 30, 2016, a proposed Plan of Administration for the Renewable Energy Standard and Tariff mechanism for review and approval by the Commission.

IT IS FURTHER ORDERED that the Purchased Power and Fuel Adjustor Mechanism ("PPFAC") shall continue to operate on a per kWh basis, and the formula used to calculate the monthly PPFAC rates shall be modified to include consideration of the bank balance, and UNS Electric Inc. shall by September 30, 2016, file a revised Plan of Administration for the PPFAC with the Commission for review and approval.

IT IS FURTHER ORDERED that at the effective date of the new rates approved in this Decision, the Transmission Cost Adjustor rate shall be reset to zero, or as close to zero as practicable, and UNS Electric, Inc. shall file by September 30, 2016, a final Plan of Administration for the Transmission Cost Adjustor with the Commission for review and approval.

IT IS FURTHER ORDERED that UNS Electric Inc.'s proposed Rider R-10, Net Metering for Certain Partial Requirements Services (NM-PRS) and Rider R-11, Renewable Credit Rates, as well as recommendations by other parties regarding UNSE's proposed tariff based on the conclusions of the Value of DG docket, shall be considered as part of phase two of this proceeding.

IT IS FURTHER ORDERED that the Hearing Division shall convene a procedural conference regarding the second phase of this docket no more than 10 days after an Order is issued in the Value DG docket and shall schedule pre-filed testimony and the hearing (if necessary) for the second phase of this docket to commence as quickly as possible.

IT IS FURTHER ORDERED that UNS Electric Inc.'s Rider-12 Interruptible Service is approved, and UNS Electric Inc. shall file Rider R-12 with the Commission on or before August 31, 2016, to be effective for service on and after September 1, 2016.

IT IS FURTHER ORDERED that UNS Electric Inc.'s Rider R-13, Economic Development Rider is approved, and UNS Electric Inc. shall file Rider R-13 with the Commission on or before August 31, 2016, to be effective for service rendered on and after September 1, 2016.

IT IS FURTHER ORDERED that UNS Electric Inc.'s Rider-14, Alternate Generation Service is denied.

IT IS FURTHER ORDERED that UNS Electric, Inc. is authorized to defer for future recovery, the following: (1) one hundred percent of the property taxes above or below the test year amount of property taxes, caused by increases or decreases to UNS Electric Inc.'s composite property tax rates; and (2) all property tax savings derived from appealing the property tax value of Gila River Unit 3, together with all attorney's fees, taxable costs, legal expenses and all other costs associated with the appeal process.

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IT IS FURTHER ORDERED that UNS Electric, Inc. shall put in place a fixed bill credit option within 120 days of the effective date of this Decision per the general program design, credit rate, and step downs outlined in the RUCO RPS Bill Credit Option.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN LITTLE

COMMISSIONER STUMP

COMMISSIONER FORESE

COMMISSIONER TOBIN

COMMISSIONER BURNS

IN WITNESS WHEREOF, I, JODI A. JERICH, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 18th day of August 2016.

JODI A. JERICH
EXECUTIVE DIRECTOR

DISSENT

DISSENT ____________________
JR:rt

COMMISSIONERS
DOUG LITTLE - Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

ARIZONA CORPORATION COMMISSION

BOB BURNS
COMMISSIONER

Direct Line: (602) 542-3682
Email: RBurns-web@azcc.gov

August 16, 2016

RE: UNS Electric, Inc., Docket No. E-04204A-15-0142

Dear Commissioners, Stakeholders and Parties:

I dissent from this case because I do not believe that raising rates on rural Arizonans is appropriate at this time.

Although I appreciated much of what was approved by the Commission—including rejecting mandatory demand rates and approving a policy statement to grandfather existing solar customers—I cannot support a rate increase of over $4/month for residential customers. I believe that such an increase will cause an undue hardship on 82,000 residential customers in rural Arizona.

Thus, I dissent.

Sincerely,

Robert L. Burns
Commissioner

SERVICE LIST FOR: UNS ELECTRIC, INC.

DOCKET NO.: E-04204A-15-0142

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