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BEFORE THE ARIZONA CORPORATION COMMISSION

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KEVIN THOMPSON	NICK MYERS
COMMISSIONER	COMMISSIONER

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR A HEARING TO DETERMINE THE FAIR VALUE OF THE UTILITY PROPERTY OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON, AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN.	)	**DOCKET NO. E-01345A-22-0144** **DIRECT TESTIMONY OF TRAVIS KAVULLA ON BEHALF OF NRG ENERGY, INC.**

NRG Energy, Inc. ("NRG"), by and through undersigned counsel, hereby submits the Direct Testimony of Travis Kavulla.

RESPECTFULLY SUBMITTED this 15th day of June, 2023.

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/s/ Court S. Rich
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ACC - Docket Control - Received 6/15/2023 3:40 PM
ACC - Docket Control - Docketed 6/15/2023 3:51 PM

Original e-filed on
this 15th day of June, 2023 with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR A HEARING TO DETERMINE THE FAIR VALUE OF THE UTILITY PROPERTY OF THE COMPANY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RATE OF RETURN THEREON, AND TO APPROVE RATE SCHEDULES DESIGNED TO DEVELOP SUCH RETURN.	)))))))))))	**DOCKET NO. E-01345A-22-0144**

DIRECT TESTIMONY OF TRAVIS KAVULLA

On Behalf of NRG Energy, Inc.

June 15, 2023

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I. INTRODUCTION AND WITNESS QUALIFICATIONS

Q1. Please state your name, business and address, and role in this matter.

A1. My name is Travis Kavulla and I am Vice President, Regulatory Affairs for NRG Energy, Inc. ("NRG"). My business address is 1825 K. St. NW, Suite 1203, Washington, D.C. 20006. I appear here in my capacity as an expert witness on behalf of NRG.

Q2. Have you previously submitted testimony in this proceeding?

A2. No.

Q3. Please describe your professional experience.

A3. I have held my current position with NRG since 2019. Together with my team, I lead the company's engagement on regulatory policy concerning both retail markets, like the one created in the APS service territory through the Commission's regulation, and wholesale markets. Prior to joining NRG, I led the R Street Institute's energy program, and wrote and commented extensively on public utility regulation. Before that, I served eight years as a Commissioner at the Montana Public Service Commission ("MT PSC"), during which time I served as the Chairman of the MT PSC from 2011-2012 and as Vice Chairman from 2015-2019. While serving on the MT PSC, I was also the President of the National Association of Regulatory Utility Commissioners ("NARUC") and a member of the advisory council of the Electric Power Research Institute. In addition, I have served on the governing body of one of North America's largest real time electricity markets, the Western Energy Imbalance Market. I received my Bachelor's degree in History from Harvard University and a Master's degree, also in History, from the University of Cambridge, where I was a Gates Scholar. [1]

[1] See Travis Kavulla's CV attached as Exhibit TK-1.

II. OVERVIEW OF TESTIMONY AND RECOMMENDATIONS

Q4. What is the point of your testimony?

A4. In this testimony, I propose the introduction of a rate option that would give residential customers an opportunity to lock in a fixed rate for a certain period of time, or to obtain a subscription-like flat-bill (together, "price lock" options). These rate offerings would be available to a limited number of residential customers in Arizona Public Service ("APS") territory. Currently, only the largest customers can use the power of the market to find themselves desirable fixed-rate options via the AG-X buy-through tariff. Residential customers should not be left behind, and in this testimony, I propose that a pilot be created that gives residential customers a new and better way to manage their utility bills by selecting to lock in prices for the energy they use. The energy-supply portion of bills to customers, which have shown significant volatility in recent years, would not be subject to adjustment during the lock-in period in which a customer is served. In this way, a fixed rate product helps balance the risks associated with utility procurement decisions between the utility and the customer, as opposed to the current situation where the customer bears the entire risk.

III. FIXED RATE TARIFF OPTION

Q5. Why are you proposing this tariff?

A5. The certainty of a price-lock option, whether a fixed rate or a flat-bill, presents residential customers with an effective way to manage their budgets that previously has only been available to a privileged few of the largest customers. There is no reason that only the largest customers should have an opportunity that can be even more meaningful to residential customers to whom every penny counts.

Q6. Why is a fixed-rate option desirable for residential customers?

A6. A fixed-rate option eliminates the uncertainty caused when utilities adjust riders that recover what can seem like ever-increasing utility costs. As practice in Arizona, utility regulation serves to pass through unexpectedly high fuel and purchased

power costs if the revenue the utility has collected through the rates in effect at the time its service was rendered were inadequate to recover those costs. Put another way, APS is assured cost recovery for fuel purchases via adjuster mechanisms. It is often said that these costs are just a pass through from the utility and that they make no money on the purchased cost of fuel. While that is true, it should be noted that they do not lose any money either on those transactions.

By allowing for rate options where a supplier of energy bears the risk of these cost fluctuations, the Commission ensures there is at least one commercial entity with "skin in the game". The Commission has recently expressed concerns with this very issue when evaluating the most recent APS PSA adjustment, as I will cover further in my testimony. This proposal is a direct response to that concern.

The proposal recognizes that there are likely residential customers who will value a price-lock option, rather than paying rates that are subject to future adjustment for service the consumer has already consumed. Such an option is particularly valuable in times like the present, when volatility appears to have returned to the energy market. Ironically, because APS is a "regulated" utility, the price impacts of this volatility are felt directly by consumers—because in this case, the Commission's retail regulation serves to pass through wholesale costs that are *not* subject to significant price regulation. Neither the customer nor the Commission has the power to influence significantly those wholesale markets for fuel and power. But through a proposal like the one I suggest in this testimony, a price-lock option can flip this script. A fixed-rate or flat-bill plan transfers the risk of price spikes and rising fuel costs from the customer to the customer's supplier, where it belongs. When fuel prices spike, the price lock remains constant, leaving the provider to absorb the increased costs while protecting the customer from feeling the impact of a fuel or power purchase transaction in which the customer has no involvement.

IV. IMPACTS OF CURRENT ADJUSTER MECHANISMS

Q7. How have APS' adjusters impacted customers?

A7. Lately, APS' adjusters have caused increased rates and have left customers without the price certainty they deserve. The APS Power Supply Adjustor ("PSA") is an example of pass-through adjuster mechanism, sometimes called a "tracker," that transfers risk to residential customers by protecting the utility form the risk of collecting less in revenues than the cost of the fuel and power it required to serve customers. The Commission first approved the concept of the PSA in 2003.[2] Subsequently, the mechanism was put into use at the conclusion of APS' 2003 rate case.[3] Notably, even at that time, the Commission recognized that additional fuel costs could end up burdening ratepayers:

> Currently, if fuel costs or any other costs rise above the level embedded in the existing rate structure, the company's shareholders feel the impact. Likewise, if the costs decrease, the shareholders benefit. *Under a PSA, the shareholders are insulated from the change in costs, because now the ratepayers are obligated to pay the additional costs*.[4]

This is exactly how it has worked in practice, and the presence of the PSA has had the effect of transferring wholesale price volatility from the shoulders of the utility to those of its customers. The last five years illustrate this problem well. During that time, the PSA's fluctuation has contributed to bill instability and price increases for APS customers as the rate fell to a small credit in February of 2020 only to skyrocket to its current high, where it constitutes nearly 13% of the total bill of the average residential customer. The two tables below depict this significant increase.

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[2] Decision No. 66567.
[3] Decision No. 67744.
[4] Decision No. 67744 at 15:26 – 16:3(emphasis added).

Table 1 – PSA Component of Average Residential Bill in 2020

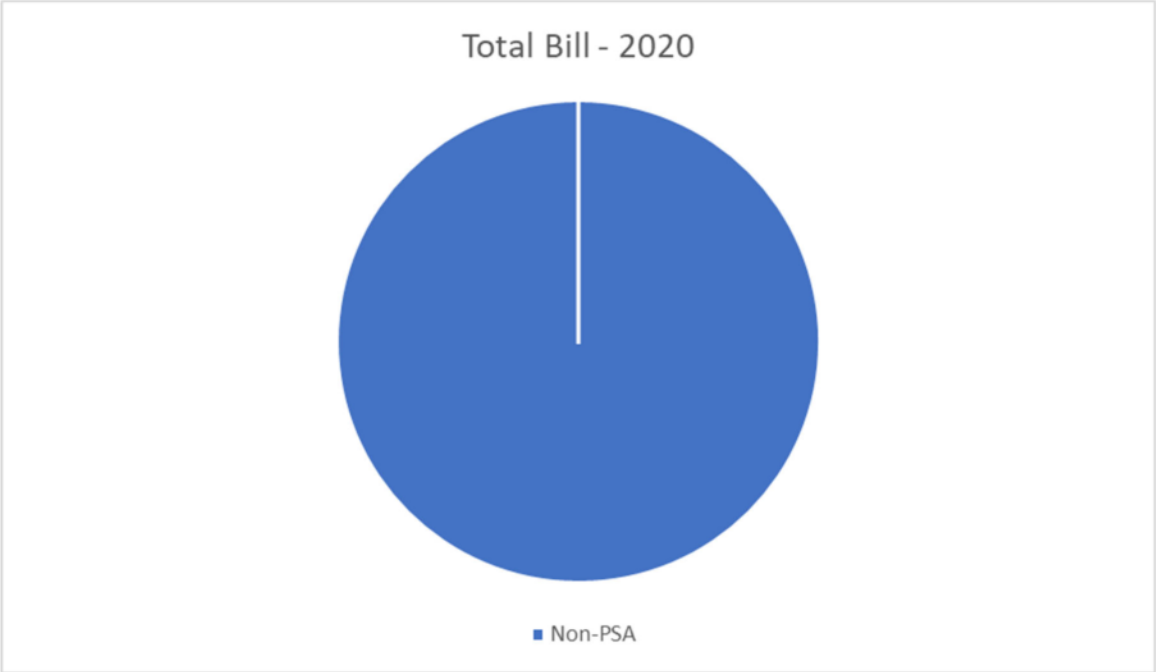
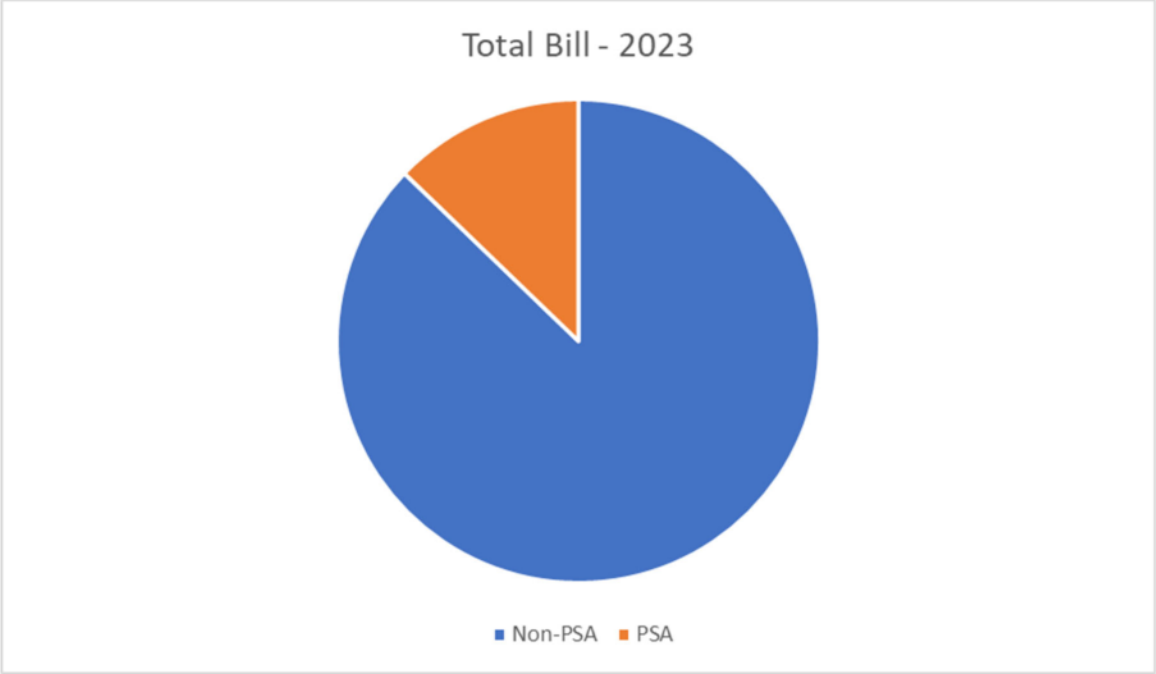


Table 2 – PSA Component of Average Residential Bill in 2023



The table below depicts PSA rates during the last five years.

Table 3 – APS PSA Rates 2018 to Present

February 1, 2018 through January 31, 2019	$0.004555 per kWh[5]
February 1, 2019 through January 31, 2020	$0.001658 per kWh[6]
February 1, 2020 through April 1, 2021	($0.000457) per kWh[7]
April 1, 2021 through November 1, 2021	$0.001544 per kWh[8]
November 1, 2021 through January 31, 2022	$0.003544 per kWh[9]
February 1, 2022 through March 1, 2023	$0.007544 per kWh[10]
March 1, 2023 to Present	$0.019074 per kWh[11]

To make matters worse, rising fuel costs recently led APS to ask the Commission to revise the PSA's surcharge cap.[12] In order to mitigate rate shock, year-over-year changes to the adjustor have been capped at $0.004 per kWh absent Commission authorization under the PSA's Plan of Administration.[13] In March the Commission agreed to increase the cap and authorized a nearly $0.02 per kWh PSA rate – a 153% increase.[14] As such, the PSA is now at all time high and is causing a $12.10 increased bill impact per month impact to the average residential customer.[15]

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[5] APS Updated Calculation of Forward, Historical, and Transition Components of PSA for 2017, Docket No. E-01345A-16-0036 available at https://docket.images.azcc.gov/0000184187.pdf?i=1685568875499.
[6] APS Revised Adjustment Schedule PSA-1 Compliance Filing, January 31, 2019, Docket No. E-01345A-16-0036 *available at* https://docket.images.azcc.gov/0000195646.pdf?i=1685565777442.
[7] APS Revised Adjustment Schedule PSA-1 Compliance Filing, January 31, 2020, Docket No. E-01345A-16-0036 *available at* https://docket.images.azcc.gov/E000004685.pdf?i=1685565777442.
[8] Decision No. 77959.
[9] *Id.*
[10] APS Revised Adjustment Schedule PSA-1 Compliance Filing, January 31, 2022, Docket No. E-01345A-16-0036 *available at* https://docket.images.azcc.gov/E000017672.pdf?i=1685570809677; Decision No. 78842.
[11] Decision No. 78877.
[12] APS Application to Reset Power Supply Adjustment Surcharge, December 1, 2022, Docket No. E-01345A-22-0297.
[13] Decision No. 78317.
[14] Decision No. 78877.
[15] *Id.*

Q8. You seem to be suggesting that the PSA went from being a relatively trivial rate element to becoming a very significant one. Is that true?

A8. Yes, absolutely. To put this into context, at its lowest, the PSA represents a rate element that would round to a 0% impact on a customer's bill. Today, it makes up nearly 13% of the customer's bill, and has risen dramatically to 2 cents per kilowatt-hour, or 28% of the total generation-related charges to residential customers. This new landscape of volatility, which the PSA allows the utility to outsource to its captive base of consumers, is the strongest argument for the rate and bill certainty that my proposal can provide.[16]

Q9. What can we learn from other Arizona utilities about how adjusters are passing through increasing costs?

A9. If you look at TEP, their customers are having a nearly identical experience with unexpected and dramatic increases in pass-through costs. TEP operates a mechanism similar to the PSA called the Purchased Power and Fuel Adjustment Clause or "PPFAC" rate.[17] And like the PSA, the PPFAC is a direct pass-through to customers that fluctuates wildly – especially recently as natural gas prices have spiked. The table below depicts these fluctuations over the last six years.

[16] *See* Decision No. 78877(enacting current PSA rate). *See also* APS Bill Impacts of Additional PSA Reset Scenarios, February 23, 2023, Docket No. E-01345A-22-0297; APS Rate Application, Docket No. E-01345A-22-0144, Attachment A, Schedule H-4 Typical Residential Bill Analysis at Present and Proposed Rates R-TOU-E. (This calculation is based on monthly usage of 1050 kWh as reported in APS' recent filing detailing bill impacts for the current PSA rate. The monthly bill for residential customers on APS' most popular residential rate schedule with that usage was $155.94 during the test year ending June 30, 2022, as reported by APS in its currently pending rate application.

[17] Decision No. 75975; see also https://docket.images.azcc.gov/0000177662.pdf?i=1685747021045.

Table 2 – TEP PPFAC Rates 2017 to Present

February 27, 2017 through March 31, 2018	($0.001956 per kWh)[18]
May 1, 2018 through March 31, 2019	$0.001979 per kWh[19]
April 1, 2019 through May 31, 2020	($0.003505) per kWh[20]
June 1, 2020 through May 31, 2021	$0.001515 per kWh[21]
June 1, 2021 through, April 28, 2022	$0.003294 per kWh[22]
April 29, 2022 through April 30, 2023	$0.008137 per kWh[23]
May 1, 2023 to Present	$0.0150706 per kWh (May-September) $0.0283760 per kWh (October – April)[24]

In sum, the rate vacillated between a credit and a surcharge before spiking *dramatically*. Year over year increases in the rate from 2020 onwards have been 118%, 147%, and most recently, an 85%/249% increase based on summer and winter month timeframes. Indeed, the rate was recently split into seasonal components in an attempt to mitigate the rate shock associated with yet another significant jump due to rising wholesale prices.

Locking in rates will also shield customers from price spikes that can occur pursuant to a rate case. For example, in the case of R-1 residential customers, APS proposes to increase its unbundled generation energy charge from $0.06898 per kWh to $0.08629 per kWh, a 25 percent increase.[25] A supplier contract that spanned the period between rate cases would shield the customer from rate case cost increases.

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[18] TEP revised Statement of Charges filed pursuant to Decision No. 75984, March 22, 2017, Docket No. E-01933A-12-0291 *available at* https://images.edocket.azcc.gov/docketpdf/0000178291.pdf.
[19] Decision No. 76691.
[20] Decision No. 77127.
[21] Decision No. 77592.
[22] Decision No. 77960.
[23] Decision No. 78551; TEP Revised Statement of Charges filed pursuant to Decision No. 78551, May 27, 2022, Docket No. E-01933A-19-0028 *available at* E000019440.pdf (azcc.gov).
[24] Decision No. 78971.
[25] APS's Redline to Proposed Rate Schedule R-1, p. 2.

Customers would have their rates adjusted only when their contract with the supplier was up for renewal. With multiple suppliers competing for a customer's business, this will ensure that customers can capture the lowest market cost and not be tied solely to full compensation of the procurement efforts from the utility.

V. BENEFITS AND EXAMPLES OF FIXED-RATE AND FLAT-BILL TARIFFS

Q10. Can a price-lock option have a positive impact on customers?

A10. Yes. The introduction of a price-lock option marks an initial effort to shift the prevailing mindset in utility ratemaking in Arizona. By offering customers a price-lock option through a third-party-supplied tariff, the Commission would be endorsing a paradigm where management of wholesale market risks is a supplier's responsibility, and not a risk that is, as now, inevitably visited upon the customer. This aligns with Commissioner comments made in a recent open meeting, where interest was expressed in development of programs where the utility has a stronger financial motivation to better manage their positions.[26] Through the introduction of a price-lock alternative into this market, this tariff aims to not only provide an attractive alternative to residential customers, but also to encourage a more proactive and diligent approach to handling pricing and market dynamics by all providers. That reformed approach would serve to benefit even those customers who do not participate in the program since the implementation of new procurement strategies may lead to more effective utility position management.

Q11. Are price-lock residential options offered by other electric providers?

A11. Yes, in both monopoly and competitive markets. Examples of monopoly utility programs include the Guaranteed Flat-Bill for residential customers offered by the Oklahoma Gas and Electric Company,[27] and the Flat-Bill offered by Georgia

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[26] Arizona Corporation Commission. (2023, May 2). *Open Meeting Item: 33. Tucson Electric Power Company (E-01933A-19-0028) - Request for Approval of Tucson Electric Power Company's PPFAC Rate Adjustment.* Retrieved from Open Meeting - May 2, 2023 (granicus.com) (At 3:26:31, Commissioner O'Connor advocating for utilities sharing in losses along with rate payers).

[27] Standard Pricing Schedule: R-GFB *available at* 3.40 R-GFB (oge.com).

Power.[28] These programs share with my proposal the idea that a customer should be able to lock in a known price and have any difference between the expected and actual cost of serving that load be the responsibility of the supplier. My proposal makes things simpler by building atop APS's long history of successfully operating similar programs for its business customers. In fact, similar programs that allow business customers to access market pricing, including fixed-rate pricing, are increasingly prevalent in Arizona. Those customers are entitled to ask their provider for a fixed-rate that is not subject to subsequent adjustments. In addition to the aforementioned AG-X tariff, the Commission recently approved TEP's MP-EX pilot program, which will allow customers to buy fixed-price block energy through a third-party generation service provider ("GSP") instead of TEP's standard power supply charge.[29]

The Oklahoma and Georgia examples above are price-lock options available where residential customers have no choice for their electric provider and where the incumbent utility will remain the load-serving entity regardless of the role of other suppliers. While my proposal here does not contemplate full restructuring, as exists in other states, fixed-price options in those jurisdictions are widely available and offer another example for comparison. Currently on the Power to Choose shopping website for Texas customers, there are many offers available, with more than 90 percent of them being fixed-rate plans.[30] Having a fixed price provides certainty for customers, forces competitive providers to compete to provide the lowest cost option to win a customer's business, and places the risk of price volatility squarely on the provider. If a competitive provider does not properly manage their positions and wholesale prices increase, this cost is solely absorbed by the retailer with no adjustors or mechanisms used to increase a residential customer's rates.

[28] Electric Service Tariff, Flat-bill Schedule: "Flat-6" *available at* FLAT-6.pdf (georgiapower.com).
[29] Decision No. 78775.
[30] Available at https://powertochoose.org/.

Q12. Has this type of program been beneficial for customers?

A12. Yes. The simplicity and predictability of fixed rate billing allows customers to plan their budgets while being protected from price volatility. In addition, when price spikes occur, customers served by regulated utilities who enjoy adjustors like APS's PSA have fully responsibility to pay for those price spikes. Meanwhile, the evidence shows that retail customers with a price lock are protected from those price spikes, because the risk and cost of those spikes are shouldered by their supplier, not the customer himself. Such protection from volatility was evident during Winter Storm Uri in 2021. Customers on Oklahoma Gas and Electric's Guaranteed Flat-Bill during the storm saved a total of $30 million which would have been passed onto them in rate increases if the utility was guaranteed full cost recovery.[31] Subsequently, the Oklahoma utility had all of the rest of its purchased power and fuel costs, amounting to more than $760 million, recovered through the issuance of securitized bonds which all customers—except those who had been on the flat-bill product—would be required to pay back over time. All told, customers who were not served on the flat-bill product will be paying a charge amounting to $3.34 per month for the *next 28 years*,[32] while customers who had signed up for the price-lock option will not pay that adder (and instead the supplier absorbed the cost of the wholesale price spike associated with serving them). In other words, the customers who locked in their price successfully avoided $1,122 per customer by virtue of not being subject to a regulatory landscape where utilities had the opportunity to collect costs in excess of the stated rate after the fact. This example helps illustrate the protection customers receive from a price-lock program and how such construct shifts risk and incentivizes utilities to find the best fuel prices on the market, or actually suffer the consequences.

[31] Direct Testimony of Donald Rowlett in Oklahoma PUD Case 2021-00072, June 18, 2021, page 6, line 18 – 28.

[32] https://www.oklahoman.com/story/business/2022/11/08/timeline-of-when-and-why-your-oge-bill-has-increased/69617097007/

There are numerous factors that can quickly lead to price spikes, but one recent severe weather event stands out as an excellent example. In February of 2021, Winter Storm Uri left millions of electric customers in central United States without power and resulted in blackouts across 15 states. The extreme cold temperatures caused by the storm led to a decrease in natural gas production and in turn, electricity generation, just as demand for power was increasing. As a result, wholesale power prices in 15 states spiked dramatically.

Many customers in the affected states were, like APS and TEP customers, in monopoly utility service territories subject to pass-through fuel adjustment mechanisms tied directly to wholesale market rates. Thus, those customers were forced to cover the costs associated with that price spike, leaving their utilities unimpacted by the increased prices. On the other hand, customers that had contracted with a third-party generation provider under a fixed-price contract fared much better because their provider had to bear the costs of the price spike, not the customer. In fact, a recent study by Intelometry quantified the average bill impact that Winter Storm Uri had on those customers that had selected competitive power providers – and therefore, who were taking service under largely fixed price generation contracts – versus those served by regulated monopolies.[33] Not surprisingly, customers taking service from regulated monopolies in Texas (the state is not fully competitive) and other states fared far worse than customers of competitive providers on fixed rates. In Texas alone, customers taking service from monopolies faced an average bill impact of $373, while customers with competitive providers paid $86 – *a $287 and 333% difference*.[34]

[33] Guy Sharfman and Jeffery Merola, Intelometry, *Beyond Texas: Evaluating Customer Exposure to Energy Price Spikes – A Case Study of Winter Storm Uri*, February 2021, available at Energy_Choice_Protecting_Customers.pdf (nrg.com).

[34] *Id*. at 8.

Table 3 – Winter Storm Uri Customer Price Impacts

Entity Type	Average Impact of Winter Storm Uri per Residential Customer
Power Competitive Suppliers - Texas	$86
Power Utility Monopolies - Texas	$373
Gas Utility Monopolies - Texas	$450
Power Utility-Monopolies - All Uri Impacted States	$326
Gas Utility-Monopolies - All Uri Impacted States	$381

And to be sure, pass-through mechanisms were directly responsible for inflicting those incredible costs on consumers. The Intelometry study also evaluated the performance of monopoly utilities and fuel adjustor mechanisms during the storm. The researchers summarized their findings as follows:

> Our analysis found that utility-monopolies opted to recover Winter Storm Uri related costs via tracker in the form of fuel cost adjustment increases when extraordinary costs were relatively low and via a deferred accounting or securitization where costs were relatively high. *In either case, however, utility-monopoly shareholders are or will be made whole at the expense of utility-monopoly consumers*.[35]

This finding is particularly noteworthy because it is much like the approach that the Commission was recently forced to adopt with respect to TEP's skyrocketing PPFAC – modifying the adjustor's timing in an attempt to mask a substantial

[35] *Id*. at 14(emphasis added).

increase and avoid rate shock.[36] Regardless of the rate's timing, however, customers still end up bearing the cost. In the case of Winter Storm Uri, the Intelometry study concluded that monopoly utilities incurred $14.5 billion in costs during the storm and that those costs are being recovered directly from customers through fuel adjustments mechanisms going forward.[37]

Q13. Do you believe wholesale prices for power and fuel in Arizona could spike like they did for those 15 states during Winter Storm Uri, leaving customers exposed?

A13. Yes. The Western power market is going through a substantial transition as power resources retire, dependency on scarce gas resources continues, and as other replacement resources struggle to keep up to serve existing demand, not to mention incremental demand growth. As a consequence, both wholesale power prices as well as fuel prices, especially natural gas, are subject to a substantial degree of volatility. My proposal would give customers an option to protect themselves from this volatility through a price lock.

Q14. APS offers something it calls 'budget billing' to its residential customers already. Does this not serve the purpose of allowing customers certainty?

A14. No, and in fact the difference between what I am proposing and 'budget billing' is illuminating. Budget billing allows the customer to elect an average monthly bill, but the customer continues to be responsible for a "settle-up balance" that represents the difference between the utility's costs and the amount it has collected through the average monthly bill from the customer.[38] Moreover, if the difference between the collected revenue and actual costs becomes too large, APS reserves to itself the right to increase the amount of the average monthly bill once a quarter.[39] In other words, budget billing does not achieve the policy objective I have described for my

[36] *See* Decision No. 78971.
[37] *Id.*
[38] https://www.aps.com/en/Residential/Billing-and-Payment/Budget-Billing#FAQs
[39] *Id.*

proposal, which is to offer a fixed-rate or a flat-bill that is not eligible to be adjusted subsequently, thus placing the risk of wholesale price spikes where it belongs, on the supplier

VI. PROPOSED RESIDENTIAL FIXED-RATE OR FLAT-BILL BUY-THROUGH PILOT

Q15. How do you propose this program be structured?

A15. At its most basic, the pilot program would largely function like the AG-X tariff, only for residential customers. The pilot program would be open to any residential customers who are currently in good standing with APS. Further, the pilot program will be modest, and capped at 10,000 customers and will continue at least until the Commission has an opportunity to re-evaluate the pilot when APS files its next rate case, when the Commission may decide to expand the program and make it permanent, modify it in any way, or terminate it.

Under the pilot, supply will be provided by a third-party generation service provider ("GSP"). Under this program, customers will pay the same non-generation charges as bundled customers. GSPs must ensure that the energy they supply meets APS' energy delivery and resource adequacy requirements, as outlined in the AG-X tariff.[40] If a GSP's self-provided energy supply does not meet proposed future requirements, they may choose to have APS provide resource adequacy under the guidelines in the AG-X tariff. Like in the existing AG-X program, the energy provided by the GSP may not be priced to exceed the generation and then-prevailing PSA components of the utility retail rate schedule offered under this tariff, by more than 35%.

Customers will have two options made available to them at the discretion of the GSP. The first is a fixed-price contract that will have a set generation charge on a $/kWh basis that will not change for the term of the contract. The second is a flat-

[40] Rate Rider AG-X *available at* agxAlternativeGenerationGeneralServiceExperimental.ashx (aps.com).

bill option where the customer's generation charge will be fixed at a flat dollar amount for the term of the contract.

Q16. Are there particular additional features of the program design that would be needed to accommodate the flat-bill option?

A16. Yes, there are three minor ones. While the fixed-rate option very closely resembles the rate options that are available to larger customers under AG-X, the flat-bill option is a customer-friendly option to residential customers who are particularly desirous of a clear, budgeted amount that they will be able to pay each month, without any subsequent adjustment. However, in order to reasonably price this product, a supplier would benefit from knowing the customers' historical consumption. Therefore, I propose that for those customers seeking to enroll on a flat-bill product, APS furnish no later than 3 days after GSP inquires the 12-month historical consumption of the customer, if available, as well as the shape of the load, again if available.

Meanwhile, in order to abide by the ratemaking parameters that exist for the AG-X program, including this extension of it, the 35% band for permissible rate offers by AG-X suppliers should be, for the purposes of those offering a flat-bill, based on the supplier's estimate of the customer's usage during the contract, divided by the price offer, to ensure the offer was within the permissible band.

Finally, in our experience as a supplier of these products, we have sometimes seen customers take undue advantage of these offers, for example by installing behind-the-meter, energy-intensive cryptocurrency operations at their homes after enrolling in a flat-bill. The purpose of this offer is to give customers budget certainty and price protection, not to facilitate cryptocurrency arbitrage. And so for a GSP offering a flat-bill product, that supplier should be allowed to bill a customer a fixed rate stated in the contract for usage above 3,000 kilowatt-hours per month. This mirrors NRG's experience in offering such products in other markets.

Q17. How would customers enroll in a price-lock option?

A17. Once the tariff is established, enrollment would be on a first-come, first-served basis. Customers would enroll with a GSP through a contract that was electronically or physically signed by the customer, or by telephonic enrollment with third-party verification, and the GSP then would submit to APS an enrollment instruction for that customer account. APS would switch the customer to GSP service in the next billing cycle. Just like on the AG-X rate, customers choosing the GSP option will still receive only a single bill from APS and it will include the GSP's charges for the generation component of their bill while excluding APS generation charges, the PSA, and Schedule EIS. Fixed price and flat-bill tariffs may be offered for a minimum of 12 months and up to 36 months. A GSP's contract with a customer may "evergreen," renewing automatically but on a fixed-rate or flat-bill price and another term of 12 to 36 months; however, notice of these details must be mailed to the customer no later than 60 days before the end of their contract period, and a customer will be allowed to opt out of a renewal period without any kind of early termination fee at any time.

Q18. Has this type of structure been established in Arizona?

A18. Yes. In fact, APS has over a decade of experience operating programs under a nearly identical structure for commercial customers. The AG-X program is the latest iteration of APS' Alternative Generation program and is a good example of how this structure can be successfully implemented. Under the Alternative Generation program, GSPs direct the generation or supply they control to APS, who in turn uses it to serve end users. In turn, participating retail customers buy electricity from APS under the AG-X tariff, which allows the customer to select the GSP, while APS collects administrative fees and is compensated for providing standard delivery and grid services. The program is available to large commercial customers seeking to acquire competitive generation service on the wholesale market. Under the AG-X tariff, most of these customers in my experience are under a fixed rate electric

generation service for the entirety of their agreement. Participating customers are protected from price volatility as a result of the fixed price offering. The basic proposition of my testimony is that other customers, not just a few large customers, should be able to select this form of price protection, using a regulatory structure that already has been developed for other customer classes.

The Alternative Generation program has a long history and was first proposed as an experimental program in 2012.[41] Subsequently, it has evolved into a standard rate program offered by APS – albeit with capped participation – that has been approved by the Commission in each of APS' most recent rate cases in 2017 and 2021.[42] As such, the program demonstrates that APS is familiar with this structure and that it has a proven track record.

Q19. Is the AG-X program the "deregulation" of the retail electric market?

A19. No. For one, and unlike fully restructured jurisdictions, APS remains the load-serving entity. There is, in other words, a single point of responsibility for ultimate load service to customers, and GSPs merely substitute the generation-related charges that APS charges for their service, while also ensuring that utility costs that benefit all customers continue to be broadly socialized. Second, Arizona has a unique constitutional provision for rate regulation of utility services, even of providers in a semi-competitive framework like AG-X.

In my long experience with the field, utility regulation represents a balance between imperfect regulation and imperfect competition, and introducing competitive elements like the one I propose to a largely still-monopolized industry represents a positive step toward a better equilibrium, based on what we have recently experienced with fuel and power cost volatility on the less-regulated wholesale markets that regulated retail entities with pass-through adjustors like APS are exposed to.

[41] *See* Decision No. 73183.
[42] *See* Decision No. 76295; Decision No. 78317.

Q20. Will this program shift costs to non-participating customers?

A20. No. In the first instance, and consistent with the structure of AG-X, customers opting into this program would continue to pay all nonbypassable charges that have been approved for the upkeep of the distribution and transmission grid, for social benefit programs, and even for generation capacity if the GSP does not itself furnish this capacity.

In the event that fuel or wholesale prices rise to a level where the expenses incurred by APS or the third party providing the product surpass the payments received from the customer, the supplier will be entirely responsible for covering those costs and will be prohibited from passing them through to others. There will be no expectation or approval for additional cost recovery, and customers who are not participating in the program will not face any additional expenses.

Additionally, in cases where the GSP supplies the power, they will have the obligation to ensure resource adequacy, or alternatively, the customer will be responsible for paying separate charges to APS for resource adequacy.

Second, while in some theoretical sense, in a situation where declining customer demand can cause a pool of fixed costs that does not diminish at the same rate to be reallocated to that smaller base of demand, this is simply not the case for Arizona, which is one of the fastest growing electric markets in North America. APS is planning for an increase in peak load growth of 3,600 MW, a 40% increase in load ***over the next 8 years alone***.[43] Initially, the program I propose will be limited to only 10,000 customers, which accounts for less than 1% of APS's residential customer base.[44] Once fully subscribed, the expected peak load of the pilot's participants will be approximately 40 MW—the equivalent of a mere 1.1% of the *incremental* growth projections over the next 8 years. In other words, the pie is growing, and even under

[43] *See* APS Response to Calpine Data Request 1.9.

[44] *See* Arizona Public Service Company Annual Report for Calendar Year Ending 12/31/21 *available at* https://www.azcc.gov/docs/default-source/utilities-files/electric/annual-reports/arizona-public-service-company/arizona-public-service-company98cf2c6e084a48b1809ed97cc3545bc6.pdf?sfvrsn=ce0dca05_3.

this proposal, APS would have more than 99% of the pie. Far from shifting costs, having GSPs in a position to be accountable for procuring supply ensures that the parties other than APS will share in the burden of making supply available to meet existing and growing customer loads.

I also expect all customers to benefit from the positive impact this should have on APS in the form of more responsible and active management of its own purchased power and fuel costs. If the utility's customers have alternatives to simply paying whatever pass-through costs are thrust upon them, the utility will be forced to take a more careful look at these expenses to give consumers what they want.

Q21. How can you ensure consumers on these tariffs will have service when they need it?

A21. If customers who are receiving GSP service under this tariff are involuntarily transferred back to the utility, they will be charged according to the incumbent APS rate schedule. To ensure that APS has enough liquidity to meet the demand of returning customers without transferring costs to bundled customers, GSPs will be required to post collateral annually. This collateral will represent the difference between market energy prices and the utility rate schedule and will serve the same purpose as the capacity reserve charge that is included in the AG-X tariff. This capacity reserve charge ensures that APS maintains adequate dispatchable resources to maintain system reliability and in turn, that it continues to be able to fulfill its role as the customer's provider of last resort ("POLR"). The POLR is responsible for providing service to the customer in the event the customer's GSP is unable to do so and is essentially a backup that ensures that customers continue to receive reliable electric service. In sum, the posted collateral will ensure the reliability of the system.

Q22. What will the pricing of the program look like and how will it impact customers talking service on the tariff?

A22. The exact impact on customers is currently uncertain until GSPs establish the specific pricing structure. It is entirely possible that the base price will be higher than APS's standard rate, incorporating an insurance-like risk premium to accommodate the risk of increased fuel prices—a risk that would be borne by the GSP in this construct, but would typically be borne by APS's customers through the PSA. Again, under this proposal, the supplier will bear full responsibility for any potential rise in wholesale market prices, ensuring that customers are protected from such volatility. And as described in my earlier testimony, customers need control over their bills and this proposal will finally enable to them have that control.

Q23. How will consumers be protected if they opt into this program?

A23. Consumer protection is extremely important, and this entire program will remain under the control of the Corporation Commission. In fact, each participating customer will continue to receive all its service direct from APS, just like the current participants in the AG-X program. This means that customers will continue to receive a single bill from APS and bills will be calculated based on readings from the same utility meters the customers use today.

The tariff itself is going to be approved by the Commission in this proceeding and will be subject to the Commission's continuous oversight. This oversight includes an automatic review in the next rate case where the entire program will be considered again. We propose that the tariff be structured such that the price offered to the public may not be greater than or less than the generation components of the utility retail rate schedule offered under this tariff, by more than 35%. To be clear, rates charged will always be subject to compliance with the Commission-approved tariff. In addition, all companies interacting with Arizona consumers remain subject to oversight and enforcement from the Arizona Attorney General's Office.

Furthermore, supply and reliability will not be an issue as providers will be subject to the same rigorous resource adequacy standards as providers under the AG-X program. This means either self-supplying or paying APS to supply resource adequacy to meet the requirements of the tariff and assure reliable service if and when these changes are enacted. As explained more fully in the testimony of NRG witness, Lance Kaufman, the resource availability of the AG-X program has far surpassed the availability of APS' own thermal fleet. According to Kaufman, AG-X availability has exceeded 99.5 percent every year while APS' thermal fleet had an equivalent availability of only 94.4 percent in 2022.[45].

Q24. Does this conclude your testimony?

A24. Yes.

[45] *See* Direct Testimony of Lance Kaufman at 10:22-25.

EXHIBIT TK-1

TRAVIS KAVULLA

travis.kavulla@nrg.com

VICE PRESIDENT, REGULATORY AFFAIRS **Sept. 2019 – Present**
NRG Energy, Inc. *Princeton, New Jersey*
Leader of the department responsible for the company's engagement with state and federal regulatory agencies, working to develop policy and ensure compliance with applicable laws and regulations.

DIRECTOR, ENERGY & ENVIRONMENTAL POLICY **JAN. 2019 – Sept. 2019**
R Street Institute *Washington, DC*
Led the energy program of a 501(c)(3) "think tank" dedicated to promoting free markets and effective government. Focused principally on the power sector, R Street's energy program supported three overarching policy goals: exposing power plants to competition, providing consumers a choice in energy provider, and efficiently networking markets together to ensure the robustness of competition. R Street led opposition to state and federal subsidies to specific generators or types of generation, and has promoted a transparent price on carbon emissions as a vehicle for environmental regulation. R Street also has promoted reforms that make it easier to construct energy infrastructure and license new technologies.

In furtherance of its policy goals, R Street publishes white papers and op- eds, files regulatory comments, and provides legislative testimony.

GOVERNING BODY MEMBER **JULY 2018 – AUG. 2019**
Western Energy Imbalance Market (EIM) *Folsom, CA*
One of five independent board members of the Western Interconnection's first regional, real-time electricity market, which is operated by CAISO. Nominated by market participants in 2018 and elected by the other governing body members to a term of three years. The governing body actively engages with market participants and works to build upon the economic efficiency of the market. In the last year, significant reforms to EIM have included revisions to local market power mitigation (increasing the default energy bid for hydroelectric resources) and a revision to how greenhouse gas emissions are accounted for in the marketplace. Market-design discussions for a day-ahead market are just beginning, which will including considerations of energy price formation, transmission costs, and governance.

CHAIRMAN, NORTH AMERICAN NUMBERING COUNCIL **NOV. 2017 – Sept. 2019**
Appointed by FCC Chairman Ajit Pai to lead the stakeholder council responsible for providing the FCC comprehensive recommendations on several emerging topics associated with next-generation communications technologies. Topics on which the council engaged included measures to combat robo-calling through the creation of a call authentication trust anchor that certifies legitimate telephone calls, the creation of a nationwide number portability framework that allows 10-digit numbers to be ported freely throughout the United States and across different types of devices, and the modernization of toll-free number distribution through the establishment of an auction mechanism. While appointed as a utility commissioner, continued to serve in this role until Fall 2019 at the request of Chairman Pai. Online at http://nanc-chair.org

COMMISSIONER, CHAIRMAN (2011-13) & VICE-CHAIRMAN (2015-19) **JAN. 2011 – JAN. 2019**
Montana Public Service Commission *Helena, MT*
One of five commissioners of the State of Montana's utility commission, serving in leadership roles at the state, regional, and national level at various times. Responsible for regulating energy and water monopolies, as well as certain telecommunications companies and motor carriers in the

State of Montana. Nominated in contested Republican primary and elected to office in 2010, and re-elected without opposition in 2014 to a term expiring in 2018. Made decisions on hundreds of matters, with a focus on rate reviews of monopoly utilities, and the reform of ratemaking, interconnection, and reporting requirements for firms in markets transitioning to competition.

Testified before U.S. Congressional committees and in administrative proceedings and technical conferences of the Federal Energy Regulatory Commission (FERC) and the Environmental Protection Agency (EPA). Frequent speaker to organizations and conferences in the field of energy and telecommunications. Named by S&P Global Market Intelligence on its list of "The 10 most influential people in energy in 2016." Advised on the intersection of technological development and regulation as a member of the advisory council of the Electric Power Research Institute. Active participant in the Harvard Electricity Policy Group.

Other professional involvement includes leadership related to national and regional energy and telecommunications policy (detailed below).

AFFILIATED ROLES TO SERVICE ON THE MONTANA PUBLIC SERVICE COMMISSION

PRESIDENT, NAT'L ASSN. OF REGULATORY UTILITY COMMISSIONERS **NOV. 2015 – NOV. 2016**
MEMBER, EXECUTIVE COMMITTEE, NARUC **NOV. 2014 – NOV. 2018**
As NARUC President, supervised a newly hired executive director and established strategic direction of the organization, with 40 staff devoted to improving the practice of utility regulation. Afterwards, continued to serve as a board director and a member of NARUC's Executive Committee.

Focus as President at NARUC included several major initiatives involving energy and telecommunications, including:

- Engagement with FERC and others on the design and regulation of the wholesale electricity markets, including the interaction between Regional Transmission Organizations (RTOs) and states, and on the reform of Public Utility Regulatory Policies Act of 1978 (PURPA).
- Improved training for new utility commissioners, focused on basic issues of ratemaking.
- Supervised the advocacy before the FCC and federal courts on issues including the Universal Service Fund/Connect America Fund, municipal broadband pre-emption, inmate calling, and net neutrality.
- Writing and publication of a "Compensation and Pricing Manual for Distributed Energy Resources," such as a roof-top photovoltaic solar, in order to address controversies about cost-shifts in current net-metering policy.
- Analysis and critical response to the EPA's Clean Power Plan.

On operations, approved plans and supported new NARUC executive director to tighten criteria for staff performance review and eliminate excessive fringe benefits and pay raises. Led a retreat of executive committee to ensure that NARUC's international program and a NARUC-affiliated organization had wind-down or contingency plans in the eventuality that program revenue became unavailable. Online at http://www.naruc.org

CO-CHAIR, NORTHERN TIER TRANSMISSION GROUP **JAN. 2013 – JULY 2018**

Co-chair of the Steering Committee of NTTG, which undertakes regional transmission planning for a collection of utilities including PacifiCorp, Portland General Electric, Idaho Power, NorthWestern Energy, the Utah Associated Municipal Power Systems, and Deseret Generation & Transmission Cooperative. NTTG's Steering Committee approves regional transmission plans, provides policy guidance, and directs FERC filings on behalf of the group.

The Steering Committee's work in the past several years has included debating and approving the region's filings in response to FERC's Order 1000, requiring interstate transmission planning processes, as well as revisiting and improving the group's use of production cost modeling for the purposes of estimate the economic benefits of transmission expansion. Online at http://www.nttg.biz

CHAIRMAN, CMTE. ON REGIONAL ELECTRIC POWER COOPERATION **OCT. 2016 – OCT. 2018**

Co-chair, along with John Chatburn of the Idaho Governor's Energy Office, of CREPC, which twice per year brings together governor's offices, utility commissioners, and consumer advocates in order to improve relationships between states, utilities, and other stakeholders in the western United States and Canada.

MEMBER, EIM TRANSITIONAL COMMITTEE **APR. 2015 – JULY 2016**

CHAIRMAN, PUC ENERGY IMBALANCE MARKET WORKING GROUP **JAN. 2012 – JULY 2015**

Headed a successful effort by state regulators to evaluate the costs and benefits of forming a real-time energy market across the dozens of balancing authorities in the Western United States. The Public Utility Commissioners Energy Imbalance Market (PUC EIM) Working Group included a member from each of the Western Interconnection's utility commissions, and was a project of CREPC. Also served on the California Independent System Operator (CAISO) EIM Transitional Committee, which designed a regional governance model to oversee the largest real-time energy market in the Western United States.

DIRECTOR, WESTERN ELECTRICITY COORDINATING COUNCIL (WECC) **FEB. 2013 – FEB. 2014**

MEMBER, MEMBER ADVISORY COMMITTEE **JAN. 2014 – NOV. 2015**

Appointed to the WECC Board of Directors at a time when WECC, the regional reliability regulator for the Western Interconnection under the North American Electric Reliability Corp. (NERC), was undergoing a governance overhaul, bifurcating its reliability coordinator function from its standards, compliance auditing, and transmission planning functions. Acted as a strong advocate for bifurcation and the installation of an independent board of directors.

Served on the seven-member selection committee for WECC's CEO. Elected by WECC Members to the Nominating Committee, responsible for selecting independent board directors. Online at http://www.wecc.biz/

EARLIER WORK EXPERIENCE

FREELANCE JOURNALIST **JULY 2008 – DECEMBER 2010**

Contributed full-length pieces and reporting to a variety of sources, including *National Review*, the *Wall Street Journal*, the *Dallas Morning News*, Fox News, the *Times* of London, *Standpoint* magazine (UK), *The New Atlantis*, *Catholic World Report*, *The Claremont Review of Books* and other outlets. Based in England and Kenya in 2008 and 2009 and traveled widely in Africa, Europe, and South Asia. Special projects editor for National Review Online, supervising five journalists.

ASSOCIATE EDITOR **JAN. 2007 – OCT. 2007**

National Review and *National Review Online* *New York, NY*

Member of the editorial staff of biweekly magazine of politics and culture, leaving to become a Gates Scholar at Cambridge. Continues to contribute periodically.

EDUCATION

M.PHIL., HISTORY FALL 2007 – SUMMER 2008

University of Cambridge *Cambridge, England*

Gates Scholar, competitively awarded through the Gates Trust at Cambridge, funded by the Bill & Melinda Gates Foundation. Considerable field research conducted in pursuit of thesis, a critical history of government-led economic planning and the beginnings of development aid in the British colonial world of the 1950s.

B.A., HISTORY SEPT. 2002 – JAN. 2007

Harvard University *Cambridge, Mass.*

History, graduated *cum laude*. Columnist for campus daily, *The Crimson*, and editor of *The Salient*.

PROFESSIONAL AFFILIATIONS & HONORS

Chairman, North American Numbering Council, Nov. 2017 – Sept. 2019

President & Director, National Association of Regulatory Utility Commissioners; President (Nov. 2015 – Nov. 2016); Director (Jan. 2011 – Jan. 2019).

Co-Chairman, Northern Tier Transmission Group Steering Committee; Jan. 2013 – July 2018.

Member, Advisory Council, Electric Power Research Institute; Nov. 2014 – Aug. 2018.

Member, Federal Communications Commission's Federal-State Joint Board on Jurisdictional Separations; Dec. 2013 – Jan. 2019.

Chairman, Public Utility Commissioners Energy Imbalance Market Group, Dec. 2011 – 2015 (Chairman as of Dec. 2012).

Director, Board of Directors, Western Electricity Coordinating Council; Feb. 2013 – Feb. 2014

Director & Treasurer, Board of Directors, National Regulatory Research Institute; May 2012 – Nov. 2014.

Member, Advisory Council for Center for Public Utilities, New Mexico State University, Nov. 2011 – Jan. 2019.

Journalism Fellow; Phillips Foundation; July 2008 – July 2009 (currently known as the Robert Novak Fellow).

Gates Cambridge Scholar; Gates Trust, Bill & Melinda Gates Foundation, Cambridge, England.; 2007-08.