BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF ENBRIDGE GAS UTAH TO INCREASE DISTRIBUTION RATES AND CHARGES AND MAKE TARIFF MODIFICATIONS	)	Docket No. 25-057-06

PHASE II SURREBUTTAL TESTIMONY OF LANCE D. KAUFMAN, PH.D.

ON BEHALF OF

NUCOR STEEL-UTAH, A DIVISION OF NUCOR CORPORATION

November 4, 2025

Nucor Exhibit 3.0

TABLE OF CONTENTS TO THE
PHASE II SURREBUTTAL TESTIMONY OF LANCE D. KAUFMAN, PH.D.

EXHIBIT LIST

I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Lance D. Kaufman, Ph.D., and my business address is 2623 NW Bluebell Place, Corvallis, Oregon 97330.

Q. PLEASE STATE YOUR OCCUPATION AND ON WHOSE BEHALF YOU ARE TESTIFYING.

A. I am the owner and principal economist of Western Economics, LLC. I provide economic and statistical consulting in utility proceedings and civil litigation. I am appearing in this matter on behalf of Nucor Steel-Utah, a Division of Nucor Corporation ("Nucor"), a transportation service customer of Enbridge Gas Utah ("EGU").

Q. ARE YOU THE SAME LANCE D. KAUFMAN, PH.D. WHO PREFILED PHASE II DIRECT AND REBUTTAL TESTIMONY ON BEHALF OF NUCOR IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR PHASE II SURREBUTTAL TESTIMONY?

A. My testimony responds to several class cost of service study, cost allocation, and rate design issues raised in rebuttal testimony by the Division of Public Utilities ("DPU") witness Matt Pernichele, Utah Association of Energy Users ("UAE") witness Courtney Higgins, EGU witness Austin Summers, and the American Natural Gas Council ("ANGC") witness Bruce Oliver.

Q. PLEASE SUMMARIZE YOUR PRINCIPAL RECOMMENDATIONS AND CONCLUSIONS ON SURREBUTTAL.

A. In my surrebuttal testimony, I make the following recommendations:

1) **Class Cost of Service Study**. I recommend the Commission reject DPU witness Pernichele's proposal to substitute Actual Peak Day for Demand Day in the calculation of Allocation factor 230.

2) Rate Design

a) I respond to EGU witness Summers and continue to recommend the Commission adopt a Low Pressure Surcharge.

b) To address concerns raised by UAE witness Higgins between the alignment of the TSL and TBF rate classes, I recommend TBF volumetric block rate design be modified to reflect Nucor's proposed rate design for TSL volumetric block rate design

c) I continue to recommend the Commission adopt ANGC witness Oliver's proposal to set the Basic Service Fee equal to cost for the TSL rate class.

II. DESIGN DAY VERSUS ACTUAL PEAK DAY FOR COST ALLOCATION

Q. WHAT DOES DPU WITNESS PERNICHELE RECOMMEND REGARDING THE USE OF DESIGN DAY PEAK?

A. DPU witness Pernichele proposes allocating feeder and compressor station costs using Actual Peak Day (or a Average and Peak method built on a rolling three-year Actual Peak Day), rather than the 60% Design Day / 40% winter throughput approach for Allocation Factor 230.[1] DPU witness Pernichele argues Actual Peak Day better reflects how the system is "actually used," distributes benefits of "excess capacity," and avoids what it characterizes as over-reliance on a rare, hypothetical Design Day.[2]

Q. WHAT REASONS DOES DPU OFFER FOR ITS PEAK DAY PROPOSAL?

A. DPU witness Pernichele argues that a utility's Design Day rarely occurs, and peak day is more reflective of actual use patterns.[3] DPU states "Actual Peak Day is more economically efficient because it is a better reflection of the benefits derived, and the costs incurred by customers."[4]

[1] DPU Exhibit 6.0 R Phase II at 6:128-135.

[2] *Id.* at 3:47-49.

[3] *Id.* at 3:50-57.

[4] *Id.* at 3:53-55.

Q. IS DPU CORRECT REGARDING THE ECONOMIC EFFICIENCY OF PEAK DAY?

A. No. DPU witness Pernichele's focus is not on economic efficiency, but on the use of the system. Economic efficiency occurs when economic surplus is maximized. Economic surplus is the difference between the benefits of receiving gas minus the cost of delivering gas. This is maximized when the price charged to customers equals the marginal cost of delivery. The marginal cost of delivering gas to non-firm customers is zero when pipeline pressures are sufficient to move gas to customers.

Q. IS DPU WITNESS PERNICHELE CORRECT THAT COSTS ARE DRIVEN BY PEAK DAY USE RATHER THAN THE UTILITY'S DESIGN DAY?

A. No. The primary cost of delivering gas is the installation and maintenance of pipe. EGU has clearly stated that its system is designed to meet only the needs of firm customers.[5] Moreover, EGU designs its system to meet firm needs during a 1-in-20 year extreme cold weather event.[6] This means that the size of the pipe, the cost of original installations, and the need for system reinforcements is not driven by peak day use. It is instead driven by expected use during extreme weather conditions. The assertion that costs are driven by peak day is clearly incorrect. As a result, the assertion regarding economic efficiency of Actual Peak Day allocation is also incorrect.

[5] *See* Nucor Exhibit 1.5 at 1 (EGU Response to Nucor Steel-Utah Data Request No. 2.02).

[6] *See* Nucor Exhibit 3.1 at 1 (EGU Response to Nucor Steel-Utah Data Request No. 3.01) ("The design day temperature was derived as a one-in-twenty-year event, meaning the probability of –5 degrees observed as the lowest daily mean temperature of the year has a 5% probability of occurring.").

Q. WHY IS ACTUAL PEAK DAY ALLOCATION A PROBLEM IF THE SYSTEM IS ENGINEERED TO A 1-IN-20 DESIGN DAY?

A. EGU's capacity-driven assets (feeders, compressors, regulating stations) are sized to ensure firm service at a 1-in-20 event,[7] not to whatever happened on last winter's single highest send-out (or the average of the prior three years). A system built to meet a 1-in-20 year event results in substantial headroom during mild winters. This is appropriate, as the headroom accommodates extreme weather while still providing reliable service to firm customers. Non-firm customers take advantage of this headroom by using excess capacity during mild days, thereby adding to the societal benefits of gas delivery without causing *any* incremental capacity costs to EGU or other firm customers.

Q. ARE INTERRUPTIBLE CUSTOMERS CURTAILED ON A TYPICAL PEAK DAY?

A. No. During mild winters, non-firm customers often receive deliveries on peak days because weather is not cold enough to warrant interruption. If DPU witness Pernichele's proposal were accepted, in years where no interruptions have occurred in the prior three years, allocations of capacity costs would treat firm and non-firm customers identically, despite the fact that these customers receive an inferior level of service and place no incremental cost burden with respect to feeder mains.

Q. WHAT INCENTIVE DOES ACTUAL PEAK DAY ALLOCATION CREATE FOR NON-FIRM CUSTOMERS?

A. If Actual Peak Day makes non-firm cost shares identical (or nearly so) to firm, non-firm customers can upgrade to firm service and gain priority reliability with little or no increase in allocated capacity costs. That is a one-way door: customers rationally move to firm

[7] *See* Nucor Exhibit 3.1 at 1 (EGU Response to Nucor Steel-Utah Data Request No. 3.01).

service to capture reliability benefits that the allocator no longer charges them for, eroding the policy rationale for interruptible service and straining Design-Day readiness.

Q. HOW DOES MIGRATION OF INTERRUPTIBLE CUSTOMERS TO FIRM SERVICE AFFECT RATES AND RELIABILITY?

A. As migration to firm service soaks up excess system capacity, EGU will face more reliability events than it would have under a Design Day allocation. Once excess capacity is absorbed by the migration from non-firm to firm, EGU will have no excess capacity, and any organic growth of GS customers will require additional capital investment. Had no migration to Firm use occurred, organic GS growth could be accommodated without additional capital investment. DPU witness Pernichele's proposal to move to Actual Peak Day Allocation will have the paradoxical effect of increasing GS rates despite introducing an allocator that has the appearance of reducing allocations to GS customers.

Q. DPU REFERENCES THE NARUC MANUAL AS SUPPORT FOR THE USE OF PEAK DAY. DOES NARUC SUGGEST THAT PEAK DAY SHOULD BE INTERPRETED TO INCLUDE NON-FIRM USE?

A. No. The NARUC Manual states as follows: "Generally, interruptible customers would receive no allocation of demand costs under this formula since they should be off the system during the peak period."[8] The NARUC Manual appears to premise its recommendation for peak day on the assumption that the peak day *excludes* non-firm load.[9]

[8] *See* UAE Exhibit COS 2.02 at 2.

[9] *See id.*

Q. WHAT DO YOU RECOMMEND REGARDING CAPACITY-RELATED COST ALLOCATION IN THIS CONTEXT?

A. I recommend retaining the current Design Day approach within Allocation Factor 230, while continuing to move away from annual throughput either by reducing weight or moving to winter throughput.

III. RATE DESIGN

A. Nucor's Proposed Low Pressure Charge

Q. IN YOUR DIRECT TESTIMONY, WHAT DO YOU RECOMMEND REGARDING THE LOW PRESSURE SURCHARGE?

A. In my direct testimony, I observe that only a small number of TSL customers are driving the allocation of low pressure mains to the TSL class, and I recommend rates be designed to recover these costs from the customers that cause them.[10]

Q. HOW DO OTHER PARTIES RESPOND TO YOUR RECOMMENDATION TO INSTITUTE A LOW-PRESSURE CHARGE TO ALLOCATE COSTS OF IHP MAINS?

A. ANGC witness Oliver supports my low pressure surcharge.[11] While ANGC witness Oliver agrees with my analysis and proposal for designing rates to recover these costs from low pressure customers, ANGC suggests that there may be an alternative method of recovering them.[12] While I was unable to determine ANGC witness Oliver's preferred method, Nucor is generally open to any solution that accurately separates these costs from the rates paid by high pressure customers.

[10] Nucor Exhibit 1.0 at 16:336-18:376.

[11] ANGC Exhibit 1R at 2.

[12] *Id.* at 2:35-37.

On the other hand, EGU witness Summers objects to my recommendation, stating that my recommendation creates a subclass, and that this violates the principle of average rate making.[13] EGU also insinuates that by opening the door to a more precise rate design, other customers may request changes that are unfair or unstable in the future.[14]

Q. DOES EGU DISPUTE YOUR ASSERTION THAT THERE IS A SUBCLASS OF CUSTOMERS THAT USE LOW PRESSURE MAINS AND DRIVE ALLOCATION OF THESE COSTS TO THE TSL RATE CLASS?

A. No, EGU does not dispute my evidence that there is a subclass or that this class is the sole cause of the allocation of low pressure mains to the TSL rate class. EGU's only objection is that my proposal segregates customers and opens the door for further rate design refinements.

Q. IS THE INTRODUCTION OF SUBCLASSES COMMON IN RATE DESIGN?

A. Yes. My recommendation is the equivalent of introducing transmission, primary, and secondary subclasses in electricity rates. In electric rate design, transmission customers do not receive service from substations or distribution lines. Electric rates may include both transmission and distribution customers in the same schedule; however, subclasses are commonly used to exclude the recovery of substation costs from transmission customers.[15]

[13] EGU Exhibit 5.0R at 15:297-314.

[14] *Id.* at 16:323-324.

[15] *See, e.g.*, Rocky Mountain Power Tariff P.S.C.U. No. 52, General Service – Distribution Voltage, *available at* https://www.rockymountainpower.net/content/dam/pcorp/documents/en/rockymountainpower/rates-regulation/utah/rates/006_General_Service_Distribution_Voltage.pdf (including a Voltage Discount for customers served at 2,300 volts or higher within the class).

Q. WOULD IT BE APPROPRIATE TO ELIMINATE THE DISTINCTION BETWEEN TRANSMISSION, PRIMARY, AND SECONDARY SERVICE IN ELECTRIC RATES IN ORDER TO SIMPLIFY TARIFFS OR SATISFY THE AVERAGE RATE PRINCIPLE?

A. No, this makes no sense. These customers clearly receive different types of service and are appropriately segregated into subclasses. Distinguishing between low pressure and high pressure customers remains consistent with the separation of transmission and distribution customers in the electric rate context.

Q. HAS EGU SUPPORTED SUBCLASSES IN THE PAST?

A. Yes. In Docket No. 19-057-02, *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, EGU (then Dominion Energy Utah) proposed a multi-step process to change the rate design of the Transportation class over that rate case and the Company's next rate case.[16] While the Company believed splitting the TS class, as proposed by others, was premature in that case, it supported a task force and further evaluation to change the rate design in the following rate case.[17] In that next rate case, Docket No. 22-057-03, *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, the Company proposed to, and ultimately did, split the TS class into three subclasses: TSS, TSM, and TSL.[18] This effectively created the current Transportation Service subclasses and introduced complexity to EGU's rates.

---

[16] Docket No. 19-057-02, *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, DEU Exhibit 4.0 at 23-26 ("In its next general rate case, the Company anticipates taking the third step in its rate corrective proposal: modifying the rates in the TS class using cost curves to identify the optimal rate structure for that class.").

[17] Docket No. 19-057-02, DEU Exhibit 4.0R at 15-16.

[18] Docket No. 22-057-03, *Application of Dominion Energy Utah to Increase Distribution Rates and Charges and Make Tariff Modifications*, DEU Exhibit 4.0 at 21-23.

Q. WHAT IS YOUR RESPONSE TO EGU WITNESS SUMMERS' ASSERTION THAT YOUR PROPOSAL VIOLATES THE AVERAGE RATE PRINCIPLE?

A. Rate principles are often conflicting and cannot be arbitrarily adhered to without a reasoned and measured approach. EGU admits that the principles are not intended to be used as prohibitors of departures from historic practice and highlights the creation of separate TS subclasses as an illustration that rate design principles are not as rigid as they appear.[19]

Q. IS EGU CORRECT THAT YOUR RECOMMENDATION WILL OPEN THE FLOODGATES FOR RATE DESIGN CHANGES THAT WILL CAUSE UNFAIRNESS AND RATE VOLATILITY?

A. No. EGU witness Summers states that "[t]here are numerous costs that could be argued to benefit only certain customers…"[20] and that approving my recommendation "could open the door to numerous proposals to isolate and assign costs to subgroups, eroding the stability and fairness of the Company's current rate design framework."[21] However, when asked to identify the "numerous costs," EGU could only provide a single hypothetical example of an extension of a gas main to a residential development, which EGU currently socializes across all customers.[22]

Moreover, whether the Commission approves or disapproves of my recommendation should not restrict other customers from petitioning for fair cost-based rates. Nor should it restrict the Commission's ability to fairly weigh the evidence of such petitions. EGU offers no evidence that a low pressure surcharge, or any other rate change that moves towards costs, would erode the fairness of rates.

[19] *See* Nucor Exhibit 3.1 at p. 2 of 5 (EGU Response to Nucor Steel-Utah Data Request No. 3.09).

[20] EGU Exhibit 5.0R at 15:312-314.

[21] *Id.* at 15:322-16:324.

[22] *See* Nucor Exhibit 3.1 at 3 (EGU Response to Nucor Steel-Utah Data Request No. 3.08).

B. Nucor's Proposed Change to TSL Volumetric Rate Design

Q. WHAT RECOMMENDATIONS REGARDING THE TSL RATE CLASS VOLUMETRIC RATE DESIGN DO YOU MAKE IN YOUR DIRECT TESTIMONY?

A. In my direct testimony, I recommend revising the TSL rate class volumetric rate design to reflect the economies of scale observable in gas distribution systems.[23]

Q. HOW DID PARTIES RESPOND TO THIS RECOMMENDATION?

A. ANGC witness Oliver supports my proposed changes to the TSL rate class volumetric rate blocks.[24] EGU witness Summers and UAE witness Higgins recommend retaining the existing TSL rate class blocks and discounts.[25] EGU witness Summers raises concerns regarding rate stability.[26] UAE witness Higgins raises concerns about consistency with EGU's as-filed cost allocation model.[27] UAE witness Higgins also requests that the TBF block design be set consistently with TSL.[28]

Q. DID THESE PARTIES REBUT YOUR FINDING OF ECONOMIES OF SCALE IN DISTRIBUTION?

A. No, there is no dispute about whether economies of scale are present. In fact, in discovery, EGU acknowledges that "there are economies of scale in the distribution of gas."[29]

---

[23] Nucor Exhibit 1.0 at 16:331-335.

[24] ANGC Exhibit 1R at 2:38-3:50 ("Witness Kaufman's proposal for restructuring the Company's Volumetric Charges for TSL customers better reflects cost-causation.").

[25] EGU Exhibit 5.0R at 16:330; UAE Exhibit COS 4.0 at 13:220-221.

[26] EGU Exhibit 5.0R at 16:335-343.

[27] UAE Exhibit COS 4.0 at 13:210-220.

[28] *Id.* at 13:222-224.

[29] *See* Nucor Exhibit 3.1 at 4 (EGU Response to Nucor Steel-Utah Data Request No. 3.06).

Q. CAN YOU RESPOND TO EGU'S RATE STABILITY CONCERN?

A. EGU clarified in discovery that "EGU does not hold the position that rate design changes in rates should never occur when they conflict with the attribute of stability, predictability of rates themselves…"[30] This illustrates that the principle of rate stability is only one consideration when designing rates. Moreover, my recommendation does not violate the goal of rate stability because once my recommendation is implemented, rates will remain stable in future cases.

Q. DOES EGU WITNESS SUMMERS ACCURATELY REPRESENT THE HISTORY OF TS BLOCK RATES?

A. No. Witness Summers states that "[t]he block breaks that the Company proposes in this case have been used consistently and have received very little opposition from customers or others during many general rate cases."[31] As discussed above, EGU has made significant changes to the TS rate class rate design in two of its last three rate cases. In Docket No. 13-057-05, *In the Matter of the Application of Questar Gas Company to Increase Distribution Rates and Charges and Make Tariff Modifications*, EGU (then Questar Gas Company) changed the volumetric rate blocks for the TS class.[32] In Docket No. 22-057-03, the Company split the TS class and changed the volumetric rate blocks for the new TSM and TSL subclasses from the pre-existing TS class.[33] The historic blocks are summarized

[30] *See id.* at 2 (EGU Response to Nucor Steel-Utah Data Request No. 3.09).

[31] EGU Exhibit 5.0R at 16:339-341.

[32] *See* Docket No. 13-057-05, *In the Matter of the Application of Questar Gas Company to Increase Distribution Rates and Charges and Make Tariff Modifications*, QGC Exhibit 3.0 at 23:595-600 (reducing the block breaks significantly) & Report and Order at 37 & App'x A at 15 (Feb. 14, 2014) (approving a stipulation incorporating the revised block structure proposed by QGC in its filing).

[33] Docket No. 22-057-03, Order at 55 (Dec. 23, 2022) (approving the new block structure as proposed by DEU in direct testimony).

below. The current blocks have only been in effect for three years and a single rate case. Moreover, the blocks set in Docket No. 13-057-05 were in rates much longer than Docket No. 22-057-03 blocks and are much closer to Nucor's proposal than the Company's proposal.

Table 1: TSL Rate Class Volumetric Block History

	(Dth)	Docket No. 13-057-05	Docket No. 22-057-03	Nucor Proposed Docket No. 25-057-06
Block 1	First	200	10,000	20,000
Block 2	Next	1,800	112,500	20,000
Block 3	Next	98,000	477,500	40,000
Block 4	Over	100,000	600,000	80,000

Q. DID EGU'S PROPOSAL TO SEPARATE THE TRANSPORTATION SERVICE CLASS INTO THE TSS, TSM, AND TSL RATE CLASSES CAUSE RATE INSTABILITY?

A. Yes. EGU acknowledges that the creation of TSS, TSM, and TSL rate classes from the prior Transportation Service class is an example of violating the principle of rate stability.

> The Company recognizes that all rate changes may be viewed as disruptive to customers to some degree. These guiding principles help the Company craft proposals that minimize such disruptions. They are not used as prohibitors in cases where departure from historical consistency and predictability is unavoidable. An important example is the formation of the TSL, TSM, and TSS classes that were approved by the Commission and took effect in 2023.[34]

EGU's proposal was so disruptive that the TSS class actually saw a rate decrease in that case, followed by a large proposed rate increase in this present case.[35]

[34] *See* Nucor Exhibit 3.1 at 2 (EGU Response to Nucor Steel-Utah Data Request No. 3.09).

[35] *See id.* at 5 (EGU Response to Nucor Steel-Utah Data Request No. 3.07).

Q. HOW DOES RATE DISRUPTION CAUSED BY A MORE ACCURATE RATE DESIGN DIFFER FROM RATE DISRUPTION CAUSED BY POORLY DESIGNED ALLOCATORS?

A. A poorly designed allocator, such as the use of Actual Peak Day rather than Design Day (as discussed above), will cause regular yo-yoing of rates, as interruption events move in and out of the three year moving average. This is the type of rate disruption that Bonbright's principle of stability is intended to address. My recommendation represents a one-time movement towards cost-based rates that does not introduce the unpredictability that Bonbright's principle is intended to address.

Q. HOW DO YOU RESPOND TO UAE'S CONCERN THAT ALLOCATIONS ARE BASED ON THROUGHPUT?

A. UAE witness Higgins agrees with Nucor that greater weight should be placed on Design Day in the allocation of mains.[36] The appropriate method of addressing UAE's concern is through proper cost allocation, not rate design. Rates should be designed based on costs, and UAE witness Higgins has agreed that Design-Day demand is the "primary cost driver for feeder-lines, compressor stations, and measuring and regulating stations."[37] The remedy in this case is to adopt a Cost of Service Study that allocates costs consistently with cost causation, and a rate design model that reflects the economies of scale that all parties agree exists.

Q. HOW DO YOU RESPOND TO UAE WITNESS HIGGINS' PREFERENCE FOR TBF BLOCK DESIGN TO MIRROR THE TSL RATE CLASS BLOCK DESIGN?

A. There is no barrier to modifying the TBF block design in the same manner I proposed for TSL. This would allow mirroring across schedules while also moving both schedules

[36] UAE Exhibit COS 4.0 at 7:88-95.

[37] *Id.*

towards costs. To the extent that these rate schedules must mirror each other, I recommend implementing Nucor's proposed rate design for the TSL rate class as outlined in my Direct and Rebuttal testimony in this proceeding for both schedules.

C. Basic Service Fees

Q. HOW DOES EGU RESPOND TO ANGC'S ASSERTION THAT EGU'S BASIC SERVICE FEES ("BSF") ARE SET BELOW COST?

A. EGU witness Summers does not oppose a higher BSF charge. However, EGU witness Summers does note that a higher BSF charge could impact low income customers.[38]

Q. DOES EGU'S RESPONSE AFFECT YOUR REBUTTAL RECOMMENDATION REGARDING BASIC SERVICE FEES?

A. No, I still recommend that the BSF be set to cost for the TSL rate class. I do not propose a change for the BSFs of other schedules. EGU's response appears to be focused on the potential impacts of revisions to the Basic Service Fees on low income customers.[39] My rebuttal testimony provides a recommended Basic Service Fee schedule change only for TSL customers.[40] The revenue collected through the BSF is a very small portion of the total TSL rate class revenue requirement.[41] TSL customers are typically business entities that do not receive low income subsidies even in years where businesses are unprofitable. Thus, I continue to recommend that the BSF be set to cost for the TSL rate class.

Q. DOES THIS CONCLUDE YOUR PHASE II SURREBUTTAL TESTIMONY?

A. Yes.

---

[38] EGU Exhibit 5.0R at 18:375-378.

[39] *Id*.

[40] Nucor Exhibit 2.0 at 4:88.

[41] *See id.* at 8:162-163 (Table 3) (demonstrating that even under my proposed revisions setting the BSFs to cost, they only 2% of the total revenue collected for the rate class ($436,824 BSF revenue / $22,369,315 total TSL class revenue = 2.0%)).