

**BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION
STATE OF NORTH DAKOTA**

**MONTANA-DAKOTA UTILITIES CO.)
2022 ELECTRIC RATE INCREASE)
APPLICATION)**

**CASE NO. PU-22-194
OAH File No. 20220225**

DIRECT TESTIMONY AND EXHIBITS OF

ANDREW D. TEAGUE

ON BEHALF OF

WALMART INC.

JANUARY 31, 2023

Table of Contents

1 I. Introduction 1
2 II. Purpose of Testimony and Summary of Recommendations 3
3 III. Cost of Service and Revenue Allocation..... 5
4 IV. Rate 30 Rate Design 9

Exhibits

Exhibit ADT-1: Witness Qualifications Statement

Exhibit ADT-2: Base Rate of Return on Rate Base vs. Proposed Rate of Return, Projected Test Year 2023

Exhibit ADT-3: Cost of Service by Function, MDU Energy Cost of Service Study Results, Proposed Rates Rate 30 Secondary

Exhibit ADT-4: Rate 30 Secondary Cost of Service Study Results, CCOSS versus Proposed

1 **I. Introduction**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.**

3 A. My name is Andrew D. Teague. My business address is 2608 SE J Street, Bentonville,
4 AR 72716. I am employed by Walmart Inc. (“Walmart”) as Senior Manager, Energy
5 Services.

6 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?**

7 A. I am testifying on behalf of Walmart.

8 **Q. IS WALMART SPONSORING THE TESTIMONY OF ADDITIONAL WITNESSES IN THIS**
9 **DOCKET?**

10 A. Yes. Walmart is also sponsoring the testimony of Alex J. Kronauer, Senior Manager,
11 Energy Services for Walmart.

12 **Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.**

13 A. I received a Master’s of Public Affairs in 2010 from the University of Indiana School of
14 Public and Environmental Affairs. From 2011 to 2019, I was an energy management
15 contractor working with the Army and the Air Force with primary duties in Texas and
16 Oklahoma. My responsibilities included energy conservation projects, on-installation
17 utility billing, management of relationships with utility providers, and other day-to-
18 day energy and utility operations. I joined the energy department at Walmart in
19 February 2019 as Senior Manager, Energy Services. My Witness Qualifications
20 Statement is attached as Exhibit ADT-1.

1 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE NORTH DAKOTA**
2 **PUBLIC SERVICE COMMISSION (“COMMISSION”)?**

3 A. No, I have not.

4 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE**
5 **REGULATORY COMMISSIONS?**

6 A. Yes, I have submitted testimonies to state regulatory commissions in Colorado,
7 Kentucky, Michigan, Nevada, Missouri, Montana, Nevada, Texas, Virginia, Wisconsin,
8 and Wyoming. A full list of the dockets I have testified in can be found in Exhibit ADT-
9 1.

10 **Q. ARE YOU SPONSORING EXHIBITS IN YOUR TESTIMONY?**

11 A. Yes. I am sponsoring the exhibits listed in the Table of Contents.

12 **Q. PLEASE BRIEFLY DESCRIBE WALMART’S OPERATIONS IN NORTH DAKOTA.**

13 A. As shown on Walmart’s website, Walmart operates 17 retail units and related facilities
14 and employs over 4,600 associates in the State of North Dakota. In fiscal year ending
15 2022, Walmart purchased over \$79.7 million worth of goods and services from North
16 Dakota-based suppliers, supporting over 4,200 supplier jobs.¹

¹ <https://corporate.walmart.com/about/north-dakota>

1 **Q. PLEASE BRIEFLY DESCRIBE WALMART’S OPERATIONS WITHIN THE NORTH DAKOTA**
2 **SERVICE TERRITORY FOR MONTANA-DAKOTA UTILITIES.**

3 A. Walmart has four stores and related facilities that take electric service from Montana-
4 Dakota Utilities (“MDU” or “Company”) in North Dakota. Walmart primarily receives
5 electric service under General Electric Service Rate 30 Secondary (“Rate 30”).
6

7 **II. Purpose of Testimony and Summary of Recommendations**

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to respond to the revenue allocation and rate design
10 portions of MDU’s rate case filing and to provide recommendations to assist the
11 Commission in its thorough and careful consideration of the customer impact of the
12 Company’s proposed rate increase.

13 **Q. IN SETTING THE REVENUE REQUIREMENT, RETURN ON EQUITY (“ROE”),**
14 **ALLOCATION, AND RATE DESIGN CHANGES FOR THE COMPANY, SHOULD THE**
15 **COMMISSION CONSIDER THE IMPACT OF THE PROPOSED RATE INCREASE ON**
16 **BUSINESS CUSTOMERS?**

17 A. Yes. Electricity is a significant operating cost for retailers such as Walmart. When
18 electric rates increase, the increased cost to retailers can put pressure on consumer
19 prices and on the other expenses required by a business to operate. The Commission
20 should thoroughly and carefully consider the impact on customers when examining
21 the requested revenue requirement, ROE, allocation, and rate design, in addition to
22 all other facets of this case, to ensure that any increase in the Company’s rates is the

1 minimum necessary to provide safe, adequate, and reliable service, while also
2 providing MDU the opportunity to recover its reasonable and prudent costs and earn
3 a reasonable return on its investment.

4 **Q. PLEASE SUMMARIZE WALMART'S RECOMMENDATIONS TO THE COMMISSION.**

5 A. Walmart's recommendations to the Commission are as follows:

6 1) For the purposes of this docket, Walmart does not take a position on the Company's
7 Class Cost of Service Study ("CCOSS") model at this time. However, to the extent that
8 other parties propose modifications or alternatives to the Company's proposed
9 CCOSS, Walmart reserves the right to address those per the Commission's procedures
10 in this docket.

11 2) For the purposes of this docket, at the Company's proposed revenue requirement,
12 Walmart does not oppose the Company's proposed revenue allocation. If the
13 Commission approves a revenue requirement lower than that proposed by the
14 Company, the Commission should begin with the revenue allocation proposed by the
15 Company and use the reduction in revenue requirement to move classes closer to cost
16 of service.

17 3) For the purposes of this docket and to avoid moving Rate 30 rates further from cost
18 of service-based levels, Walmart recommends the Commission keep the present
19 customer, demand, and energy cost allocation percentages for the Rate 30 rate
20 design.

21 4) If the Commission approves a lower revenue requirement for the Rate 30 class than
22 that proposed by the Company, the Commission should first apply Walmart's

1 proposed rate design for the class, and then apply the revenue requirement reduction
2 to the energy charges.

3 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION ADVOCATED**
4 **BY THE COMPANY INDICATE WALMART'S SUPPORT?**

5 A. No. The fact that an issue is not addressed herein or in related filings should not be
6 construed as an endorsement of, agreement with, or consent to any filed position.

7

8 **III. Cost of Service and Revenue Allocation**

9 **Q. GENERALLY, WHAT IS WALMART'S POSITION ON SETTING RATES BASED ON THE**
10 **UTILITY'S COST OF SERVICE?**

11 A. Walmart advocates for setting rates based on the utility's cost of service for each
12 customer class. This produces equitable rates that reflect cost causation, send proper
13 price signals, and minimize price distortions.

14 **Q. HOW DOES THE COMPANY PRESENT ITS COST OF SERVICE?**

15 A. MDU is presenting its CCOSS based on a projected average test period for 2023. *See*
16 *Direct Testimony of Ronald J. Amen ("Amen Direct")*, p. 26, lines 7-8.

17 **Q. DOES WALMART TAKE A POSITION ON THE COMPANY'S PROPOSED CCOSS AT THIS**
18 **TIME?**

19 A. No. However, to the extent that other parties propose modifications or alternatives
20 to the Company's proposed CCOSS, Walmart reserves the right to address those per
21 the Commission's procedures in this docket.

1 **Q. HAVE YOU EXAMINED THE RATES OF RETURN FOR THE COMPANY’S CURRENT**
2 **RATES?**

3 A. Yes. The Company provided the rates of returns (“RORs”) for each class in Statement
4 K and summarized in Table 4 of Company witness Amen’s Testimony. See Amen
5 Direct, lines 6-7, p. 24. From this information an indexed rate of return (“RRI”), which
6 is the indexed value of the ROR, was calculated. An RRI of one represents parity
7 between the costs incurred by each class and what that class pays. An RRI of less than
8 one means that the class is earning less than the Company’s ROR and is thus being
9 subsidized by other customer classes. While an RRI of greater than one means the
10 class is earning more than the Company’s ROR and is thus subsidizing other customer
11 classes.

12 **Q. HAS WALMART CALCULATED THE RRI FOR THE PROPOSED RATES?**

13 A. Yes, it has. Although Statement K included in the Company’s filing provides the RORs
14 for each rate at cost of service, it does not present the RORs or RRIs at the proposed
15 rates. See Statement K, Cost by Component. In order to calculate the RRIs at the
16 proposed rates, I incorporated the proposed rates found in Statement L of the
17 Company’s initial filing with the RORs and RRIs in Statement K. The resulting RORs
18 and RRIs for the current and proposed rates are provided in Exhibit ADT-2, which is
19 summarized in Table 1 below.

1

Table 1. Base Rate of Return on Rate Base vs. Proposed Rate of Return, Projected Test Year 2023

Customer Class	Base Rate of Return on Rate Base	Base RRI	Proposed Rate of Return on Rate Base	Proposed RRI
Residential Rate 10	2.50%	0.47	6.25%	0.76
Small General Rate 20	4.20%	0.79	8.58%	1.05
Irrigation Rate 25	-4.06%	(0.76)	-1.31%	(0.16)
Large General Secondary Rate 30	10.45%	1.95	11.69%	1.42
Large General Primary Rate 30	5.53%	1.03	8.15%	0.99
Time of Day Large General Secondary Rate 31	11.33%	2.12	12.62%	1.54
Time of Day Large General Primary Rate 31	6.87%	1.28	7.87%	0.96
Space Heating Rate 32	5.31%	0.99	8.23%	1.00
Interruptible Demand Response Rate 38	11.63%	2.17	12.89%	1.57
Small Municipal Rate 40	0.90%	0.17	6.30%	0.77
Municipal Lighting Secondary Rate 41	9.63%	1.80	10.58%	1.29
Municipal Lighting Primary Rate 41	14.82%	2.77	18.38%	2.24
Municipal Pumping Secondary Rate 48	7.93%	1.48	9.02%	1.10
Municipal Pumping Primary Rate 48	2.87%	0.54	8.54%	1.04
Outdoor Lighting Rate 52	7.60%	1.42	8.06%	0.98
Contract Sabin	1.95%	0.36	3.92%	0.48
Contract Tesoro	3.79%	0.71	6.07%	0.74
System	5.35%	1.00	8.21%	1.00

Source: Statement K-1 Rate Base and Income Statement by Class Cost By Component

2

3 **Q. DOES THE COMPANY PROPOSE TO SET RATES FOR EACH CLASS AT COST OF SERVICE**
 4 **LEVELS?**

5 **A.** No. As shown in Table 1, per the Company’s proposed revenue allocation, most of
 6 the RRIs for each rate class remain either above or below parity, i.e., above or below
 7 1.00.

8 **Q. WHAT JUSTIFICATION HAS THE COMPANY PROVIDED FOR NOT SETTING RATES AT**
 9 **THEIR COST OF SERVICE LEVELS?**

10 **A.** It is my understanding that the Company is not proposing to set rates at each classes’
 11 class cost of service level in order to mitigate bill increases. Instead, the Company is
 12 proposing a moderation process that includes a floor of one-third of the system
 13 average increase, or 4.634 percent, and a cap of 35 percent. See Amen Direct, p. 31,

1 lines 23-25. This moderation process was applied to all classes other than the
2 Residential class, which received the remainder of the revenue increase. See Amen
3 Direct, p. 32, line 1.

4 **Q. DOES THE COMPANY'S PROPOSED REVENUE ALLOCATION MOVE EACH CLASS**
5 **CLOSER TO COST OF SERVICE?**

6 A. Yes. As shown in Table 1, the RRIs for most rate classes have moved closer to parity
7 when compared to the current rates for those classes. It is worth noting, however,
8 that five of these rate classes, as proposed, would move from either a subsidizing to
9 a subsidized position or vice versa. Although these changes remained fairly close to
10 an RRI of 1.00, of these five rate classes, Small General Rate 20 will see the largest
11 departure from parity with an RRI of 1.05.

12 **Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION ON THIS ISSUE?**

13 A. For the purposes of this docket, at the Company's proposed revenue requirement,
14 Walmart does not oppose the Company's proposed revenue allocation. If the
15 Commission approves a revenue requirement lower than that proposed by the
16 Company, the Commission should begin with the revenue allocation proposed by the
17 Company and use the reduction in revenue requirement to move classes closer to cost
18 of service.

1 **IV. Rate 30 Rate Design**

2 **Q. WHAT IS YOUR UNDERSTANDING OF THE EXISTING RATE 30 RATE DESIGN?**

3 A. My understanding is that Rate 30 currently contains the following charges:

- 4 1. A \$/month Basic Service Charge;
- 5 2. A seasonal \$/kW Demand Charge;
- 6 3. A \$/kWh Energy charge;
- 7 4. A \$/kWh Renewable Resource Cost Adjustment rider;
- 8 5. A \$/kW Generation Resource Recovery rider;
- 9 6. A \$/kWh Environmental Cost Recovery rider;
- 10 7. A \$/kWh Fuel and Purchased Power Adjustment rider; and
- 11 8. A \$/kWh Transmission Cost Adjustment rider. *See* Appendix A, NDPSC Volume 4,
- 12 7th Revised Sheet No. 18.1.

13 **Q. DOES THE COMPANY PROPOSE ANY STRUCTURAL CHANGES TO RATE 30?**

14 A. No, MDU is not making any structural changes to Rate 30. However, the Company is
15 proposing changes to the existing Generation Resource Recovery Rider (“Generation
16 Rider”).

17 **Q. WHAT CHANGES IS THE COMPANY PROPOSING TO THE GENERATION RIDER?**

18 A. The Company is proposing to move certain costs from the Generation Rider to rate
19 base and to move other costs from rate base to the Generation Rider. Based on my
20 understanding, the costs that are moving to rate base are the production investment
21 and related expenses of Lewis & Clark Unit II and Heskett Unit IV. *See* Direct
22 Testimony of Tara R. Vesey (“Vesey Direct”), p. 5, lines 1-5. While the costs that are

1 being moved to the Generation Rider are the retired investment and related expenses
2 of Lewis & Clark I and Heskett Units I and II. *See Vesey Direct*, p. 4, lines 17-19.

3 **Q. WHAT REASONS DOES THE COMPANY PROVIDE FOR CHANGING CERTAIN COSTS**
4 **RECOVERED THROUGH THE GENERATION RIDER?**

5 A. The Heskett Unit IV is a new gas combustion turbine that is scheduled to be in
6 operation in April 2023. *See Direct Testimony of Nicole A. Kivisto*, p. 17, lines 18-20.
7 The Lewis & Clark I and Heskett Units I and II were established as a regulatory asset in
8 Docket No.66 PU-19-317 to be amortized over seven years. However, MDU is now
9 proposing to extend this seven-year amortization period to over 10 years. *See Vesey*
10 *Direct*, p. 7, lines 4-18.

11 **Q. PER THE COMPANY’S COST OF SERVICE STUDY RESULTS, ARE THE MAJORITY OF THE**
12 **COSTS INCURRED TO SERVE RATE 30 CUSTOMERS ENERGY RELATED?**

13 A. No, they are not. ADT-3 shows a complete breakdown of the cost of service by
14 function for the Company and for Rate 30 as identified in the CCOSS provided by the
15 Company in Statements K and L. The proposed and current rates do not specify
16 allocation to each function on the same granular level as the cost studies did, so the
17 data is simplified in ADT-4. As designed in the CCOSS, 67.2 percent of the costs
18 incurred by Rate 30 are demand related, 6.2 percent are customer related, and 26.6
19 percent are energy related, as shown in Table 2 below.

Table 2. Rate 30 Secondary Cost of Service Study Results, CCOSS versus Proposed

Function	Rate 30 Current Revenue by Function		Rate 30 CCOSS Revenue by Function		Rate 30 Proposed Revenue by Function	
	Rate 30 Secondary	Rate 30 Secondary	Rate 30 Secondary	Rate 30 Secondary	Rate 30 Secondary	Rate 30 Secondary
Customer	\$ 3,068,352.00	7.11%	\$ 3,410,798	6.2%	\$ 3,068,352	6.61%
Demand	\$ 23,251,782.55	53.86%	\$ 36,722,833	67.2%	\$ 24,529,473	52.83%
Energy	\$ 16,847,213.43	39.03%	\$ 14,564,293	26.6%	\$ 18,834,765	40.56%
Total Revenue	\$ 43,167,348	100.00%	\$ 54,697,924	100.0%	\$ 46,432,590	100.00%

Source: Ex.-Walmart ADT-3

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Q. IS THE RECOVERY OF DEMAND-RELATED COSTS THROUGH ENERGY CHARGES APPROPRIATE?

A. No. The recovery of demand-related costs through energy charges is inappropriate and violates cost causation principles.

Q. PLEASE EXPLAIN.

A. The shift in demand-related costs from per kW demand charges to per kWh energy charges results in a shift in demand cost responsibility from lower load factor customers to higher load factor customers. For example, two customers can have the same level of demand and cause the utility to incur the same amount of fixed cost, but because one customer uses more kWh than the other, that customer will pay more of the demand cost than the customer that uses fewer kWh. This results in a misallocation of cost responsibility as higher load factor customers overpay for the demand-related costs incurred by the Company to serve them. In other words, higher load factor customers are paying for a portion of the demand-related costs that are

1 incurred to serve lower load factor customers simply because of the manner in which
2 the Company collects those costs in rates.

3 **Q. WOULD THE COLLECTION OF A GREATER PERCENTAGE OF RATE 30 REVENUE**
4 **REQUIREMENT THROUGH THE DEMAND CHARGE BE BENEFICIAL TO THE COMPANY?**

5 A. Yes. By collecting a large percentage of a class revenue requirement through energy
6 charges, the Company subjects itself to under and overcollection of its revenue
7 requirement due to fluctuations in customer usage. As such, issues such as weather
8 and the economy will have a greater impact on the utility versus a rate design in which
9 an appropriate amount of revenue requirement is collected through the demand
10 charge.

11 **Q. HOW DOES THE COMPANY CHARACTERIZE THE FUNCTIONALIZATION OF COSTS?**

12 A. Assigning the costs incurred by the production, transmission, distribution, and
13 administration of electricity, or functionalization, are discussed in the accounting
14 CCOSS testimony of Company witness Ronald J. Amen. Mr. Amen describes the
15 allocation of costs as follows:

- 16 • Production: 12 coincident peak average.
- 17 • Transmission: 12 coincident peak average.
- 18 • Distribution: class one non-coincident peaks. *See* Amen Direct, p. 8, lines 10-12.
- 19 • Customer: based on the hypothetical minimum-sized version of the distribution
20 system and a regression of the cost of a zero-load system. *Id.*, p. 18, lines 1-15.

21 **Q. DOES WALMART AGREE WITH THIS CHARACTERIZATION OF COSTS?**

22 A. Yes, this methodology is consistent with commonly accepted practices.

1 **Q. IS THE COMPANY’S RATE DESIGN CONSISTENT WITH THIS FUNCTIONALIZATION?**

2 A. As discussed above, it is not. For example, in the Company’s proposed rates, 40.56
3 percent of the revenue requirement for Rate 30 would be collected through the
4 energy charge despite the fact that, according the CCOSS, only 26.6 percent of costs
5 are energy related.

6 **Q. WHAT ARE WALMART’S RECOMMENDATIONS TO THE COMMISSION FOR RATE 30 A**
7 **RATE DESIGN AT THE COMPANY’S PROPOSED REVENUE REQUIREMENT?**

8 A. For purposes of this docket and to avoid moving Rate 30 rates further from cost of
9 service-based levels, Walmart recommends the Commission keep the present
10 customer, demand, and energy cost allocation percentages for the Rate 30 rate
11 design.

12 If the Commission approves a lower revenue requirement for the Rate 30 class
13 than that proposed by the Company, the Commission should reject the Company’s
14 proposed rate design and keep present revenue allocation percentages and use
15 reductions to the Rate 30 allocated revenue requirement to reduce the energy
16 charges.

17 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

18 A. Yes, it does.


STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

In the Matter of the Application of) Case No. PU-22-194
Montana-Dakota Utilities Co. for))
Authority to Establish Increased Rates) OAH File No. 20220225
for Electric Service))

VERIFICATION

STATE OF ARKANSAS §
 §
COUNTY OF BENTON §

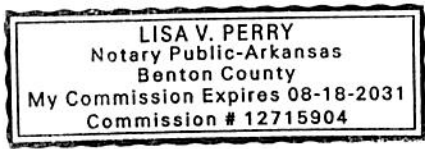
Andrew D. Teague, being first duly sworn on oath, deposes and states that he has read the testimony and exhibits submitted in the above captioned matters under his name, that they were prepared by him or under his direction, that he knows the contents thereof, that the same are true and correct to the best of his knowledge and belief, and that he would give the same testimony orally and would present the same attachments if asked under oath.

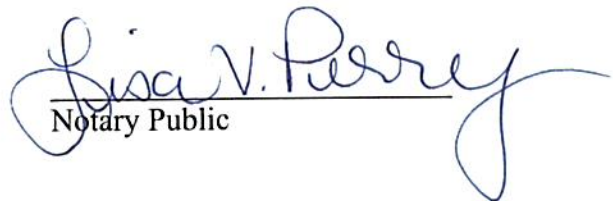


Andrew D. Teague

SUBSCRIBED AND SWORN to before me this 30 day of January, 2023. Witness my hand and official seal.

My Commission expires: 8/18/2031





Notary Public

[SEAL

Andrew D. Teague, CEM

Senior Manager, Energy Services

Walmart Inc.

Business Address: 2608 SE J Street, Bentonville, Arkansas 72716

Business Phone: (865)-696-4687

EXPERIENCE

February 2019 – Present

Walmart Inc., Bentonville, AR

Senior Manager, Energy Services

March 2011 – March 2019

AGEISS, Inc., Fort Sill, OK

Energy Conservation Program Support

EDUCATION

2010 University of Indiana

MPA, Environmental Policy and Natural
Resource Management; Sustainable
Development

2008 Emory University

B.S., Environmental Studies

2006 Oxford College of Emory University

A.A.

FILED TESTIMONY

2023

New Mexico Public Regulatory Commission Case No. 22-00058-UT: In The Matter of Public Service Company of New Mexico's Application for Authorization to Implement Grid Modernization Components That Include Advanced Metering Infrastructure and Application to Recover the Associated Costs Through a Rider, Issuance of Related Accounting Orders, and Other Associated Relief

Issue: Renewable Energy Program.

2022

Missouri Public Service Commission Case No. ER-2022-0245: In The Matter Of The Application Of Union Electric Company D/B/A Ameren Missouri For Approval Of A Subscription-Based Renewable Energy Program

Issue: Renewable Energy Program.

Public Service Commission of Montana Docket No. 2022.07.078: In RE NorthWestern Energy's Application for Authority to Increase Retail Electric and Natural Gas Utility Service Rates and for Approval of Electric and Natural Gas Service Schedules and Rules and Allocated Cost of Service and Rate Design.

Issue: General rate case.

Public Service Commission of Wyoming Docket No. 20003-214-ER-22, Record No. 17072: In the Matter of the Application of Cheyenne Light, Fuel and Power Company D/B/A Black Hills Energy for a General Rate Increase of \$15,366,026 per Annum and Authority to Revise its Power Cost Adjustment Mechanism.

Issue: General rate case.

Public Utility Commission of Colorado Proceeding No. 22A-0230E: In the Matter of the Application of Black Hills Colorado Electric, LLC for (1) Approval of its 2022 Electric Resource Plan and Clean Energy Plan, and (2) Approval of its 2023-2026 Renewable Energy Standard Compliance Plan.

Issue: Approval of renewable resource plans.

New Mexico Public Regulation Commission Case No. 22-00178-UT: In the matter of Southwestern Public Service Company's Application for Authorization to Implement Grid Modernization Components that Include Advanced Metering Infrastructure and Recover the Associated Costs through a Rider, Issuance of Related Accounting Orders, and other Associated Relief.

Issue: Approval of AMI deployment and grid modernization.

Public Utilities Commission of Nevada Proceeding No. 22-06014: In the Matter of the Application by Sierra Pacific Power Company D/B/A NV Energy, Filed Pursuant to NRS 704.110(3), Addressing Its Annual Revenue Requirement for General Rates Charged to All Classes of Electric Customers.

Issue: General rate case.

Public Service Commission of Wisconsin Docket No. 5-UR-110: Joint Application of Wisconsin Electric Power Company and Wisconsin Gas LLC for Authority to Adjust Electric, Natural Gas and Steam Rates.

Issue: General rate case.

Public Service Commission of Wisconsin Docket No. 6690-UR-127: Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates.

Issue: General rate case.

Public Utilities Commission of Nevada Proceeding No. 22-03028: Joint Application of Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy for approval to merge into a single Corporate entity, to transfer Certificates of Public Convenience and Necessity ("CPC") 685 Sub 20, 688, And 688 Sub 6 from SPPC to NPC, and to consolidate Generation assets.

Issue: Utility merger.

Public Utility Commission of Colorado Proceeding No. 22AL-0130E: In the Matter of Advice No. 1881-Electric of Public Service Company of Colorado for Approval of a Resiliency Service Program in Its Colorado PUC No. 8 – Electric Tariff Effective April 24, 2022

Issue: Approval to implement resiliency service program tariff.

2021

Public Utility Commission of Texas Case Docket No. 52389, SOAH Docket No. 473-22-0009: Southwestern Electric Power Company's Request for Approval of Advanced Metering System (AMS) Deployment Plan, AMS Surcharge and Non-Standard Metering Service Fees
Issue: Approval to implement AMS and recover costs through an additional surcharge.

Missouri Public Service Commission Case No. ER-2021-0312: In The Matter Of The Request Of The Empire District Electric Company D/B/A Liberty For Authority To File Tariffs Increasing Rates For Electric Service Provided To Customers In Its Missouri Service Area
Issue: General Rate Case.

Public Utility Commission of Texas Case Docket No. 52195, SOAH Docket No. 473-21-2606: Application of El Paso Electric Company to Change Rates
Issue: General Rate Case.

Missouri Public Service Commission Case No. ER-2021-0240: In the Matter of the Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service
Issue: General Rate Case.

New Mexico Public Regulation Commission Case No. 21-00148-UT: In the matter of Southwestern Public Service Company's Application for Authorization to Implement Grid Modernization Components that Include Advanced Metering Infrastructure and Recover the Associated Costs through a Rider, Issuance of Related Accounting Orders, and other Associated Relief.
Issue: Approval of AMI deployment and grid modernization.

Virginia State Corporation Commission Case No. PUR-2021-00127: Petition of the Virginia Electric and Power Company, for approval of a plan for electric distribution grid transformation projects pursuant to §56-585.1 A 6 of the Code of Virginia.
Issue: Approval of a Customer Information Platform and Phase II AMI deployment.

Public Utility Commission of Texas Docket No. 52040, SOAH Docket No. 473-21-2607: Application of El Paso Electric Company for Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees.
Issue: Approval to implement AMS and recover costs through an additional surcharge.

Michigan Public Service Commission Case No. U-20963: In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief.
Issue: General rate case.

Commonwealth of Kentucky Public Service Commission Case No. 2020-00350: Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering

Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit.

Issue: General rate case.

Commonwealth of Kentucky Public Service Commission Case No. 2020-00349: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit.

Issue: General rate case.

PRESENT MEMBERSHIPS

Association of Energy Engineers, Member

Utah Association of Energy Users, Board Member

INDUSTRY TRAINING

- 2020 Practical Regulatory Training for the Electric Industry, Center for Public Utilities, New Mexico State University College of Business
- 2020 IPU Accounting and Ratemaking Course, Michigan State University

KEY ACCOMPLISHMENTS

Oversaw the roll out of the Meter Data Management System at Fort Sill.

Performed meter audits and surveys at Joint Base San Antonio.

Managed meter data for natural gas, electric, wastewater, and water for Joint Base San Antonio and Fort Sill. Developed customer utility rates and managed billing for Joint Base San Antonio and Fort Sill.

Supported utility management for natural gas, electric, wastewater, and water billing with city, public utility, and privatized utility providers.

Supported energy savings performance contract endeavors at Fort Sill and Joint Base San Antonio, including a \$143 million contract.

Audited historic energy savings performance contracts for compliance for the Air Force Civil Engineering Center.

Maintained and expanded Walmart's Rate Engine with the addition of dozens of utilities' and distributed generation providers' interval data and cataloging and modeling hundreds of different utility rates.

Table 1. Base Rate of Return on Rate Base vs. Proposed Rate of Return, Projected Test Year 2023

Customer Class	Total Rate Base	Current Operating Income	Base Revenue	Base Rate of Return on Rate Base	Base RRI	Proposed Revenue	Proposed Income	Proposed Rate of Return on Rate Base	Proposed RRI
Residential Rate 10	\$ 295,459,735.00	\$ 7,381,897.00	\$ 69,769,528.00	2.50%	0.47	\$ 80,854,522.38	\$ 18,466,891.38	6.25%	0.76
Small General Rate 20	\$ 39,180,031.00	\$ 1,645,171.00	\$ 10,032,962.00	4.20%	0.79	\$ 11,750,567.00	\$ 3,362,776.00	8.58%	1.05
Irrigation Rate 25	\$ 822,809.00	\$ (33,413.00)	\$ 100,003.00	-4.06%	(0.76)	\$ 122,632.25	\$ (10,783.75)	-1.31%	(0.16)
Large General Seconda	\$ 166,242,816.00	\$ 17,369,359.00	\$ 60,580,979.00	10.45%	1.95	\$ 62,637,609.31	\$ 19,425,989.31	11.69%	1.42
Large General Primary	\$ 48,661,987.00	\$ 2,692,325.00	\$ 14,563,657.00	5.53%	1.03	\$ 15,838,407.00	\$ 3,967,075.00	8.15%	0.99
Time of Day Large Gen	\$ 3,102,290.00	\$ 351,469.00	\$ 1,173,919.00	11.33%	2.12	\$ 1,213,929.28	\$ 391,479.28	12.62%	1.54
Time of Day Large Gen	\$ 480,338.00	\$ 32,983.00	\$ 158,043.00	6.87%	1.28	\$ 162,864.17	\$ 37,804.17	7.87%	0.96
Space Heating Rate 32	\$ 11,516,458.00	\$ 611,135.00	\$ 3,608,230.00	5.31%	0.99	\$ 3,944,358.00	\$ 947,263.00	8.23%	1.00
Interruptible Demand 1	\$ 5,133,035.00	\$ 596,809.00	\$ 2,099,767.00	11.63%	2.17	\$ 2,164,767.93	\$ 661,809.93	12.89%	1.57
Small Municipal Rate 4	\$ 1,347,948.00	\$ 12,167.00	\$ 281,253.00	0.90%	0.17	\$ 354,036.90	\$ 84,950.90	6.30%	0.77
Municipal Lighting Sec	\$ 6,406,252.00	\$ 616,800.00	\$ 899,801.00	9.63%	1.80	\$ 961,102.00	\$ 678,101.00	10.58%	1.29
Municipal Lighting Pri	\$ 168,116.00	\$ 24,907.00	\$ 80,434.00	14.82%	2.77	\$ 86,424.00	\$ 30,897.00	18.38%	2.24
Municipal Pumping Se	\$ 4,759,443.00	\$ 377,419.00	\$ 1,624,130.00	7.93%	1.48	\$ 1,676,182.90	\$ 429,471.90	9.02%	1.10
Municipal Pumping Pr	\$ 4,581,990.00	\$ 131,702.00	\$ 1,254,219.00	2.87%	0.54	\$ 1,513,815.75	\$ 391,298.75	8.54%	1.04
Outdoor Lighting Rate	\$ 2,780,360.00	\$ 211,294.00	\$ 362,968.00	7.60%	1.42	\$ 375,642.31	\$ 223,968.31	8.06%	0.98
Contract Sabin	\$ 5,676,249.00	\$ 110,423.00	\$ 1,438,878.00	1.95%	0.36	\$ 1,550,999.99	\$ 222,544.99	3.92%	0.48
Contract Tesoro	\$ 15,858,124.00	\$ 601,468.00	\$ 4,874,206.00	3.79%	0.71	\$ 5,234,634.83	\$ 961,896.83	6.07%	0.74
System	\$ 612,177,981.00	\$ 32,733,915.00	\$ 172,902,977.00	5.35%	1.00	\$ 190,442,496.00	\$ 50,273,434.00	8.21%	1.00

Source: Statement K-1 Rate Base and Income Statement by Class Cost By Component

Cost of Service by Function, MDU Energy Cost of Service Study Results, Proposed Rates Rate 30 Secondary

Function	Cost of Service by Function		Rate 30 Secondary Revenue by Function		Rate 30 Secondary Revenue by Function		Rate 30 Secondary Revenue by Function	
			COSS		Proposed		Current Rates	
	(\$) (1)	(%) (2) (1) / Total	(\$) (3)	(%) (4) (3) / Total	(\$) (5)	(%) (6) (5) / Total	(\$) (5)	(%) (6) (5) / Total
Production and Transmission	\$ 93,183,730		\$ 31,183,207					
Distribution	\$ 19,693,859		\$ 5,539,626					
Demand Total	\$ 112,877,589	58.1%	\$ 36,722,833	67.1%	\$ 24,529,473	52.83%	\$ 23,251,783	53.86%
Customer	\$ 39,201,302		\$ 3,410,798					
Customer Total	\$ 39,201,302	20.2%	\$ 3,410,798	6.2%	\$ 3,068,352	6.61%	\$ 3,068,352	7.11%
Energy	\$ 42,261,770		\$ 14,564,293					
Energy Total	\$ 42,261,770	21.7%	\$ 14,564,293	26.6%	\$ 18,834,765	40.56%	\$ 16,847,213	39.03%
Total Revenue	\$ 194,340,661	100.00%	\$ 54,697,924	100.0%	\$ 46,432,590	100.0%	\$ 43,167,348	100.0%

Sources:

Statement K-1 Rate Base and Income Statement by Class Cost By Component
 Statement L-1: Derivation of Rate and Reconciliation Large General Electric Service Rate 30

Table 2. Rate 30 Secondary Cost of Service Study Results, CCOSS versus Proposed

Function	Rate 30 Current Revenue by Function		Rate 30 CCOSS Revenue by Function		Rate 30 Proposed Revenue by Function		Rate 30 Current Revenue by Function	
	Rate 30 Secondary		Rate 30 Secondary		Rate 30 Secondary		Rate 30 Secondary	
Customer	\$ 3,068,352.00	7.11%	\$ 3,410,798	6.2%	\$ 3,068,352	6.61%	\$ 3,068,352.00	7.11%
Demand	\$ 23,251,782.55	53.86%	\$ 36,722,833	67.1%	\$ 24,529,473	52.83%	\$ 23,251,782.55	53.86%
Energy	\$ 16,847,213.43	39.03%	\$ 14,564,293	26.6%	\$ 18,834,765	40.56%	\$ 16,847,213.43	39.03%
Total Revenue	\$ 43,167,348	100.0%	\$ 54,697,924	100.0%	\$ 46,432,590	100.0%	\$ 43,167,348	100.0%

Source: Ex.-Walmart ADT-3