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Witness: Andrew D. Teague
**Sponsoring Party: Midwest Energy Consumers
Group**
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2021-0312

DIRECT TESTIMONY AND EXHIBITS OF

ANDREW D. TEAGUE

ON BEHALF OF

MIDWEST ENERGY CONSUMERS GROUP

November 17, 2021

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Exhibit ADT-1: Witness Qualifications Statement

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. as Senior Manager, Energy Services.

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

6 A. I am testifying on behalf of Midwest Energy Consumers Group (“MECG”), which is an
7 incorporated association representing the interests of large commercial and
8 industrial users of electricity. MECG members take electric service from The Empire
9 District Electric Company (“Empire” or “the Company”) primarily on Large Power
10 (“LP”); General Power (“GP”); Transmission Service (“TS”) and Total Electric Building
11 Service (“TEB”) rate schedules.

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

21 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE MISSOURI PUBLIC**
22 **SERVICE COMMISSION (“COMMISSION”)?**

1 A. Yes, I have testified before the Commission on behalf of the MECG on Case No. ER-
2 2021-0240.

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

5 A. I have previously testified before the Kentucky Public Service Commission in Case
6 Nos. 2020-00349 and 2020-00350, before the Michigan Public Service Commission in
7 Case No. U-20963, before the Public Utility Commission of Texas in Case Nos. 52040
8 and 52195, before the Virginia State Corporation Commission in Case No. PUR-2021-
9 00127, and before the New Mexico Public Regulation Commission on Case No. 21-
10 00148-UT.

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

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

13 **Q. DO CUSTOMERS REPRESENTED BY MECG HAVE A SIGNIFICANT IMPACT ON**
14 **MISSOURI'S ECONOMY?**

15 A. Yes. For example, as shown on Walmart's website, Walmart operates 156 retail
16 units and four distribution centers and employs over 43,000 associates in Missouri.
17 In fiscal year ending 2021, Walmart purchased \$6.9 billion worth of goods and
18 services from Missouri-based suppliers, supporting over 68,000 supplier jobs.¹

19

¹ <http://corporate.walmart.com/our-story/locations/united-states#/united-states/missouri>

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

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

3 A. The purpose of my testimony is to provide MECG's response to Empire's Advanced
4 Metering Infrastructure ("AMI") deployment in regards to data access to enable
5 smart and efficient customer behavior changes.

6 **Q. PLEASE SUMMARIZE MECG'S RECOMMENDATIONS TO THE COMMISSION.**

7 A. MECG's recommendations to the Commission are as follows:

8 1) The Commission should require the Company to provide customers the
9 ability to retrieve and download energy usage interval data for multiple
10 accounts, up to and including all accounts, through one file;

11 2) The Commission should require the Company to take the steps necessary to
12 become Green Button Connect My Data ("CMD") compatible; and

13 3) The Commission should establish a stakeholder process for engaged
14 customers and other interested stakeholders to discuss data access needs
15 with the Company, and, if the Commission determine it appropriate, all
16 regulated utilities in the state, in order to ensure that the Company's efforts
17 will result in customer needs being fully met.

18 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION**
19 **ADVOCATED BY THE COMPANY INDICATE MECG'S SUPPORT?**

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

22

1 **III. AMI Deployment**

2 **Q. HOW DOES THE COMPANY DESCRIBE ITS CURRENT METER INFRASTRUCTURE?**

3 A. Empire began installing AMI meters in July 2020 and is considered to be “materially
4 complete” by June 30, 2021. See Direct Testimony of Chad C. Hook (“Hook
5 Testimony”), p. 6, lines 5-10. In Missouri approximately 147,000 electric meters
6 were installed. See Hook Testimony at p. 6, lines 20-21.

7 **Q. DOES MECG OPPOSE THE COMPANY'S AMI DEPLOYMENT?**

8 A. MECG does not oppose the Company's AMI deployment, however, MECG does
9 believe that the interval data provided by AMI meters should be made available to
10 Empire’s customers in a customer-friendly, easy-to-access format, which includes
11 the availability of Green Button Connect My Data functionality. Otherwise,
12 customers, especially commercial and industrial customers with multiple locations,
13 cannot access one of the primary benefits of smart meter technology.

14

1 **IV. Access to Interval Data Through the Company's Customer Portals**

2 **Q. WHAT IS "INTERVAL DATA?"**

3 A. Interval data is the metered consumption data for electricity delivered at a given
4 meter over a stated period of time. In general, the interval period is fifteen minutes,
5 and the delivery units are either kilowatts (demand) or kilowatt-hours (energy). This
6 information can be aggregated over a period of time to determine the consumption
7 and demand at the meter, which provides the customer with billing information that
8 is needed to evaluate energy consumption and identify savings opportunities.

9 **Q. DOES THE COMPANY CURRENTLY PROVIDE CUSTOMERS WITH ACCESS TO THEIR**
10 **INTERVAL DATA?**

11 A. Yes. The Company, with a fee, can email a data file for each account every month
12 containing the interval data.

13 **Q. IS THE CURRENT METHOD OF DATA ACCESS INSUFFICIENT?**

14 A. Yes. While this option does allow for data automation, it is not in a standardized
15 format and can cause additional development time for customers who receive data
16 from multiple sources.

17 **Q. IS CUSTOMER ACCESS TO INTERVAL ENERGY USAGE DATA IMPORTANT TO THE**
18 **COMMERCIAL / INDUSTRIAL CUSTOMERS REPRESENTED BY MECG?**

19 A. Yes.

20 **Q. PLEASE EXPLAIN.**

21 A. Easy and transparent access to interval data allows a customer to measure its energy
22 usage and make data-driven adjustments to its energy consumption. In addition,

1 interval data allows customers to better target facilities for energy reduction
2 projects. Interval data also facilitates measurement and verification of energy
3 savings and an emissions footprint of energy usage.

4 **Q. DOES MECG ADVOCATE FOR A SPECIFIC INTERVAL DATA ACCESS METHOD?**

5 A. Yes, it does. For large energy users with multiple sites like Walmart and other large
6 customers, it is important that data access is automated, accessible by a third party,
7 and provided in a standardized format. In MECG's experience, this is best met
8 through a customer portal that is "Green Button" Connect My Data compatible.

9 **Q. IN GENERAL, WHAT DOES IT MEAN TO BE "GREEN BUTTON" COMPATIBLE?**

10 A. The Green Button initiative was developed by the federal government to challenge
11 utilities to provide customers' energy usage information in a downloadable,
12 standard, and simple format.² Green Button is a data standard for enabling utility
13 customers or third-parties access to energy usage information in a "consumer-
14 friendly and computer-friendly format."³ Essentially, a Green Button utility allows
15 interval data to be accessed by simply clicking a "Green Button" located on the
16 utility's website. There are two types of Green Button compatibility: Download My
17 Data ("DMD") and Connect My Data ("CMD"). Under either option, customers
18 would be able to obtain interval data for all of its locations through a single file,
19 however, CMD provides better functionality.

20 **Q. WHY DOES GREEN BUTTON CMD COMPATIBLE PROVIDE BETTER FUNCTIONALITY?**

² www.greenbuttonalliance.org/about#what.

³ www.greenbuttondata.org

1 A. While DMD compatibility allows the customer to download their interval data
2 through a single file, with CMD compatibility, it gives the customer the option to
3 allow a third-party vendor to obtain that data directly from the customer portal
4 without ongoing involvement from the customer.

5 **Q. ARE THERE OTHER BENEFITS TO THE GREEN BUTTON CMD FUNCTIONALITY?**

6 A. Yes. For example, Walmart currently engages a third-party vendor to access interval
7 energy usage data for its stores, distribution centers, and other facilities from a
8 variety of applications maintained by different utilities across the United States.
9 Green Button CMD functionality allows that third-party vendor to automatically
10 "connect" and obtain usage data directly from the Company without the extra step
11 of having to obtain that information from Walmart. This added functionality allows
12 Walmart and other MECG customers to manage their energy usage more efficiently
13 and effectively.

14 **Q. WHAT IS MECG'S RECOMMENDATION TO THE COMMISSION?**

15 A. MECG recommends that the Commission require the Company to include the option
16 for customers to retrieve and download energy usage interval data for multiple
17 accounts, up to and including all accounts, through one datafile. MECG also
18 recommends that the Commission require customer interval data for commercial
19 and industrial customers be available in the Green Button CMD format. The steps
20 for becoming CMD compatible are detailed in the "Green Button Connect My Data
21 (CMD)" Data Sheet found under Green Button *Connect My Data (CMD)* Testing at
22 www.Greenbuttonalliance.org/testing.

1 **Q. WOULD COMMISSION APPROVAL OF MECG'S RECOMMENDATIONS FURTHER THE**
2 **COMPANY'S GOALS AS STATED IN ITS TESTIMONY?**

3 A. Yes. The Company stated that, through the more granular information that AMI can
4 provide, customers will be “empowered to make informed choices regarding how
5 they use energy and have the ability to potentially change their energy usage
6 behaviors and reduce their energy costs.” See Hook Testimony at p. 12, lines 4-6.
7 These benefits are not fully realized by commercial and industrial customers without
8 the increased functionality of Green Button CMD.

9 For large customers with multiple accounts across multiple utilities, manual
10 access to interval data is not practical and the data is not timely. It is only the ability
11 to automate the dataflow from the utility to the customer that makes the data
12 usable. Without providing large customers with multiple sites like Walmart with
13 automated access to usage data such as is provided by Green Button CMD, by the
14 customer or an authorized third-party, then these customers are limited in their
15 ability to analyze and respond to this data in a way that futhers of the Company’s
16 stated benefit to promote customer-driven energy conservation.

17 **Q. IN A PREVIOUS CASE, MECG RECOMMENDED A DATA ACCESS STAKEHOLDER**
18 **GROUP, IS MECG RECOMMENDING A SIMILAR PROCESS?**

19 A. Yes. In Case No. ER-2021-0240, MECG recommended the Public Service Commission
20 to have a stakeholder process on customer desires for data access. If the
21 Commission determines such a process is appropriate, MECG would recommend a

1 similar stakeholder process between engaged customers and other stakeholders,
2 either separate from the Ameren Missouri process or together with other utilities.

3

4 **V. Recommendations**

5 **Q. WHAT ARE MCEG'S RECOMMENDATIONS TO THE COMMISSION?**

6 A. MCEG's recommendations to the Commission are as follows:

7 1) The Commission should require the Company to provide customers the
8 ability to retrieve and download energy usage interval data for multiple
9 accounts, up to and including all accounts, through one file;

10 2) The Commission should require the Company to take the steps necessary to
11 become Green Button CMD compatible; and

12 3) The Commission should establish a stakeholder process for engaged
13 customers and other interested stakeholders to discuss data access needs
14 the Company, and, if the Commission determine it appropriate, all regulated
15 utilities in the state, in order to ensure that the Company's efforts will result
16 in customer needs being fully met.

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

18 A. Yes.

Andrew D. Teague, CEM

Senior Manager, Energy Services
Walmart Inc.

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

Business Phone: (479) 258-6267

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

2021

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

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.