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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

FILE NO. ER-2026-0143

DIRECT TESTIMONY OF
KATHERINE WYSZKOWSKI
ON BEHALF OF RENEW MISSOURI

June 30, 2026

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A. My name is Katherine Wyszkowski. I am the State Policy Manager of Mission:data Coalition ("Mission:data"). My business address is 7511 Greenwood Avenue North #1809, Seattle, WA 98103.

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

A. I am testifying on behalf of Renew Missouri Advocates d/b/a Renew Missouri ("Renew Missouri"), an intervenor in this proceeding.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR RELEVANT PROFESSIONAL EXPERIENCE.

A. I joined Mission:data in July, 2025 and have led our state policy efforts to intervene at public utility commissions on issues of advanced meters and ratepayer benefits of energy data portability. Since joining Mission:data I have worked in nine states across the United States. Of particular relevance to this proceeding, I have authored the publication of our latest Green Button Scorecard, which evaluated Green Button Connect implementations across five different utilities. To complete the scorecard, I registered Mission:data as a third-party data recipient and gained first-hand experience with the customer experience associated with sharing their energy data. I recently co-authored two reports, *Community Choice Aggregation (CCA) Customer Data Access*[1] and *Fair And Open Markets For Virtual Power Plants*.[2] I also present regularly at conferences and

[1] Dépit-Strömbäck, C., & Murray, M. *Community Choice Aggregation Customer Data Access A Cross-State Study of Utility Data Sharing Practices with CCAs*. November 2025. https://www.missiondata.io/s/MD_LEAN_Comm-Choice-Agg-Cust-Data-Access.pdf

[2] Murray, M., Vaheesan, S., Wyszkowski, K., & Hanley, D. *Fair and Open Markets for Virtual Power Plants*. December 2025. https://www.missiondata.io/s/Missiondata-OMI-Fair-and-Open-Markets-for-VPPs_final.pdf

industry events, such as at the Michigan Energy Industry Business Council conference on data portability.

Previously, I was the Senior Government Affairs Association at Sunnova Energy where my work focused on interconnection, permitting and residential solar policy in the Southwest. I was the board treasurer for the Arizona Solar Energy Industry Association, and a board member of the New Mexico Renewable Energy Industry Association.

I received my master of science degree in Natural Resource and Energy Policy from the Colorado School of Mines and a Bachelor of Science degree in Earth, Society, and Environmental Sustainability from the University of Illinois at Champaign-Urbana.

Q. IN WHAT OTHER STATES HAVE YOU TESTIFIED BEFORE A PUBLIC UTILITY REGULATOR?

A. I have testified before the Illinois Commerce Commission.

Q. WHAT IS MISSION:DATA COALITION?

A. Mission:data Coalition is a national coalition of approximately 25 technology companies delivering data-enabled distributed energy resources ("DERs") for residential, commercial and industrial customers. Our members – with sales in excess of $1 billion per year – have developed innovative services leveraging meter data and utility bill data that help customers reduce their monthly bills. Many companies are focused on bringing energy efficiency solutions to a national market, and to realize that objective, it is vital that we empower consumers with convenient access to their own energy data in a consistent manner from state to state. Mission:data works with industry and policymakers to advance customers' ability to quickly and conveniently share their energy-related data with energy management companies of their choice.

II. PURPOSE OF TESTIMONY AND SUMMARY OF RECOMMENDATIONS

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to establish the need for Green Button Connect My Data ("GBC") and its associated revenue requirement. After describing the benefits that GBC offers to ratepayers, I provide a tailored estimate for Evergy Metro, Inc. d/b/a Evergy Missouri Metro ("Evergy" or the "Company") to implement GBC during the next rate period.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the Commission add $347,327 to Evergy's revenue requirement in order for the Company to offer GBC. These funds, based on cost estimates described below, would help ratepayers better manage their electric bills, audit their bills for accuracy, and ensure that their rate is economically optimal. GBC would also allow aggregations of demand-side resources to participate in markets organized by Southwest Power Pool ("SPP") by providing secure, electronic access to customer data that is required by SPP and which Evergy exclusively possesses. I also recommend that Evergy study participation in a statewide or regional "data hub" that would enable broader access to energy-saving and bill-saving services.

III. BACKGROUND

Q. WHAT IS DATA PORTABILITY?

A. Data portability refers to the ability of a consumer to seamlessly move or "port" his or her data held by one corporation to another service provider. The driver behind data portability is twofold: to encourage competitive markets by using the internet, and to prevent formation of "data monopolies" in the information economy. Whereas the term "data access" pertains to a customer

obtaining his or her own information from a utility – such as through a utility's web portal – portability refers to the transfer of customer-specific data from the utility to a third party directly, without passing through the hands of the customer. The transfer of customer data is initiated upon the consent of the customer.

Q. IN WHAT STATES IS DATA PORTABILITY BEING ADOPTED?

In the utility sector, data portability has been mandated in fourteen (14) states: California, Colorado, Illinois, Kentucky, Louisiana, Maryland, Michigan, Missouri, New Hampshire, New Mexico, North Carolina, New York, Ohio, and Texas.[3] It is enabled by the technical standard known as Green Button Connect My Data, which I describe below.

Q. WHAT IS GREEN BUTTON CONNECT MY DATA?

A. Green Button Connect My Data ("GBC") is a technical standard, maintained by the Green Button Alliance ("GBA"), for sharing customer usage, cost, and other related data. The standard was originally developed by the U.S. Department of Energy, the National Institute of Standards and Technology ("NIST"), the Smart Grid Interoperability Panel and industry participants over several years. GBC has its roots in the American Recovery and Reinvestment Act of 2009, which directed the Federal Communications Commission to develop a national broadband plan to include digital strategies for "energy independence and efficiency." Goal #6 of the National Broadband Plan states, "To ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption."[4]

[3] https://explorer.missiondata.io/
[4] Federal Communications Commission (2010). "Connecting America: The National Broadband Plan," p. xiv-xv. https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.

With GBC, a utility provides an application programming interface ("API") for machine-to-machine communication that third party developers of energy management software can, with customer authorization, automatically and securely retrieve energy data. These authorizations are valid for an agreed upon time and can be revoked at any time by the consumer. The data received can then be accessed and analyzed by the third party, using web-based software tools or a mobile device application.

Q. WHERE HAS GREEN BUTTON CONNECT MY DATA BEEN IMPLEMENTED?

A. GBC has been deployed by numerous investor-owned utilities, both gas and electric, in states across the country:

- California: Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric
- Illinois: Ameren Illinois Company and Commonwealth Edison
- Louisiana: Southwestern Electric Power Co
- Michigan: Consumers Energy
- New Mexico: El Paso Electric
- New York: Consolidated Edison and National Grid (both gas and electric)
- Texas: Oncor, Centerpoint, AEP Texas Central, AEP Texas North, and Texas-New Mexico Power (TNMP) in the competitive regions of Texas, as well as Entergy Texas, Inc.
- Washington: Snohomish PUD

Approximately 35 million electric meters across the U.S. are covered by a GBC mandate. For a more detailed list, please see our Green Button Explorer map.[5]

[5] Green Button Explorer

Q. WHY ARE THERE DIFFERENCES BETWEEN THE STATES THAT HAVE MANDATED GBC AND THOSE THAT YOU SAY ARE IMPLEMENTED?

A. For two reasons. First, some states such as Maryland and North Carolina have mandated GBC very recently, and it takes some time for utilities to implement. Second, utilities in some states such as Colorado and Kentucky claim to have implemented GBC but it is not fully operable at this time. Mission:data has color-coded tracking of the implementation status of every utility on the aforementioned Green Button Explorer map.

Q. HAS GREEN BUTTON CONNECT MY DATA BEEN REQUIRED RECENTLY OF AMEREN MISSOURI?

A. Yes. In a settlement agreement approved by the Commission in File No. ER-2024-0319, Ameren Missouri was required to offer GBC.

Q. DOES EVERGY PROVIDE GREEN BUTTON CONNECT MY DATA TODAY?

A. No, it does not.

Q. WHAT IS GREEN BUTTON DOWNLOAD MY DATA?

A. Green Button Download My Data is merely one component of the broader GBC standard: a file format for capturing a customer's *usage* data, such as electricity use in kilowatt-hours, or natural gas use in therms. The format of Download My Data is XML. For a customer to use Download My Data, he or she must log in to their utility's website and find a "Download My Data" link. Once the file is downloaded, he or she can then upload it to a third party service, such as the website of rooftop solar installer or energy auditor. However, Download My Data is not considered "portability" as defined above because the data must pass through the customer's hands.

Q. IS GREEN BUTTON DOWNLOAD MY DATA ADEQUATE FOR ENERGY MANAGEMENT PURPOSES?

A. No. Green Button Download My Data is not true portability. Most energy management applications require continuous, ongoing access to customer energy data. It is not realistic to expect modern customers to log in every day to their utility's website, download their data, and upload it into an energy management application, such as a mobile "app."

Q. HAS GREEN BUTTON BEEN ADDRESSED BY THE COMMISSION BEFORE?

A. Yes. In addition to Ameren Missouri's recent rate case (File No. ER-2024-0319), the Commission addressed Green Button in Evergy's 2018 rate cases, Docket Nos. ER-2018-0145 and ER-2018-0146. The order stated:

> The Company will adopt the Green Button platform no later than the second half of 2020. The Company commits to producing a privacy policy statement and frequently asked questions ("FAQ") website section for customers regarding use of customer data. The Company will receive input from OPC, Staff, and DE on the privacy policy statement and FAQs. The Company will hold annual meetings with Staff, OPC, and DE regarding the results of third party privacy impact assessments. The meetings and any material discussed at the meetings may be designated as confidential by the Company.[6]

Q. DOES THAT MEAN EVERGY OFFERS GREEN BUTTON DOWNLOAD MY DATA?

A. That is my understanding, yes.

[6] *Order Approving Stipulations And Agreements*. In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service and In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service Docket Nos. ER-2018-0145 and ER-2018-0146, Issued October 31, 2018.

Q. IS THAT ADEQUATE IN YOUR VIEW?

A. No, because Download My Data is not GBC. Whether residential or small business customers simply want to save on their utility bills, or whether those customers want to participate in an aggregator's service of providing demand response to SPP markets and thereby reduce system-wide energy costs, GBC is needed because it allows customers and aggregators to quickly and easily assess the usage patterns of thousands of sites with automated software tools. Provided that the data sent from Evergy through GBC is accurate, complete, easily accessible and reliable, GBC is the best method for bringing data-driven, tailored energy management solutions to Evergy customers. It is unlikely Evergy customers will go through the steps of downloading and sharing their data more than once, a significant barrier to participation in the wholesale market. GBC is a better solution because the data is exchanged for a duration of time, allowing customers to participate in cost saving offerings.

Q. HAS THE COMMISSION RELIED ON GREEN BUTTON IN ITS ORDERS REGARDING DISTRIBUTED ENERGY RESOURCE PARTICIPATION IN THE WHOLESALE MARKET?

A. Yes. In File No. EW-2021-0267 concerning the Federal Energy Regulatory Commission's ("FERC") Order 2222, the Commission modified its temporary ban on distributed energy resource ("DER") aggregators participating in capacity, energy, and ancillary services markets. In its decision, the Commission referenced Green Button, but it was ambiguous whether the Commission was referring to GBC or Green Button Download My Data. In response to the Commission's request for comment, the Office of Public Counsel ("OPC") stated:

> The OPC has filed testimony supporting that utilities use the Green Button functionality and each of the electric utilities have entered into stipulation and agreements to utilize the Green Button functionality to mitigate data transfer concerns. That unique platform should allow for secure transfer of finite customer data to 3rd party vendors.[7]

The Commission referenced OPC's statement above in reaching its order dated December 11, 2023. In explaining its reasoning for lowering the threshold for DER aggregator participation to customers with 100 kW of peak demand, the Commission stated as follows:

> Regarding data governance and cybersecurity issues, both MISO and SPP rules include confidentiality provisions. Voltus and CPower described how their technology is designed to protect against cybersecurity threats. In addition, Missouri's utilities are utilizing Green Button functionality that should allow for secure transfer of customer data to third parties. As experience is gained with ARCs [aggregations of retail customers] in Missouri, all stakeholders will be able to raise issues in this working docket or in other dockets for Commission consideration.

Q. WHAT IS YOUR REACTION TO THE COMMISSION'S DECISION CITED ABOVE IN FILE NO. EW-2021-0267?

A. The decision does not include a distinction between GBC and Green Button Download My Data. There was also no discussion about the availability of other customer-specific data points, besides kWh usage data, that are exclusively held by electric utilities and that are required by SPP for DER aggregations to register and settle in wholesale markets. While understandable, the Commission was not aware of critical details about

[7] *Public Counsel's Additional Comments,* p. 5. In the Matter of the Establishment of a Working Case Regarding FERC Order 2222 Regarding Participation of Distributed Energy Resource Aggregators in Markets Operated by Regional Transmission Organizations and Independent System Operators, File No. EW-2021-0267, dated June 22, 2023.

data portability that directly affect whether DER aggregators are able to have the ability to compete in wholesale markets.

Since modifications to DER participation in wholesale power markets have been in place for almost three years and the Commission seeks to incorporate lessons learned into its policies, now is an excellent time for the Commission to improve the ways in which Evergy provides customer energy data electronically to customer-authorized energy management firms. In short, lowering the threshold to 100 kW will not by itself ensure that DER aggregators have a fair opportunity to compete. The Commission must also address customer data..

III. RECOMMENDATIONS

A. METHODOLOGY

Q. HOW DID YOU DEVELOP COST ESTIMATES FOR GBC IMPLEMENTATION BY EVERGY?

A. I took the average of known costs from GBC implementations in other jurisdictions during the period 2017-2020. This represents the best and most recent information available. I adjusted the costs to reflect price increases from inflation by using the consumer price index from the U.S. Bureau of Labor Statistics. Cost figures are expressed per electric meter, and I multiplied the average cost by 321,204, the number of Evergy's electric meters given by the Energy Information Administration.[8]

[8] Form EIA-861 2024. Available at https://www.eia.gov/electricity/data/eia861/.

Q. WHAT OTHER JURISDICTIONS HAVE ASSESSED THE COSTS OF GREEN BUTTON CONNECT MY DATA?

A. The jurisdictions that have completed an assessment of the costs of GBC, or systems similar to GBC, include California, Colorado, New Hampshire, Massachusetts, Ohio, New York, North Carolina, Texas, and Ontario, Canada.

Q. WHAT COSTS WERE ESTIMATED (OR INCURRED) IN VARIOUS JURISDICTIONS?

A. Since 2012, some utilities have developed GBC systems, or very similar systems, and their actual costs are reported below. Others have developed cost estimates for data-sharing IT systems but have not yet implemented them: Duke Energy, in North Carolina; AEP, in Ohio; and the government of Ontario, Canada for all of its electric and gas utilities. The table below is listed chronologically in the order in which costs were estimated.

Utility/Territory	*Year*	*Initial (one-time) cost*	*Annual cost*	*Number of electric meters (2017)*	*First year cost per electric meter*	*Inflation factor*[9]	*First year cost per meter (2026 dollars)*
Texas TDSPs[10]	2012	unclear[11]	$9,282,000	7,262,553	$1.28	1.48	$1.89
Pacific Gas & Electric[12]	2013	$19,400,000	unclear	5,363,705	$3.62	1.46	$5.29
Southern California Edison[13]	2013	$7,588,000	$1,512,000	5,158,889	$1.47	1.46	$2.15
Xcel Energy (CO)[14]	2015	$2,000,000	unclear	1,339,534	$1.49	1.43	$2.13
Consolidated Edison (NY)[15]	2016	$9,009,000	$1,195,000	3,464,957	$2.60	1.41	$3.67
Ontario, Canada (low)[16]	2017	CAD$4.69 million over 5 years		5,159,331	$0.14	0.77 x 1.38[17]	$0.15
Ontario, Canada (high)	2017	CAD$8.96 million over 5 years		5,159,331	$0.27	0.77 x 1.38	$0.29
AEP Ohio[18]	2018	$900,000	$75,000	1,498,405	$0.60	1.35	$0.81

[9] Inflation factor is defined as the ratio of 2026 dollars to the cost in the original year. See U.S. Bureau of Labor Statistics

[10] Texas Transmission and Distribution Service Providers (TDSPs), which include Oncor, Centerpoint, AEP Texas Central, AEP Texas North, and Texas-New Mexico Power (TNMP).

[11] Texas TDSPs report only the annual cost of Smart Meter Texas, which is administered by IBM. See Project No. 49730, *Compliance Filing of Oncor regarding Smart Meter Texas's project budget for 2020*. January 31, 2020.

[12] California Public Utilities Commission. Decision D.13-09-025, September 23, 2013 (hereafter "California Decision") at 2. Available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M077/K191/77191980.PDF.

[13] *Id.*

[14] Price quote as given from Opower/Oracle to Xcel via email dated October 12, 2015. Exhibit No. Mission:data-2, *Prepared Rebuttal Testimony of Michael Murray on Behalf of the Mission:data Coalition.* California Public Utilities Commission. Application (A.18-11-005), April 26, 2019 at Bates 51-52.

[15] Consolidated Edison, *Customer Engagement Plan*. Slides presented at Stakeholder Collaboration Meeting July 15, 2016 at 21.

[16] Low and high estimates of direct costs estimated over a 5-year period. Converted into U.S. dollars by multiplying by 0.7711. First year cost determined by dividing the cost by five. *Ontario Green Button Cost-Benefit Analysis Report (hereafter "Ontario Report")*. Prepared for the Ontario, Canada Ministry of Energy by Dunsky Energy Consulting. October, 2017, Tables 39-40 at 60.

[17] Canadian dollars are converted to U.S. dollars in 2017 by dividing by 0.7711, the approximate average exchange rate throughout calendar year 2017.

[18] AEP Ohio presentation dated June, 2018 to the gridSMART Collaborative working group pursuant to Case No. 13-1939-EL-RDR.

Duke Energy (NC)[19]	2019	$850,000	$52,000	3,276,005	$0.26	1.33	$0.35
National Grid (NY)[20]	2020	$3,000,000	unclear	1,738,843	$1.73	1.30	$2.25
					Average cost (all, 2026 dollars):		*$1.90*
					Average cost (2017-2020 deployments, in 2026 dollars):		*$0.77*

Table 1: GBC cost estimates, 2012-2020.

Q. PLEASE EXPLAIN HOW INFLATION WAS CALCULATED.

A. I used the U.S. Bureau of Labor Statistics Consumer Price Index calculator to find the inflation factor from the year the purchase was made to May 2026. For the Canadian utilities, I found the average exchange rate for that year from Canadian dollars to US dollars. From there, I calculated inflation in US dollars.

Q. PLEASE EXPLAIN AEP OHIO'S COST ESTIMATE.

A. As part of a settlement in Case No. 13-1939-EL-RDR approved by the Public Utilities Commission of Ohio ("PUCO"), AEP agreed to "monitor the implementation costs and associated customer benefits of Green Button Connect." In 2018, AEP provided a cost estimate of GBC to a PUCO working group. The cost reported was $750,000 for initial IT investment plus $150,000 for a sandbox test environment, making the total initial cost $900,000. An annual cost of $75,000 was estimated for ongoing support. AEP Ohio provides electricity to 1.5 million customers in Ohio.

[19] Duke Energy cost-benefit analysis. April 12, 2019, as required by North Carolina Utilities Commission order dated March 7th, 2018 in Docket No. E-100 Sub 147.

[20] Niagara Mohawk Power Corporation d/b/a National Grid. *Fiscal Year 2021 Information Technology Capital Investment Plan Report*. New York Public Service Commission, Case Nos. 17-E-0238 and 17-G-0239. April 10, 2020 at Attachment 1, p. 2.

It is unclear exactly what technical features are included or excluded from the price estimate, as additional information from AEP was not provided. However, AEP understood how GBC functions and what GBC is intended to achieve – namely, the exchange of customer energy information with authorized third parties – based upon discussions in a working group that met regularly throughout 2018 as was ordered by the PUCO.

Q. PLEASE EXPLAIN DUKE ENERGY'S COST ESTIMATE.

A. Pursuant to a 2018 North Carolina Utilities Commission order, Duke Energy was required to hold stakeholder meetings to discuss data access topics.[21] At a stakeholder meeting dated April 12, 2019, Duke Energy provided a cost estimate to implement GBC. In addition to offering customer-facing capabilities as required by the GBC technical standard, Duke Energy includes in its estimate certain IT system features including "customer information system extract, transform load (ETL) protocols" and "integration with customer portals, meter data, external testing and validation." The up-front cost to develop GBC is $850,000, with annual maintenance costs of $52,000. Duke Energy operating companies, Duke Energy Carolinas and Duke Energy Progress, together serve approximately 3.4 million electric customers with advanced meters in North Carolina.

Q. PLEASE EXPLAIN XCEL ENERGY'S COST ESTIMATE.

A. In Docket No. 16A-0588E before the Colorado Public Utilities Commission, Xcel Energy disclosed that its estimated cost to develop GBC is $1.6 million to $2.0 million. No information

[21] State of North Carolina Utilities Commission. Docket No. E-100, Sub 147. *Order Accepting DNC's and DEC's SGTP Updates, Requiring Additional Information From DEP, and Directing DEC and DEP to Convene a Meeting Regarding Access to Customer Usage Data*. March 7, 2018 at 11. Available at https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=6168d3c2-b144-42dc-8fc2-1e3079866f67

was given on annual or recurring costs. The initial development included registering third parties, authenticating third parties, allowing customer authorization and de-authorization, developing application programming interfaces ("APIs") to serve usage data as well as billing data, creating a separate role for third parties to securely access Xcel's information technology systems and offering a sandbox environment for testing. In a settlement agreement approved by the Colorado Commission in 2017, Xcel Energy was granted approval to spend up to $2.0 million developing GBC. Xcel Energy serves electricity and natural gas to 1.6 million customers in Colorado.

Q. ARE THERE RECENT DEVELOPMENTS TO XCEL ENERGY'S COST ESTIMATE?

A. Yes. In December, 2025, Xcel was required to file a "Green Button Connect improvement plan" containing costs for addressing bugs and defects. Many of the costs are redacted from the public filing, but one cost that is unredacted is $2.7 million to $3.6 million for distinguishing whether interval usage values are "raw" or "billing quality."[22] This ambiguity caused concerns because DER aggregators were only provided "raw" usage data, but financial settlements are to be based upon "billing quality" usage data.

[22] *Green Button Connect Improvement Report*. Xcel Energy. Colorado Public Utilities Commission, Proceeding No. 24A-0547E. June 15, 2026 at 7. Green
Button Connect
Green Button Connect Improvement Report, Proceeding Number 24A-0547E, June 15th, 2026.
https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1067859&p_session_id=.

Q. WHAT LESSON SHOULD THE MISSOURI COMMISSION TAKE FROM THIS RECENT DEVELOPMENT?

A. Once a utility has selected a vendor, it can be very difficult or expensive to make modifications. The Missouri Commission should ensure that all of the technical requirements around data accuracy are specified up front so that costs can be minimized.

Q. PLEASE EXPLAIN NATIONAL GRID'S COST ESTIMATE.

A. Several orders from New York's Commission have required utilities pursuing advanced metering infrastructure ("AMI") to provide GBC.[23] National Grid notified the New York Commission it would spend up to $3 million on capital expenses associated with GBC, to be implemented by March 31, 2021.[24]

Q. WHAT DO YOU OBSERVE ABOUT THE COSTS YOU CITE ABOVE AND THEIR APPLICABILITY TO EVERGY?

A. Some reported costs are up-front while others are a mix of up-front and ongoing expenses. In addition, the reported software features are not categorized identically. As a result, it is difficult to compare costs on an "apples to apples" basis. Nevertheless, by treating the larger of the cost information provided as the first-year implementation cost, I calculated a range of $0.15 to $5.29 (adjusted for inflation) per electric meter.

[23] See, *e.g.*, Case 16-M-0411. New York Public Service Commission. *Order Adopting Distributed System Implementation Plan Guidance.* April 20, 2016.

[24] Niagara Mohawk Power Corporation d/b/a National Grid. *Fiscal Year 2021 Information Technology Capital Investment Plan Report*. New York Public Service Commission, Case Nos. 17-E-0238 and 17-G-0239. April 10, 2020 at Attachment 1, p. 2.

However, I think it is both wise and appropriate for the Commission to exclude from consideration the above cost estimates from 2016 and earlier. This is because software offerings, and the Green Button standard generally, have significantly matured over time. When Texas utilities contracted with IBM in 2012 to develop Smart Meter Texas, nothing like it had ever been built before, and as a result, an entirely custom-built software system was constructed, and IBM has been compensated for taking a large execution risk. Similarly, when California utilities were ordered to implement GBC in 2013, the GBC standard was barely finalized and no off-the-shelf GBC software products existed at that time. Today, however, several vendors offer GBC software, and the scope of work that utilities confront is much better known. As a result, I believe the average of $0.77 is an appropriate estimate as a per meter cost.

Q. WHY ARE GBC COSTS FROM 2021-2025 NOT INCLUDED IN YOUR ANALYSIS?

A. Because that information is not available. During the period 2021-2024, a number of utilities began offering GBC for the first time, including LG&E-KU, Entergy Texas Inc., Consumers Energy in Michigan, and numerous utilities in Ontario, Canada. However, despite several attempts, I am not able to obtain cost figures from any of those utilities.

A. REVENUE REQUIREMENT

Q. WHAT IS THE REVENUE REQUIREMENT THAT YOU RECOMMEND FOR EVERGY TO IMPLEMENT GBC?

A. $347,327. This has two components: $247,327 for GBC implementation, and $100,000 to study participation in a regional data hub, a concept I further describe below.

Q. HOW DID YOU DEVELOP COST ESTIMATES FOR GBC IMPLEMENTATION BY EVERGY?

A. I used the inflation-adjusted average first-year cost of $0.77 per customer based upon Table 1 for GBC implementations 2017-2020 and multiplied by 321,204, the number of electric meters served by Evergy according to EIA in 2024.

B. JUSTIFICATION

Q. WHY SHOULD GREEN BUTTON CONNECT MY DATA BE INCLUDED IN EVERGY'S REVENUE REQUIREMENT?

A. For several reasons. Evergy's penetration of advanced metering is nearly 100%. Ratepayers, who ultimately pay for metering investments, are entitled to receive all of their direct benefits. If a customer wants to access an energy management service that uses interval usage data collected from his or her smart meter, the customer should be allowed to do so without restrictions imposed by the monopoly utility.

Second, GBC is becoming a best practice among utilities nationwide for empowering consumers. Rather than being speculative or untested, GBC has proven itself to be a safe, secure and scalable standard for millions of customers across North America for over a decade. Dozens or hundreds of energy management firms are providing valuable services to customers across numerous states.[25] Ameren Missouri is also required to offer GBC, and Evergy customers will

[25] See, *e.g.*, Consumers Energy directory showing over 100 firms registered to use GBC (https://greenbutton.consumersenergy.com/directory); Smart Meter Texas performance report dated May 2026 showing 708 firms registered to receive customer data (https://www.smartmetertexas.com/perfreporting).

benefit from firms that are able to offer interoperable, data-enabled services in Evergy's territory such as virtual power plants or energy management "apps" on mobile devices.

Q. HAVE OTHER JURISDICTIONS ESTIMATED THE BENEFITS OF GBC?

A. Yes, four jurisdictions have estimated the benefits to ratepayers of GBC. AEP Ohio estimated 1.1% to 2.5% energy savings,[26] and Duke Energy estimated 1% to 5% energy savings.[27] In a study by Dunsky Energy Consulting in 2023, New Hampshire found potential benefits state-wide of between $10 million to $94 million. By dividing by the number of electric meters in the utilities covered by the study, this equates to a benefits range of $14.17 to $133.20 per customer.[28]

Q. DOES GBC PROVIDE DEMAND RESPONSE BENEFITS TO EVERGY RATEPAYERS?

A. Yes. One of the key barriers to widespread participation of small or medium customers in demand response markets at SPP is the cost and availability of energy data for each customer. While larger industrial facilities can install their own metering equipment, small and medium customers cannot do so economically. Demand response providers are thus unable to bring these customers into the market, which would help mitigate system-wide costs of peak demand.

[26] AEP Ohio cost-benefit analysis. Workpaper provided in gridSMART collaborative, June, 2018.

[27] Duke Energy cost-benefit analysis. April 12, 2019, as required by North Carolina Utilities Commission order dated March 7th, 2018 in Docket No. E-100 Sub 147.

[28] Presentation of Eversource, Liberty Utilities and Unitil to the New Hampshire Public Utilities Commission dated October 12th, 2024. Available at https://www.puc.nh.gov/Regulatory/Docketbk/2019/19-197/LETTERS-MEMOS-TARIFFS/19-197_2023-10-09_GSEC_JOINT-GOVERNANCE-COUNCIL-GRIP-PRESENTATION.PDF

Q. WHAT CUSTOMER DATA IS REQUIRED BY SPP THAT CAN BE SATISFIED BY GBC?

A. Based on an analysis by Mission:data of SPP's market protocols, the types of customer data necessary to register and settle dispatchable demand response ("DDR") resources and block demand response ("BDR") resources at SPP are shown in Table 2. Currently, none of the information in Table 2 below is electronically and automatically accessible from Evergy in a standardized way, even if a customer grants their explicit permission. Everything except the last item involving real-time telemetry can be provided by Evergy via GBC.

Data type	***Required of DDRs***	***Required of BDRs***
60-minute usage	No	Yes
5-minute usage	Yes	No
Premise address	Yes	Yes
Pricing Node (PNode)	Yes	Yes
10-second usage (telemetered)	Yes	Yes

Table 2: Data requirements of SPP markets, gathered from SPP Market Protocols (Rev 106).

Q. CAN DER AGGREGATORS GET CUSTOMERS' PREMISE ADDRESS FROM THE CUSTOMER DIRECTLY?

A. They can, but minor differences between address formats can frustrate the registration of DERs at SPP. For example, if Evergy's record of a premise address is "123 Main Street" but the customer tells the DER aggregator that its address is "123 Main St.," the contracted form of "Street" could lead to a mismatch during the SPP resource registration process, thereby preventing the customer from participating. Practically speaking, Evergy exclusively possesses the definitive, authoritative record of customer information.

Q. IN ADDITION TO THE SPP INFORMATION ABOVE, SHOULD EVERGY INCLUDE ELECTRONIC BILLING AND ACCOUNT HISTORY IN GBC FOR ENERGY MANAGEMENT PURPOSES?

A. Yes. Without standardized, machine-readable access to historical billing and account data, customers will not be able to access new services that depend upon streamlined, zero-cost electronic accessibility, including, but not limited to: cost analysis software, automated bill audits that search for overcharges, financial benchmarking services against peers, and even certain financial products that allow customers to borrow money for efficiency improvements. It will also be difficult for customers to know whether investments they have made in energy efficiency ("EE") are paying off, because EE firms cannot easily access the customer's bills at scale.

For commercial customers, including multifamily property owners, the lack of software-readable billing histories means that many customers turn to the market and pay for bill digitization services. An industry in its own right, bill digitization serves the needs of many multi-site building owners or managers who must capture, understand, benchmark and ultimately pay dozens,

hundreds or even thousands of bills from different utilities across the U.S. every month. The inclusion of 24-48 months of historical billing data, as well as ongoing bills as they are generated, via GBC would significantly benefit these customers by avoiding the costs of bill digitization services and significantly reducing the time needed to process billing data.

While larger enterprises can afford bill digitization services to manage their utility expenses and track energy usage, these types of services are prohibitively expensive for medium-size customers such as nonprofit low-income housing organizations, small businesses, and building owners and tenants. These customers often cannot afford bill digitization services . For these customers, access to detailed, machine-readable bill data means that it will become easier to monitor and pay their bills, save money and access new services.

In addition, multi-site property owners with a nationwide presence want to perform analysis for properties across states, utility companies, and types of tariffs. While some information can be interpreted from bills by hand, it is not scalable, and the bill digitization process can introduce inaccuracies, because optical character recognition ("OCR") and other techniques performed to extract data from printed bills and bill images are not always perfect. Customers would benefit by having accurate representations of their bills available from Evergy in an electronic, automated fashion via GBC.

Q. ARE THERE OTHER BENEFITS OF GBC THAT YOU WISH TO DISCUSS?

A. Customer bills will increase with Evergy's new rate at a time when customers are facing rising costs across every sector of the economy. Today's inflationary environment will likely lead to an increase in non-payment and disconnections. There should be an opportunity for customers

to audit their own bills for accuracy, considering both the calculations on the bill as well as ensuring consistency between meter data and billed amounts. Prior to any shut off, customers should have access to accurate data via GBC and an opportunity for a third party to audit their billing data. Bill inaccuracy issues are very common, and rate changes create additional opportunities for errors.

According to EIA data, there are approximately 240,000 customers enrolled in time-of-use ("TOU") rates in Evergy territory. TOU rates can be complex, leading naturally to questions about whether on-peak and off-peak rates are being calculated accurately. As described in Bradley D. Lutz's direct testimony, customers have an opportunity to choose different rates that may be more appropriate for their usage patterns.[29] But the optimal rate choice is a function of many different factors, including forecasted behaviors and home occupancy patterns. Data portability via GBC is the best way for customers to learn from a trusted organization who is not the utility which rate is the most appropriate. Customers should not be dependent solely on Evergy's claims, which often appear as "black boxes" to customers, to ensure they are making the best rate choice for their usage profile. Customer skepticism of utility-offered bill calculators is often warranted. For example, Arizona Public Service's rate comparison tool recommended over 12,000 customers switch to a rate that was more expensive for their usage profile. [30]

[29] *Direct Testimony of Bradley D. Lutz,* page 30, l 9-18.
[30] APS to give refunds to customers due to a comparison tool malfunction | 12news.com

Q. ARE BILLING INFORMATION, ACCOUNT INFORMATION, PREMISE ADDRESS AND PRICING NODE DATA TYPES SUPPORTED BY THE GBC STANDARD?

A. Yes. As mentioned above, one of the key distinctions of GBC from Green Button Download My Data is that GBC supports much more information than simply kWh usage data. While kWh usage data is important for energy management, it alone is not sufficient. The GBC standard can easily accommodate additional information.

Q. WHAT OTHER TYPES OF CUSTOMER DATA ARE IMPORTANT TO BE INCLUDED IN GBC?

A. It is critical that "billing-quality" usage data be available to customer-authorized entities, such as DER aggregators. Interval electric usage data from advanced meters has varying levels of quality as it is processed by Evergy's software systems. It is standard operating procedure for utilities to process and "clean" incoming usage data from meters prior to generating bills. This is known as validating, editing and estimating ("VEE").

One of the key lessons learned from other jurisdictions is that, when electric utilities provide only the "raw" usage data that has not gone through VEE, significant uncertainty is created that undermines energy management purposes. For example, if a DER aggregator provides only the "raw" usage data to SPP for settlement, the DER aggregator could be penalized for not providing the final, VEE usage data.

Fortunately, the GBC standard accommodates an attribute of each 15-minute or 60-minute kWh usage value as it goes through the VEE process known as "ReadingQuality." It is an optional data type, designed to provide third parties with status updates on interval usage quality over time.

I will address this issue more thoroughly in forthcoming direct testimony focused on policy matters.

C. STUDYING PARTICIPATION IN A REGIONAL DATA HUB

Q. WHAT IS YOUR NEXT RECOMMENDATION CONCERNING A REGIONAL DATA HUB?

A. I further recommend that Evergy should add $100,000 to the revenue requirement in order to study the costs and benefits of participating in a centralized "data hub." A data hub means that a customer-authorized third party can receive information from a single place across a state or a region, regardless of which utility is providing the underlying data.

Q. PLEASE FURTHER DESCRIBE YOUR RECOMMENDATION.

A. To achieve maximum ratepayer benefits, it is helpful for all electric and natural gas utilities in Missouri to offer GBC. Ameren Missouri is currently working on a Green Button Connect tariff, and there is an opportunity at this moment for Missouri utilities to share in the cost of a single implementation across multiple utilities. While GBC is a standard, the reality is it allows a degree of variation from utility to utility. These idiosyncrasies result in unnecessary costs on DER providers who must write customer software to accommodate the particularities of each utility's GBC. The net result of these costs is that smaller utilities, such as Evergy, could be overlooked by some DER providers – that is, unless a regional data hub provides economies of scale by virtue of having a single "point of entry" across millions of consumers. Note that the underlying customer data need not be transferred from each utility and stored separately in a centralized repository; rather, the API provides a "gateway" into the customer data that is already stored and maintained

by each utility individually, even if it appears from the third party's point of view that the customer data is centralized.

Q. WHAT OTHER STATES HAVE DATA HUBS?

A. Currently, Texas[31] and New York[32] have data hubs, covering many of their electric and gas utilities. New Hampshire[33], Maryland[34] and Massachusetts[35] are also exploring a state-wide, and possibly multi-state, data hub.

Q. WHAT OTHER STATES AND UTILITIES SHOULD EVERGY CONSIDER JOINING WITH AS PART OF THE STUDY YOU PROPOSE?

A. I recommend that Evergy engage with other electric and gas utilities in other SPP states such as Illinois, Iowa and Kansas to evaluate the costs and benefits of a centralized data hub. Evergy Metro covers Missouri and Kansas, and the utility should consider the cost of covering its entire territory. As mentioned in John Wolfram's direct testimony, there is a notion that a collaborative effort to achieve jurisdictional harmony on cost allocation is an important and worthwhile endeavor;[36] I think a similar effort regarding jurisdictional "data harmony" is similarly worthwhile. Additionally, at this time, Iowa is developing a data access tariff and ComEd in Illinois is proposing a new data platform which includes Green Button Connect. All three states (IA, IL,

[31]Smart Meter Texas, https://www.smartmetertexas.com/home
[32]New York Integrated Energy Data Resource, https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program
[33] State Of New Hampshire Public Utilities Commission, DE 19-197, Development of a Statewide, Multi-Use Online Energy Data Platform.
[34] Maryland Public Utility Commission, Order No. 92398, Case No. 9778, Order On Electric Utilities' VPP/DER Conceptual Reports And Office Of Cybersecurity Status Report, May 6, 2026.
[35] Massachusetts Department Public Utilities, D.P.U 26-20/26-21/26-22, Investigation by the Department of Public Utilities on the Advanced Metering Data Access Protocol Implementation Plan and Related Proposals Submitted by NSTAR Electric Company d/b/a Eversource Energy, Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid, and Fitchburg Gas and Electric Light Company d/b/a Unitil Pursuant to an Act Promoting a Clean Energy Grid, Advanced Equity, and Protecting Ratepayers, St. 2024, c. 239, §§ 79, 127, 128.
[36]Wolfram direct, Page 11 at 22-24

MO) are currently at the beginning stages of adopting a Green Button Connect platform, and sharing the costs of a data hub should not be disregarded.

Q. FINALLY, ARE THERE OTHER SPECIFIC DETAILS CONCERNING GREEN BUTTON CONNECT MY DATA OR THE REGIONAL DATA HUB THAT YOU RECOMMEND?

A. I have other detailed recommendations, such as the amount of historical information that should be provided, performance requirements and the customer experience. But rather than describe them here, I will detail them as policy recommendations in forthcoming rate design direct testimony. For now, the information I have provided is sufficient for determining Evergy's revenue requirement for the upcoming rate period.

IV. CONCLUSION

Q. WHAT IS YOUR CONCLUSION?

A. Across the U.S., numerous other state commissions have required utilities to implement data-sharing platforms of various types. My objective is to ensure that Missouri joins these other states in creating bill-saving opportunities for ratepayers. Not only would consumers be able to reduce their energy usage; they would be able to participate in demand response offerings, which mitigate system-wide peaks. The cost estimates I provide are reasonable and are based on the best available information from other jurisdictions. When combined with my forthcoming policy recommendations that refine the details of data portability for Missouri, the Commission should require GBC implementation as I have described.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Request of Evergy Metro, Inc. d/b/a Evergy Missouri Metro for Authority to Implement a General Rate Increase for Electric Service	))))	File No. ER-2026-0143

AFFIDAVIT OF KATHERINE WYSZKOWSKI

STATE OF COLORADO)
) ss
COUNTY OF JEFFERSON)

COMES NOW Katherine Wyszkowski and on her oath states that she is of lawful age; that she prepared the attached Direct Testimony; and that the same is true and correct to the best of her knowledge and belief.

Further the Affiant sayeth not.

K. Wyszkowski
Katherine Wyszkowski

VERIFICATION ON OATH OR AFFIRMATION WITH AFFIANT STATEMENT

State of Colorado
County of Jefferson } ss.

☒ See Attached Document (Notary to cross out lines 1–7 below)
☐ See Statement Below (Lines 1–7 to be completed only by document signer[s], *not* Notary)

1
2
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Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

Subscribed and sworn to (or affirmed) before me
this 29 *Day* day of June *Month*, 2026 *Year* by
Katherine Wyszkowski
Name of Signer No. 1
n/a
Name of Signer No. 2 (if any)

IAN CHRISTOPHER MOREY
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20174022271
MY COMMISSION EXPIRES MAY 25, 2029

Signature of Notary Public

Place Notary Seal/Stamp Above

Any Other Required Information (Residence, Expiration Date, etc.)

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Request of Energy for F.I. No. ER-2026-0147
Document Date: June 29, 2026 Number of Pages: 34
Signer(s) Other Than Named Above: n/a

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