

1 **BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**

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5 FILE NO. ER-2024-0319

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10 **DIRECT TESTIMONY AND EXHIBITS OF**

11 **MICHAEL MURRAY**

12 **ON BEHALF OF RENEW MISSOURI**

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24 December 17, 2024

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1 **I. PURPOSE OF TESTIMONY AND SUMMARY OF RECOMMENDATIONS**

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

3 A. My name is Michael Murray. I am the President of Mission:data Coalition
4 ("Mission:data"). My business address is 1752 NW Market Street #1513, Seattle, WA 98107.

5 **Q. ARE YOU THE SAME PERSON WHO FILED DIRECT TESTIMONY ON**
6 **DECEMBER 4, 2024, CONCERNING AMEREN MISSOURI'S REVENUE**
7 **REQUIREMENT?**

8 A. Yes.

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

10 A. Having established the need for Green Button Connect My Data ("GBC") and its associated
11 revenue requirement in prior testimony, I now turn to the policies that are necessary to bring GBC
12 into effective operation. I propose a tariff that describes the rules and responsibilities for Ameren
13 Missouri in making GBC available to all ratepayers. I also present justifications for each section
14 of the proposed tariff and consider likely negative outcomes if the Commission declines to require
15 a tariff.

1 **II. TARIFF FOR GREEN BUTTON CONNECT**

2 **A. TARIFF OUTLINE**

3 **Q. WHAT TARIFF DO YOU PROPOSE?**

4 A. I propose a tariff governing Ameren Missouri's provision of its GBC implementation,
5 attached as Schedule MM-1 hereto.

6 **Q. PROVIDE AN OUTLINE OF THE TARIFF YOU PROPOSE.**

7 A. The tariff has the following sections:

- 8 1. Definitions of terms, including a definition of "standard customer data," which refers to
9 all information about a customer's account and usage that I argue should be portable, i.e.
10 transferable to third parties authorized by the customer;
- 11 2. Data portability, which details Ameren Missouri's obligation to electronically transfer a
12 customer's standard customer data to a third party upon request;
- 13 3. Eligibility criteria of third parties;
- 14 4. Liability, which limits Ameren Missouri's liability for the acts of a third party;
- 15 5. Data quality and integrity; and
- 16 6. General, which covers miscellaneous topics such as the applicability of other terms and
17 conditions, certification to the GBC standard, uptime and termination.

18

1 **B. TARIFF JUSTIFICATION**

2 **Q. WHY IS A TARIFF NECESSARY FOR GREEN BUTTON CONNECT?**

3 A. In my experience, utilities in other jurisdictions have sought to evade regulatory oversight
4 on matters involving Green Button Connect (GBC). If the Commission were to order Ameren
5 Missouri to offer GBC, that requirement by itself would not be sufficient because terms could be
6 subsequently imposed by Ameren Missouri that could be unfair, onerous, or could render GBC
7 itself of little value. Any of these outcomes would undermine the purpose of the Commission's
8 orders in the first place. By establishing a detailed tariff at the outset, the Commission can ensure
9 that ratepayers get the most value from investments in advanced metering as well as avoid the need
10 for subsequent litigation of the type seen in other jurisdictions.

11 **Q. PLEASE PROVIDE EXAMPLES OF TERMS AND CONDITIONS OUTSIDE OF**
12 **TARIFFS THAT YOU BELIEVE ARE PROBLEMATIC.**

13 A. I have seen utilities across the country impose the following problematic terms on data
14 recipients:

- 15 • Broad disclaimers on data accuracy, meaning that the utility is not obligated to provide
16 correct information about customers' energy usage and account information
- 17 • The utility may unilaterally terminate access for any reason at any time
- 18 • The utility asserts the right to unilaterally change their terms at any time without notice
- 19 • The utility asserts proprietary rights or intellectual property rights in customer data,
20 thereby prohibiting third parties from analyzing energy usage to help ratepayers save on
21 their monthly bills

- 1 • The utility asserts the right to inspect and audit third party software applications, forcing
2 the disclosure of competitively-sensitive information that a monopoly utility could use to
3 unfairly compete in adjacent markets, such as energy efficiency

4 **Q. WHY ARE THE ABOVE EXAMPLES PROBLEMATIC?**

5 A. Because they erect unnecessary barriers to customers or to customer-authorized third
6 parties. Rather than putting customers in charge of their own information, the examples above
7 undermine the central purpose of data portability, which is empowering consumers. Instead, the
8 examples above subordinate third parties to unjustified or anti-competitive acts of the utility while
9 depriving third parties of due process.

10 **Q. WHAT IS ANOTHER REASON WHY YOU BELIEVE A TARIFF IS NECESSARY**
11 **FOR GREEN BUTTON CONNECT?**

12 A. Today, the provision of customer information by Ameren Missouri to customer-authorized
13 third parties is not standardized in terms of process, data format or software requirements. A tariff
14 would resolve and clarify these matters. In a discovery request, when asked if there was a web-
15 based method for customers to easily share their information with a distributed energy resources
16 (DER) aggregator as required by MISO, Ameren Missouri responded: “There is no web-based
17 method at this time.”¹ Not only is there no website for customers to authorize the exchange of their
18 information, but a customer trying to enroll in a demand response offering, say, would need to
19 consult with multiple sources of information – their monthly bill, the Ameren Missouri website,

¹ Ameren Missouri Response to Discovery Request Renew MO 2-RMO 006, December 16th, 2024.

1 an account representative – and ask Ameren Services to deliver certain MISO-required information
2 such as local balancing authority and commercial price node to the DER aggregator that serves the
3 customer.² This process is clumsy and unnecessarily burdensome. The tariff I propose would
4 streamline and systematize this process so that it is easy for customers to use and efficient for
5 Ameren Missouri to administer.

² *Id.*; Ameren Missouri Response to Discovery Request Renew MO 2-RMO 005, December 16th, 2024.

1 **Q. PLEASE EXPLAIN YOUR DEFINITIONS OF STANDARD CUSTOMER DATA.**

2 A. I propose a comprehensive definition of “standard customer data” that includes usage,
3 account and billing information; information needed for demand response participation at MISO;
4 and any other customer-specific information, such as rate codes, that determine a customer’s
5 eligibility to participate in a renewable energy or demand management program.

6 **Q. WHY IS DEFINING STANDARD CUSTOMER DATA IN THIS WAY**
7 **IMPORTANT?**

8 A. By defining standard customer data broadly, software applications that are authorized by
9 customers could quickly and efficiently assess a customer’s situation and provide a range of
10 actions that a customer could take, ranging from bill savings to energy efficiency incentives to
11 demand response. In my experience, one of the key failures of utilities in other jurisdictions
12 regarding GBC has been to provide an insufficient range of customer data in an electronic form,
13 which limits its utility. For example, Ameren Illinois³ and Commonwealth Edison provide interval
14 usage data in kilowatt-hours for each customer via GBC. But this is insufficient for many, if not
15 most, energy management applications, because:

- 16 • Customers with multiple meters (e.g., commercial) are unable to make use of their interval
17 energy usage data because they cannot match usage to a particular building or facility;
- 18 • Account numbers and meter numbers are needed by MISO, and so administrative
19 efficiencies from GBC are lost as a result of an incomplete data set;

- 1 • Whether meter readings are actual or estimated is an important consideration for Inflation
2 Reduction Act rebates, as further described below; and
- 3 • Cost reduction services that analyze your bills and identify savings opportunities need to
4 know bill amounts in dollars and the applicable rate code.

5 **Q. WHY DID YOU INCLUDE CUSTOMER CONTACT INFORMATION IN THE**
6 **DEFINITION OF STANDARD CUSTOMER DATA?**

7 A. According to MISO’s Business Practice Manual BPM-026-r10, customer name, email
8 address and telephone number must be provided by DER aggregators to MISO. While this
9 information can be provided by customers to their third party directly, without the need for its
10 inclusion in GBC, it is important that Ameren Missouri’s contact records be electronically
11 available because Ameren Missouri can deny customer participation in a DER aggregation if there
12 are mismatches between records. The MISO’s Business Practice Manual states, “Regarding
13 double-counting, ARC [aggregations of retail customers] registration requirements include
14 physical addresses and other information which may then be cross-checked by MISO, the LSE
15 [load serving entity], and the LBA [local balancing authority] with other demand resources
16 registered in MISO Markets.”⁴ I note that commercial customers in particular may not easily be

³ Renew Missouri had previously submitted discovery on this matter in this case, however Ameren Missouri initially objected to responding to inquiries regarding Ameren Illinois. I have been advised by counsel that after discussion with Ameren Missouri’s counsel, subject to Ameren Missouri’s previous objection, an answer regarding Ameren Illinois’ GBC capabilities will be provided. Should the pending response require updates to either this tariff direct testimony or the previously filed revenue requirement direct testimony of December 4, 2024, I will update my testimony in rebuttal accordingly.

⁴ MISO Business Practice Manual BPM-026-r10 at 30. Available at <https://www.misoenergy.org/legal/rules-manuals-and-agreements/business-practice-manuals/>

1 able to determine what name or telephone number is associated with their account in Ameren
2 Missouri's records, creating an unnecessary and frustrating barrier to demand response
3 participation. This can be avoided by simply including the customer's name, telephone number
4 and email address in GBC.

5 **Q. WHAT DID AMEREN MISSOURI SAY ABOUT CUSTOMER CONTACT**
6 **INFORMATION IN DISCOVERY?**

7 A. When asked how Ameren Missouri would be able to provide the information needed by
8 MISO for a DER aggregation including contact information, Ameren Missouri stated:

9 Customers already possess their own name, e-mail address and phone number. If
10 desired, they can confirm that it matches what is in Ameren Missouri's customer
11 system by accessing their online account or contacting their account representative if
12 applicable.⁵

13 While Ameren Missouri is technically correct, the fact remains that demands on Ameren
14 Missouri's call center from customers seeking to enroll in DER aggregations could be reduced,
15 and the customer experience significantly improved, by simply making customer contact
16 information available via GBC. For these reasons, I believe Ameren Missouri misunderstands how
17 the demand response registration process at MISO works.

⁵ Ameren Missouri Response to Discovery Request Renew MO 2-RMO 005(a-c), December 16th, 2024.

1 **Q. PLEASE EXPLAIN THE TARIFF’S SECTION ON DATA PORTABILITY.**

2 A. This section describes the GBC service in more detail, outlining the authorization process,
3 authentication details (i.e. how customer identity is established), and how a customer can revoke
4 an authorization. Many of these provisions reinforce what is required under the GBC standard.

5 **Q. PLEASE EXPLAIN THE TARIFF’S SECTION ON ELIGIBILITY CRITERIA OF**
6 **THIRD PARTIES.**

7 A. This section describes what a third party must do in order to be eligible to receive customer
8 data. I propose five requirements: (i) demonstrate technical capability to interact securely with
9 Ameren Missouri’s servers; (ii) provide contact information and federal tax identification
10 numbers; (iii) acknowledge receipt and review of the tariff; (iv) not have been disqualified as an
11 authorized third party provider in the past by the Commission; and (v) adopt and comply with the
12 most updated version of the 2015 Department of Energy’s Voluntary Code of Conduct Final
13 Concepts and Principles for Data Privacy and the Smart Grid (the “DataGuard Seal”) or a similar
14 nationally accepted eligibility standard approved by the Commission.

15 **Q. WHY ARE ELIGIBILITY CRITERIA IMPORTANT?**

16 A. Because without clearly defined eligibility criteria, Ameren Missouri could engage in
17 discriminatory handling of third parties. For example, Ameren Missouri could refuse to allow
18 access to a certain third party for unfair or anti-competitive reasons – for example, if a third party
19 was engaged in lawful deployment of renewable energy projects that Ameren Missouri might

1 perceive to be competitively threatening. Well-defined eligibility criteria help ensure that each
2 third party is treated equally.

3 **Q. WHAT IS DATAGUARD?**

4 A. DataGuard is a privacy statement that originated with the U.S. Department of Energy.⁶ It
5 consists of a comprehensive statement regarding privacy and the appropriate use of customer data
6 to which companies attest they comply. This attestation is enforceable by the U.S. Federal Trade
7 Commission, which has authority to police unfair or deceptive business acts or practices. State
8 attorneys general may also be able to take enforcement actions based upon similar authority.

9 **Q. HAVE OTHER STATES ADOPTED ELIGIBILITY CRITERIA SIMILAR TO**
10 **WHAT YOU PROPOSE?**

11 A. Yes. California and New Hampshire have very similar requirements. Texas does as well,
12 although Texas does not require adherence to DataGuard.

13 **Q. DOES THE COMMISSION HAVE THE AUTHORITY TO REQUIRE THIRD**
14 **PARTIES TO AGREE TO DATAGUARD?**

15 A. I am not a lawyer, but I believe it is acceptable because DataGuard is connected to Ameren
16 Missouri's practices of administering GBC, and Ameren Missouri is clearly under the jurisdiction
17 of the Commission. I also note that other states whose commissions do not have regulatory

⁶ Available at https://www.missiondata.io/s/DataGuard_VCC_Concepts_and_Principles_2015_01_08_FINAL.pdf

1 authority over third parties have required DataGuard or substantially similar privacy requirements,
2 such as California and New Hampshire.

3 **Q. PLEASE EXPLAIN THE SECTION ON LIABILITY AND WHY IT IS**
4 **IMPORTANT.**

5 A. The tariff states that Ameren Missouri is not liable for the acts of a third party. If a customer
6 authorizes a third party and, after data transfer, experiences a data breach of some kind, then
7 Ameren Missouri is immunized, except in cases where Ameren Missouri has acted recklessly.

8 An important distinction must be made between customer-authorized third parties and
9 *vendors* to a utility. Customer-authorized third parties are at arm's length to a utility and have no
10 contractual relationship with a utility. Ameren Missouri cannot therefore control a third party, and
11 nor should they. It is precisely the innovation that comes from outside the structure of regulated
12 monopolies that this platform seeks to nurture in Missouri in order to benefit ratepayers. Making
13 Ameren Missouri liable for a third party's actions thus puts the utilities in the role of "policeman,"
14 which is both undesirable and unworkable.

15 **Q. PLEASE EXPLAIN DATA QUALITY AND INTEGRITY, AND WHY IT IS**
16 **IMPORTANT.**

17 A. Data quality and integrity refer to high-quality, complete records of energy usage and
18 account data that is important to downstream economic decisions. For example, if a customer signs
19 up for a competitive demand response service, the customer can receive payments from MISO for
20 its load curtailment. Through its monopoly on metering and billing, Ameren Missouri is the

1 exclusive “source of truth” for metering information. Providing incorrect interval usage data via
2 GBC creates a significant risk to demand response aggregators, who may face fines and liquidated
3 damages at MISO for Ameren Missouri’s failure to provide accurate information.

4 Another example is residential or commercial building energy efficiency retrofits.
5 Modeling energy savings before a retrofit, and verifying savings afterward, are important market
6 functions that are undermined by incorrect or incomplete billing records. It would be unfair to a
7 building owner who, say, makes a multi-million-dollar decision to improve HVAC systems or
8 building envelope insulation based on energy usage data that was false and imprudently handled
9 by Ameren Missouri. Similarly, residential efficiency rebates from the Inflation Reduction Act,
10 Section 50121 require the Missouri Department of Natural Resources to pay rebates according to
11 “the monthly and hourly (if available) weather-normalized energy use of a home before and after
12 the implementation of a home energy efficiency retrofit...”⁷ Missouri is set to receive \$75.7
13 million for these retrofits,⁸ and accurate energy data from utilities is essential to administering
14 these funds.

15 **Q. HOW DO YOU ADDRESS DATA QUALITY AND INTEGRITY IN THE TARIFF?**

16 A. I address this topic by obligating Ameren Missouri to provide standard customer data under
17 a “best available” standard. The “best available” standard acknowledges that information can
18 change over time (such as when contact records are updated, or meter reading validation processes
19 or re-billing occurs) but Ameren Missouri would be required to provide the then-current and

⁷ Inflation Reduction Act (2022) Section 50121.

⁸ <https://www.energy.gov/sites/default/files/2024-05/IRA-50121-50122-home-energy-rebates-state-allocations.pdf>

1 accurate information for the customer requested and transmit updates in a timely manner after
2 updates in its systems occur.

3 **Q. DO OTHER STATES REQUIRE A “BEST AVAILABLE” DATA STANDARD?**

4 A. Yes, the New Hampshire Public Utilities Commission approved a settlement agreement in
5 Docket No. DE 19-197 that references this standard.⁹

6 **Q. TO YOUR KNOWLEDGE, WHAT OTHER STATES HAVE ESTABLISHED**
7 **TARIFFS FOR GREEN BUTTON CONNECT OFFERED BY UTILITIES?**

8 A. I am aware of several states with regulator-approved tariffs. These are provided in Table 1
9 below.

State	Is there a GBC-specific tariff?	Have utilities established terms and conditions not approved by the utility’s regulator?
California	Yes	Yes (Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric)
Colorado	No	Yes (Xcel Energy)
Illinois	Yes	Yes (Commonwealth Edison) Not observed (Ameren Illinois)
Kentucky	No	Yes (LG&E-KU) ¹⁰
Minnesota	No	Yes (Xcel Energy)
New Jersey	No	Yes (Rockland Utilities)
New York	Yes ¹¹	Unknown
Texas	No	Yes (AEP Texas, Centerpoint, Entergy Texas, Oncor, Texas-New Mexico Power Co and Xcel Energy)

⁹ https://www.puc.nh.gov/Regulatory/Docketbk/2019/19-197/LETTERS-MEMOS-TARIFFS/19-197_2021-04-28_EVERSOURCE_JT_SETTLEMENT_AGREEMENT.PDF

¹⁰ Per communication with Accelerated Innovations, LG&E-KU’s vendor for Green Button Connect My Data, there are no terms and conditions during the online third-party registration process, but LG&E-KU require third parties to agree to certain terms through an offline process.

¹¹ Although technically not called a tariff, the New York Public Service Commission has approved a “data security agreement” which outlines the terms and conditions under which entities authorized by account holders may access data.

1 *Table 1: States and utilities with a Green Button Connect tariff and other terms established*
2 *by utilities without approval of their regulator.*

3 **Q. WHAT DO YOU OBSERVE ABOUT TABLE 1 ABOVE?**

4 A. Many of the states with the longest history of offering GBC have established tariffs,
5 including California, Illinois, and New York. It is also notable that most utilities – even those
6 offering GBC under a regulator-approved tariff – have imposed their own separate terms and
7 conditions upon data recipients.

8 **Q. IS IT A PROBLEM FOR UTILITIES TO MAKE THEIR OWN TERMS AND**
9 **CONDITIONS GOVERNING GREEN BUTTON CONNECT?**

10 A. Yes, I believe it is. Monopolies have an incentive to exploit adjacent markets, such as
11 energy management and demand response, by unfairly leveraging their regulated functions to
12 diminish competition. Without Commission review, the terms could be anti-competitive, as I have
13 described above.

14 **Q. DOES YOUR PROPOSED TARIFF ADDRESS THIS ISSUE OF TERMS AND**
15 **CONDITIONS?**

16 A. Yes. In the final section (“General”) my proposed tariff clearly states that separate terms
17 and conditions that Ameren Missouri may demand have no force or effect.

1 **Q. IN TABLE 1 ABOVE, FOR THE STATES AND UTILITIES WITH NO TARIFF,**
2 **ARE YOU SAYING THERE ARE NO RULES OR REQUIREMENTS ESTABLISHED**
3 **WHATSOEVER FOR GREEN BUTTON CONNECT?**

4 A. No. All of the state regulators in Table 1 have issued orders of some kind requiring GBC.
5 The only exception is New Jersey, which is currently considering a data portability rule, but
6 Rockland Utilities began offering GBC because its New York-based affiliate, Consolidated
7 Edison, was already required to provide GBC, and the firm appears to share common information
8 technology infrastructure across operating companies.

9 My point is that a regulatory requirement for a utility to offer GBC is fundamentally distinct
10 from a tariff because a tariff forms a contract between a utility and a third party. Mediating the
11 relationship between monopoly utilities and competitive market actors is an important
12 responsibility of utility regulators, which an order to merely compel GBC from a utility does not
13 address.

14 **Q. ARE OTHER STATES IN THE PROCESS OF CONSIDERING TARIFFS**
15 **GOVERNING GREEN BUTTON CONNECT OFFERED BY UTILITIES?**

16 A. Yes. I am aware of efforts underway in Connecticut, New Hampshire, and North Carolina.

17 **Q. WHAT ARE THE OTHER PROVISIONS OF THE SECTION TITLED**
18 **“GENERAL”?**

19 A. Section (f)(2) calls for Ameren Missouri to obtain independent, periodic certification that
20 it adheres to the GBC standard. Section (f)(3) sets uptime requirements for the GBC platform,

1 ensuring it is usable at least 99% of the time. And finally, Section (f)(4) concerns termination and
2 vests customers and the Commission, but not Ameren Missouri, with the ability to terminate a
3 data-sharing authorization.

4 **Q. WHAT IS CERTIFICATION AND WHY IS IT IMPORTANT?**

5 A. Certification is an important part of following any technical standard. Rather than relying
6 merely on Ameren Missouri's claim that it adheres to the GBC standard, the Commission should
7 require testing by an independent body, the non-profit Green Button Alliance. Certification
8 involves passing numerous technical tests.¹² Certification helps ensure interoperability with other
9 GBC implementations in other states across the country, making it more likely that Missouri
10 ratepayers will be able to take advantage of energy management offerings available elsewhere.
11 Certification also helps reduce administrative and technical support costs because third parties will
12 have clear expectations about what to expect in terms of technical functionality.

13 **Q. WHAT IS THE COST OF CERTIFICATION?**

14 A. According to the Green Button Alliance website, GBC certification costs only \$3,200.

15 **Q. WHAT IS AMEREN MISSOURI'S GREEN BUTTON DOWNLOAD MY DATA?**

16 A. Ameren Missouri offers Green Button Download My Data today. As the name suggests,
17 this allows customers to download their electric usage data in XML format (eXtensible Markup
18 Language), which is a format that software applications can, in theory, process easily. Download

¹² Information on the certification process is available at <https://www.greenbuttonalliance.org/testing>.

1 My Data is only useful in a narrow set of use cases when a snapshot of energy usage history is
2 required. Unlike GBC, Download My Data does not allow ongoing access to a customer’s
3 information because the customer must take an action – download their data from Ameren
4 Missouri’s website, and then upload it to another service – each time.

5 **Q. WHAT DID YOU FIND REGARDING AMEREN MISSOURI’S GREEN BUTTON**
6 **DOWNLOAD MY DATA FILE?**

7 A. I received a sample file from a residential customer located in the St. Louis area and ran
8 the file through the Green Button Alliance’s “file validation” tool, which checks to see if it
9 complies with the GBC standard.¹³ Schedule MM-2 shows the results. While much of the file
10 comports with the GBC standard, it notably failed in two areas: It did not contain the
11 “UsageSummary” element, which contains important monthly bill information about usage, and it
12 failed to have consistent and unique start and end time periods of each 15-minute interval. I also
13 note that the file did not include any cost information; it was limited to interval usage in kilowatt-
14 hours.

15 **Q. WHAT DOES THIS MEAN FOR ENERGY MANAGEMENT SOFTWARE**
16 **APPLICATIONS?**

17 A. It means that energy management software applications would be unable to read the file.
18 Software developers would need to customize their tools for Ameren Missouri specifically in order
19 to work around the non-conformance issues.

¹³ Available at <https://dmdvalidator.greenbuttonalliance.org/>

1 **Q. WOULD AMEREN MISSOURI'S GREEN BUTTON DOWNLOAD MY DATA**
2 **FILE PASS CERTIFICATION TODAY?**

3 A. No, it would not.

4 **Q. WHAT DOES THIS SUGGEST ABOUT THE NEED FOR CERTIFICATION OF**
5 **GREEN BUTTON CONNECT MY DATA?**

6 A. This simple test of Ameren Missouri's Download My Data file supports my argument that
7 independent testing and certification should be required for GBC. Just because Ameren Missouri
8 claims that it supports Green Button does not mean that it is truly compliant with the standard.
9 This is especially true of GBC, which contains more than simply a file format. GBC involves
10 interactive communications between the utility and the authorized third party that enable requests
11 for different types of information over different time intervals. This machine-to-machine
12 "dialogue" is critical to effective, ongoing communication, which is why it is evaluated for
13 consistency during the independent certification process.

14 **Q. WHAT ARE THE UPTIME REQUIREMENTS IN SECTION (f)(3)?**

15 A. I propose a 99.0% uptime requirement, with exceptions for scheduled maintenance
16 windows. This ensures that of the 8,760 hours in a year, GBC will only be offline for 87.6 hours,
17 or about three and a half days.

1 **Q. WHY ARE UPTIME REQUIREMENTS IMPORTANT?**

2 A. This type of commitment, often called a service level agreement, is common in information
3 technology applications. It is important as an accountability measure because it gives confidence
4 to third parties that they can invest time and resources in Missouri without undue interruption. If a
5 GBC platform is only operational 60% of the time, it will scare away software providers and
6 undermine the purpose of GBC. It also helps the Commission ensure that ratepayer funds are spent
7 prudently.

8 **Q. WHY IS 99.0% UPTIME REASONABLE?**

9 A. 99.0% uptime, along with 200 hours per year of scheduled maintenance windows for
10 security improvements and software updates, is reasonable and achievable because many
11 enterprise software agreements are at least as stringent. I would anticipate that Ameren Missouri's
12 existing software vendors would be able to easily meet this requirement. I note that the New
13 Hampshire Public Utilities Commission approved a design of a GBC platform with a 99.5% uptime
14 requirement.¹⁴

15 **Q. WHAT ARE THE TERMINATION PROVISIONS OF SECTION (f)(4)?**

16 A. The termination provision states that Ameren Missouri is prohibited from terminating an
17 active customer authorization. It says that, if Ameren Missouri has a reasonable suspicion that a
18 third party is violating the law or customer privacy, then it can bring these suspicions to the

¹⁴ See, e.g., settlement agreement at Bates page 45-46: https://www.puc.nh.gov/Regulatory/Docketbk/2019/19-197/LETTERS-MEMOS-TARIFFS/19-197_2021-04-28_EVERSOURCE_JT_SETTLEMENT_AGREEMENT.PDF

1 Commission for review and/or action. It also clarifies that the customer and the Commission, and
2 not Ameren Missouri, may terminate activate customer authorizations.

3 **Q. WHY ARE THESE PROVISIONS NECESSARY?**

4 A. It is necessary to prevent Ameren Missouri, or any utility, from unilaterally terminating an
5 authorization because of its potential for abuse. Ameren Missouri could use customer privacy as a
6 pretext to interrupt data access to third parties, who might be considered competitors to Ameren
7 Missouri, without due process. Moreover, I note that in its consideration of this topic back in 2013,
8 the California Public Utilities Commission came to a similar conclusion:

9 To clarify further, it is reasonable for the Commission, in its oversight of the
10 utilities and smart meters, to take responsibility for ordering the suspension of third-
11 party access to customer data. Under the procedures adopted in this decision, it is
12 not necessary nor is it reasonable for a utility to suspend access to customer data
13 based on *suspicion* that a third party may be violating tariffs.¹⁵

14 If there is genuine “bad actor” who is violating customer privacy, then it is reasonable
15 for the Commission to use its fact-finding abilities to investigate the matter. If a violation
16 is ultimately found, then the Commission can order the termination of data sharing.
17 However, delegating this “policing” function to Ameren Missouri would be put the utility
18 in the powerful position of surveilling, investigating and potentially terminating
19 connections with adjacent market actors, some of whom Ameren Missouri might consider
20 its competitors. Fairness thus demands that Ameren Missouri be stripped of the ability to
21 terminate data sharing.

¹⁵ Emphasis in original. California Public Utilities Commission, Decision D.13-09-025 (Sept 23, 2013) at 53.
Available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M077/K191/77191980.PDF>

1 **IV. CONCLUSION**

2 **Q. WHAT ARE POSSIBLE NEGATIVE OUTCOMES IF THE COMMISSION DOES**
3 **NOT ESTABLISH A GREEN BUTTON CONNECT TARIFF AS YOU HAVE**
4 **PROPOSED?**

5 A. The tariff I have proposed provides critical requirements to ensure fairness in the
6 relationship between Ameren Missouri and the third party. Without clarity about certain provisions
7 such as service guarantees or non-discriminatory application of eligibility criteria, monopolies
8 such as Ameren Missouri can abuse their power and unfairly diminish the ability of energy
9 management firms to compete on a level playing field. A tariff is necessary to ensure that
10 ratepayers have the ability to choose energy management providers that best suit them without
11 undue interference.

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

13 A. Yes.

14