

Exhibit No.: _____
Issue(s): Residential Battery Energy Storage Pilot
Program/Low-Income Solar Subscription Pilot
Witness/Type of Exhibit: Seaver/Rebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2022-0129 and ER-2022-0130

REBUTTAL TESTIMONY

OF

JORDAN SEAVER

Submitted on Behalf of the Office of the Public Counsel

**EVERGY METRO, INC. D/B/A
EVERGY MISSOURI METRO
AND
EVERGY MISSOURI WEST, INC. D/B/A
EVERGY MISSOURI WEST**

CASE NOS. ER-2022-0129 AND ER-2022-0130

** **
Denotes Confidential information that has been redacted

July 13, 2022

PUBLIC

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**REBUTTAL TESTIMONY
OF
JORDAN SEAVER**

**EVERGY MISSOURI METRO d/b/a EVERGY MISSOURI METRO & EVERGY
MISSOURI WEST d/b/a EVERGY MISSOURI WEST**

CASE Nos. ER-2022-0129 & ER-2022-0130

I. INTRODUCTION

Q. What is your name and what is your business address?

A. My name is Jordan Seaver, and my business address is 200 Madison Street, Governor Office Building, Suite 650, Jefferson City, MO 65102

Q. Are you the same Jordan Seaver who filed direct testimony in Case Nos. ER-2022-0129 and ER-2022-0130?

A. I am.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this testimony is to respond to the direct testimony of other parties regarding:

- The Residential Battery Energy Storage Pilot Program (“RBES”)
- The Low-Income Solar Subscription Pilot (“Schedule LI SSP”)

II. RESIDENTIAL BATTERY ENERGY STORAGE PILOT PROGRAM (“RBES”)

Q. What are the details of Evergy’s proposed RBES?

A. Evergy is proposing to install 50 behind the meter (BTM) energy storage systems in the homes of 50 customers across MO Metro and MO West service territories. The allocation proportions per service territory have not been specified, just that there will be participating customers in both service territories. Each BTM system would have continuous output capacity of either 4.5kW or 6kW. Participating customers would be chosen based on whether they are enrolled in time-of-use (“TOU”) rates, whether they have rooftop solar photovoltaic panels, and whether they have electric vehicles or some sort of smart home device (e.g., a smart thermostat). The capital budget for the RBES is estimated at \$2.4 million, and EM&V costs are estimated at \$100,000. Participating customers will pay a \$10 monthly service fee.

1 **Q. What is the Company’s goal in implementing the RBES?**

2 A. The Company’s stated goal of the RBES is to “advance Evergy’s operational knowledge of
3 how battery energy storage systems can be utilized to achieve customer savings and grid
4 benefits.”¹ That goal is allegedly reinforced by Senate Bill 564, Section 393.1610 RSMo,
5 which states that

6 *“The Commission may approve investments by an electrical corporation in small
7 scale or pilot innovative technology projects, including but not limited to renewable
8 generation, micro grids, or energy storage, if the small scale or pilot project is
9 designed to advance the electrical corporation’s operational knowledge of deploying
10 such technologies, including to gain operating efficiencies that result in customer
11 savings and benefits as the technology is scaled across the grid or network.”*

12 **Q. Is this goal best achieved by implementing the RBES?**

13 A. No, it is not. The Company’s Integrated Resource Plan (“IRP”) filed in Case Docket Nos.
14 EO-2021-0035 and EO-2021-0036 describes a “study program...with Sunverge to explore
15 benefits of combining BTM storage with distributed energy resources (“DER”).”² This study
16 program has three phases, two of which have already been completed. These completed
17 phases are “Lab Testing” and “Field Trial”, which consisted in installing Sunverge storage
18 systems both in an isolated setting and at Evergy customer locations, testing and evaluating
19 their functionality under different grid conditions, and connecting them with Evergy’s DERs,
20 and “Advanced Distribution Management.”³ These completed phases of the study program
21 are sufficient for the Company’s stated goal of advancing “operational knowledge of how
22 battery energy storage systems can be utilized to achieve customer savings and grid benefits.”
23 If a third phase is needed after these, then the Company has not effectively utilized the first
24 two phases and I would ask the Commission to deny the RBES on those grounds.

25 **Q. What are the drawbacks of the RBES as proposed?**

26 A. The Company alleges that the BTM storage systems will broadly provide two types of
27 benefits: those for participating customers and those for non-participating customers. The

¹ Kimberly Winslow, Direct Testimony, ER-2022-0130, p. 42.

² Ibid., p. 41.

³ Ibid., p. 42.

1 benefits for participating customers are confined to backup electricity during a blackout and
2 potential savings when the batteries are called on to discharge stored power during periods of
3 high or peak demand. The benefit for non-participating customers is a reduction in the costs
4 of energy due to the ability to call and discharge stored power in the batteries to the grid. I do
5 not believe that these rationales are compelling, as I will explain below.

6 Participating customers may indeed benefit from BTM systems during blackouts, but
7 those are rare in Evergy's service territory. Furthermore, the cost of installing BTM storage
8 systems solely to provide power during a blackout is incredibly high. The cost of a Sunverge
9 energy storage system with 4.5kW to 6kW continuous output capacity ranges from \$15,000
10 to \$20,000.⁴ The cost of a Generac PowerPact liquid propane/natural gas generator with
11 7.5kW (using liquid propane) or 6kW (using natural gas) continuous output capacity is
12 roughly \$2,000.⁵ More output capacity in Generac generators can be purchased for still less
13 than the low-end of the Sunverge storage systems. Thus, the RBES' benefits to participating
14 customers does not justify the cost to all ratepayers by increasing rate base.

15 Alleged benefits to non-participating customers are reducing peak demand and
16 improving grid distribution reliability and capacity. These benefits are, theoretically, a result
17 of mass BTM energy storage system deployment; however, the RBES will only deploy 50
18 BTM energy storage systems. In order to have any real benefit, there would need to be many
19 more BTM systems in Evergy's service territory. The costs of mass deployment of BTM
20 systems would outweigh any benefits. Installing BTM systems in 100,000 residential
21 customers' homes in both MO Metro and MO West service territories (less than half) would
22 cost roughly \$1 billion. Even installing only 10,000 BTM system in residential customers'
23 homes would cost roughly \$200 million. If Evergy is not going to install a reasonable number
24 of BTM systems in its service territories under a permanent program due to a high cost barrier,
25 then I recommend that the Commission deny the RBES.

⁴ Ibid., p. 41.

⁵ As of writing on July 6, 2022, this model generator costs \$1,999.00 at Lowe's (<https://www.lowes.com/pd/Generac-PowerPact-7500-Watt-LP-6000-Watt-NG-Standby-Generator-with-Automatic-Transfer-Switch/1000815538>) and has a listed MSRP starting at \$2,049.00 on Generac's website (<https://www.generac.com/all-products/generators/home-backup-generators/powerpact/powerpact-6998-8-circuit-switch>). I have included Lowe's price to show the cost to an individual customer purchasing a generator for the purpose of powering the home during a blackout.

1 **Q. What is your recommendation regarding the RBES?**

2 A. My recommendation for the Commission regarding the RBES is that it not be allowed. In
3 direct testimony for this rate case⁶ I have recommended that the Commission order the
4 Company to conduct a meta-study or literature review of the studies known on the topic to
5 determine what benefit there might be for Evergy customers in both MO Metro and MO West
6 territories. I believe that the meta-study or literature review is a viable substitute for the RBES
7 that would not cost customers to conduct and would achieve the same goal as the RBES.

8 **III. LOW-INCOME SOLAR SUBSCRIPTION PILOT (“SCHEDULE LI SSP”)**

9 **Q. What is the Low-Income Solar Subscription Pilot?**

10 A. Similar to the currently active Solar Subscription Pilot Rider (“Schedule SSP”),⁷ Schedule LI
11 SSP is a solar subscription program for low-income customers. The Company has proposed
12 1 MWac⁸ of solar PV array to provide subscription blocks for any participating low-income⁹
13 customers. Participating customers subscribe for 500 Wac blocks of the solar PV array and
14 can subscribe so that up to 50% of their energy use is met by their subscribed portion of the
15 array. Although not all details of the proposed pilot are provided in Company witness
16 testimony, we can assume that it will be relevantly similar to Schedule SSP in several ways.
17 Because the power generated by the solar array does not go directly to meet the participating
18 customers’ load, the Company acquires renewable energy credits (“RECs”) for generation.
19 Schedule SSP third revised tariff sheet 39D states that the RECs are tracked by the company
20 and retired on behalf of participating customers. This is tracked in a group retirement
21 subaccount. The participants of Schedule SSP must be subscribed for 12 months and waive
22 all rights to billing adjustments once participating. If the cost of electric service for
23 participating customers would have been lower had they had a different rate, that is not reason
24 for the Company to grant a billing adjustment under the Schedule SSP.

⁶ Jordan Seaver, Direct Testimony, ER-2022-0130 & ER-2022-0129.

⁷ P.S.C. MO. No. 7, Revised Sheet Nos. 39-39E.

⁸ This unit refers to the resulting power measurement after conversion from the dc solar PV to ac by means of a converter.

⁹ “Low-income” is defined for the program as those whose income is at or below 200% of the current federal poverty level. See Kimberly Winslow, Direct Testimony, ER-2022-0129 and ER-2022-0130, p 35.

1 **Q. What are your concerns about the Schedule LI SSP?**
2 A. Schedule LI SSP is a risky program because of the group of eligible participants. The fact
3 that the group of eligible participants is low-income makes their participation in a program
4 with an eventually increasing rate tenuous. **_____

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¹⁰ Schedule JS-R-1-CONF, pp 1 and 4.
¹¹ See the formula in P.S.C. MO. No. 7, Second Revised Tariff Sheet No. 39B.
¹² See Schedule JS-R-2-CONF, p 11.

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Some participants are likely to end their subscriptions when they find their rates increase over time. Others are likely to end theirs because the rate will be higher than they can afford at some time in the near term. Inflation and national GDP contraction will both likely lead to uncertainty of employment for many in the next few years, not to mention the tightening of household budgets. The market saturation of solar energy in SPP is uncertain at this point in time, and the predictions for the project may turn out to be wrong. The fact that low-income customers are those who have the most in arrearages and the hardest time paying for electricity in the first place, coupled with the current economic and market situations, makes this program needlessly risky with the chance that non-participating customers would be asked to cover costs in the future. Because Schedule SSP is already a program, and the difference in solar block subscription charges for Schedule SSP and LI SSP is \$0.05, customers with income at 200% of the federal poverty line can reasonably take advantage of Schedule SSP. Thus there is no reason to create a separate solar subscription schedule for the class of low-income individuals who would benefit more from other energy affordability programs.

Q. What is your recommendation for the LI SSP?

A. I recommend that the Commission deny the LI SSP.

Q. Do you recommend any other changes related to LI SSP?

A. If the Commission instead allows the LI SSP, then I recommend that they order the Company to include a shareholder cost sharing component, similar to that in Schedule SSP.¹⁴ This cost sharing component has shareholders bear 75% of the cost of unsubscribed solar blocks, while participating customers bear the other 25% cost. I recommend for the LI SSP that shareholders bear 90% and participating customers bear 10% of the unsubscribed solar blocks.

¹³ Schedule JS-R-1-CONF, p 3.
¹⁴ See P.S.C. MO. No. 7, Third Revised Sheet No. 39D.

1 **Q. Does this conclude your testimony?**

2 A. Yes.