

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

In the Matter of the Joint Application of Evergy)
Kansas Central, Inc., Evergy Kansas South, Inc.,) Docket No. 23-EKCE-775-RTS
and Evergy Metro, Inc. for Approval to Make)
Certain Changes in their Charges for Electric)
Services.)

**EVERGY’S INFORMATIONAL FILING REGARDING ITS
RESIDENTIAL BATTERY ENERGY STORAGE PILOT PROGRAM**

COMES NOW, Evergy Kansas Central, Inc. (“Evergy Kansas Central”) and Evergy Metro, Inc. (“Evergy Kansas Metro”) (collectively referenced hereinafter as “Evergy”), hereby submit to the Kansas Corporation Commission (“Commission”) this Informational Filing.

1. The Commission’s Order Approving Unanimous Settlement Agreement, issued on November 21, 2023, approved implementation of Evergy’s residential battery energy storage (“RBES”) pilot subject to the following requirements:

- a. EKC will submit a final Evaluation Measurement & Verification (“EM&V”) report to stakeholders and the Commission by the second quarter of 2027 to evaluate the success of the pilot and determine whether to move it to a full-scale offer in a future rate proceeding; and
- b. The Parties agree to a collaborative to identify parameters on deployment, reporting and EM&V, and propose to file a compliance filing in this docket after that process is complete.

2. Evergy and KCC Staff confirmed a mutually agreeable date for a collaborative meeting, and on June 20, 2024, Evergy emailed the service list for this docket requesting a response from

any party interested in participating in the collaborative meeting. Responses were received from Citizens' Utility Ratepayer Board ("CURB") and Climate and Energy Project ("CEP").

3. The collaborative meeting was held on July 18, 2024, and attended by Evergy, KCC Staff, CURB, and CEP. The presentation attached as Exhibit 1 guided the discussion.

4. Two modifications were requested by the participating stakeholders as follows:

- a. Evergy employees are not eligible to participate in the RBES pilot; and
- b. Evergy to schedule a follow-up meeting with stakeholders during the summer of 2025 to report on the RBES pilot's progress.

These modifications are incorporated into the RBES pilot as requested.

WHEREFORE, Evergy respectfully requests the Commission take notice of this Informational Filing.

Respectfully submitted,

/s/ Cathryn J. Dinges

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**ATTORNEY FOR EVERGY KANSAS
CENTRAL AND EVERGY KANSAS
METRO**



Kansas Residential Battery Storage Pilot Stakeholder Meeting

July 18, 2024





Overview

- Kansas Pilot Objectives, Benefits & Timeline
- Technology Overview
- EM&V Approach
- Customer Screening
 - Selection & Onboarding
- Budget
- Next Steps

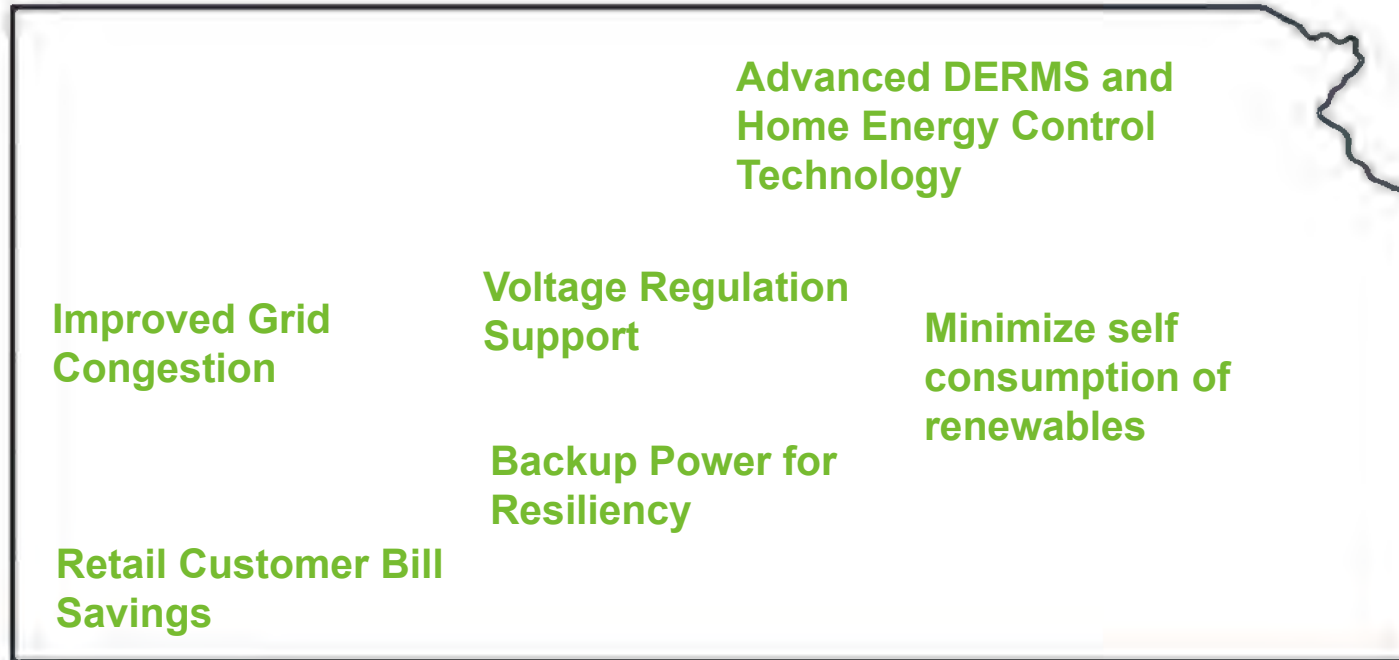
Learning Objectives, Benefits & Timeline

Drivers & Goals



Recognition of pilot drivers and objectives is critical to meeting customer satisfaction and gaining operational knowledge to decrease grid impacts

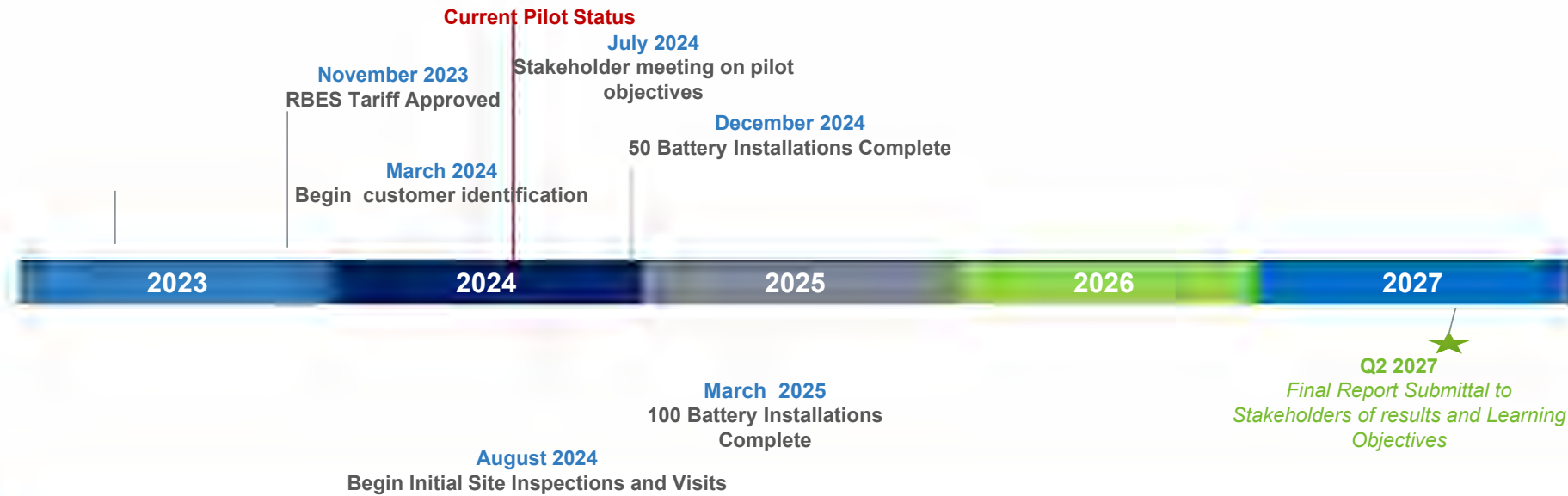
Pilot Benefits for Kansas



As a pilot, the residential battery pilot program advances Evergy's operational knowledge of how battery energy storage systems can be utilized to achieve customer savings and grid benefits.



Residential Battery Pilot Timeline



The Company will collaborate with stakeholders throughout the pilot process to align on goals and objectives. The Company will provide a final summary report at the conclusion of the pilot providing final measured impacts, process findings and recommendations on next steps

Technology

Kansas Battery Storage Pilot Stakeholder Meeting 071824



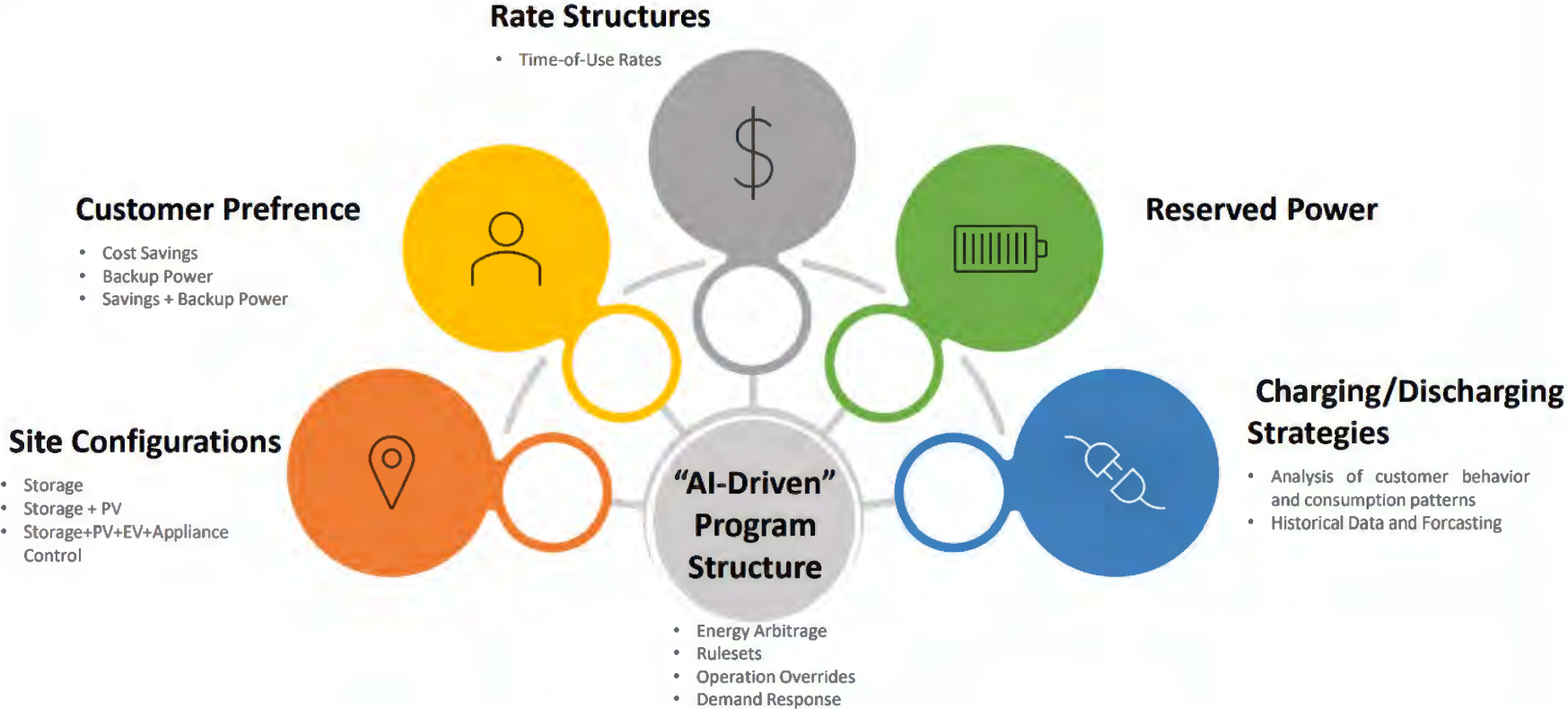
Battery System Technology





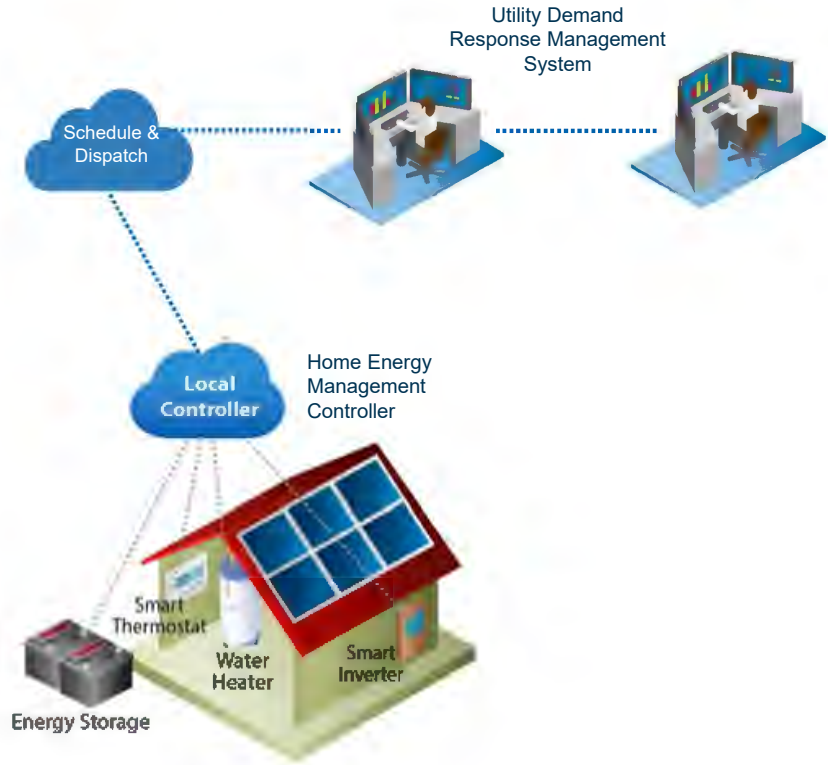
Technical Overview

A Win-win for Utility and Consumer





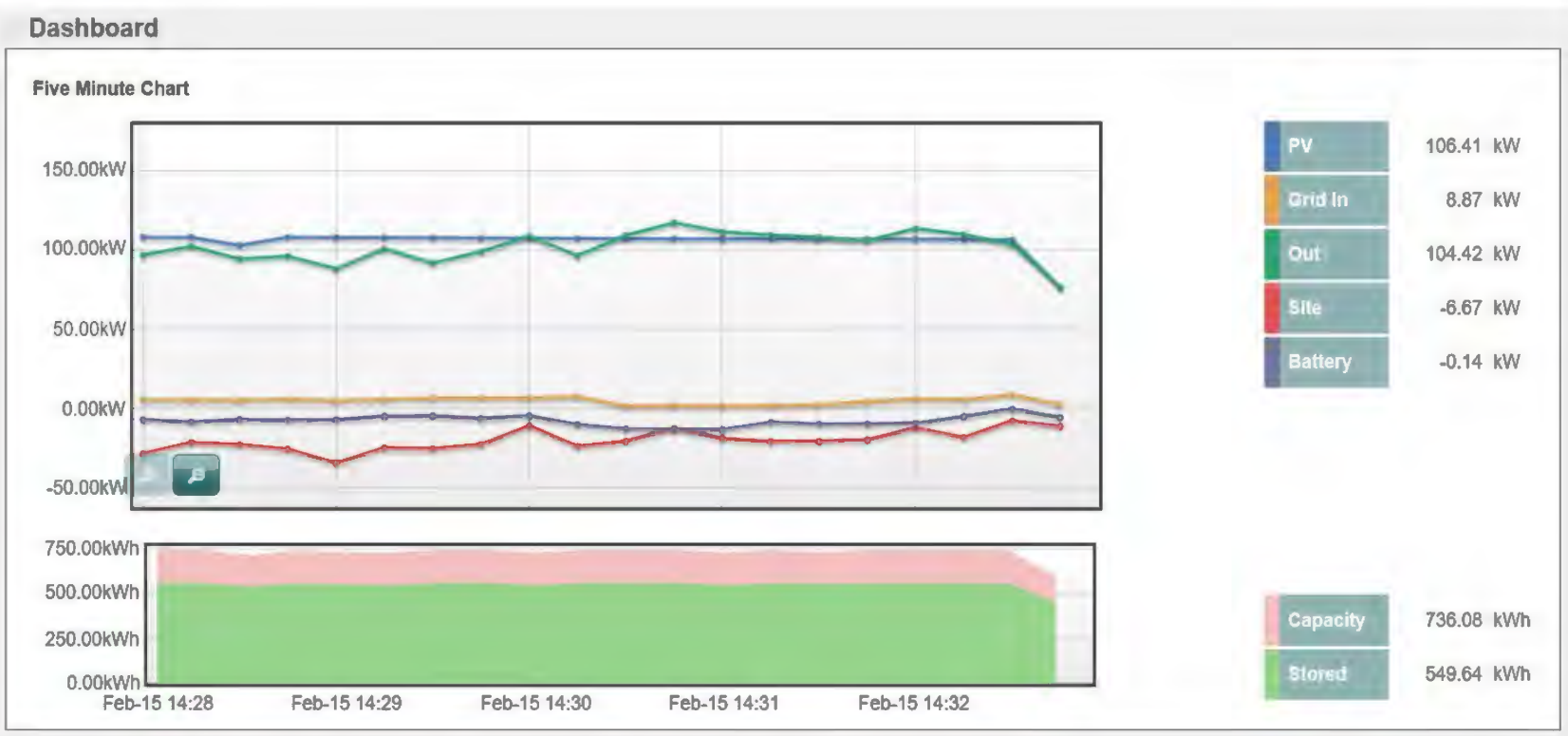
Technology Platform



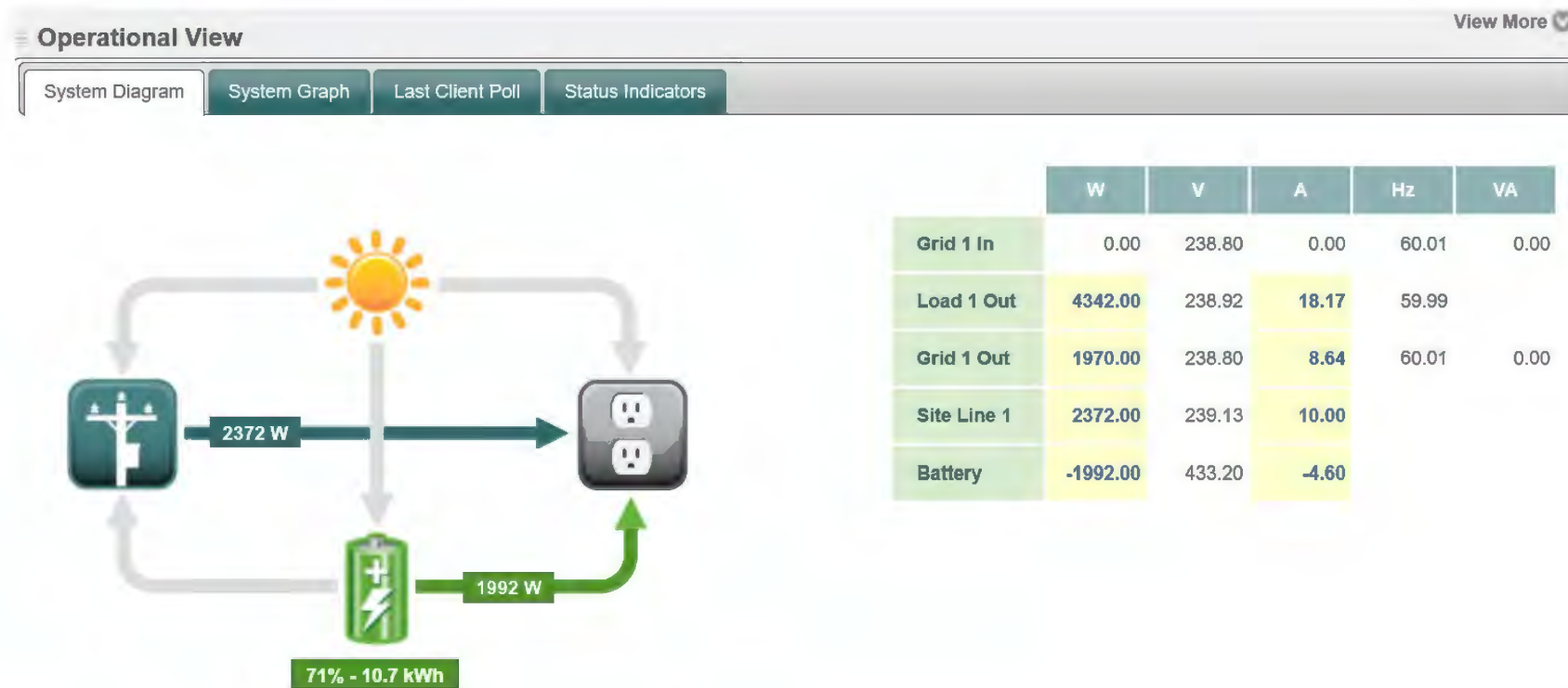
Component	Function/Purpose
Size/Duration LG Home 8	Total 14.4 kWh of storage
Local Controller	Home Energy Management local controller perform real-time control of storage and loads at customer's site
Cloud Platform	System cloud platform provides individual DER management, forecasting and optimization algorithms.
DRMS Sunverge	Sets charge and discharge schedules and optimization of battery over pilot period
DERMS OATI	Will provide full visibility across all commissioned approved Evergy DR programs and determine scheduling for peak or operational events

DRMS-Demand Response Management System
 DERMS-Distributed Energy Resource Management System

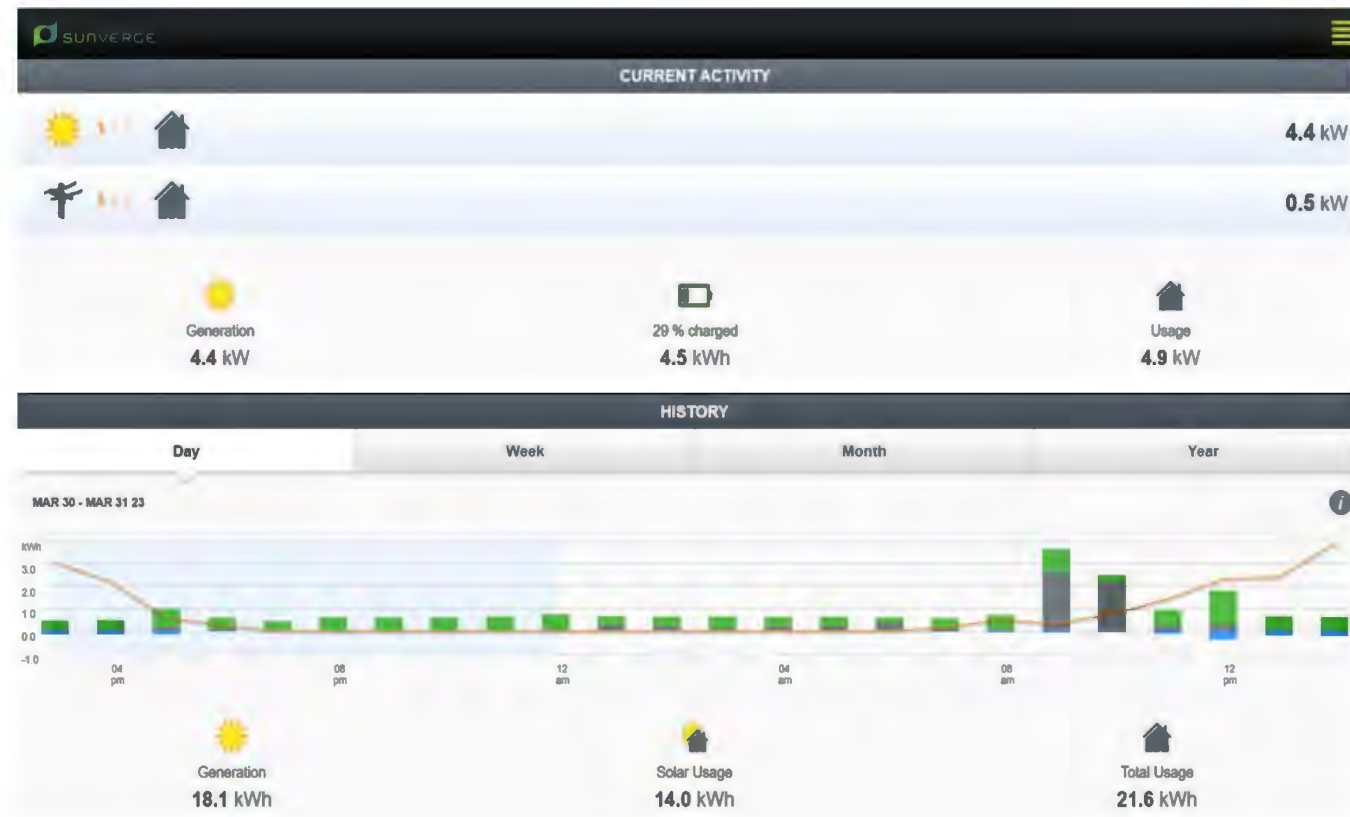




Utility Dashboard and Utilization --- Individual Unit



Customer User Interface



EM&V



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Evaluation Measurement & Verification

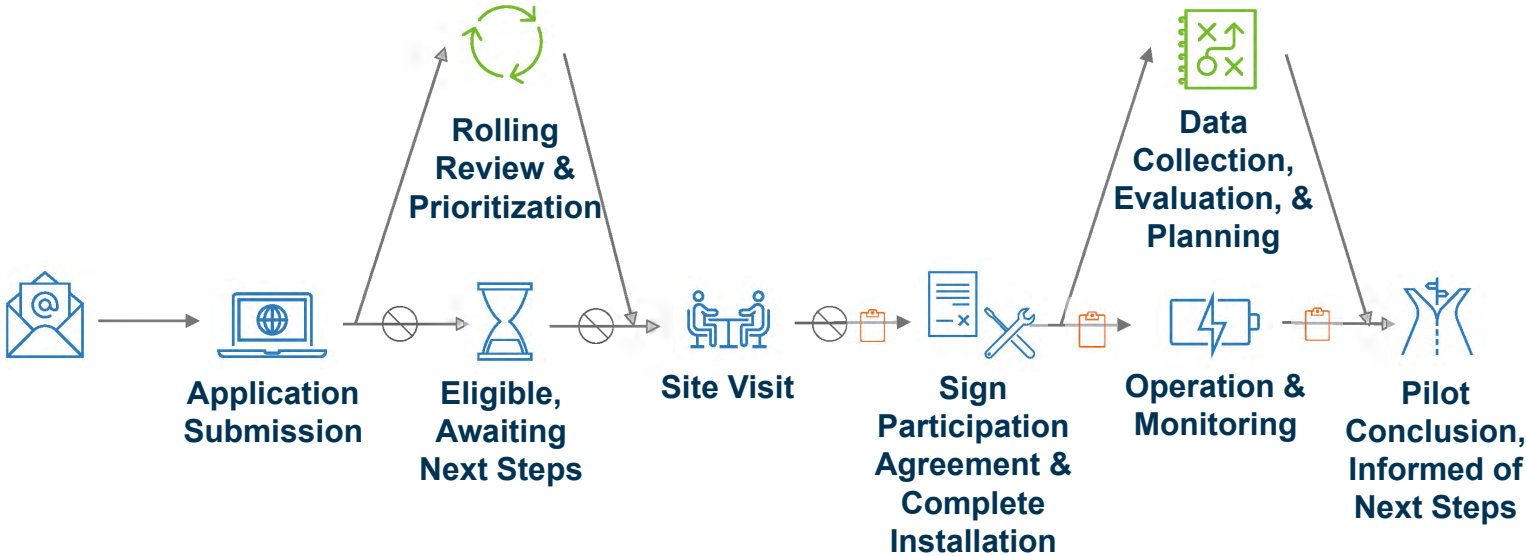
Objectives


- Understand requirements and process for integrating the control and communications systems from DERMS (Sunverge)
- Assess impacts of the battery system on demand for on-peak and off-peak period energy and customer bills
- Understand how Evergy can use batteries to impact future grid impacts of behind the meter (“BTM”) solar systems, such as rapid ramping of home demand and mid-day over-supply of power on Evergy’s system
- Understand capabilities of the batteries as a Demand Response capacity resource
- Help understand why program induced effects occurred and identify ways to improve Pilot and future programs
- Document benefits/impacts of the Pilot program and determine post Pilot recommendations



Customer Screening

Battery Pilot: Customer Onboarding Journey



- 
- Disqualified for Pilot Participation**
- 1. Failed eligibility check
 - 2. Disqualified, de-prioritized, or interest withdrawn
 - 3. Site visit flawed

- 
- Customer Satisfaction Surveys**
- 1. Post-Visit
 - 2. Post-Installation
 - 3. 4 months of pilot operation

¹Kansas Battery Storage Pilot Stakeholder Meeting 071824





Criterion	Description	Max Score Possible (% of Total Score)
Circuit	The best way to evaluate grid impact of behind the meter storage is to install these batteries in clusters on same circuits. We identified 5 circuits to target that have a low number of customers but a high number of outages	300 (30%)
No Plans to move for 2 years	To maintain continuity in the data and keep from incurring cost to remove and reinstall a battery in the event of a move we prefer to install at homes where there is no immediate plan of transfer of ownership	150 (15%)
Solar	A priority of this pilot is to analyze the operation and customer impact of behind the meter storage and PV. We want to optimize self consumption and on-site solar management	100 (10%)
Home EV Charger	A priority of this pilot is to analyze the operation and customer impact of behind the meter storage and EV Charging to manage peak demand	100 (10%)
Smart Devices	A priority of this pilot is to analyze the operation and customer impact of behind the meter storage and Smart Devices such as, Appliance control, HVAC load center, smart digital circuit breakers, and pool pump controls	100 (10%)
Attached Garage with space for battery	The lowest cost of install will be in an attached garage that has existing space for the battery	75 (7.5%)
Comfortable with the potential of conduit on home	There is the potential conduit on the outside of the home will be needed to facilitate this install. This is a criteria we want addressed prior to incurring cost of the site visit	50 (5%)
All Electric, Single Family home, Primary residence	With this smaller pilot we will not be looking at multifamily residences as this could complicate single installs. To gather consistent data we do want to install on only primary residences and avoid summer or seasonal homes.	50 (5%)
Space in breaker panel	Having existing space in the breaker panel will allow for a lower cost and less disruptive installation.	50 (5%)
Willingness to be surveyed	It is important for us to gather information from program participants. The data gathered through the 4 planned customer surveys will be valuable to end of pilot reporting and any future program design.	25 (2.5%)

A multi-criterion weighted screening matrix will be utilized to evaluate all battery applicants on a leveled basis to ensure optimal participant selection for the pilot



All customers that express interest in the residential battery storage pilot will go thru the selection funnel conversion process to determine the 100 pilot participants

Pilot Survey & Customer Demographics

Budget



Pilot Budget - Summary

KS Battery Pilot Budget Summary				
	2024	2025	2026	Total
Number of Batteries installed	50	50	0	100
Battery Storage Systems @ \$14K	\$ 700,000	\$ 700,000	\$ -	\$ 1,400,000
Installation @3.7k/system	\$ 185,000	\$ 185,000	\$ -	\$ 370,000
Communications monthly fee (Sim Card)	\$ 12,000	\$ 24,000	\$ 24,000	\$ 60,000
Software Licensing	\$ 42,000	\$ 42,000	\$ 42,000	\$ 126,000
Data Warehousing & SaaS	\$ 40,000	\$ 40,000	\$ 40,000	\$ 120,000
Open ADR & DERMS/SCADA (DNP3)	\$ 42,000	\$ 42,000	\$ 42,000	\$ 126,000
DERMS SaaS Fees	\$ 50,000	\$ 50,000	\$ 50,000	\$ 150,000
EM&V		\$ 50,000	\$ 75,000	\$ 125,000
Program Manager	\$ 20,000	\$ 35,000	\$ 35,000	\$ 90,000
Technical Support	\$ 18,000	\$ 20,000	\$ 20,000	\$ 58,000
Cost Category Summary				
	2024	2025	2026	Total
Capital Costs	\$ 1,071,000	\$ 1,083,000	\$ 198,000	\$ 2,352,000
O&M Costs	\$ 38,000	\$ 105,000	\$ 130,000	\$ 273,000
Total Costs	\$ 1,109,000	\$ 1,188,000	\$ 328,000	\$ 2,625,000

Q&A



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STATE OF KANSAS)
) ss:
COUNTY OF SHAWNEE)

VERIFICATION

The undersigned, Cathryn Dinges, upon oath first duly sworn, states that she is Senior Director and Regulatory Affairs Counsel for Evergy Kansas Central, Inc. and Evergy Kansas South, Inc., that she has reviewed the foregoing pleading, that she is familiar with the contents thereof, and that the statements contained therein are true and correct to the best of her knowledge and belief



Cathryn J. Dinges

Subscribed and sworn to before me this 14th day of January, 2025.



Notary Public

My Appointment Expires *May 30, 2026*



CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been emailed, this 14th day of January 2025, to all parties of record as listed below:

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