

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

In the Matter of the Application of Evergy)	
Kansas Metro, Inc., for Approval of its)	
Demand-Side Management Portfolio Pursuant)	Docket No. 25-EKME-504-TAR
to the Kansas Energy Efficiency Investment Act)	
("KEEIA"), K.S.A. 66-1283.)	

**EVERGY METRO, INC.'S RESPONSE TO STAFF REPORT AND
RECOMMENDATION**

COME NOW Evergy Metro, Inc. d/b/a/ Evergy Kansas Metro ("Evergy Kansas Metro", "EKM" or the "Company") and pursuant to K.S.A. 66-117 and 66-1283, hereby files a Response to the Report and Recommendation ("Report") of the request from Staff of the Kansas Corporation Commission ("Staff"). In furtherance of this Response, Evergy states as follows:

I. BACKGROUND

1. On August 29, 2025, Staff filed its Report on Evergy's application seeking approval of its updated 2025 Kansas Energy Efficiency Investment Act ("KEEIA") Energy Efficiency Rider ("EER"). EKM's Application requested recovery of costs associated with KEEIA and various energy efficiency programs.

2. EKM seeks cost recovery in the amount of \$4,673,862 of its Commission-approved energy efficiency programs.

3. Staff's Report recommended EKM should recover a revised KEEIA EER amount of \$4,299,543, including \$2,329,241 to be collected from residential customers and \$1,970,303 to be collected from non-residential customers. Staff's recommendation would result in a revised KEEIA EER factor of \$0.00078/kWh for residential customers and \$0.00056/kWh for non-residential customers, to be effective October 15, 2025. Staff's Report also contained three conditions:

a. That EKM file its next KEEIA EER in June 2026, to include costs incurred from Commission-approved programs from May 1, 2025, through April 30, 2026. The filing should include a true-up calculation to include the amounts collected from October 1, 2025, to September 30, 2026, versus the amounts intended to be collected during that time period.

b. That EKM conduct quarterly meetings to allow Staff to ask questions, evaluate program metrics, provide feedback, and to continue to refine Technical Reference Manual (“TRM”).

c. That EKM be denied of Throughput Disincentive (“TD”) and Earnings Opportunity Award (“EO”), with ability to file for recovery of Plan Year 1 TD and EO in Plan Year 2 if EKM provides sufficient data to allow Staff to replicate the savings calculations.

4. Staff’s Report explained that it reduced the requested recovery amount due to EKM not providing sufficient information or data to allow Staff to replicate the energy savings results and that EKM also failed to apply NMEC analysis to savings calculations at the minimum level prescribed by the Commission Order. Therefore, Staff recommended no recovery of the TD amount of \$49,479 and the EO amount of \$324,840. Staff’s Report concludes that while it recommends denial of TD and EO in the instant docket, if the Commission determines the TD and EO related to Plan Year 1 should be recovered in Plan Year 2, Evergy must provide sufficient data to allow Staff to replicate the savings calculations and minimum NMEC analysis criteria necessary to evaluate whether the criteria was met.

II. RESPONSE

5. Evergy Kansas Metro appreciates working collaboratively with Staff throughout this entire docket. EKM accepts the portion of Staff's Report and Recommendation that supports recovery of \$4,299,543 and the corresponding EER factors for residential and non-residential of \$0.00078/kWh and \$0.00056/kWh, respectively. EKM also accepts the three conditions listed in the Report which are; 1) the next KEEIA EER filing will be in June 2026, however, EKM believes Staff's description of the dates for the next filing is incorrect and will be addressed below; 2) EKM will hold quarterly meetings with Staff; and 3) denial of TD and EO recovery in this docket with the opportunity to recover those costs in Plan Year 2. EKM requests the Commission also accept Staff's Report and issue an order making the EER factors effective on October 15, 2025.

6. Evergy Kansas Metro believes Staff's first condition should read "Evergy Kansas Metro shall file its next KEEIA EER in June 2026, to include costs incurred from Commission-approved programs for Program Year 1 from May 1, 2025, through July 31, 2025, and Program Year 2 from January 1, 2025, through April 30, 2026. In this filing, Evergy Kansas Metro shall also include a true-up calculation to include the difference between:

a. Actual amounts collected from January 1, 2025, (including legacy program revenue collected prior to the recovery period start date) to April 30, 2026, plus forecasted amounts to be collected from May 1, 2026, to September 30, 2026, and

b. The approved recovery amounts from the June 15, 2025, filing."

7. Evergy Kansas Metro respectfully disagrees with Staff's conclusion and recommendation concerning the recovery of TD and EO, as calculated from the savings results presented in third-party evaluator's, ADM Associates Inc. ("ADM"), Evaluation Measurement

and Verification (“EM&V”) Program Year 1 report. While there is disagreement, EKM does not wish to delay the Commission’s order on the EER factors by challenging Staff’s Report regarding the TD and EO at this time. Staff’s conclusion provides an opportunity for EKM to recover TD and EO later and EKM will seek recovery of the TD and EO from Plan Year 1 in Plan Year 2 filing in 2026. EKM will work to ensure that Staff has adequate information to review the TD and EO for Year 1 prior to requesting recovery in Plan Year 2. EKM requests that the Commission specifically authorize its recovery of the Year 1 TD and EO in Plan Year 2, assuming that EKM provides sufficient evidence in its filing to support the calculations and request.

8. Although EKM is not challenging Staff’s Report regarding the TD and EO at this time and is reserving the right to dispute that recommendation as part of its Year 2 filing, EKM does feel it necessary to provide background information and explanation of what may have led to Staff’s recommendation for denial of the TD and EO and express concern that Staff’s recommendation may undermine key elements of the KEEIA statute.

9. At its foundation, the KEEIA statute allows for and the Commission subsequently approved Evergy’s S&A including three recovery parts: Program Costs (“PC”), TD, and EO. These three parts create the EER Factor. Without TD and EO as recommend by Staff, the equation just becomes PC spread for recovery across the customers. Acknowledged by Staff in its Report, PC indicates prudently incurred program expenditures, TD exists to alleviate the disincentive a utility and its shareholders have when implementing the programs, and EO is a direct incentive for Evergy to help its customers use energy more efficiently. The Commission recognized the importance of all three components when it approved EKM’s KEEIA programs and reducing the equation to just the PC component removes two essential components of

KEEIA. This removes the intent behind KEEIA for utilities to invest and get recovery in demand-side programs, similar to supply-side investments.

10. Staff hired its own third-party consultant to review and analyze Evergy's EM&V Program Year 1 report. Because this is the first year of the plan, it appears that there may have been several areas of misunderstanding and/or miscommunication between Staff's third-party EM&V consultant and EKM and EKM's third party EMV&V consultant – instances where Staff's third-party EM&V consultant was misapplying standards of review or did not have what it believed to be sufficient information but did not take steps to request that information from EKM – that led to Staff's recommendations regarding the TD and EO . For example:

- Staff's third-party EM&V consultant seems to be unaware of the EM&V Plan PY 1 ("Plan") document that was shared with Staff and intervenors. The Plan contains some of the information that Staff's consultant claims was missing. The Plan further clarifies what is to be in the EM&V Program Year 1 report.
- Staff's third-party EM&V consultant commented that the Whole Home Efficiency ("WHE") program did not have a detailed explanation of the selection of treatment and control groups. But the WHE program does not have these groups because its evaluation does not use a randomized control trial.
- Staff's third-party EM&V consultant also had a criticism that the third-party evaluator, ADM Associates Inc., did not provide enough detail for "to-code" savings. But Evergy's programs do not target code compliance, so these comments are not applicable.

11. There are other examples where a poor grading was received based on a lack of information, however, Evergy was never asked for specific information which would lead to "satisfactory" grading.

12. Evergy Kansas Metro’s third-party evaluation consultant has created a response to the scorecard in Staff’s Exhibit 2, which they represent as a more accurate and fair grade. The scorecard response is attached to this Response as Exhibit A.

13. There also appears to be confusion about Normalized Metered Energy Consumption (“NMEC”) requirements. NMEC is a powerful tool for measuring energy savings, but there are specific circumstances where it cannot or should not be used. Staff states that Evergy did not “adhere to the Commission’s requirement to use NMEC or meter-based data in every instance where it is feasible and cost-effective.” Contrary to Staff’s assertion, ADM Associates, Inc. conducted NMEC analysis in all instances where it was feasible and cost-effective, in full alignment with the Commission’s approved EM&V methodology. The PY1 EM&V Report confirms that NMEC was applied to all programs with sufficient advanced metering infrastructure (“AMI”) data and stable participation timelines. Specifically, programs such as WHE, Home Demand Response, and Home Energy Education achieved 100% NMEC-based verification of savings. Where NMEC was not feasible—due to short program duration, insufficient post-installation data, or low participation—ADM transparently documented the rationale and applied engineering-based methods using the Kansas TRM, as permitted by the Commission’s February 2024 Order. ADM’s methodology was consistent with the California Public Utilities Commission (“CPUC”) NMEC Rulebook and included regression-based modeling, weather normalization, and rigorous QA/QC protocols.

14. Therefore, the claim that Evergy did not adhere to NMEC requirements is inaccurate and does not reflect the comprehensive and compliant EM&V work performed in

PY1. The evaluation did comply with the Commission's Order¹ to use NMEC or meter-based data in every instance where it is feasible and cost-effective which resulted in 62.1% total being evaluated by NMEC in PY1. And to EKM's knowledge there is no minimum requirement for NMEC measurement prescribed by the Commission that restricts recovery of TD and EO.

15. This is the first year for this type of evaluation and the Company appreciates Staff's recommendation to allow EKM to request recovery of Plan Year 1 TD and EO in Plan Year 2 if it can provide the necessary information to receive satisfactory scores. EKM also looks forward to Staff's additional EM&V Report and Recommendation in the 22-EKME-254-TAR docket and will respond fully and accordingly at that time. EKM and its third-party evaluator will continue to work with Staff before filing its next application in order to achieve a better score and recover TD and EO.

16. Again, EKM agrees with the portion of Staff's Report and Recommendation recommending the EER Factor but disagrees with Staff's recommendation regarding disallowance of the TD and EO and reserves the right to seek recovery of TD and EO with interest as part of its filing for Plan Year 2. EKM requests the Commission approve the report allowing the EER Factor to be effective on October 15, 2025, and allowing it to seek recovery of the Plan Year 1 TD and EO with interest as part of its Plan Year 2 filing.

WHEREFORE, EKM respectfully requests the Commission issue an Order approving the portion of Staff's recommendation with conditions that results in a revised EER amount of \$4,299,543, including \$2,329,241 to be collected from residential customers and \$1,970,303 to be collected from non-residential customers. This results in a revised EER Factor of

¹ 22-EKME-254-TAR – Commission Order on Evergy's Application and Settlement Agreements (9/1/23) paragraph 56 pg. 23

\$0.00078/kWh for residential customers and \$0.00056/kWh for non-residential customers to be effective October 15, 2025, through September 30, 2026. Evergy also requests that the Commission revise Staff's first condition to match the dates in paragraph 6 above, and any other relief as the Commission deems appropriate.

Respectfully submitted,



Cole Bailey (#27586)
Corporate Counsel Director
Evergy Metro, Inc.
818 South Kansas Avenue
Topeka, Kansas 66612
Phone: (816)652-1066
Cole.Bailey@evergy.com

Cathryn J. Dinges, (#20848)
Sr Director and Regulatory Affairs Counsel
Cathy.Dinges@evergy.com

ATTORNEYS FOR EVERGY METRO, INC.

STATE OF KANSAS)
) ss:
COUNTY OF SHAWNEE)

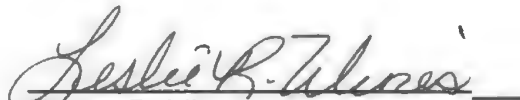
VERIFICATION

Cole Bailey, being duly sworn upon his oath deposes and states that he is the Corporate Counsel Director, for Evergy, Inc., that he has read and is familiar with the foregoing Pleading, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.



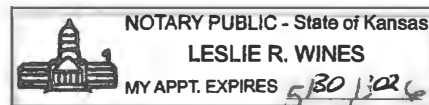
Cole Bailey

Subscribed and sworn to before me this 15rd day of September, 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 15th day of September 2025, to all parties of record as listed below:

JOSEPH R. ASTRAB, CONSUMER
COUNSEL
CITIZENS' UTILITY RATEPAYER
BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Joseph.Astrab@ks.gov

TODD E. LOVE, ATTORNEY
CITIZENS' UTILITY RATEPAYER
BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Todd.Love@ks.gov

SHONDA RABB
CITIZENS' UTILITY RATEPAYER
BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Shonda.Rabb@ks.gov

DELLA SMITH
CITIZENS' UTILITY RATEPAYER
BOARD
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Della.Smith@ks.gov

ROBIN ALLACHER, REGULATORY
ANALYST
EVERGY KANSAS CENTRAL, INC
818 S KANSAS AVE
PO BOX 889
TOPEKA, KS 66601-0889
Robin.Allacher@evergy.com

CATHRYN J. DINGES, SR
DIRECTOR & REGULATORY AFFAIRS
COUNSEL
EVERGY KANSAS CENTRAL, INC
818 S KANSAS AVE
PO BOX 889

TOPEKA, KS 66601-0889
Cathy.Dinges@evergy.com

LINDA NUNN, MANAGER -
REGULATORY AFFAIRS
EVERGY KANSAS CENTRAL, INC
1200 MAIN STREET
KANSAS CITY, MO 64105
linda.nunn@evergy.com

LESLIE WINES, Sr. Exec. Admin.
Asst.
EVERGY KANSAS CENTRAL, INC
818 S KANSAS AVE
PO BOX 889
TOPEKA, KS 66601-0889
leslie.wines@evergy.com

AARON BAILEY, ASSISTANT
GENERAL COUNSEL
KANSAS CORPORATION
COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
aaron.bailey@ks.gov

PATRICK HURLEY, CHIEF
LITIGATION COUNSEL
KANSAS CORPORATION
COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Patrick.Hurley@ks.gov

CARLY MASENTHIN, LITIGATION
COUNSEL
KANSAS CORPORATION
COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604
Carly.Masenthin@ks.gov

/s/ Cole Bailey

Cole Bailey

Response to Staff Review and Comments on the PY1 EM&V Evaluation (KEEIA EER 503/504)

Prepared for:



September 2025



Prepared by:

ADM, A Qualus Company
3239 Ramos Circle
Sacramento, CA 95827
916-363-8383

Table of Contents

1	Cover Memo / Summary	1-1
1.1	Commitment to Ongoing Collaboration.....	1-1
1.2	Response to Transparency and Replicability Concerns	1-1
2	Exhibit 2 Scorecard Response.....	2-1
2.1	Whole Home Efficiency Program.....	2-2
2.2	Hard-to-Reach Homes Program	2-9
2.3	Home Energy Education Program.....	2-15
2.4	Whole Business Efficiency Program	2-21
2.5	Hard-to-Reach Businesses Program	2-27
2.6	Home Demand Response Program	2-34
2.7	Business Demand Response Program.....	2-41
3	Appendix A: PY1 M&V Work Papers	3-1
4	Appendix B: Residential Percent Consumption.....	4-1
5	Appendix C: Residential kWh Rollup Walkthrough.....	5-1
6	Appendix D: C&I kWh Rollup Walkthrough.....	6-1

1 Cover Memo / Summary

This memorandum is submitted for the purpose of addressing Staff review and comments on the Kansas Energy Efficiency Investment Act (KEEIA) Program Year 1 (PY1) final evaluation, prepared by ADM, a Qualus company (ADM). The purpose of this document is to provide clarifications, additional context, and supporting documentation related to ADM's evaluation, analyses, and methodologies as presented in the Evaluation, Measurement, and Verification (EM&V) Report and in response to Bates White audit (KEEIA EER 503/504).

1.1 Commitment to Ongoing Collaboration

ADM recognizes that robust, transparent, and replicable EM&V is critical to the Kansas Corporation Commission (KCC)'s regulatory oversight and to maintaining stakeholder confidence in the energy savings claims. Therefore, ADM commits to ongoing cooperation with all Commission Staff and Bates White. The evaluation team welcomes the opportunity to discuss this submission in detail during the proposed future quarterly meetings or at any other forum deemed appropriate.

The objective is to ensure the highest level of clarity and confidence in the reported energy savings, facilitate continuous improvement in EM&V processes, and support Evergy's commitment to delivering reliable, verifiable demand-side management (DSM) portfolio program results.

1.2 Response to Transparency and Replicability Concerns

Transparency and replicability of savings calculations are foundational to the integrity and credibility of the EM&V process. The KCC Order and related Measurement and Verification (M&V) Methodology require that all energy savings calculations be documented thoroughly and be replicable by the Commission and its designated reviewers. This includes providing access to all analytical methods, supporting data, work papers, and code used to derive savings estimates.

A key focus of the Bates White audit (KEEIA Energy Efficiency Rider (EER) 503/504) involved reviewing the replicability of all program-level energy savings calculations. Bates White found that they were unable to replicate the kWh energy savings or the peak demand reduction savings, as detailed in their report.¹

¹ KEEIA EER 503/504, Page 13.

Prior to Bates White's observation that replicability of Program's kWh and peak demand savings could not be achieved, ADM had taken multiple steps intended to ensure clarity and reproducibility, including:

- **Comprehensive Documentation:** Appendix A (see Section 3 below) was provided to Staff during the evaluation report period. It includes a list of all applicable PY1 analysis files and explanations of their purpose.
- **Provision of Analytical Tools and Files:** ADM supplied the Commission Staff with the underlying M&V spreadsheets, calculation workbooks, R code review workshops, and any additional supporting files, following the Commission's preference for open-source analytical tools. No proprietary methods or software were used in the evaluation. The analytical tools and files include detailed explanations, methodologies, assumptions, and references for all savings calculations. This includes engineering calculations, adjustments to TRM values based on metered data (e.g., lighting logger measurements), and any deviations from the standard normalized metered energy consumption (NMEC) approach.
- **Alignment with Commission Directives:** ADM acknowledges the Commission's expressed preference for "measured savings" via meter-based data and NMEC methodologies, per the 22-254 Order and the California Public Utilities Commission (CPUC) NMEC Rulebook v2.0. ADM aimed to apply NMEC or meter-based data to the fullest extent feasible and cost-effective, as required. For the portion of savings not covered by NMEC, ADM has applied calibrated, engineering-based adjustments to the Kansas Technical Reference (TRM) values, with detailed rationale provided for each such measure. These exceptions were documented and consistent with the methodology outlined in the PY1 EM&V Report.
- **Engagement and Collaboration:** Over the past several months, ADM has engaged in collaborative meetings with Bates White and Commission Staff. These discussions have provided clarifications, addressed data requests, and enabled a transparent exchange regarding methodologies and data sources. During these meetings, the group discussed challenges associated with replicating evaluation results utilizing the R-code. A couple of the main concerns were obstacles in the accurate replicability of the analysis resulting from the continuous updates of the open-source R packages and the necessity of a non-disclosure agreement (NDA) being provided by all Staff subcontractors participating in the analysis review process. It was ADM's understanding at that time that the workshops were the preferred method of analysis review by all parties. ADM remains fully committed to continuing a collaborative dialogue, and is amenable to further discussions

about code replication, with emphasis on resolving any remaining issues or questions.

2 Exhibit 2 Scorecard Response

Bates White evaluated compliance with the M&V Methodology requirements using a detailed scorecard that assessed each program within the KEEIA PY1 portfolio, as shown in Exhibit 2 Scorecard in the Bates White audit document². In response, ADM has provided comprehensive clarifications and supplementary information addressing each score and comment identified by Bates White (see Sections 2.1 through 2.7 below). These responses offer additional context and explanation to support ADM's adherence to the M&V standards and to ensure a thorough understanding of the methodologies applied across all programs.

Commission Staff reviewed the seven programs in compliance with Sections 2.4.1 and 2.4.8 of the M&V Methodology document. Section 2.4.1 in the M&V Methodology document describes the components that must be included in all *EM&V plans*. The final PY1 EM&V Plan was provided to Commission Staff on January 20, 2025. It is noteworthy that the criteria used for the reporting scorecard was based metrics and topic areas listed as requirements for the EM&V plan. All comment responses provided in the Exhibit 2 Scorecard (See Section 2) include notation of information provided in the EM&V plan and/or the final PY1 Evaluation Report. In all cases where reviewers were unable to find a duplicate of plan information in the evaluation report, commitments were documented in comment responses to replicate plan information in designated future report sections. In addition, the PY2 EM&V Plan will contain a list of suggested report section headings, topic areas, and metrics for consideration. This will allow for a documented list of metrics prior to the submittal of the draft evaluation report, ensuring the evaluator has a line of sight to reporting requirements, which could ultimately aid in future subjective report review efforts.

Table 2-1 below presents initial and revised scores across all programs in PY1.

Table 2-1: Program Totals Initial and Revised Scores

Rating	Score	Score %	Revised Score	Revised Score %
Satisfactory	28	22%	77	61%
Needs Improvement	25	20%	29	23%
Unsatisfactory	57	45%	0	0%
Unknown	11	9%	0	0%
N/A	5	4%	20	16%
Total	126	100%	126	100%

² KEEIA EER 503/504, Page 24

2.1 Whole Home Efficiency Program

Table 2-2: Whole Home Efficiency Program Scorecard

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Needs Improvement		1	Description of the program target population and participant eligibility criteria.	Needs Improvement	1. No information in EM&V regarding participant eligibility criteria. 2. Target population is not explicitly described.	1. Section 3.1.3 in EM&V Plan 2. PY2 and all future reports can include this information
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	1. No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project. 2. Lacks thorough description of methods/tools used to calculate incentives or compensation.	1. Section 3.1.4 in EM&V Plan states who incentives are paid to 2. PY2 and all future reports can include this information 3. Future plan documents and reports should provide a improved description of incentive calculation methods.
Satisfactory	All required information for review subject 3 was provided in the PY1 EM&V report. While the evaluation team is amenable to duplicating information in specific sections, for ease of review in future reporting, the criteria as written was fulfilled in this report.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	1. No mention of effective useful life (EUL) of planned measures. No descriptions of, or calculations of the project-level EUL.	Note: Response provided for EULs of installed measures, not "planned measures", since this is a review of the EM&V report. 1. EULs are provided in Section A.3.2 "Impact Evaluation Results", and EUL source is provided in Table 7-3 of EM&V Report. 2. All EULs were reported and applied at a measure level for this program. Project level EULs are not applicable in this program design. 3. The evaluation team can duplicate lifetime savings tables and applicable EUL information in Section 3 of future evaluation reports to facilitate an efficient review.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory	NMEC qualified analysis performed for all measures.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Unknown	<p>1. EM&V Table 4-1, 100.0% NMEC Verified Savings for WHE Program. However, Staff can not verify accuracy of the 100% Verified Savings value.</p> <p>2. EM&V Paragraph A.2.3.3 and Paragraph A.3.1.1 discuss "Energy Savings Calculation" and "Gross Energy Savings and Demand Reduction, respectively."</p> <p>3. NMEC Concerns: Staff notes that in Paragraph A.4.2, it is stated that "While savings differ on a measure-by measure basis, the results from the usage regression analyses showed greater energy savings and slightly lower demand savings for the program overall..." when compared to engineering analysis.</p>	<p>Response 1</p> <p>1. ADM provided all back up analysis files and raw data associated with those files. A list of these files is included in Response Appendix A.</p> <p>2. A meeting was held with staff on August 5th to walk through those documents and associated files. "Residential kWh Rollup Walkthrough" flow chart was provided at that time. This document can also be found in Response Appendix C. No further requests for clarification were made.</p> <p>3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.</p> <p>Response 2</p> <p>Evaluators' assumption is this comment is intended to communicate that the description of methodology in the referenced sections is adequate for the review process.</p> <p>Response 3</p> <p>1. Clarification on language reported in EMV Report Paragraph:</p> <p>ADM used the EFLH values (EFLHcooling = 962 and EFLHheating = 1335) obtained from the monitoring study results when calculating savings for HVAC units in the engineering analysis. The remainder of the measures we analyzed for the supplemental engineering analysis using algorithms and attributes provided in the Every TRM and Energy Star and AHRI data as applicable. Table A-17 in the EMV Report shows the results from the engineering analysis. These results differ on a measure-by-measure basis from the regression analysis, as shown in Table A-7 in the EMV Report. However, the results from the</p>

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
						usage regression analyses showed lower energy savings and demand savings for the program overall.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory	ADM asserts the information required in comment 6 was included in the Evaluation report. If there are adjustments needed for the level of detail or perhaps location of the information within the report, ADM is amenable to a future update of report structure.	5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Needs Improvement	<p>1. EM&V Paragraph A.2.2 notes that "monitoring results were normalized using local weather station data and extrapolated onto a typical meteorological year (TMY) to develop a yearly cooling and heating EFLH value." EFLH being defined as an equivalent full-load hour.</p> <p>2. However, the on-site monitoring study was only applied to a sample of projects (51 central air conditioners and 28 air source heat pumps), EM&V Paragraph A.2.2. This represents a minority of the 1243 unique projects in the program, EM&V Paragraph A.2.2.1</p> <p>3. EM&V Paragraph A.2.3.2 discusses how independent Heating Degree Hours (HDH) and Cooling Degree Hours (CDH) for weather was included in the model.</p>	<p>1 & 2. Note the monitoring study was an additional evaluation activity to triage/corroborate the ex-post regression savings results. The report information summarized in comment 1 accurately describes weather normalization for the monitoring study.</p> <p>3. The information summarized in comment 3 accurately describes weather normalization for the regression analysis.</p>
Satisfactory		6	Detailed Sampling Plan.	Satisfactory	1. EM&V Paragraph A.2.1	
N/A	N/A	7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	Unsatisfactory	<p>1. Staff can not find any explanation of the selection process for treatment and representative control groups for the WHE Program.</p> <p>2. EM&V Paragraph A.2.2.1 notes 1243 unique projects in the program through November 2024</p>	<p>1. This comment is intended for programs like HERS, where a treatment group predetermined by implementation is part of the program design. ADM was able to obtain a good model fit through the population level analysis.</p> <p>2. No control group was used in the WHE analysis.</p>
Satisfactory	See EM&V Methodology document.	8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Needs Improvement	1. EM&V Paragraph A.2.2, ADM deployed current transducers onto the HVAC units, utilized motor on/off loggers on compressor motors. However detailed data collection for Building shells and Duct Repair and Sealing are not described.	1. In the EM&V Methodology document, Table 12: "Homes Programs: Pre- and Post-Installation Monitoring Requirements per Measure Category" (page 25) shows the approved methodology for building shell measures, including that duct repair and sealing analysis will be performed using AMI data only.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory		9	Description of methods of determining program influence through detailed data collection and analysis	Satisfactory	1. EM&V Paragraph A.2.2.1, A.2.2.2, participant and contractor surveys were conducted. 2. EM&V Paragraph A.3 discusses Impact Evaluation Results.	
Needs Improvement	This threshold was not applicable for the WHE regression evaluations. The percent of savings compared to consumption will be provided in future reports.	10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Unsatisfactory	1. Staff can not determine if program savings are less than ten percent of annual consumption. 2. If program target savings are assumed to be less than ten percent of annual consumption. There is no detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	1. Savings as a percent of consumption are shown in Response Appendix B. ADM will include this information in reporting from PY2 forward. 2. Savings were not less than 10 percent of consumption at the program level or measure level.
N/A	Not applicable to this program.	11	If targeting to-code savings, a detailed description of the following. - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover.	Unsatisfactory	No descriptions of the following: - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover.	This program does not target code compliance.
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no M&V plans submitted for this program by third party implementers.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Needs Improvement	ADM has a commitment to continue to shorten EM&V activities timelines and provide frequent analysis updates. Program data availability prohibited these activities for PY1.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Every to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Unsatisfactory	1. Staff could not find detailed descriptions of the timing of real-time M&V activities, including M&V schedules and implementer incentives	1. Preliminary data was not available for this program until the end of the last quarter. All evaluation activities were complete as soon as data became available. 2. The PY2 EM&V Plan will include information on all EM&V activities and associated timelines. Specific activities for which data can be provided monthly or quarterly will be noted.
Needs Improvement		14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	1. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business Efficiency, and Hard-to-Reach Businesses participant surveys"	1. Because of the nature of the program design and participation criteria, there is minimal to no expected overlap between WHE and HTRH audit measures. ADM validated this assumption through a review of the program participation data sets. The savings for both HTRH and WHE projects were removed from the HERS savings analysis in cases where participation overlapped.
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement	The requirements in the EM&V Methodology document was for this information to be provided in the Evaluation Plan.	16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Unsatisfactory	1. Staff could not find detailed descriptions of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines in the EM&V.	1. Estimated timelines were included in Table 10-2 and 10-3 of the EM&V plan. 2. A table showing estimated evaluation timelines compared to actual achieved timelines can be provided as part of reporting from PY2 forward.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests: - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item 4). ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.
Satisfactory	All back up information was provided for review.	18	M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency. - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM.	See response to line item 4.

Revised Score	Evaluator Request	#	Whole Home Efficiency Program	Score	Comment	ADM Comment Response
			tutorials), and supporting files, references, and literature.			

2.2 Hard-to-Reach Homes Program

Table 2-3: Hard-to-Reach Homes Program Scorecard

Revised Score	Evaluator Request	#	Hard-to-Reach Homes Program	Score	Comment	ADM Comment Response
Needs Improvement		1	Description of the program target population and participant eligibility criteria.	Needs Improvement	<p>1. EM&V Paragraph B.1 notes that the program provides home upgrades for multi-family residences, weatherization home upgrades, foodbank giveaways, energy assessments and energy savings kits for income eligible customers. However specific eligibility criteria is not explicitly described.</p> <p>2. Target population is not explicitly described.</p>	<p>1. Section 3.2.3 in EM&V Plan</p> <p>2. PY2 and all future reports can include this information</p>
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	<p>1. No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project.</p> <p>2. Lacks thorough description of methods/tools used to calculate incentives or compensation.</p>	<p>1. Section 3.2.4 in EM&V Plan states who incentives are paid to</p> <p>2. PY2 and all future reports can include this information</p> <p>3. Future plan documents and reports should provide a improved description of incentive calculation methods.</p>

Satisfactory	All required information for review subject 3 was provided in the PY1 EM&V report. While the evaluation team is amenable to duplicating information in specific sections, for ease of review in future reporting, the criteria as written was fulfilled in this report.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	1. No mention of effective useful life (EUL) of planned measures. No descriptions of, or calculations of the project-level EUL.	Note: Response provided for EULs of installed measures, not "planned measures", since this is a review of the EM&V report. 1. EULs are provided in Section A.3.2 "Impact Evaluation Results", and EUL source is provided in Table 7-3 of EM&V Report. 2. All EULs were reported and applied at a measure level for this program. Project level EULs are not applicable in this program design. 3. The evaluation team can duplicate lifetime savings tables and applicable EUL information in Section 3 of future evaluation reports to facilitate an efficient review.
Satisfactory	NMEC qualified analysis was performed for all measures listed as NMEC eligible in the EM&V Methodology document.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Unsatisfactory	1. EM&V Table 4-1, 6.0% NMEC Verified Savings for HRH Program, less than 90.0% NMEC Verified Savings. 2. EM&V Paragraph 1.3.1.2, in reference to the Community Energy Efficiency Kits, Energy Savings Kits, and Income Eligible Multi-Family that "ADM primarily relied on the Kansas Technical Reference Manual (TRM) for algorithms and deemed inputs to calculate measure savings, which includes industry standard algorithms for an engineering review of the program measures." (Emphasis added)	1. NMEC qualified analysis was performed for all measures listed as NMEC eligible in the EM&V Methodology document. 2. The assumption for percent of Estimated NMEC savings provided in that document was developed using a measure level participation assumption spanning across the 3 year KEEIA 1 portfolio cycle. Notably the participation assumption across the KEEIA 1 cycle is 87.7%, while the PY1 participation for HVAC was 3.9%.
Satisfactory	Provided in EM&V report section B.2.2	5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Unsatisfactory	1. Staff could not find descriptions of methodology in the EM&V addressing weather normalization for the HRH Program.	Weather normalization methodology can be found in EM&V Report section B.2.2.2.
Satisfactory	Sampling plan not applicable	6	Detailed Sampling Plan.	Unsatisfactory	1. No Sampling Plan Provided in the EM&V	ADM performed evaluation activities on a census of program participants for the HTRH program. Sampling plan was included in section the 4.2.2 of the EMV Plan. PY2 and future reporting ensure the call of the census evaluation approach in a section titled "Sampling" to align with the

						reporting structure for the other program sections.
N/A	N/A	7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	Unsatisfactory	<p>1. Staff can not find any explanation of the selection process for treatment and representative control groups for the HRH Program.</p> <p>2. EM&V Table B-2 notes that PY1 had a total of 18,283 Number of Participants/Kits.</p>	<p>1. This comment is intended for programs like HERS, where a treatment group predetermined by implementation is part of the program design. ADM was able to obtain a good model fit through the population level analysis.</p> <p>2. No control group was used in the HTRH analysis.</p>
Needs Improvement	Included in plan, will be duplicated in future reports	8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Unsatisfactory	<p>1. EM&V Paragraph 1.3.1.2, in reference to the Community Energy Efficiency Kits, Energy Savings Kits, and Income Eligible Multi-Family that "<i>ADM primarily relied on the Kansas Technical Reference Manual (TRM) for algorithms and deemed inputs to calculate measure savings</i>, which includes industry standard algorithms for an engineering review of the program measures." (Emphasis added)</p> <p>2. EM&V Paragraph 1.3.1.2, "Weatherization Assistance: In the evaluation of the Weatherization Assistance Program, energy savings and peak demand reductions were estimated using regression analyses consisting of population level NMEC in which energy savings were determined using an NMEC approach based on pre- and post-installation AMI data..."</p>	<p>1. The data collection plan was described in section 5.2.1.1 of the PY1 EMV Plan.</p> <p>2. Note the kit contents were all measures that were included in approved in an NMEC analysis approach.</p> <p>ADM is working with Evergy implementation during the PY2 evaluation period to increase the Evaluability of this measure (for example, attending community events and deploying surveys with participants and event coordinators). For PY1 the data was provided in the first quarter 2025, after all distribution events were complete. Note: the TRM includes both energy savings assumptions and industry standard attributes.</p> <p>3. Staff comment on methodology for Weatherization assistance is accurate. This approach followed NMEC protocols.</p>

Needs Improvement		9	Description of methods of determining program influence through detailed data collection and analysis	Unsatisfactory	1. EM&V Paragraph 1.3.1.2, in reference to the Community Energy Efficiency Kits, Energy Savings Kits, and Income Eligible Multi-Family that " <i>ADM primarily relied on the Kansas Technical Reference Manual (TRM) for algorithms and deemed inputs to calculate measure savings</i> ," which includes industry standard algorithms for an engineering review of the program measures." (Emphasis added) 2. EM&V Paragraph B 3.2.3, notes discrepancies between the TRM and reported values	See response to line item 8.
N/A		10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Unknown	1. Staff can not determine if program savings are less than ten percent of annual consumption.	1. Savings as a percent of consumption are shown in Response Appendix B. ADM will include this information in reporting from PY2 forward.
N/A		11	If targeting to-code savings, a detailed description of the following. - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover	N/A	1. Not targeting to-code savings.	1. Not targeting to-code savings.
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no M&V plans submitted for this program by third party implementers.

Needs Improvement	ADM has a commitment to continue to shorten EM&V activities timelines and provide frequent analysis updates. Program data availability prohibited these activities for PY1.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Energy to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Unsatisfactory	1. Staff could not find detailed descriptions of the timing of real-time M&V activities, including M&V schedules and implementer incentives	1. Preliminary data was not available for this program until the end of the last quarter. All evaluation activities were complete as soon as data became available. 2. The PY2 EM&V Plan will include information on all EM&V activities and associated timelines. Specific activities for which data can be provided monthly or quarterly will be noted.
Needs Improvement	In addition to cross checking program participation, the evaluation team can adjust savings for kits savings where participation is unknown.	14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	1. Staff can not find this information in the EM&V for the HRR program. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business Efficiency, and Hard-to-Reach Businesses participant surveys" 2. EM&V Table B-12, Smart Thermostats appear in this table. However there is no confirmation that the savings from this program are not double counted in the Home Demand Response Program.	1. Because of the nature of the program design and participation criteria, there is minimal to no expected overlap between WHE and HTRH audit measures. ADM validated this assumption through a review of the program participation data sets. The savings for both HTRH and WHE projects were removed from the HERS savings analysis in cases where participation overlapped.
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement	The requirements in the EM&V Methodology document was for this information to be provided in the Evaluation Plan.	16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Unsatisfactory	1. Staff could not find detailed descriptions of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V	1. Estimated timelines were included in Table 10-2 and 10-3 of the EM&V plan. 2. A table showing estimated evaluation timelines compared to actual achieved timelines can be provided as part of reporting from PY2 forward. 3. Community kits were not included in the evaluation timeline because participation in that program channel was unknown by

					reporting schedules and deadlines in the EM&V.	the evaluation team during plan development.
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	<p>1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests:</p> <ul style="list-style-type: none"> - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. <p>The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item 4).</p> <p>ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.</p>

Satisfactory	All back up information was provided for review	18	<p>M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency.</p> <p>- To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature.</p>	Unsatisfactory	<p>1. Staff is unable to replicate the savings calculations conducted by ADM.</p> <p>2. Staff can not confirm the accuracy of the savings stated and notes several cases for concern. EM&V B.3.2.3 "Window Film Kits: The energy savings for Window Film Kits have a realization rate of 3 percent, and the demand savings have a realization rate of 100 percent. The significant discrepancy in the energy savings realization rate <i>was caused by the reported savings calculation erroneously multiplying the unit savings by the quantity twice.</i>" (Emphasis Added). The same error was also preformed on the Weatherization Strips Measure.</p> <p>3. EM&V B.3.2.3 "LED Bulbs: The energy savings for LED Bulbs have a <i>realization rate of 180 percent</i> , and the demand savings have a realization rate of 107 percent. The energy savings realization rate was primarily affected by a <i>difference in Hours of Use applied</i> between reported and verified gross savings..." (Emphasis Added)</p>	<p>1. ADM provided all back up analysis files and raw data associated with those files. A list of these files is included in Response Appendix A.</p> <p>2. A meeting was held with staff on August 5th to walk through those documents and associated files. "Residential kWh Rollup Walkthrough" flow chart was provided at that time. This document can also be found in Response Appendix C. No further requests for clarification were made.</p> <p>3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.</p>
---------------------	---	-----------	---	-----------------------	--	---

2.3 Home Energy Education Program

Table 2-4: Home Energy Education Program Scorecard

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
Needs Improvement		1	Description of the program target population and participant eligibility criteria.	Needs Improvement	<p>1. No information in EM&V regarding participant eligibility criteria.</p> <p>2. Target population is not explicitly described.</p>	<p>1. Section 3.3.3 in EM&V Plan</p> <p>2. PY2 and all future reports can include this information</p>

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	1. No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project. 2. Lacks thorough description of methods/tools used to calculate incentives or compensation.	1. Section 3.3.4 in EM&V Plan states incentive structure 2. PY2 and all future reports can include this information 3. Future plan documents and reports should provide a improved description of incentive calculation methods.
Satisfactory	Information provided in report.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	1. No mention of effective useful life (EUL) of planned measures. No descriptions of, or calculations of the project-level EUL.	A measure life of 1 is assigned to behavioral program savings, and persistence savings are evaluated in future program years. This information is included in the lifetime savings calculation section of the EMV report (c.3.11.3). Future reports can include EUL specification in a defined section.
Satisfactory	All back up information was provided for review	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Needs Improvement	1. EM&V Table 4-1, 100.0% NMEC Verified Savings for HEE Program. However, Staff can not verify accuracy of the 100% Verified Savings value.	1. ADM provided all backup analysis files and raw data associated with those files. A list of these files is included in Response Appendix A. 2. Meetings were held to walk through program and project level documentation for the Residential and Commercial evaluations. A request was not made for a similar review of the HEE program. 3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.
Satisfactory		5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Satisfactory	1. EM&V Paragraph C.3.4	

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
Satisfactory	Information included in report and plan documents.	6	Detailed Sampling Plan.	Unsatisfactory	1. No Sampling Plan Provided in the EM&V	1. A census of projects were analyses. The sampling plan is included in section 4.3.2 of EM&V plan document. Final treatment group participants, after accounting for the documented data cleaning steps, are reported in the EMV report in Table C-6 "Treatment Group Customer Counts by Jurisdiction" in the EM&V report. Future reports can report this information under the subheading "Sample" so the information is easier to locate in the report.
Satisfactory		7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	Satisfactory	1. EM&V Paragraph C.2, "The methods detailed in the Uniform Methods Project (UMP) behavioral chapter by the National Renewable Energy Laboratory were followed for this evaluation." 2. https://docs.nrel.gov/docs/fy18osti/70472.pdf	
Satisfactory		8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Satisfactory	1. EM&V Paragraph C.2 "Pre-treatment and posttreatment AMI data for participants and nonparticipants. The data started on April 1, 2023, and ended on February 28, 2025, with the start date depending on when customers were added to program cohorts.	
Satisfactory		9	Description of methods of determining program influence through detailed data collection and analysis	Satisfactory	1. EM&V Paragraph C.2, "The methods detailed in the Uniform Methods Project (UMP) behavioral chapter by the National Renewable Energy Laboratory were followed for this evaluation." 2. https://docs.nrel.gov/docs/fy18osti/70472.pdf	
Satisfactory		10	For programs or projects that target savings less than ten percent of annual consumption, a detailed	Satisfactory	1. EM&V Paragraph C.3 notes methods taken from the UMP to consider any small systematic	

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
			description of rationale and methods for distinguishing savings from normal variations in consumption.		differences in pre-treatment usage trends. 2. https://docs.nrel.gov/docs/fy18osti/70472.pdf	
N/A		11	<p>If targeting to-code savings, a detailed description of the following</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover 	N/A	1. Not targeting to-code savings.	
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no M&V plans submitted for this program by third party implementers.
Needs Improvement	ADM has a commitment to continue to shorten EM&V activities timelines and provide frequent analysis updates. Program data availability prohibited these activities for PY1.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Evergy to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Unsatisfactory	<p>1. Staff could not find detailed descriptions of the timing of real-time M&V activities, including M&V schedules and implementer incentives</p>	<p>1. Estimated timelines for program analysis were provide in Table 10-2 of the EMV Plan. Preliminary data was not available for this program until the end of the last quarter. All evaluation activities were complete as soon as data became available. Future evaluation reports can include a list of estimated activity timelines compare to actuals.</p> <p>2. The PY2 EM&V Plan will include information on all EM&V activities and associated timelines. Specific activities for which data can be provided monthly or quarterly will be noted.</p>
Satisfactory		14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is	Satisfactory	1. EM&V Paragraphs C.3.9-10	

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
			no double counting of reported savings.			
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement	The requirements in the EM&V Methodology document was for this information to be provided in the Evaluation Plan.	16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Unsatisfactory	1. Staff could not find detailed descriptions of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines in the EM&V.	1. Estimated timelines were included in Table 10-2 and 10-3 of the EM&V plan. 2. A table showing estimated evaluation timelines compared to actual achieved timelines can be provided as part of reporting from PY2 forward.
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests: - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. The requests above were not applicable to

Revised Score	Evaluator Request	#	Home Energy Education Program	Score	Comment	ADM Comment Response
						<p>this program.</p> <p>ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.</p>
Satisfactory	All back up information was provided for review	18	<p>M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency.</p> <ul style="list-style-type: none"> - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature. 	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM.	<p>1. ADM provided all backup analysis files and raw data associated with those files. A list of these files is included in Response Appendix A.</p> <p>2. Meetings were held to walk through program and project level documentation for the Residential and Commercial evaluations. A request was not made for a similar review of the HEE program.</p> <p>3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.</p>

2.4 Whole Business Efficiency Program

Table 2-5: Whole Business Efficiency Program Scorecard

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
Needs Improvement		1	Description of the program target population and participant eligibility criteria.	Needs Improvement	1. No information in EM&V regarding participant eligibility criteria. 2. EM&V Table D-2 lists types of businesses/ industries served.	1. Section 3.5.3 in EM&V Plan 2. PY2 and all future reports can include this information
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	1. No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project. 2. Lacks thorough description of methods/tools used to calculate incentives or compensation.	1. Section 3.5.4 in EM&V Plan states who incentives are paid to 2. PY2 and all future reports can include this information 3. Future plan documents and reports should provide a improved description of incentive calculation methods.
Satisfactory	EULs reported at the stratum level.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	1. No mention of effective useful life (EUL) of planned measures. No descriptions of, or calculations of the project-level EUL.	Note: Response provided for EULs of installed measures, not "planned measures", since this is a review of the EM&V report. 1. Stratum level EULs are provided in Table D-3 "Lifetime energy savings", and EUL source is provided in Table 7-3 of EM&V Report. 2. All EULs were reported and applied at the stratum level for this program. Project level EULs are developed by weighting measure EULs by kWh. Stratum level EULs are developed by weighting project level EULs by kWh within each stratum. The evaluation workbook provide as backup to the reporting document contains project level EULs. If there is interest in the measure level EULs, project level EULs, and a program level EUL being documented in the EMV report, ADM can included in future years reporting. 3. The evaluation team can also duplicate lifetime savings tables and applicable EUL information in Section 3 of future evaluation reports to facilitate an efficient review.

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory	NMEC qualified analysis performed for all measures.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Unsatisfactory	<p>1. EM&V Table 4-1, 79.0% NMEC Verified Savings for WBE Program, less than 90.0% NMEC Verified Savings.</p> <p>2. EM&V Table D-4 lists descriptions of verified savings methodology for sampled projects. However this information is not provided for the remaining unsampled projects.</p>	<p>1. NMEC qualified analysis was performed for all measures listed as NMEC eligible in the EM&V Methodology document for which the evaluation reporting date allowed for enough time for a project to be sampled and monitored. Any sampled projects with reporting dates in the last two months of PY1 and didn't use a NMEC analysis, will be analyzed again using a NMEC analysis in PY2. Table 11 in the EM&V Methodology document specified when monitoring must be complete. Project submitted later in the program year and which didn't use NMEC analyses were likely submitted in the program after the installation date cutoff thresholds in Table 11.</p> <p>2. More clarification is needed on the concern driving this comment. Projects are sampled to meet 10 percent precision at the 90 percent confidence interval. Results from sampled projects are extrapolated to the rest of the projects in the population. In the comment response to line six "Detailed Sampling Plan," reviewers confirmed the sampling section in the report was "Satisfactory."</p>
Satisfactory	Comment not applicable to the plan requirement.	5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Unsatisfactory	<p>1. Staff can not find descriptions of methodologies that address weather normalization in the EM&V for the WBE Program.</p> <p>2. EM&V D.3.2 notes that "ADM utilized normalized energy savings curves to determine peak demand reduction savings for each participant... Normalized energy savings curves were developed for each sampled project by verifying energy use schedules. <i>Non-sampled measures were assigned annual load shapes from the IL TRM.</i>" (Emphasis Added)</p>	<p>1. For PY1, there were no weather sensitive measures included in the sampled projects, therefore weather normalization was not needed.</p> <p>2. In the report content pulled from section D.3.2 of the EM&V report, normalization refers to the curves being normalized by kWh so the sum of the curve is equal to one. This is different than normalization as referenced in comment response 1.</p> <p>3. Note that ADM accepted Staff's recommendation to use End Use Savings Shapes from the COMstock data set developed by the National Renewable Energy Laboratory.</p>
Satisfactory		6	Detailed Sampling Plan.	Satisfactory	1. EM&V Paragraph D.2.2	

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
N/A	N/A	7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	Unsatisfactory	1. EM&V Paragraph D.2.2, "ADM used a stratified sampling plan to reach the overall target..." However, no selection process for treatment nor representative control groups was utilized.	1. There were no treatment and control groups utilized in the PY1 evaluation. Results from the sampled sites were extrapolated bystratum to the rest of the program population. Note: When regression analysis is performed at an individual site (project level), the difference in usage is calculated by comparing the pre and post consumption at the service point ID based on the <i>project's pre, post, and installation periods. There are no current or future plans for commercial evaluations which use treatment and control groups.</i>
Satisfactory	See EM&V Methodology document.	8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Needs Improvement	1. EM&V Paragraph D.2.1 notes data collection for M&V review. ADM performed site visits, installed monitory equipment and interviewed customers to confirm details about projects. 2. EM&V Paragraph D.3.2 "Normalized energy savings curves were developed for each sampled project by verifying energy use schedules. <i>Non-sampled measures were assigned annual load shapes from the IL TRM</i> " (Emphasis Added) 3. EM&V Table D-4 lists descriptions of verified savings methodology for sampled projects. However this information is not provided for the remaining unsampled projects.	1. Monitoring activities described in Table D-4 as noted in reviewer comment 2. 2. More information is needed on the concerns driving this comment. Note that ADM accepted Staffs' recommendation to use End Use Savings Shapes from the COMstock data set developed by the National Renewable Energy Laboratory. 3. More clarification is needed on the concern driving this comment. Projects are sampled to meet 10 percent precision at the 90 percent confidence interval. Results from sampled projects are extrapolated to the rest of the projects in the population. In the comment response to line six "Detailed Sampling Plan," reviewers confirmed the sampling section in the report was "Satisfactory."
Satisfactory		9	Description of methods of determining program influence through detailed data collection and analysis	Unsatisfactory	1. EM&V Paragraph D.3.2 "Normalized energy savings curves were developed for each sampled project by verifying energy use schedules. <i>Non-sampled measures were assigned annual load shapes from the IL TRM</i> " (Emphasis Added) 2. EM&V Table D-4 lists	See comment response 2 & 3 for line item 8.

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
					descriptions of verified savings methodology for sampled projects. However this information is not provided for the remaining unsampled projects.	
Satisfactory	Not applicable to this program	10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Unknown	Staff can not determine if target savings is less than ten percent of annual consumption.	This comment is not applicable to the WBE evaluation results as all sampled NMEC eligible projects use Option A (i.e. engineering calculations with measured data inputs) for all projects with savings of less than 10% of consumption.
N/A	N/A	11	<p>If targeting to-code savings, a detailed description of the following.</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover 	Unsatisfactory	<p>No descriptions of the following:</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover. 	This program does not target code compliance.
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1,3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no bid M&V plans submitted for this program by third party implementers.

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
Needs Improvement	ADM has a commitment to continue to shorten EM&V activities timelines and provide frequent analysis updates. Program data availability prohibited these activities for PY1.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Evergy to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Unsatisfactory	1. Staff could not find detailed descriptions of the timing of real-time M&V activities, including M&V schedules and implementer incentives	1. Preliminary data was not available for this program until the end of the last quarter. All evaluation activities were complete as soon as data became available. 2. The PY2 EM&V Plan will include information on all EM&V activities and associated timelines. Specific activities for which data can be provided, on monthly or quarterly basis, will be noted.
Satisfactory		14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	1. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business Efficiency, and Hard-to-Reach Businesses participant surveys" However, Staff can not find information that specifically ensured that there was no double counting of reported savings, other than a statement in Paragraph 5.3 stating that a survey was conducted for the WBE program.	This is not applicable for this program design. Eligibility requirements push projects into either the WBE program or the HTRB program. ADM cross checks both program populations at the project level.
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploads/cpuc_public_website/content/utilities_and_industries/energy_electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement	The requirements in the EM&V Methodology document was for this information to be provided in the Evaluation Plan.	16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and	Unsatisfactory	1. Staff could not find detailed descriptions of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the	1. Estimated timelines were included in Table 10-2 and 10-3 of the EM&V plan. 2. A table showing estimated evaluation timelines compared to actual achieved timelines can be provided as part of reporting from PY2 forward.

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
			M&V reporting schedules and deadlines		program year, and M&V reporting schedules and deadlines in the EM&V.	
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	<p>1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests:</p> <ul style="list-style-type: none"> - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. <p>The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item 4). ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.</p>

Revised Score	Evaluator Request	#	Whole Business Efficiency Program	Score	Comment	ADM Comment Response
Satisfactory	All back up information was provided for review.	18	M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency. - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature.	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM.	1. ADM provided all backup analysis files and raw data associated with those files. A list of these files is included in Response Appendix A. A meeting was held with staff on July 29th to walk through those documents and associated files. "C&I kWh Rollup Walkthrough" flow chart was provided at that time. This document can also be found in Response Appendix D. No further requests for clarification were made. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.

2.5 Hard-to-Reach Businesses Program

Table 2-6: Hard-to-Reach Businesses Program Scorecard

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Needs Improvement		1	Description of the program target population and participant eligibility criteria.	Needs Improvement	1. No information in EM&V regarding participant eligibility criteria. 2. EM&V Paragraph E.1, target population is "small business and nonprofit customers."	1. Section 3.5.3 in EM&V Plan 2. PY2 and all future reports can include this information
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	1. No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project. 2. Lacks thorough description of methods/tools used to calculate incentives or compensation.	1. Section 3.5.4 in EM&V Plan states who incentives are paid to 2. PY2 and all future reports can include this information 3. Future plan documents and reports should provide a improved description of incentive calculation methods.

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory	EULs reported at the stratum level.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	<p>1. Lifetime Energy Savings shown in EM&V Table E-8. However descriptions of how project-level EUL was calculated is not given.</p> <p>2. EM&V Tables 8-10 and 8-11 note Gross Energy Savings and Peak Demand Reductions. Verified Savings Methodology is noted for sampled projects, See EM&V Table E-4. However baseline descriptions for unsampled projects, which account for most of the program, can not be found.</p>	<p>Note: Response provided for EULs of installed measures, not "planned measures", since this is a review of the EM&V report.</p> <p>1. EULs are provided in Section A.3.2 "Impact Evaluation Results", and EUL source is provided in Table 7-3 of EM&V Report.</p> <p>2. All EULs were reported and applied at a measure level for this program. Project level EULs are not applicable in this program design.</p> <p>3. The evaluation team can duplicate lifetime savings tables and applicable EUL information in Section 3 of future evaluation reports to facilitate an efficient review.</p>
Satisfactory	NMEC qualified analysis performed for all measures.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Unsatisfactory	<p>1. EM&V Table 4-1, 53.0% NMEC Verified Savings for HRB Program, less than 90.0% NMEC Verified Savings.</p>	<p>1. NMEC qualified analysis was performed for all measures listed as NMEC eligible in the EM&V Methodology document for which the evaluation reporting date allowed for enough time for a project to be sampled and monitored. Any sampled projects with reporting dates in the last two months of PY1 and didn't use a NMEC analysis, will be analyzed again using a NMEC analysis in PY2. Table 11 in the EM&V Methodology document specified when monitoring must be complete. Project submitted later in the program year and which didn't use NMEC analyses were likely submitted in the program after the installation date cutoff thresholds in Table 11.</p> <p>2. More clarification is needed on the concern driving this comment. Projects are sampled to meet 10 percent precision at the 90 percent confidence interval. Results from sampled projects are extrapolated to the rest of the projects in the population. In the comment response to line six "Detailed Sampling Plan," reviewers confirmed the sampling section in the report was "Satisfactory."</p>

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory	Comment not applicable to the plan requirement.	5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Needs Improvement	<p>1. EM&V Paragraph E.4 "Sampled sites used normalized energy savings curves from the measured primary data. Non-sampled measures were assigned annual load shapes from the IL TRM." Flat load shapes were assigned to measures with uniform yearly usage. Exterior lightings measures were assigned to an ADM created load shape based on KS sunrise and sunset times. Exterior lighting was assumed to be controlled with a photocell to follow sunrise and sunset times.</p> <p>2. Staff can not find descriptions of methodologies that address weather normalization in the EM&V for the HRB Program.</p>	<p>1. For PY1, there were no weather sensitive measures included in the sampled projects, therefore weather normalization was not needed.</p> <p>2. In the report content pulled from section D.3.2 of the EM&V report, normalization refers to the curves being normalized by kWh so the sum of the curve is equal to one. This is different than normalization as referenced in comment response 1.</p> <p>3. Note that ADM accepted Staff's recommendation to use End Use Savings Shapes from the COMstock data set developed by the National Renewable Energy Laboratory.</p>
Satisfactory		6	Detailed Sampling Plan.	Satisfactory	1. EM&V Paragraph E.2.2	
N/A	N/A	7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	Unsatisfactory	1. EM&V Table E-2 Notes 374 total projects. No description regarding how sampled sites were chosen compared to unsampled sights. Program did not utilize treatment and representative control groups.	<p>1. There were no treatment and control groups utilized in the PY1 evaluation. Results from the sampled sites were extrapolated bystratum to the rest of the program population. Note: When regression analysis is performed at an individual site (project level), the difference in usage is calculated by comparing the pre and post consumption at the service point ID based on the <i>project's pre, post, and installation periods. There are no current or future plans for commercial evaluations which use treatment and control groups.</i></p>

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory	See review comment 1	8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Needs Improvement	1. EM&V Paragraph E.2.1 describes Data Collection. 2. The extent of descriptions of methodologies regarding monitoring activities for each energy efficiency measure is "Program tracking data for M&V review was obtained from the energy database."	1. Description of methods for determining program influence through detailed data collection and analysis is provided for sampled projects, see EM&V Table E-4. as noted in review comment 9.1.
Satisfactory	See ADM comment response	9	Description of methods of determining program influence through detailed data collection and analysis	Needs Improvement	1. Description of methods for determining program influence through detailed data collection and analysis is provided for sampled projects, see EM&V Table E-4. However, there is no description of these methods for unsampled projects, which make up a majority of the program. 2. EM&V Paragraph E.7, ADM conducted a participant survey with 25 respondents.	1. More clarification is needed on the concern driving this comment. Projects are sampled to meet 10 percent precision at the 90 percent confidence interval. Results from sampled projects are extrapolated to the rest of the projects in the population. In the comment response to line six "Detailed Sampling Plan," reviewers confirmed the sampling section in the report was "Satisfactory." 2. Table E-9 presents the sampling precision at the 90% confidence interval. (0.06)
Satisfactory	Not applicable to this program	10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Unknown	1. Staff can not determine if program savings are less than ten percent of annual consumption.	This comment is not applicable to the HTRB evaluation results as all sampled NMEC eligible projects use Option A (i.e. engineering calculations with measured data inputs) for all projects with savings of LESS than 10% of consumption. Note: The evaluation team is working with Evergy staff to ensure correct data mapping protocols are in place to map from projects to premise IDs to AMI data. This will allow for future reporting of savings to consumption ratios for all sampled projects. This information can also be reported for PY1 projects, however because of the savings thresholds for those projects, ADM doesn't anticipate any PY1 sampled project to fall into the above 10 percent of consumption category.

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
N/A	N/A	11	<p>If targeting to-code savings, a detailed description of the following.</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover 	Unsatisfactory	<p>No descriptions of the following:</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover. 	This program does not target code compliance.
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no bid M&V plans submitted for this program by third party implementers.
Needs Improvement	ADM has a commitment to continue to shorten EM&V activities timelines and provide frequent analysis updates. Program data availability prohibited these activities for PY1.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Every to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Unsatisfactory	<p>1. Staff could not find detailed descriptions of the timing of real-time M&V activities, including M&V schedules and implementer incentives</p>	<p>1. Preliminary data was not available for this program until the end of the last quarter. All evaluation activities were complete as soon as data became available.</p> <p>2. The PY2 EM&V Plan will include information on all EM&V activities and associated timelines. Specific activities for which data can be provided, on monthly or quarterly basis, will be noted.</p>

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory		14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	1. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business Efficiency, and Hard-to-Reach Businesses participant surveys." 2. EM&V Paragraph E.7 notes that there were 25 survey responses from the HRB program participants. This represents a small sample of the 374 total projects noted in Table E-2. Furthermore, Staff can not find information that specifically ensured that there was no double counting of reported savings, other than a statement Paragraph 5.3 stating that a survey was conducted for the HRB program.	This is not applicable for this program design. Eligibility requirements push participants into either the WBE program or the HTRB program. ADM cross checks both program populations at the project level.
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement	The requirements in the EM&V Methodology document was for this information to be provided in the Evaluation Plan.	16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Unsatisfactory	1. Staff could not find detailed descriptions of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines in the EM&V.	1. Estimated timelines were included in Table 10-2 and 10-3 of the EM&V plan. 2. A table showing estimated evaluation timelines compared to actual achieved timelines can be provided as part of reporting from PY2 forward.

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	<p>1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests:</p> <ul style="list-style-type: none"> - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. <p>The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item 4).</p> <p>ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.</p>

Revised Score	Evaluator Request	#	Hard-to-Reach Businesses Program	Score	Comment	ADM Comment Response
Satisfactory	All back up information was provided for review.	18	M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency. - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature.	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM. 2. EM&V Paragraph E.10 Notes recommendations that Staff supports. Specifically that father program years should "Include specific information about baseline equipment" such as including photos, model numbers and baseline wattage. Staff also supports the recommendation that future program years "Provide incremental costs for all measures and projects in the tracking data."	1 & 2. ADM provided all back up analysis files and raw data associated with those files. A list of these files is included in Response Appendix A. A meeting was held with staff on July 29th to walk through those documents and associated files. "C&I kWh Rollup Walkthrough" flow chart was provided at that time. This document can also be found in Response Appendix D. No further requests for clarification were made. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.

2.6 Home Demand Response Program

Table 2-7: Home Demand Response Program Scorecard

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory		1	Description of the program target population and participant eligibility criteria.	Satisfactory	EM&V Paragraph F.1 1. Customers can purchase devices and install the device themselves. 2. Customers can receive devices provided at a discounted price and receive professional installation. 3. Customers can enroll their eligible existing device. EM&V Paragraph F.3.2.1 has a section titled "Eligible Units" that further elaborates.	

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
Needs Improvement	Information included in EM&V plan document.	2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Unsatisfactory	<p>EM&V Paragraph F.1</p> <p>1. Customers can purchase devices and install the device themselves.</p> <p>2. Customers can receive devices provided at a discounted price and receive professional installation.</p> <p>3. Customers can enroll their eligible existing device.</p> <p>2.No description in EM&V of incentive structure specifically regarding which entity receives compensation at each stage of the project.</p> <p>3. Lacks thorough description of methods/tools used to calculate incentives or compensation.</p>	Section 3.7.1 of the EM&V Plan details the program incentives: "As of the summer of 2024, new customers who purchase a smart thermostat on Evergy's website will receive a discount of up to \$150 while customers who enroll with an existing smart thermostat will receive up to \$100. These new customers will receive \$25 per year starting in the customer's second year of participation."
Satisfactory	Information in report	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Needs Improvement	<p>1. No mention of effective useful life (EUL) of planned measures. No descriptions of, or calculations of the project-level EUL.</p> <p>2. EM&V Paragraph F.3.1.3, Prior-Day Averaging Customer Baselines (CBL)</p>	EULs came from the Evergy TRM and are shown in Table F-22 in the EMV Report: 11 years for smart thermostats, 1 year for DLC Legacy devices.
Satisfactory	The evaluation methodology accounted for NRDs correctly.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Unsatisfactory	<p>1. Data Collection: 22-254 DR# 134 and EM&V Table F8. 48,300 out of 70,006 total enrolled devices were non-contributing. This is 69.0% of the total sample.* NMEC Concern: Staff notes that the high noncontribution rate of 69.0% puts into question the accuracy of ADM's claim of 100% NMEC Verified Savings for HDR Program found in EM&V Table 4-1. Furthermore, staff can not verify accuracy of the 100%</p>	1. Non-contributing devices are assigned zero Verified kW savings. For example, Google devices received zero verified kW savings because they did not participate in a DR event. For Ecobee and Legacy, the 100% NMEC Verified Savings are derived from a weighted average of sampled customers with non-contributing devices (implicitly zero kW savings) and contributing devices. For Legacy devices in PY2, ADM will estimate kW savings for contributing devices and set non-contributing device savings to zero. On average, both methods produce identical

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
					<p>Verified Savings value.</p> <p>2. EM&V Paragraph F.3.1.5, Equation 8-17 Notes HDR Final model. However, this model would be better communicated graphically as well.</p>	<p>savings, with the latter method reducing baseline variability when NCD rates are high.</p> <p>2. CBL models were selected as the best fit model (Table F-11: "Selected Baseline Model" in EM&V Report)</p>
Satisfactory		5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Satisfactory	<p>1. EM&V Paragraph F.2.1, two types of weather data utilized. 1) actual recorded weather data from NOAA and 2) 30-year weather normal or Typical Meteorological year (TMY). "Actual weather data was used when fitting the models and TMY data was used to extrapolate savings (if appropriate)."</p> <p>2. EM&V Paragraph F.2.1, Heating Degree Hours (HDH) and Cooling Degree Hours (CDH) from NOAA.gov were utilized in regression analysis from the nearest available weather stations and assigned based on zip code.</p>	
Needs Improvement		6	Detailed Sampling Plan.	Needs Improvement	<p>1. EM&V Paragraph F.2.2, However further clarification is needed, such as listing sample size per jurisdiction, device type per jurisdiction and further elaboration on extrapolated peak demand reduction in the sampling plan.</p>	<p>1. Sampling by device type is listed in Table F-4 of EM&V Report.</p> <p>2. The number of devices for the extrapolated kW savings are provided in Table F-19 and Table F-20 of EM&V Report.</p> <p>3. This information can be added to section F.2.2 for future reports.</p>
Satisfactory		7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process	Satisfactory	<p>1. EM&V Paragraph F.3.3.1, Propensity Score Matching (PSM) was utilized to create statistically similar, matched</p>	

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
			for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).		pre-period control and treatment groups. Joint chi-square test for covariate balance of p-value of 1.00, further pre-period confirming the treatment and comparison groups are statistically similar.	
Satisfactory		8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Satisfactory	1. EM&V Paragraph F.2.1 describes Data Collection methods. AMI data is collected in 15-minute interval meter data for each participating customer. 2. EM&V Table 4-1, 100% NMEC Verified Savings for HDR Program.	
Satisfactory	See section F.5.	9	Description of methods of determining program influence through detailed data collection and analysis	Needs Improvement	1. Data Collection: 22-254 DR# 134 and EM&V Table F8. 48,300 out of 70,006 total enrolled devices were non-contributing. This is 69.0% of the total sample. * EM&V Paragraph F.2.2 "Google devices were not successfully dispatched in PY1." All Google Thermostats were non-contributing for PY1. 2. EM&V Paragraph F.3.1 describes estimation evaluation impacts.	See Section F.5 of EM&V report regarding program influence. Legacy Honeywell devices have high non-contributing devices rates because they are nearing their end of useful life; they only contribute kW savings to the program. Google devices were not dispatched in PY1 due to the implementer, and verified kW savings were zero. Refer to comment above about NRD.
Satisfactory		10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Satisfactory	1. EM&V Paragraph F.2.1 describes Data Collection methods. AMI data is collected in 15-minute interval meter data for each participating customer. 2. EM&V Paragraph F.3.1.1, Proxy days were utilized to test the suitability of the baseline approach. "Proxy days represent days like demand response event days in terms of load shape and temperature profiles." 3. EM&V Paragraph F.3.1.1,	

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
					Estimated bias (uncertainty) was examined using Mean Percent Error and Root Mean Squared Error.	
N/A		11	<p>If targeting to-code savings, a detailed description of the following.</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover 	N/A	1. Not targeting to-code savings.	
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no bid M&V plans submitted for this program by third party implementers.
Satisfactory		13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Evergy to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Satisfactory	1. EM&V Paragraph F.2.1 describes Data Collection methods. AMI data is collected in 15-minute interval meter data for each participating customer.	

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory	Baselines derived from consumption.	14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	1. Staff can not find this information in the EM&V for the HDR program. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business Efficiency, and Hard-to-Reach Businesses participant surveys"	Verified kW savings are derived from baselines that utilize a participant's own consumption during the program year; therefore, any other program participation would already be captured by the baseline. Verified kWh savings utilize a control group, which minimizes any double counting impact from other program participation. This comment is not applicable to demand response programs.
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploads/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement		16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Needs Improvement	1. EM&V Table F-6 and Table F-7 describe DR Events in 2024. However, Google Devices were not part of the participating sample, and more than a single event date for Smart Thermostats would be beneficial. 2. Further information regarding M&V milestones, reporting schedules and deadlines would be beneficial.	Only one event was called for Ecobee devices in PY1. The intent was to call more events in PY1, and ADM expects more events to be called in PY2. EMV timelines were provided in the EM&V Plan (Table 10-2); we can add this to PY2 report.

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests: - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. Note: there are no new construction programs within KEEIA Cycle 1. - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item These item are not applicable to the HDR program. ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.
Satisfactory	All back up information was provided for review.	18	M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency. - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM.	1. ADM provided all back up analysis files and raw data associated with those files. A list of these files is included in Response Appendix A. 2. Meetings were held to walk through program and project level documentation for the Residential and Commercial evaluations. A request was not made for a similar review of the Demand Response Programs.

Revised Score	Evaluator Request	#	Home Demand Response Program	Score	Comment	ADM Comment Response
			spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature.			3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.

*Staff calculated a total sample non-contribution amount of 69.0% by determining a total device amount from Table F-8 (70006) and calculating a total amount of non-contributing devices from DR-134 (263 Ecobee devices and 42,464 Legacy devices) and Table F- (5573 Google devices) for a total of 48,300 non-contributing devices.

2.7 Business Demand Response Program

Table 2-8: Business Demand Response Program Scorecard

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory		1	Description of the program target population and participant eligibility criteria.	Satisfactory	1. Paragraph G.1 "To remain eligible for the multi-year agreement bonus, participants must meet 90 percent performance." 2. Participant eligibility: Paragraph G.8.2 Target is larger Tier 1 business customers. "These customers must have a peak demand of at least 750kW and sign up for a maximum of 20 hours of curtailment a year." 3. Target Population: Paragraph G.8.2 Target is larger Tier 1 business customers.	
Satisfactory		2	Description of incentive structure, including which entity receives compensation at each stage of the project, and methods/tools used to calculate incentives or compensation.	Satisfactory	1. Incentive Structure: Paragraph G1. One year incentive calculated as "Incentive = \$28 x kW Enrolled x Percentage of Enrolled kW Achieved. For multiple years	

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
					"Incentive = \$30 x kW Enrolled x Percentage of Enrolled kW Achieved. Participant receives compensation."	
Satisfactory	Comment is not related to evaluated savings methodology.	3	Detailed documentation and supporting work papers for expected costs, baseline, baseline period (e.g., the 12-month period immediately preceding intervention), energy savings, peak impacts, and effective useful life (EUL) of planned measures and intervention strategies; also describe how project-level EUL will be calculated.	Unsatisfactory	<p>1. Customer Baseline (CBL): Paragraph 7.71 Everygy ... "utilized a <i>single Customer Baseline (CBL)</i> for all sites for the baseline counterfactual. Unlike prior program years, Everygy was not able to utilize the Distributed Energy Management System (DERMS) CBL models that ADM provides at the start of each summer DR season, and a <i>less optimal</i> CBL model was utilized for reported demand reduction baselines." On Paragraph G.9 ADM notes that "<i>Utilizing only one CBL model is not recommended for determining demand reductions...</i>" Emphasis added.</p> <p>2. Baseline period: Table G-6, period ranges from 5-10 days before the event, and hours between 2-6pm. Energy Savings: See Table G-7</p> <p>3. Peak Impact: Paragraph G.3.3, "Peak demand reduction was determined as the maximum hourly difference between event hours and a counterfactual non-event period on the system peak day for the jurisdiction." Effective useful life or BDR program persistence is not mentioned or calculated anywhere.</p>	1. A single CBL model was not utilized for all sites for either the expected or verified kW. The single CBL model was utilized during the summer season by the implementer to provide real-time feedback to sites on their program performance. The discussion of using a single CBL model was provided for context.

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory	All back up information was provided for review. Comment is not related to evaluated savings methodology.	4	Description of methodology, analytical methods, and software employed for calculating NMEC, gross savings, and net savings resulting from the energy efficiency measures installed and not influenced by unrelated changes in energy consumption.	Needs Improvement	<p>1. Table 4-1, 100% NMEC Verified Savings for BDR program. Paragraph G.2.1 15-minute interval meter data (AMI) for each customer. However, Staff can not verify accuracy of the 100% Verified Savings value.</p> <p>2. DERMS software, however implementor "staff noted that they encountered challenges with setup or initial usage of the DERMS"</p> <p>3. Gross savings, See EM&V Paragraphs G.3.2.4 and G.3.4.</p>	<p>1. See comment response 17.</p> <p>2. This was an issue for the implementer that did not impact verified savings. See comment 3.</p>
Satisfactory	Detailed information on the CBL methodology was provided by ADM in the report.	5	Description of methodology must address weather normalization, calculation of hourly load shape impacts, and other factors including adjustments for non-routine events.	Needs Improvement	<p>1. Weather Normalization: See Table 7-17 for Savings vs weather. Paragraph G.2.1 "ADM collected recorded weather data from... (NOAA)... Data was collected from the Kansas City International Airport</p> <p>2. Calculation of Hourly Load Shape Impacts: See G.3.3 for Load shape figures, however methodology is not well stated and is vague.</p> <p>3. Paragraph G.3.2.1 "determining this baseline is a non-trivial task, especially in the context of commercial and industrial customers whose energy usage could theoretically be a function of the weather, the number of orders received, shift schedules, economic trends, and any number of variables that cannot always be explicitly modeled."</p>	More detail on the CBL methodology and CBL model selection is detailed in Section G.3.2.3 of the EM&V Report.
Satisfactory	Not applicable to this program	6	Detailed Sampling Plan.	Unsatisfactory	<p>1. Paragraph G.2.2 Sampling Plan: states only in its entirety "ADM evaluated a census of participants for the impact evaluation."</p>	No sampling occurred for this program. Census of population.

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
N/A		7	For any program design targeting large treatment groups, the M&V Plan must provide a detailed explanation of the selection process for treatment and representative control groups; this requirement also applies to Randomized Controlled Trials (RCTs).	N/A	1. Treatment group was only 28 participants.	
Satisfactory		8	Detailed Data Collection Plan, including description of monitoring activities for each energy efficiency measure category that is expected to be implemented and sampled; data collection includes all AMI data, metered data, submetered data, building energy management system data, and logger data.	Satisfactory	1. Metered data is used and recorded using DERMS. 2. Paragraph G.2.1 15-minute interval meter data (AMI)	
Satisfactory		9	Description of methods of determining program influence through detailed data collection and analysis	Satisfactory	1. Paragraph G.2.1 Metered data is collected every 15 minutes. ADM reviewed data tracking systems to ensure data provided sufficient information to calculate energy and demand impacts	
Satisfactory		10	For programs or projects that target savings less than ten percent of annual consumption, a detailed description of rationale and methods for distinguishing savings from normal variations in consumption.	Satisfactory	1. Curtailment events are used, compared to normal baseline consumption trend of the previous 5 day lookback window.	

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
N/A		11	<p>If targeting to-code savings, a detailed description of the following.</p> <ul style="list-style-type: none"> - Identify the specific code that is targeted. - Specify the equipment types, building types, geographical locations, and/or customer segments that will provide cost-effective to-code savings. - Describe the specific barriers that are preventing code-compliant equipment replacements. - Describe the reasons that natural turnover is inadequate for certain markets or technologies. - Explain program interventions that would effectively accelerate equipment turnover 	N/A	1. Not targeting to-code savings.	
N/A		12	Any Bid M&V Plan submitted by third-party implementers in their bids (at minimum, must include above-listed items 1, 3, 4, 5, and 8).	Unknown	1. Staff can not find any bid M&V plans provided by third-party implementers for this program.	There were no bid M&V plans submitted for this program by third party implementers.
Satisfactory	Real-time EM&V activities were completed punctually at the end of PY1 event season to inform program design updates.	13	Detailed description of the timing of real-time M&V activities, including M&V schedules that will enable Evergy to use ex-post verified savings (as determined by the independent EM&V contractor) to determine a significant portion of customer and implementer incentives	Needs Improvement	1. Paragraph G.2.3 "Based on Kansas regulations, ADM used method 1a and protocol 2a to evaluate the BDR Program... Evergy does not claim energy savings for demand response initiative(DRI); thus, the evaluation team did not calculate energy savings.	<p>1. ADM is unsure how the information pulled from EMV Report Paragraph G.2.3 led to the determination of a "needs improvement" rating.</p> <p>2. However, in regards to real time EMV activities in PY1 ADM completed the evaluation of all events upon the conclusion of the demand response season so any applicable program design updates could be made prior to the PY2 event season.</p>
Satisfactory	Baselines derived from consumption.	14	Methods to account for interactive effects for participants in multiple programs, i.e., ensure that there is no double counting of reported savings.	Unsatisfactory	Staff can not find this information in the EM&V for the BDR program. EM&V Paragraph 5.3 notes that "ADM investigated participant spillover through its Whole Home, Whole Business	1. Verified kW savings are derived from baselines that utilize a participant's own consumption during the program year; therefore, any other program participation would already be captured by the baseline.

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
					Efficiency, and Hard-to-Reach Businesses participant surveys"	
Satisfactory		15	Methods for calculating cost effectiveness.	Satisfactory	1. EM&V Paragraph 3.4, methods informed by California Standard Practice Manual. 2. https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy__electricity_and_natural_gas/cpuc-standardpractice-manual.pdf	
Needs Improvement		16	Detailed description of M&V schedules, including a timeline for all activities, the frequency of M&V review/input to ensure adherence to the real-time M&V approach, specific real-time M&V milestones throughout the program year, and M&V reporting schedules and deadlines	Needs Improvement	1. List of curtailment events available "Evergy BDR KS Analysis Results PY2024.xlsx" 2. Not able to locate real-time M&V reporting schedules and deadlines.	1. EM&V timelines were provided in the EM&V Plan (Table 10-2). 2. This information can be included in the PY2 report.

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory	All preidentified reporting metrics relevant to the stipulation and commission order were reported on.	17	Any other information required by the Commission, including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR.	Unsatisfactory	1. No description of program compliance with the Commission approved Stipulations and Commission Order in Docket 22-EKME-254-TAR.	<p>1. The additional language "including (but not limited to) description of program compliance with the Commission approved Stipulations and the Commission Order in Docket 22-EKME-254-TAR" was added to the EM&V Methodology document in response to stakeholder comments; specifically from the Gas Utilities. There were three main requests:</p> <ul style="list-style-type: none"> - The KEEIA order forbids any fuel switching rebates with KEEIA dollars (Residential & Business Programs) - Concern with KEEIA funding being allocated to new construction projects. <p>Note: there are no new construction programs within KEEIA Cycle 1.</p> <ul style="list-style-type: none"> - Emphasis on the requirement to allow stakeholders to have access to data per the Stipulation. <p>The evaluation report provides a description of evaluation activities performed to verify "like for like" installations. The evaluation team provided all requested back-up data to support the review and audit of analysis files (see response to line item</p> <p>These item are not applicable to the BDR program.</p> <p>ADM is willing to document any additional information requested related program compliance in relation to the Stipulation and Commission order and encourages ongoing collaboration in the development of specific reporting metrics.</p>

Revised Score	Evaluator Request	#	Business Demand Response Program	Score	Comment	ADM Comment Response
Satisfactory	All back up information was provided for review.	18	<p>M&V Plans must describe M&V transparency, which must include (but is not limited to) discussion of the following components of transparency.</p> <ul style="list-style-type: none"> - To demonstrate the replicability of savings calculations, the Commission will be provided all analytical methods, work papers, and data, including M&V spreadsheets, R code, explanatory presentations (e.g., workshop presentations and tutorials), and supporting files, references, and literature. 	Unsatisfactory	1. Staff is unable to replicate the savings calculations conducted by ADM.	<p>1. ADM provided all backup analysis files and raw data associated with those files. A list of these files is included in Response Appendix A.</p> <p>2. Meetings were held to walk through program and project level documentation for the Residential and Commercial evaluations. A request was not made for a similar review of the Demand Response Programs</p> <p>3. While the evaluation team is committed to fully supporting a transparent and collaborative review process, we feel all information for this purpose has been provided and request a follow up discussion with reviewers to aid us in the identification of any misalignment in our understanding.</p>

3 Appendix A: PY1 M&V Work Papers

File Name	Program Name	Reason for 'Confidential' Designation	Description	Methodology Document Data Description	Created By
Evergy KEEIA 2024 CE Model - Final	All	Contains program spend and budget amounts	M&V Analysis File	Expected Costs	Natalie Miller
KEEIA C&I Analysis 04.30.2025 - No PII	Business Programs	N/A	Data Summary File	Energy Savings, EUL, Program EUL	Mark Ewalt
KEEIA_HTRB_kW_Analysis_No_PII	Hard-to-Reach Businesses	N/A	M&V Analysis File	Peak Impacts	Mark Ewalt
KEEIA_WBE_kW_Analysis_No_PII	Whole Business Efficiency	N/A	M&V Analysis File	Peak Impacts	Mark Ewalt
HTR-B - Site Level Analysis Workbooks (Folder)	Hard-to-Reach Businesses	Contains site contact PII	M&V Analysis Supporting Document	Energy Savings	Mark Ewalt
WBE - Site Level Analysis Workbooks (Folder)	Whole Business Efficiency	Contains site contact PII	M&V Analysis Supporting Document	Energy Savings	Mark Ewalt
Evergy BDR KS Analysis Results PY2024	Business Demand Response	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Chris Johnson
Evergy HDR KS Analysis Results PY2024	Home Demand Response	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Chris Johnson
KEEIA 2024 Community Kits_Deemed_Savings_Calculations	Hard-to-Reach Homes	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA 2024 Energy Saving Kits_Deemed_Savings_Calculations	Hard-to-Reach Homes	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA 2024 Income Eligible Multi-Family_Deemed_Savings_Calculations	Hard-to-Reach Homes	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA 2024 Weatherization Assistance Results	Hard-to-Reach Homes	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA 2024 HTRH_Final_Results	Hard-to-Reach Homes	N/A	Data Summary File	Energy Savings, Peak Impacts	Benjamin Gosney

File Name	Program Name	Reason for 'Confidential' Designation	Description	Methodology Document Data Description	Created By
2024 HEER Analysis and Report Tables	Home Energy Education	N/A	M&V Analysis File	Energy Savings, Peak Impacts, EUL, Program EUL	Mikello Bonus
2024 HEER Energy Savings Curves	Home Energy Education	N/A	Energy Model	Peak Impacts	Mikello Bonus
2024 HEER Supplementary Analysis	Home Energy Education	N/A	M&V Analysis Supporting Document	Energy Savings	Mikello Bonus
KEEIA 2024 WHE Program_Engineering Calculations	Whole Home Efficiency	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA 2024 WHE_final_billing_analysis	Whole Home Efficiency	N/A	M&V Analysis File	Energy Savings, Peak Impacts	Benjamin Gosney
KEEIA Energy Savings Curves Overview, Methodology, and Curves Per Program	All	N/A	Energy Model	Peak Impacts	Katelan Scherer
Everygy KEEIA Whole Home Efficiency - Participant Survey Analysis - No PII	Whole Home Efficiency	N/A	Survey Results	Process, Net Energy Savings	Mike Soszynski
Everygy KEEIA Whole Home Efficiency - Trade Ally Survey Analysis - No PII	Whole Home Efficiency	N/A	Survey Results	Process	Mike Soszynski
KEEIA Whole Business Efficiency Trade Ally Survey Analysis - PY1 - No PII	Whole Business Efficiency	N/A	Survey Results	Process	Mike Soszynski
KEEIA - BDR - Survey Analysis - No PII	Business Demand Response	N/A	Survey Results	Process	Mike Soszynski
KEEIA Weatherization Participant Survey Analysis - PY1 - No PII	Hard to Reach Homes	N/A	Survey Results	Process	Mike Soszynski
KEEIA Home Demand Response Participant Survey Analysis - PY1 - No PII	Home Demand Response	N/A	Survey Results	Process	Mike Soszynski
KEEIA - HEERS -PY1 Survey Analysis - No PII	Home Energy Education	N/A	Survey Results	Process	Mike Soszynski
KEEIA Multifamily Decisionmaker Survey Analysis - PY1	Hard to Reach Homes	Contains customer PII	Survey Results	Process	Mike Soszynski

File Name	Program Name	Reason for 'Confidential' Designation	Description	Methodology Document Data Description	Created By
KEEIA Whole Business Efficiency Participant Survey Analysis - PY1	Whole Business Efficiency	Contains customer PII	Survey Results	Process, Net Energy Savings	Mike Soszynski
0 - Every KEEIA Cycle 1 - PY1 Residential, Business, & Demand Response EM&V Report - List of References	All	N/A	Document or Description of a Reference Cited in the M&V Report	-	Laura Hagen
Sources of References Cited in the M&V Report	All	N/A	Document or Description of a Reference Cited in the M&V Report	-	Laura Hagen
KEEIA PY1 Baseline Period Documentation	All	N/A	Supporting Description of Analysis Component	Baseline Period	Katelan Scherer

4 Appendix B: Residential Percent Consumption

Table 4-1: Ex-Ante Percent Consumption - Program Level (WHE Program)

Jurisdiction	Ex-Ante Consumption (%)
Kansas Central	25.72%
Kansas Metro	30.63%
Total	28.37%

Table 4-2: Ex-Post Percent Consumption - Program Level (WHE Program)

Jurisdiction	Ex-Post Consumption (%)
Kansas Central	15.98%
Kansas Metro	15.20%
Total	15.56%

Table 4-3: Ex-Ante Percent Consumption - Measure Level (WHE Program)

Jurisdiction	Ex-Ante Consumption (%)					
	CAC	ASHP	GSHP	MINI	DUCT	SHELL
Kansas Central	23.28%	30.79%	61.24%	20.31%	5.26%	7.62%
Kansas Metro	28.91%	39.60%	41.29%	22.61%	9.56%	7.66%
Total	26.33%	34.84%	56.97%	21.46%	8.13%	7.65%

Table 4-4: Ex-Post Percent Consumption - Measure Level (WHE Program)

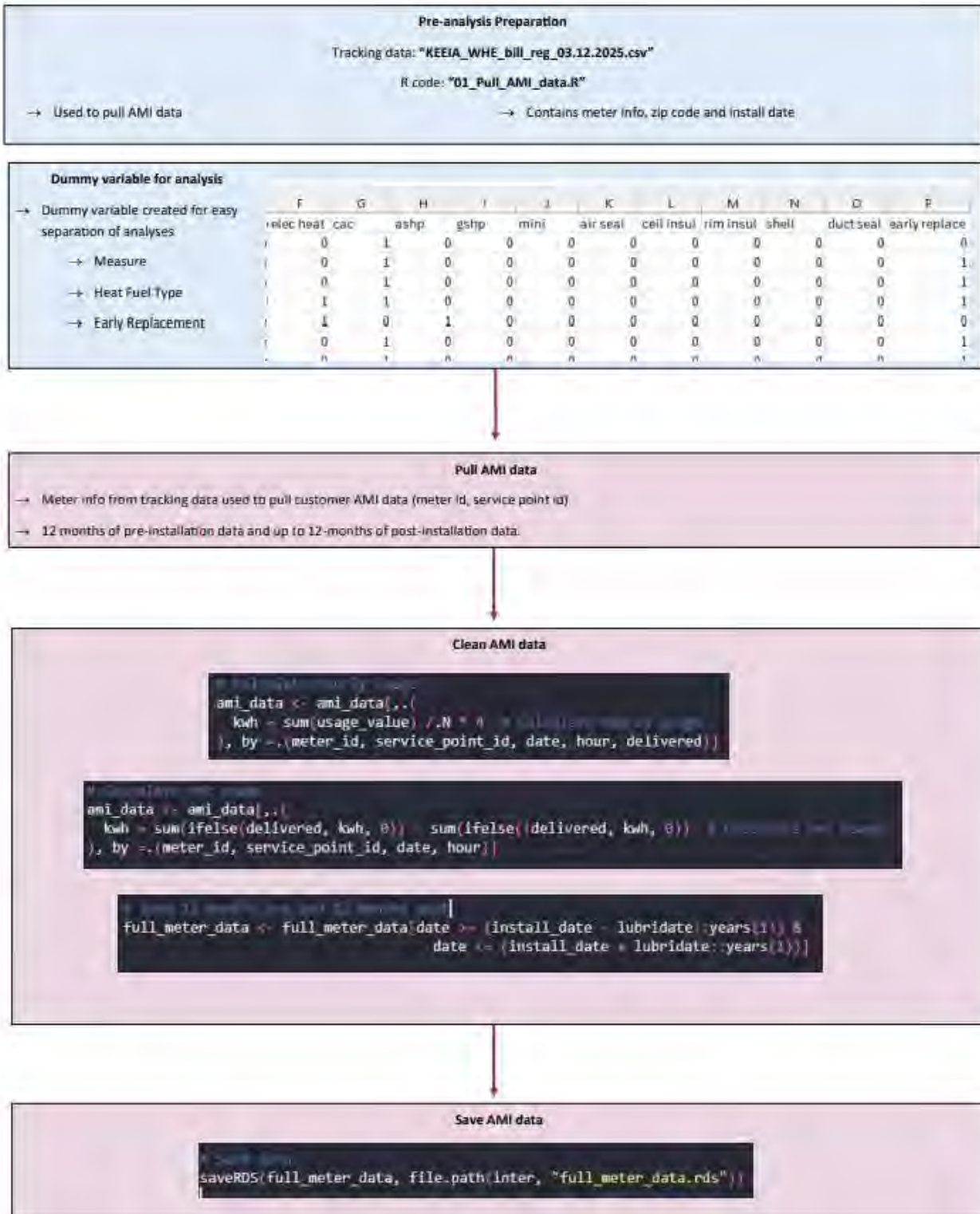
Jurisdiction	Ex-Post Consumption (%)					
	CAC	ASHP	GSHP	MINI	DUCT	SHELL
Kansas Central	16.54%	15.67%	12.16%	0.48%	7.94%	17.07%
Kansas Metro	16.14%	14.55%	4.27%	0.37%	7.56%	12.72%
Total	16.32%	15.16%	10.47%	0.42%	7.69%	13.73%

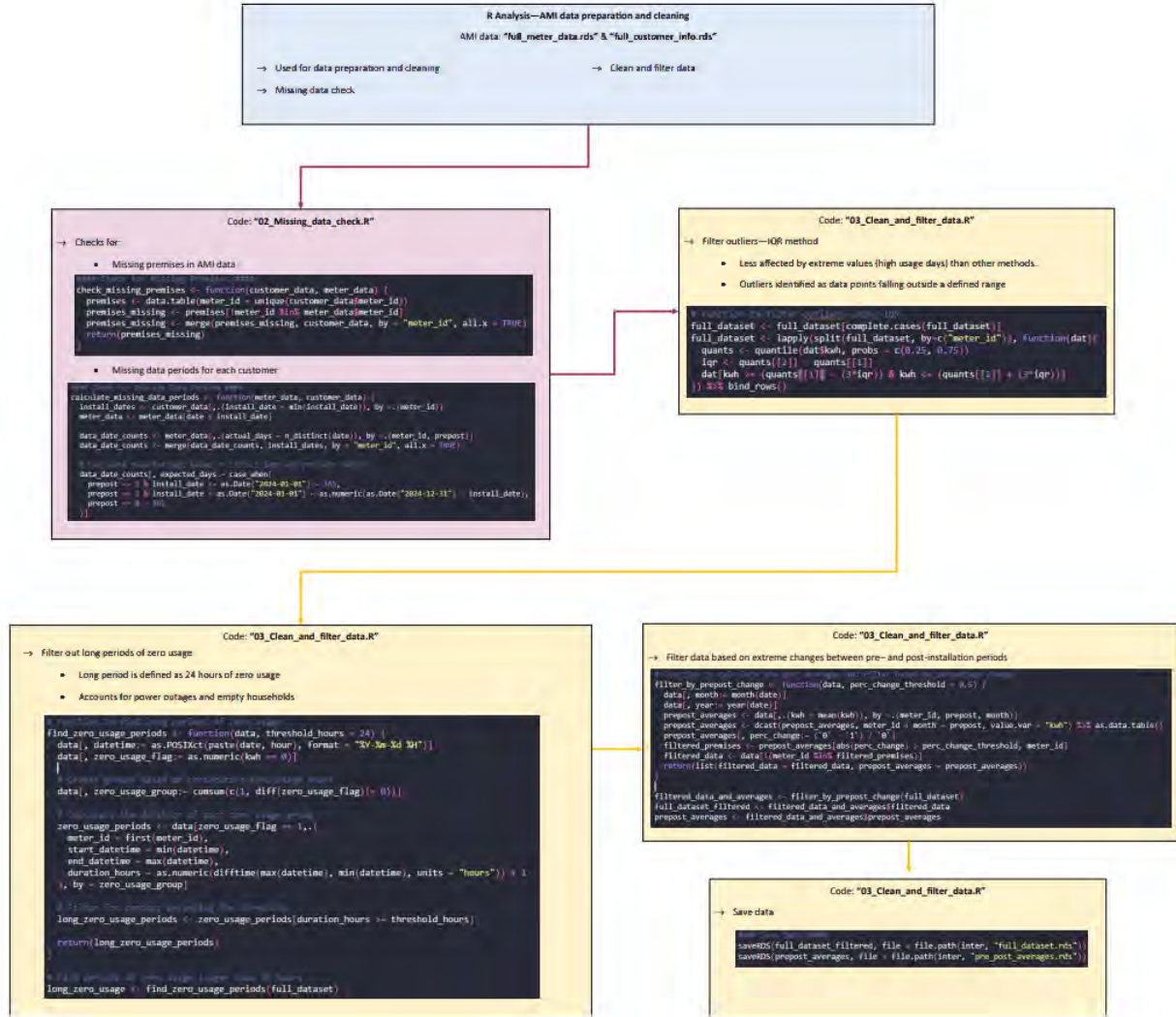
Table 4-5: Ex-Ante Percent Consumption (HTRH Program)³

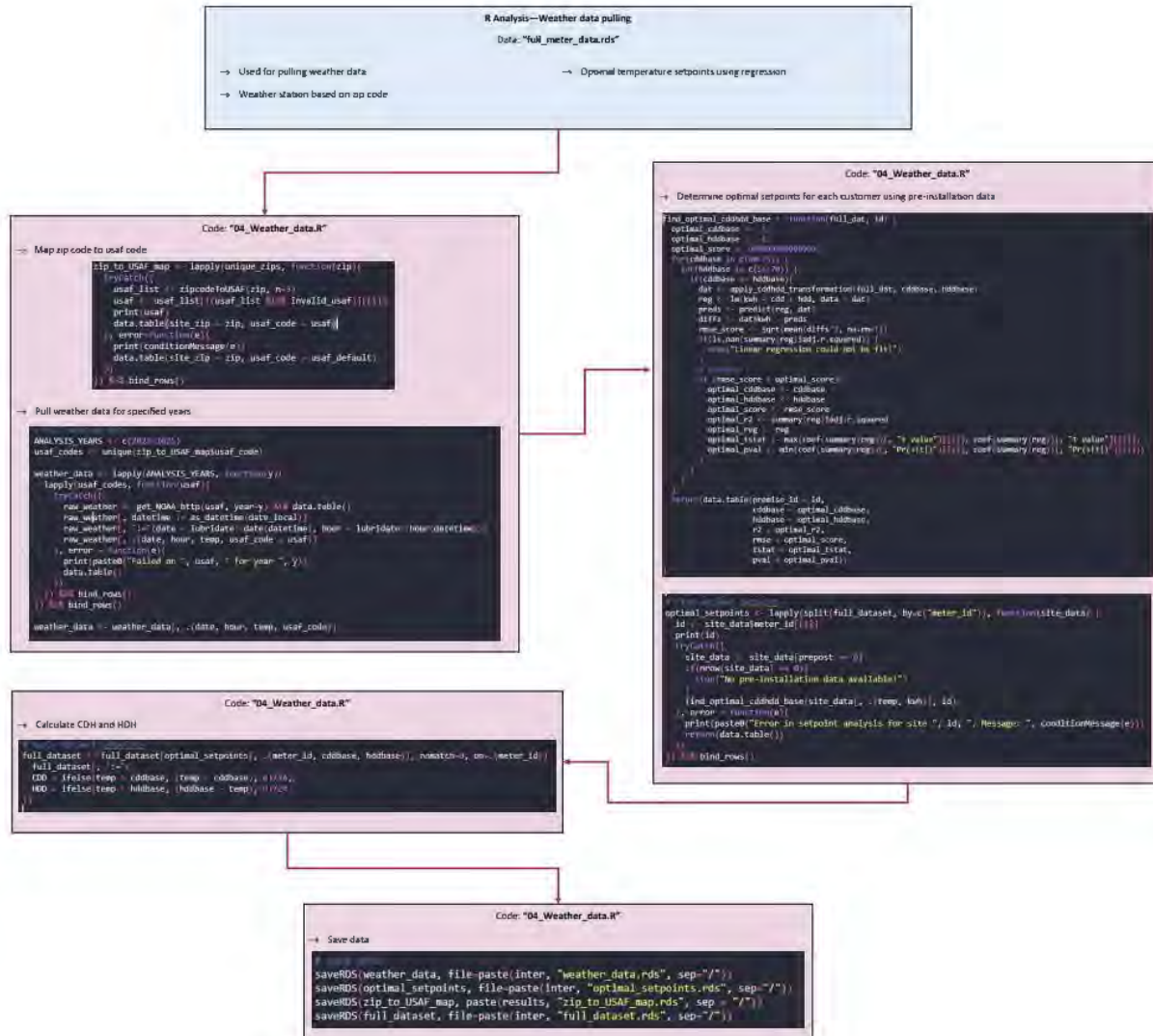
Savings Type	Ex-Ante Consumption (%)
Ex-Ante	26%
Ex-Post	25%

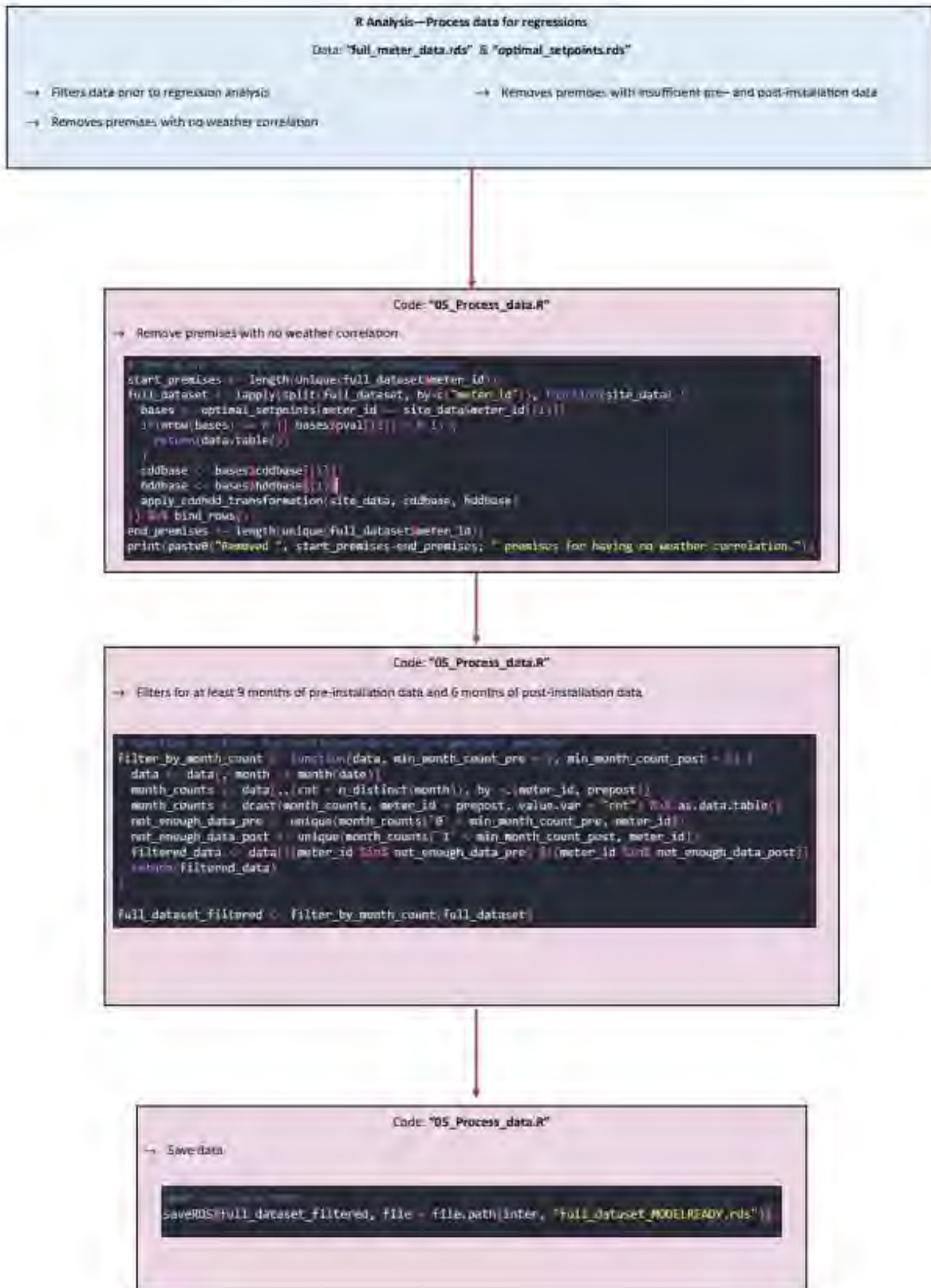
³ Weatherization Assistance program only.

5 Appendix C: Residential kWh Rollup Walkthrough













Report and Report Tables

Program-level Excel workbook: "WHE_final_billing_analysis_2025.05.05_noPII.xlsx"

- Extrapolates regression results to all participants
- Rolls up premise level results into program level results
- Makes report tables and figures.

Results extrapolation (kWh)

- Uses regression results (Regression Results tab) to extrapolate results to participants dropped from the analysis.
- The average kWh savings across participants for each measure (Regression Summary tab) in both jurisdictions is used for savings extrapolation.

Average per unit/home Savings

Jurisdiction	Measure	Participants	Peak Month	Peak Hour
Kansas Central	ASHP	4,005	2,110	
	CAC	2,493	1,823	
	Ductless Mini Split	3,629	23	
	Duct Repair and Sealing	878	2,023	
	GSHP	5,930	964	
	Building Shell	469	709	
Kansas Metro	ASHP	5,609	2,107	
	CAC	3,369	1,717	
	Ductless Mini Split	2,765	53	
	Duct Repair and Sealing	878	1,361	
	GSHP	8,920	773	
	Building Shell	1,181	386	

Results extrapolation (kWh)

- Individual measure tabs are where the savings extrapolation takes place.

ASHP CAC MINI DUCT GSHP SHELL

- All customers that received these measures are in each tab.
- For customer in the regression analysis, savings are taken from the "Regression Results" tab.
- All remaining customers receive the average savings per jurisdiction.

8760 Curve (kW)

- 8760 curves used for determining kW savings were created using the hourly savings from the regression analysis.
- Savings are summed across all participants in the regressions for each hour of the year and divided by total savings to create normalized 8760 curves.

```

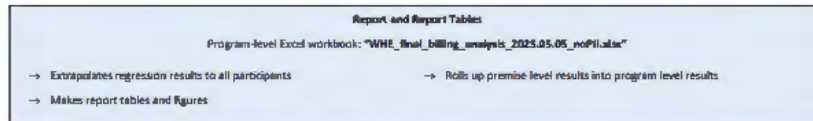
hourly_results <- readRDS(paste(results, "hourly_results.rds", sep="/"), as.data.table())
# Save savings for each measure
hourly_results <- hourly_results[, measure := ifelse(cac==1, "CAC",
  ifelse(ashp==1, "ASHP",
    ifelse(gshp==1, "GSHP",
      ifelse(mini==1, "MINI",
        ifelse(shell==1, "SHELL",
          ifelse(duct_seal==1, "DUCT", NA))))))]
hourly_results <- hourly_results[, (savings:=sum(savings)), by=(measure, month, day, hour)]
# Normalized savings
savings_curve <- hourly_results %>%
  split(measure) %>%
  lapply(function(x){
    print(x$measure[1])
    curve <- x[, curve := savings/sum(savings)]
    return(curve)
  }) %>% rbindlist()
# Save savings
saveRDS(savings_curve, paste(results, "8760_curves.rds", sep="/"))
write.xlsx(savings_curve, paste(results, "8760_curves.xlsx", sep="/"))
  
```

kW Savings

- kW savings are then calculated by multiplying kWh savings for each customer by the maximum peak coincidence factor from the 8760 curves for each measure (July, hour 17).

L	M	NI	O	P	Q	R	S
Peak month	Peak hour	ASHP	CAC	DUCT	GSHP	MINI	SHELL
7	17	0.000543	0.000668	0.000849	0.000723	0.000359	0.001008

CAC

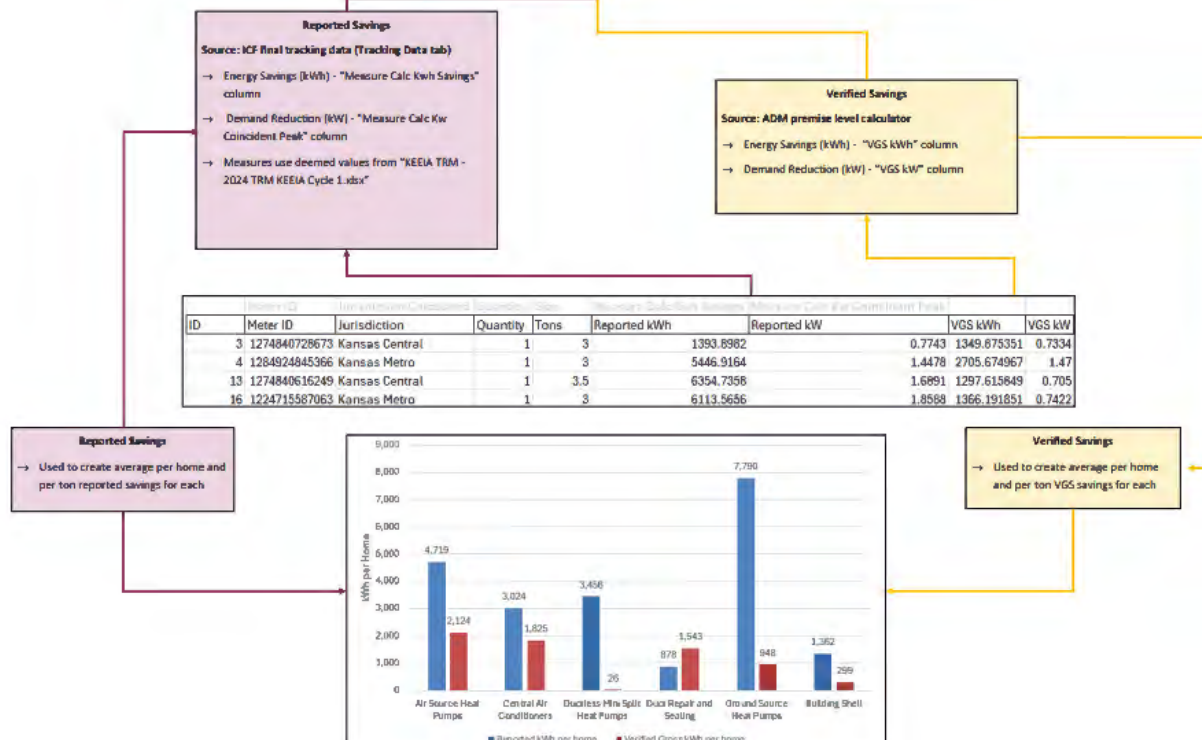


kWh Realization Rate

→ Source: ADM verified kWh savings

→ Rolled into program-level results

Articulation	Measure	Reported Energy (kWh)	Gross Verified Energy (kWh)	Reported Demand (kW)	Gross Verified Demand (kW)	ERate	DRate
Kansas Central	Air Source Heat Pump	155,111	322,610	181.97	184.41	55%	95%
	Central Air Conditioner	1,611,953	1,173,460	1,516.18	784.30	73%	92%
	Ductless Mini Split Heat Pump	43,549	227	3.58	0.09	1%	2%
	Duct Repair and Sealing	10,537	24,270	2.27	26.61	230%	997%
	Ground Source Heat Pump	195,838	27,370	0.66	19.79	14%	186%
	Building Shell	17,934	4,967	9.48	1.60	23%	19%
	Subtotal	2,434,922	8,532,897	1,792.58	994.19	53%	58%
Kansas Metro	Air Source Heat Pump	733,232	277,148	218.37	158.57	58%	88%
	Central Air Conditioner	2,691,435	1,423,635	2,532.68	951.11	53%	36%
	Ductless Mini Split Heat Pump	8,295	160	0.68	0.06	2%	1%
	Duct Repair and Sealing	36,881	69,860	7.50	68.17	180%	631%
	Ground Source Heat Pump	179,284	17,169	0.56	12.47	10%	100%
	Building Shell	171,414	26,967	63.89	36.57	21%	58%
	Subtotal	3,891,559	1,813,249	2,804.48	1,081.20	48%	47%
Total		6,346,474	5,346,139	4,597.06	2,195.49	54%	48%



6 Appendix D: C&I kWh Rollup Walkthrough

