Memorandum from the Office of the Inspector General

January 12, 2026

Monika Beckner

FINAL REPORT – EVALUATION 2025-17554 – TVA DEMAND RESPONSE

The Tennessee Valley Authority (TVA) makes investments in energy efficiency (EE), demand response (DR), renewable, and resiliency programs, as part of its commitment to meet the Tennessee Valley's growing energy needs and to support a decarbonized and more resilient grid. DR programs offer incentives for electric utility customers to reduce their energy use during peak demand which reduces the need for generation and helps offset market purchases during times of peak cost. TVA is expanding its portfolio and plans to invest more than $1.5 billion in its EE and DR programs from fiscal year (FY) 2024 through FY 2028. Due to the risk of TVA's investment not meeting the anticipated reduction in energy needs, we performed an evaluation to determine if TVA's investment in DR programs was delivering intended benefits.

While the Demand Management (DM) organization increased the DR curtailment capacity,[1] they did not meet the targets for FY 2024 or FY 2025.[2] The curtailment capacity achieved was 27 percent less than planned in FY 2024 and 23 percent less than planned in FY 2025. We identified two contributing causes for not achieving the DR program targets for curtailment capacity: (1) the planned increases in DR capacity were set before some new and redesigned programs were completed, which resulted in inaccurate estimates; and (2) there were challenges with implementation and adoption of new and redesigned DR programs that impacted achievement of the goal. Not achieving the planned curtailment capacity could result in increased cost to TVA. Planned curtailment capacity is included in TVA's strategy to meet demand. If DM does not achieve its goals, TVA could be required to meet the demand with purchased power. Since DR programs are mainly used when demand and therefore prices are the highest, purchasing the necessary capacity can be costly.

We recommend the Vice President, Power Supply and Fuels, determine if impacts from program implementation and adoption challenges have been incorporated in future goals. Prior to issuing a formal response, TVA management reviewed the draft report and provided informal comments that have been incorporated into the final report as appropriate. In TVA management's formal response to the draft report, they agreed with our recommendation and provided actions taken to address the recommendation. See the Appendix for TVA's complete response.

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1 The amount of megawatts TVA has available to reduce customer demand.

2 Targets based on the FY 2024 contracting plan that articulates the direction for achieving strategy and goals.

BACKGROUND

TVA's DM organization is responsible for developing and implementing DR programs that offer incentives for electric utility customers to reduce their energy use during times of peak demand. Between FY 2015 and FY 2022, TVA spent an average of $88.6 million per year on DR programs for an average of 1,482 megawatts (MW) of curtailment capacity. TVA is expanding its DR programs and plans to invest more than $1.5 billion in its EE and DR programs from FY 2024 through FY 2028.

TVA's DR programs include:

- **Valley Growth Partners** (Launched May 2024) – Interruptible power program[3] for new economic development load.
- **PowerFlex** (Launched June 2024) – Interruptible power program for direct serve and industrial customers with advance notice options and incentives in exchange for curtailment hours.
- **Dispatchable Voltage Regulation (DVR)** (Redesign launched December 2024) – Local power companies optimize distribution-level voltage to reduce peak demand.
- **Smart Thermostats** (Launched March 2025) – An aggregator[4] works with residents to help them save money on their energy bills and reduce system peak demand by adjusting their thermostats.
- **Power Interruption Provision** (Launched March 2025) – Interruptible power program for large, new loads that are 100 MW or more.
- **Peak Rewards** (Redesign Launched September 2025) – An aggregator works with commercial, institutional, and industrial customers to identify an energy reduction plan where customers receive financial incentives for reducing consumption during peak demand hours.

DM supports TVA's Balancing Authority and Resource Operations[5] and Power Trading[6] in the execution of the DR programs to maintain reliability of the TVA power system and to help keep rates low. In FY 2024 and FY 2025, 78 percent of the MW hours available from the DR portfolio were utilized.

Due to the risk of TVA's investment not meeting the anticipated reduction in energy needs, we performed an evaluation of TVA's DR.

3 Interruptible power programs require customers to suspend use within a specified time frame upon notification from TVA.

4 An aggregator is a company that manages the program, bares the performance risk, and passes through incentive payments to participants.

5 Balancing Authority and Resource Operations executes decisions for calling on the DR products for system reliability.

6 Power Trading performs the market analysis and execution decisions for calling on DR products for economic decisions.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of our review was to determine if TVA's investment in DR programs was delivering intended benefits. The scope of our review included DR programs for FY 2024 and FY 2025. To achieve our objective, we:

- Compared DR programs' actual and planned curtailment capacity to determine if TVA was achieving the anticipated impact from its investment.
- Reviewed documentation to determine the basis for DR capacity expansion projections.

This evaluation was conducted in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation*.

FINDINGS

While the DM organization increased the DR curtailment capacity, they did not meet the targets for FY 2024 or FY 2025. The curtailment capacity achieved was 27 percent less than planned in FY 2024 and 23 percent less than planned in FY 2025. We identified two contributing causes for not meeting the planned curtailment capacity: (1) the planned increases in DR capacity were set before some new and redesigned programs were completed, which resulted in inaccurate estimates; and (2) there were challenges with implementation and adoption of new and redesigned programs that impacted achievement of the goal.

TVA's investment allotted $149 million and $163 million toward achieving 1,939 MW and 2,217 MW of curtailment capacity in FY 2024 and FY 2025, respectively. While DM spent less than planned, the DR programs achieved curtailment capacity of approximately 520 MW and 502 MW fewer than planned, as shown in Table 1 below.

	Planned MW	Planned Spend	Planned MW/$M	Actual MW	Actual Spend	Actual MW/$M
FY 2024	1,939 MW	$149M	13.0	1,419 MW	$102M	13.9
FY 2025	2,217 MW	$163M	13.6	1,715 MW	$148M	11.6

Table 1

The planned curtailment capacity included increases from new and redesigned DR programs of 400 MW for FY 2024 and an additional 300 MW for FY 2025. However, the new and redesigned DR programs were in development at the time the plan was set, which resulted in inaccurate estimates. According to DM personnel, the planned increases were set in accordance with TVA's planning processes, and as the strategy became more fully developed, the planned MWs were updated with more accurate MW numbers and cost impacts.

Challenges with implementation and adoption of programs impacted achievement of goals. According to TVA management, there were delays in executing new programs and adoption rates were slower than expected. While the previous interruptible power programs were integrated into TVA's billing system, the varying times and rates associated with the new and redesigned programs were complicated to incorporate in the billing system, resulting in delays in enrollments.

The adoption rate of the DVR redesign has been slower than expected. DM expected local power companies committed to the original DVR program to commit to the newly redesigned program based on input during program development; however, several local power companies have not yet joined the program. As a result, DM achieved 12 MW of DVR curtailable capacity as opposed to the 184 MW planned. Challenges with execution and implementation of redesigns and new programs could continue to impact DM's ability to meet planned curtailment capacity.

Not achieving the planned curtailment capacity could result in increased cost to TVA. Planned curtailment capacity is included in TVA's strategy to meet demand. If DM does not achieve its goals, TVA could be required to meet the demand with purchased power. Since DR programs are mainly used when demand and therefore prices are the highest, purchasing the necessary capacity can be costly.

RECOMMENDATION

We recommend the Vice President, Power Supply and Fuels, determine if impacts from program implementation and adoption challenges have been incorporated in future goals.

TVA Management's Comments – TVA management agreed with the recommendation and have refined capacity inputs and applied a risk adjusted approach to demand response forecasting. See the Appendix for TVA management's complete response.

Auditor's Response – We concur with TVA management's actions and will verify completion prior to closing the recommendation.

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The report is for your review. Your written comments, which addressed your management decision and actions taken, have been included in the report. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding evaluations that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our observations, please contact Lindsay J. Denny, Director, Evaluations – Operations, at (865) 633-7349. We appreciate the courtesy and cooperation received from your staff during the evaluation.

Greg Stinson

Greg Stinson
Assistant Inspector General
(Audits and Evaluations)

HRK:FAJ
cc: TVA Board of Directors
Jessica Dufner
Jeremy P. Fisher
Jim Fleming
Jill M. Matthews
Donald A. Moul
Ronald R. Sanders II
Rebecca C. Tolene
Ben R. Wagner
OIG File No. 2025-17554

TENNESSEE VALLEY AUTHORITY

1101 Market Street, Chattanooga, Tennessee 37402

Greg Stinson
Assistant Inspector General – Audits and Evaluations
Office of the Inspector General

January 8, 2026

RE: REQUEST FOR COMMENTS – EVALUATION 2025-17554 – TVA DEMAND RESPONSE

Dear Mr. Stinson,

The Demand Management (DM) team would like to thank the Office of the Inspector General (OIG) for their diligence and support in evaluating whether TVA's investment in demand response (DR) programs is delivering intended benefits.

The DM leadership team has reviewed your draft memorandum dated November 20, 2025 and would like to provide the following responses and follow-up actions.

Recommendation

1. *We recommend the Vice President, Power Supply and Fuels, determine if impacts from program implementation and adoption challenges have been incorporated in future goals.*

   RESPONSE
   DM agrees with this recommendation.

   The following actions have been taken to address this recommendation:

   Capacity inputs have been refined iteratively in each Power Supply Plan (PSP) cycle since the established baseline for this evaluation.

   A risk adjusted approach has been applied to demand response forecasting in both the PSP and midterm cycles to ensure that the potential risks and impacts of not achieving full capacity megawatt (MW) goal levels are broadly communicated in order to inform contingency plans if necessary.

We agree with the report's observation that "While the Demand Management organization increased the DR curtailment capacity, they did not meet the targets for FY 2024 or FY 2025," noting that the targets considered as the baseline for this evaluation were from the FY 2024 Contracting Plan developed in the spring of 2023 following Winter Storm Elliott. TVA teams were asked to quickly develop approaches and potential plans to avoid future reliability issues, and the timing reviewed in this evaluation covers a period of rapid exploration of DR potential, market testing, and PSP input refinement.

Regarding the planned MW and spend versus actual MW and spend in FY 2025, the "Actual MW/$M" was more favorable at 11.6 actual versus 13.6 planned. The spending DM did execute was more cost effective than planned. Additionally, the planned growth from FY 2024 to FY 2025 was 278 MW or 14%, and DM achieved actual growth at a volume of 296 MW or 21%. While the timeline was affected by the contributing causes stated in the evaluation, the DR portfolio is showing strong growth.

Lastly, a significant component of growth of the DR portfolio is the substantial increase in available capacity megawatt hours (MWh) – the contractual hours available to dispatch the DR MW. How often MW in the DR portfolio can be deployed as a system resource is critical for system planners and operators. Due to the success in increasing available capacity hours from just 12 hours per fiscal year to instances of 300+ hours per fiscal year, TVA was able to leverage demand response on 53 event days in FY 2025 versus just 18 days in FY 2024.

On behalf of Demand Management, Demand Response and TVA, I thank you for allowing us to review your findings and provide feedback on the evaluation.

Monika Beckner

Monika Beckner
Vice President
Power Supply and Fuels

CCJ:GLH
cc: Lindsay J. Denny
Jenny Phifer Fogo
Jennifer Lynne Hartman
Claire Carlton Jones
Ray Knotts
Heather R. Kulisek
Eric Andrew Murray
Tracy Charles Underdown