Document Type: EA-Administrative Record
Index Field: Finding of No Significant Impact (FONSI)
Project Name: Resilience 360°
Project Number: 2023-23

FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
FINAL PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
RESILIENCE 360° PROGRAM
TVA POWER SERVICE AREA

The Tennessee Valley Authority (TVA) proposes a “Commercial Resiliency” program, titled Resilience 360°, to partner with vendors and TVA customers to improve and enhance resiliency during events that challenge the transmission of power on the grid [e.g., extreme weather, and minor incidences of cyber-attack or domestic terrorism (vandalism of one or a few substations or switchyards)] and to periodically support demand on the TVA system.

Under the initial phases of the program, TVA would partner with multiple vendors through a qualified resiliency network to provide backup generation in the form of onsite modular natural gas units or battery energy storage systems (BESS) to improve commercial resiliency for qualified customers (i.e. hosts). Under the proposal, vendors of natural gas units or BESS would install the units at host locations, and would own, operate, and maintain the units. The host would provide the location, contribute to the installation and maintenance costs of the units, and pay for power used during qualifying resiliency events at the host site. Additionally, TVA would enter into a single Power Purchase Agreement (PPA) with a vendor to purchase and have control or dispatch rights to the units. Under normal grid conditions, TVA would dispatch these units to support the balancing of demand on the TVA system as deemed economical and reliable. During qualifying events, TVA would purchase the energy generated from these units and sell such energy to the host’s local power company (LPC) to sell to the host. During these qualifying events, the units would provide generation onsite to the host. While the backup generation would be important to the host, the power generated at individual host locations and provided to TVA would be aggregated by third-party developers and not solely impact TVA’s overall operation of the transmission grid. The unavailability of one or several Resilience 360° installations would not materially affect TVA’s ability to balance generation and load on the TVA transmission grid.

Energy resiliency ensures those reliant on the LPC distribution system have a reliable, regular supply of energy and contingency measures in place in the event of a small or isolated power failure. Like other power providers, TVA seeks ways in which to improve and enhance resiliency during events that challenge the transmission of power on the grid, such as extreme weather and minor incidences of cyber-attack or domestic terrorism (vandalism of one or a few substations or switchyards). Commercial and industrial facilities, critical county and city infrastructure, federal government, emergency response centers, communities, LPCs, and TVA all stand to benefit from enhanced reliability.

In addition, as identified in the 2019 IRP, TVA needs flexible, dispatchable power that can successfully integrate increasing amounts of renewable energy sources while ensuring it can meet required year-round generation and maximum capacity system demands and planning reserve margin targets in responding to grid emergencies. While ensuring the host’s critical resiliency needs are met, the proposed Resilience 360° program would also deliver near-term

generation capacity to TVA as power demand increases under normal grid conditions. The Resilience 360° program would leverage the host's need for backup generation and resiliency in a manner which benefits both the grid and the host.

Alternatives

As described in the Programmatic Environmental Assessment (PEA), TVA evaluated two alternatives; taking no action and the Resilience 360° program for which TVA has developed new guidance, including an Environmental Screening Checklist and a bounding analysis to facilitate implementation of the program. This programmatic approach allows TVA to adequately address most of the site-specific activities that would occur under the PPA with the respective vendors, thereby streamlining the implementation of the Resilience 360° program. It also establishes general siting and environmental criteria so that installations do not cause greater impacts than those addressed in the PEA.

Alternative A - No Action Alternative

The No Action alternative provides a baseline for comparing against the Action Alternative. Under the No Action Alternative, TVA would not establish the proposed Resilience 360° program. TVA would continue to provide generation through alternative methods. Individual properties could independently provide their own backup generation.

Alternative B – Resilience 360° Program

As described in the PEA, TVA would partner with Qualified Resilience vendors to provide backup generation in the form of onsite modular natural gas units or BESS to improve resiliency for qualified customers (hosts). Under the proposal, a vendor would install these natural gas units or BESS at hosts' locations and own, operate, and maintain the units. The host would provide the location, contribute to the installation and maintenance costs of the units, and pay for power used during qualifying resiliency events. TVA would enter into a single PPA with each vendor, including a site-specific addendum for each host site, to purchase and have control or dispatch rights to the units, except during qualifying resiliency events when the units would provide generation onsite to the host.

Each host site would contain natural gas units or BESS that would generate about 100 kilowatts (kW) up to 25 megawatts (MW) of power. TVA anticipates establishing a Qualified Resilience Network of vendors to participate in the program. While each vendor's equipment may vary in configuration, the individual units would typically be smaller than a standard shipping container. While the number of units at each location would depend on the host's needs, the installation and operation of the unit(s) would generally occupy a small footprint near the existing host facility on previously disturbed land. The natural gas units would run on distribution-level natural gas, onsite propane or liquified natural gas; pipeline-level natural gas supply would not be needed. BESS systems would utilize grid energy for storage. Both the gas and the BESS units are expected to have a relatively low generation demand. TVA anticipates the gas units would be used less than 400 hours annually for TVA demand and dispatch. According to TVA's initial estimates, the units would be dispatched infrequently, potentially only 150 to 200 hours annually. The generation from the units would be dispatched by TVA primarily during periods when the operating reserve is limited, such as during extraordinary weather events. In addition, the units could be used infrequently for other qualifying resilience events as necessary.

Installations under the program could involve various potential transmission interconnection scenarios. Connections with an LPC distribution system would likely result in TVA screening each site as part of TVA's Affected System process, with deference given to the respective LPC's interconnection standards. Interconnections for TVA direct serve customers would more than likely fall within TVA's standard small generator or large generator interconnection protocol, which includes facilities studies and/or system impact studies. Such direct serve projects would require a separate environmental review and approval process and would not be part of the Resilience 360° program.

TVA has prepared an Environmental Screening Checklist to gather information about each proposed host site during the approval process. TVA specialists can verify whether the siting decision is adequately covered by the PEA or if an additional environmental review under NEPA is required. Should the siting of a natural gas unit or BESS not fully comply with the criteria established in the PEA, TVA may be required to complete additional environmental review on a case-by-case basis. In addition, if new gas pipelines or TVA transmission upgrades are required outside of the host's property to install generation at a site, in most cases TVA would be required to conduct a site-specific environmental review of those actions.

Preferred Alternative

TVA has identified Alternative B as its preferred alternative. Under the preferred alternative, TVA would partner with Qualified Resilience Network vendors to provide backup generation in the form of onsite modular natural gas units or BESS to improve resiliency for qualified customers. TVA would also enter into a single PPA with the vendor to purchase and have control or dispatch rights to these units to support demand.

Impacts Assessment

TVA's analysis found that environmental resources would be minimally affected by the proposed action. Most activities associated with the proposed program would occur on previously disturbed areas; therefore, impacts to most resources, including geology and groundwater, land use and prime farmland, soil erosion and surface water, floodplains, wetlands, threatened and endangered species (including terrestrial zoology, botany, and aquatic ecology), visual resources, noise, air quality, greenhouse gas and climate change, transportation and navigation, hazardous materials and solid waste, public health and safety, and socioeconomics are anticipated to be minor and temporary during construction and minor during operations. Effects would be mitigated through implementation of standard and routine best management practices (BMPs) and non-routine mitigation measures as identified in the PEA. Because specific host locations have not yet been identified, specific reasonably foreseeable future actions with a close causal relationship cannot be identified; however, overall effects from such actions are addressed in the PEA and expected to be minor.

To minimize potential effects to cultural resources, TVA has developed a Programmatic Agreement (PA) with State Historic Preservation Officers (SHPOs), the Advisory Council on Historic Preservation (ACHP), and federally recognized Tribes with an interest in the PEA. The purpose of the PA is to establish an efficient program for compliance with Section 106 of the NHPA at a programmatic level. This PA stipulates roles and responsibilities and identifies undertakings exempt from further Section 106 review. TVA has received comments from the public, ACHP, individual state SHPOs, and federally recognized Tribes with an interest in the PEA and is in the process of finalizing the document. For program activities not covered by this PA, or in the event that TVA does not have an executed PA with a particular SHPO, TVA would

follow the Section 106 process for specific program related undertakings. The PA will be provided online at tva.com/nepa once it has been executed. With implementation of the PA, there would be no adverse effect to cultural and historical resources.

Public Involvement and Intergovernmental Review

TVA's public and agency involvement included publication of a notice of availability and a 30-day public review of the Draft PEA. The Draft PEA was posted to TVA's website and a media advisory issued on March 18, 2025. TVA also notified interested federal, state, and local agencies of the availability of the Draft. during the 30-day public review period. Fourteen public comment submittals were received from individuals, businesses, non-profits (including the Center for Biological Diversity, the Southern Environmental Law Center, CleanUpTVA, Sierra Club, and Appalachian Voices), and governmental agencies (including the Virginia Department of Environmental Quality and Tennessee Department of Environment and Conservation). Individual comments focused on alternatives, BMPs, the Environmental Screening Checklist (Appendix A), resource areas, as well as implementation and support. Comments and responses are included in PEA Appendix E Public Comments and Responses.

Best Management Practices and Routine Measures

Soil Erosion and Surface Water

- Low ground-pressure-type equipment would be used in specified locations (such as areas with soft ground) to reduce the potential for environmental impacts.
- Measures would be implemented to minimize erosion during site preparation.
- The vendor and/or host would develop a project specific stormwater pollution prevention plan (SWPPP), if required, prior to the start of construction.
- Perennial, intermittent, and ephemeral streams that could be affected by the proposed construction would be protected by implementing standard BMPs as identified in the project SWPPP.
- Equipment washing and dust control discharges would be handled in accordance with BMPs described in the SWPPP for water-only cleaning and/or applicable state Stormwater Pollution Prevention Plan Guidance Manual for Industrial Activities to minimize construction impacts to surface waters.
- BMP procedures for controlling soil erosion and sediment control, such as the use of buffer zones, to the extent practicable, surrounding perennial and intermittent streams, would be implemented.

Wetlands

- Any wetland impacts would be mitigated under regulations implementing Sections 401 and 404 of the Clean Water Act, applicable state regulations and Executive Order 11990.

Air Quality

- Fugitive dust produced from construction activities would be controlled by BMPs (e.g., wet suppression) as required by state and local agencies.

- Construction equipment with diesel emission controls and cleaner fuel (ultra-low sulfur diesel) would be utilized when possible.

- The operation of trucks with up-to-date emission control technologies and proper maintenance would help to minimize vehicle and equipment emissions during operation and idling. Idling would also be minimized to the extent practicable to decrease the impact of mobile source emissions on ambient air quality.

Botany

- Construction areas would be revegetated with native and/or non-invasive vegetation consistent with Executive Order 13112 (Invasive Species).

Non-Routine Measures

Floodplain Management

- The vendor would contact the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit as appropriate.

- Natural gas units, BESS, temporary and/or permanent laydown areas, buildings, storage sheds, tanks, storage areas, as well as fill for any of these facilities would be located outside 100-year floodplains and at least one foot above the 100-year flood elevation at that location.

Pollution Prevention

- Where appropriate, the vendor would develop an effective Environmental Management System to ensure that the proposed facility is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance.

- To the extent practicable, the vendor would consider environmental attributes when choosing and purchasing materials and products, including energy efficiency, sustainability, and environmental commitment of contractors.

- To the extent practicable, pollution prevention techniques would be incorporated into the proposed facility maintenance and operation, with maintenance facilities having sufficient and suitable space to allow for effective inventory control and preventive maintenance.

- In general, when pesticides or herbicides must be used, their use would be strictly in accordance with manufacturers' recommendations. To the extent practicable, the vendor or maintenance contractor would use the least toxic pesticides or herbicides effective in controlling the target species, and selection of pesticides or herbicides will be evaluated on a site-specific or unit basis.

Threatened and Endangered Species

- In areas requiring tree removal, clearing activities would be limited to trees less than three inches in diameter at breast height or would be elevated for additional review. Tree removal resulting in impacts to potential suitable summer roosting habitat for the federally listed Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and proposed endangered tricolored bat (*Perimyotis subflavus*) would be

elevated to subject matter experts for additional review. Projects with the potential to adversely affect any federally listed species would be elevated for additional review. Relevant conservation measures required for categorical exclusion under this review would be identified in the Environmental Screening Checklist and would be implemented as part of the proposed project.

Cultural and Historic Resources

- TVA has developed a PA with SHPOs, the ACHP, and federally recognized Tribes with an interest in the PEA. The purpose of the PA is to establish an efficient program for compliance with Section 106 of the NHPA at a programmatic level. This PA stipulates roles and responsibilities and identifies undertakings exempt from further Section 106 review. TVA has received comments from the public, ACHP, individual state SHPOs, and federally recognized Tribes with an interest in the PEA and is in the process of finalizing the document. For program activities not covered by this PA, or in the event that TVA does not have an executed PA with a particular SHPO, TVA would follow the Section 106 process for specific program related undertakings. The PA will be provided online at tva.com/nepa once it has been executed.

Mitigation

TVA assumes the vendor would implement the routine environmental protection measures identified in the PEA. TVA would provide the vendor and host location with the non-routine measures to avoid, minimize, or mitigate adverse impacts on the environment. In addition, the vendor and/or host site would acquire, implement, and maintain all applicable permits and permit-related mitigation measures.

Conclusion and Findings

Based on the findings listed above and the analyses in the PEA, we conclude that the proposed Resilience 360° Program, would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the permit conditions and mitigation



August 7, 2025

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Date Signed