8120–08–P

TENNESSEE VALLEY AUTHORITY

New Caledonia Gas Plant Environmental Impact Statement

AGENCY: Tennessee Valley Authority.

ACTION: Record of Decision.

SUMMARY: Tennessee Valley Authority (TVA) has decided to adopt the Preferred Alternative identified in its Final Environmental Impact Statement (EIS; Document ID EISX-455-00-000-1734008442) for the construction of the New Caledonia Gas (NCG) Plant. TVA's Preferred Alternative, Alternative B, involves the construction and operation of an approximately 500 megawatts (MW), dual fuel, simple cycle, frame combustion turbine (CT) facility on the NCG Plant property.

Alternative B will achieve the purpose and need to support continued load growth within TVA's seven-state service territory in a way that is consistent with the recommendations in the 2019 Integrated Resource Plan (IRP). The CTs are needed to provide dispatchable generation capacity to ensure that TVA can reliably meet required year-round generation, maximum capacity system demands, planning reserve margin targets, and comply with a primary objective under the TVA Act that power be sold at rates as low as feasible. The addition of CT units to the fleet supports meeting the growing demand for electricity and enhances system flexibility to integrate distributed resources and renewables such as solar generation. As the amount of solar generation in the TVA generation portfolio continues to increase, flexibility of the remainder of the fleet becomes even more important.

FOR FURTHER INFORMATION CONTACT: Erica McLamb, NEPA Compliance Specialist, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; telephone 423-751-8022; email esmclamb@tva.gov. The Final EIS, this Record of Decision, and other project documents are available on TVA's website at https://www.tva.gov/nepa.

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the National Environmental Policy Act (NEPA), as amended (42 U.S. Code [U.S.C.] §§ 4321 et seq.), the Council on Environmental Quality (CEQ)'s regulations for implementing NEPA (40 Code of Federal Regulations (CFR) 1500 through 1508, as updated April 20, 2022), and TVA's NEPA procedures (18 CFR 1318). On January 20, 2025, President Trump issued executive orders that (1) directed the Council on Environmental Quality to "provide guidance on implementing NEPA, 42 U.S.C. 4321 et seq., and propose rescinding CEQ's NEPA regulations found at 40 CFR 1500 et seq;" and (2) revoked all executive orders on environmental justice. These revoked EOs will no longer inform TVA's environmental analysis in NEPA documents. Although TVA anticipates receiving further guidance from CEQ, the Final Environmental Impact Statement and this Record of Decision were prepared pursuant to CEQ regulations at the time of preparation.

TVA is a corporate agency and instrumentality of the United States that provides electricity for 153 local power companies (LPC) serving approximately 10 million people as well as directly serving commercial, industrial, and government customers in the Tennessee Valley—an 80,000-square-mile region comprised of Tennessee and parts of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky.

Planning Basis and Assumptions

In 2019, TVA completed its IRP and associated IRP EIS. The 2019 IRP identified various energy resource options that TVA may pursue to meet the energy needs of the Tennessee Valley region over a 20-year planning period. The Preferred Alternative aligns with the 2019 IRP. The strategic direction established by the 2019 IRP and results from recommended near-term actions formed the basis for TVA's asset strategy, which continues to support affordable, reliable, and cleaner energy for customers. The 2019 IRP recommendation optimizes TVA's ability to create a more flexible power-generation system that can successfully meet changing load demands and integrate increasing amounts of renewable energy sources while ensuring reliability. TVA's target power supply mix includes firm, dispatchable power, which refers to a generating resource that can adjust power output up or down on demand within the specific operating limitations of that resource, thus increasing system reliability and resiliency. CT units can be operated year-round to meet the fluctuating demand on the power system, including overnight, during cold pre-dawn winter mornings, and during warm summer evenings as solar generation fades. In September 2024, TVA released a new Draft IRP for public review and comment. The 2019 IRP remains valid and guides future generation planning until TVA's 2025 IRP is issued as Final and the TVA Board of Directors has approved the recommendations therein.

The role and contribution to system-wide generating capacity by various technologies/generating sources, including natural gas, is likely to change over time or be replaced by newer technologies. The inclusion of dispatchable power generation from natural gas-fired CTs effectively enables system-wide integration of solar while providing

critical transmission-related benefits to ensure reliability, resiliency, and power quality. TVA has existing solar capacity commitments of nearly 3,200 MW and plans to add up to 10,000 MW of solar by 2035. TVA is continuing to expand its solar and carbon-free commitments through procurement methods such as requests for proposals and opportunities at existing TVA sites. Additionally, TVA continues to work with long-term LPCs customers to deploy additional generation onto the system, including solar, through the Flexibility option under TVA's Long-Term Agreement with each individual LPC customer. The recommended construction and operation of the approximately 500-MW simple cycle frame CT facility at the NCG Site is one piece of TVA's overall asset strategy.

TVA prepared a Final EIS pursuant to NEPA to assess the environmental impacts associated with constructing and operating the NCG Plant on the previous generating facility site, utilizing existing natural gas and transmission infrastructure, to meet system-wide generation demands. The Notice of Availability (NOA) for the New Caledonia Gas Plant Final EIS was published in the *Federal Register* on January 10, 2025.

Alternatives Considered

TVA assessed two alternatives: Alternative A – No Action, and Alternative B – Construction and Operation of a simple cycle frame CT facility. Alternatives considered but eliminated from detailed evaluation are summarized in Table 2.1-1 of the Final EIS.

Alternative A: No Action Alternative - Under the No Action Alternative, TVA would not construct a simple cycle frame CT facility at the NCG Site. TVA would not make related upgrades to the transmission system to interconnect the generation, and actions related to upgrading the natural gas pipeline interconnection would not be

completed. TVA would be required to obtain capacity from other sources to maintain reserves, if possible. Without peaking power available when needed, TVA would purchase the cheapest available market power, a portion of which would likely be natural gas. Purchased power is generally less cost-effective than using TVA generation sources. Relying on purchased power could potentially adversely affect TVA's ability to meet required year-round generation, maximum capacity system demands, and planning reserve target margins should market power be limited or unavailable. This alternative does not meet the purpose and need of TVA's Proposed Action; however, it is included in this evaluation as it represents current baseline conditions against which the proposed action alternative is compared.

Alternative B: Construction and Operation of a simple cycle frame CT facility – Alternative B is the construction and operation of an approximately 500 MW dual fuel CT facility on federally-owned property managed by TVA in Lowndes County, Mississippi, approximately 10 miles northeast of Columbus. The project area includes the entire 63-acre NCG Site as well as the adjacent 82-acre Lowndes County 500-kilovolt (kV) Substation Site and totals approximately 145 acres. The NCG Site is a former CT facility, originally constructed in 1998 and operated for several years by a private company. The company dismantled the site in 2007, removing the existing six frame CTs. The adjacent TVA Lowndes County 500- kV Substation has remained in-service. The existing six turbine/generator foundations, three 500-kV generator step-up, 500-kV Transmission Line superstructure, gas metering equipment, water tanks, and office building were abandoned in their current locations, but are scheduled to be demolished and removed in early 2025 as part of a separate Strategic Real Estate Reduction effort. Much of the property is fenced

and graveled, with the remaining portions undeveloped and largely composed of early succession forest, particularly in areas with steep slopes, while the flatter portions of the property are largely fallow field.

Additionally, the proposed NCG Site would include plant equipment and systems, such as natural gas metering and handling systems, instrumentation and control systems, transformers, and administration and warehouse/maintenance buildings. The NCG Plant would use an existing gas line currently located at the site. The existing interconnection and existing ancillary infrastructure (e.g., taps, meter station, pressure regulation equipment, etc.) would need to be replaced; however, construction of a new gas pipeline is not required.

Alternative B would meet TVA's project purpose and need to support continued load growth within the Tennessee Valley in a way that is consistent with the recommendations in the 2019 IRP and to meet the demand for electricity while facilitating the integration of renewables onto the electric grid.

Preferred Alternative

TVA identified Alternative B as the Preferred Alternative in both the Draft and Final EISs because it is the best overall solution to provide low-cost, reliable energy to TVA's power system and would facilitate integration of renewable energy resources into the TVA power system. Additionally, the use of the existing, previously disturbed property and natural gas infrastructure would minimize potential environmental impacts. Alternative B aligns with the 2019 IRP generation target power supply mix, which includes the addition of up to 8,600 MW of CT by 2038.

Summary of Environmental Effects

The anticipated environmental impacts of the No Action Alternative and the Preferred Alternative are described in detail in the Final EIS and summarized in Table 2.2-1, and this section summarizes the actions and impacts that would occur under the various alternatives.

Alternative A: No Action Alternative - Under the No Action Alternative, TVA would not construct a simple cycle frame CT facility at the NCG Site or make related upgrades to the transmission system to interconnect the generation. Actions related to upgrading the natural gas pipeline interconnection would not be completed. The No Action Alternative would avoid the impacts of constructing and operating a new generating facility at the NCG site; therefore, TVA identifies this as the environmentally preferable alternative. However, TVA would be required to obtain capacity from other sources to maintain reserves, if possible. Without peaking power available when needed, TVA would purchase the power from the cheapest market source, a portion of which would likely be natural gas. Relying on purchased power from a market source could potentially result in adverse impacts to TVA generation system reliability and increased costs to customers. Incorporation of renewable energy sources would be limited without the addition of the reliable dispatchable generation.

Alternative B Construction and Operation of a simple cycle frame CT facility - TVA's actions during construction under Alternative B would have no impacts on the following resources: Floodplains, Public Health and Safety, Wetlands, Parks and Recreational areas, Groundwater Quantity and Quality, Cultural and Historic Resources.

Construction of the site would have a minor and temporary effect on the following resources: Air Quality, Geology, Soils, and Prime Farmland, Surface Water Quality and Quantity, Vegetation, Aquatic Ecology, Natural Areas, Threatened and Endangered Species, Transportation, and Solid and Hazardous Waste. Minor, long-term effects anticipated are Climate Change, GHG, Land Use, Wildlife, Visual Resources, and Noise.

TVA actions under Alternative B would have a beneficial effect on the following resources: socioeconomics and environmental justice and utilities. Overall, the added dispatchable generation capacity as a result of Alternative B would have potential long-term beneficial impacts by helping to ensure that TVA can reliably meet required year-round generation, maximum capacity system demands, and planning reserve margin targets while facilitating the integration of renewable energy onto the electric grid. Additionally, a temporary increase in employment during construction activities will also occur, which may increase beneficial impacts on socioeconomic resources.

Alternative B would advance TVA's Strategic Intent and Guiding Principles to execute a long-term carbon reduction plan. Pursuant to guidance in effect at the time the EIS was prepared, TVA completed an analysis of GHG emissions and Social Cost of GHG (SC-GHG) directly attributable to Alternative B's construction and operation using methods consistent with guidance from the Council on Environmental Quality. Alternative B will result in an increase to TVA's system-wide GHG emissions; however, this increase is expected to be temporal. By providing flexible, dispatchable generation that would enable the integration of renewable generation into the system, the proposed project is expected to facilitate a long-term reduction in GHG emissions in alignment with the 2019 IRP. The eventual net reduction in GHG emissions would put downward pressure on the

rate of climate change when the proposed project is paired with the installation of renewable energy. However, TVA acknowledges that any future net reductions would be dependent on installation of renewable energy as separate future projects.

To fulfill its obligations under Section 106 of the National Historic Preservation Act (NHPA), TVA consulted with the Mississippi State Historic Preservation Officer (SHPO) and federally recognized Indian tribes regarding potential project-related effects to cultural resources from TVA's actions under Alternative B. Based on prior surveys and consultation, there are no above-ground historic properties in the cultural resources area of potential effect (APE), and one potentially significant archaeological site is present. To further assess the potential National Register of Historic Places (NRHP) eligibility of the site, TVA completed additional investigations following consultation with the SHPO and the tribes concerning the proposed research design and determined that the site should be considered eligible for inclusion in the NRHP. Furthermore, TVA determined the portion of the site north of the established gravel access road, and the road itself, are non-contributing portions to the site's NRHP eligibility. The continued use of the existing road and any ground-disturbing actions north of the gravel road would have no adverse effects on the site. TVA submitted a report of its findings to the SHPO and the tribes regarding this determination; the SHPO provided concurrence on August 30, 2024, while none of the consulted tribes objected or identified additional resources of concern in the APE. TVA and SHPO have agreed that the project as currently designed will avoid any adverse effects on the NRHP-eligible archaeological site located in the NCG boundary; therefore, TVA has no further obligation to consider potential effects on the site and no further compliance

obligations under Section 106 of the NHPA. As such, Alternative B would have no impact on historic properties.

While the No Action Alternative would avoid the impacts of constructing and operating a new approximately 500-MW simple cycle frame CT, TVA would be required to obtain capacity from other sources, and relying on purchased power could potentially adversely affect TVA's ability to meet required year-round generation, maximum capacity system demands, and planning reserve target margins should market power be limited or unavailable.

When comparing the environmental impacts of the two alternatives, the No Action Alternative would have fewer environmental impacts in terms of immediate results; however, under the No Action Alternative, TVA would be required to obtain capacity from other sources to maintain reserves, if other sources are actually available. Without peaking power available when needed, TVA would purchase the power from the cheapest market source, a portion of which would likely be natural gas. Alternative A could result in adverse impacts to power availability if purchased power is not available or sufficient to meet demand, resulting in adverse impacts to TVA generation system reliability and increased costs to customers. Additionally, incorporation of renewable energy sources would be limited without the addition of the reliable dispatchable generation.

Public Involvement

TVA initiated a 30-day public scoping period on November 28, 2023, when it published a Notice of Intent in the *Federal Register* announcing the preparation of an Environmental Assessment (EA) or EIS (88 FR 83202, November 28, 2023). TVA also announced the project and requested public input in news releases; on its website; in

notices printed in relevant area newspapers and news websites; and in letters to federal, state, and local agencies and federally recognized Indian tribes. TVA held a public scoping meeting on January 28, 2024. During the scoping period, TVA received 30 submissions from members of the public, federal agencies, and various organizations totaling 1,027 unique comments. This included sixteen submissions from the General Public, one submission from a federal agency, the U.S. Environmental Protection Agency, and thirteen submissions from the following organizations: Appalachian Voices, Center for Biological Diversity, GS Research LLC, Gulf Coast for a Sustainable Future, Hop, Legacy Village Inc, Mississippi Rising Coalition (2 submissions), Robbins Properties, Sierra Club, Solar Energy Industries Association, Southern Alliance for Clean Energy, Southern Environmental Law Center.

The NOA of the Draft EIS was published in the *Federal Register* on July 19, 2024, initiating a 45-day public comment period that ended on September 4, 2024 (89 FR 58733, July 19, 2024). The availability of the Draft EIS and request for comments were announced on the TVA website; in regional and local newspapers; in a news release; and in letters to local, state, and federal agencies and federally recognized tribes. TVA held a public meeting for the Draft EIS on August 15, 2024, at the Caledonia Community Center in Columbus, Mississippi.

TVA received nine submissions totaling 100 unique comments on the Draft EIS. Substantive comments are addressed in Appendix A of the Final EIS.

Following the publication of the NOA for the Final EIS in January 2025, TVA received no additional public or agency comments.

Decision

TVA has considered all the alternatives, information, analyses, material in the record determined to be relevant, and comments submitted by Federal, State, Tribal, and local governments and public commenters for consideration in developing the Final EIS.

TVA has decided to implement the Preferred Alternative identified in the Final EIS. Under this alternative, TVA would construct the simple cycle frame CT at the NCG site, which would be capable of generating approximately 500 MW. The addition of CT units to the fleet aligns with the 2019 IRP recommendation to enhance system flexibility and TVA's May 2021 Strategic Intent and Guiding Principles.

Mitigation Measures

TVA would employ standard practices, routine measures, and other project-specific measures to avoid and minimize effects to resources from the implementation of Alternative B. TVA would also implement minimization and mitigation measures based on BMPs, permit requirements, and adherence to erosion and sediment control plans to minimize erosion during construction, operation, and maintenance activities. The BMPs are described in TVA's A Guide for Environmental Protection and BMPs for TVA Construction and Maintenance Activities – Revision 4.

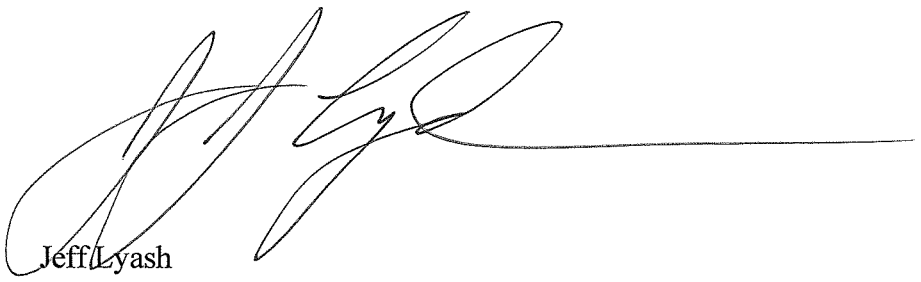
For those activities with potential to affect bats, TVA committed to implementing conservation measures established through TVA's programmatic consultation on routine actions with potential to affect federally listed bats that was completed in April 2018 and updated May 2023 and November 2024 with the U.S. Fish and Wildlife Service in accordance with Section 7(a)(2) of the Endangered Species Act. In areas requiring tree removal, clearing activities would be limited to winter periods (October 1 – March 14) to minimize impacts to wildlife and protected species. Unavoidable impacts to potential

suitable summer roosting habitat for the proposed endangered tricolored bat (*Perimyotis subflavus*) and endangered Indiana bat *(Myotis sodalis*) would be addressed using TVA's programmatic consultation. The conservation measures required for this project are identified in Appendix C of the Final EIS, and they would be implemented as part of the proposed project. Winter tree removal and conservation measures implemented through TVA's bat programmatic consultation would also minimize unavoidable impacts to summer roosting habitat for the Indiana bat and tricolored bat.

To minimize potential impacts to transportation, a transportation study would be conducted to determine the routes used for delivery of construction equipment and project materials. Roads used to access the project area would be surveyed to determine the existing conditions prior to construction. Finally, based on the results of the transportation study and road survey, a traffic impact analysis would be performed if necessary to address potential roadway impacts.

Authority: 40 CFR 1505.2.

Dated: February 13, 2025



Jeff Lyash

President & Chief Executive Officer