TENNESSEE VALLEY AUTHORITY

Environmental Impact Statement for 2019 Update to the Integrated Resource Plan

AGENCY: Tennessee Valley Authority.

ACTION: Notice of Intent.

SUMMARY: The Tennessee Valley Authority (TVA) is conducting a study of its energy resources in order to update and replace the Integrated Resource Plan (IRP) and the associated Supplemental Environmental Impact Statement (EIS) that it completed in 2015. The IRP is a comprehensive study of how TVA will meet the demand for electricity in its service territory over the next 20 years. The 2015 IRP is being updated in response to major changes in electrical utility industry trends since 2015, including flat to slightly declining load growth, advances in the development of distributed energy resources and the integration of those resources in the electric grid. As part of the study, TVA intends to prepare a programmatic EIS to assess the impacts associated with the implementation of the updated IRP. TVA will use the EIS process to elicit and prioritize the values and concerns of stakeholders; identify issues, trends, events, and tradeoffs affecting TVA's policies; formulate, evaluate and compare alternative portfolios of energy resource options; provide opportunities for public review and comment; and ensure that TVA's evaluation of alternative energy resource strategies reflects a full range of stakeholder input. Public comment is invited concerning both the scope of the EIS and environmental issues that should be addressed as a part of this EIS.

DATES: To ensure consideration, comments on the scope and environmental issues must be postmarked, emailed or submitted online no later than April 16, 2018. To

facilitate the scoping process, TVA will hold public scoping meetings; see http:// www.tva.gov/irp for more information on the meetings.

ADDRESSES: Written comments should be sent to Ashley Pilakowski, NEPA Compliance Specialist, 400 West Summit Hill Dr., WT 11D, Knoxville, TN 37902-1499. Comments may also be submitted online at: www.tva.gov/irp, or by email at IRP@tva.gov.

FOR FURTHER INFORMATION CONTACT: For general information about the NEPA process, please contact Ashley Pilakowski at the address above, by email at aapilakowski@tva.gov. For general information on the IRP process, contact Hunter Hydas, Tennessee Valley Authority, 1101 Market Street, MR 3M-C, Chattanooga, TN, 37402 or by email at jhhydas@tva.gov.

SUPPLEMENTARY INFORMATION: This notice is provided in accordance with the Council on Environmental Quality's Regulations (40 CFR parts 1500 to 1508) and TVA's procedures for implementing the National Environmental Policy Act (NEPA). TVA is an agency and instrumentality of the United States, established by an act of Congress in 1933, to foster the social and economic welfare of the people of the Tennessee Valley region and to promote the proper use and conservation of the region's natural resources. One component of this mission is the generation, transmission, and sale of reliable and affordable electric energy.

TVA Power System

TVA operates the nation's largest public power system, providing electricity to about 9 million people in an 80,000-square mile area comprised of most of Tennessee and parts of Virginia, North Carolina, Georgia, Alabama, Mississippi, and Kentucky. It provides wholesale power to 154 independent local power companies and 56 directly served large industries and federal facilities. The TVA Act requires the TVA power system to be

self-supporting and operated on a nonprofit basis and directs TVA to sell power at rates as low as are feasible.

Dependable generating capability on the TVA power system is approximately 37,000 megawatts. TVA generates most of the power it distributes with 3 nuclear plants, 7 coal-fired plants, 9 simple-cycle combustion turbine plants, 7 combined-cycle combustion turbine plants, 29 hydroelectric dams, a pumped-storage facility, a methane-gas cofiring facility, a diesel-fired facility, and 16 small solar photovoltaic facilities. A portion of delivered power is provided through long-term power purchase agreements. In 2017, 25 percent of TVA's power supply was from coal; 38 percent from nuclear; 16 percent from natural gas; 9 percent from non-renewable purchases; 7 percent from hydro; and 5 percent from renewable power purchase agreements. TVA transmits electricity from these facilities over 16,000 circuit miles of transmission lines. Like other utility systems, TVA has power interchange agreements with utilities surrounding its region and purchases and sells power on an economic basis almost daily.

Resource Planning

TVA develops an Integrated Resource Plan to identify the most effective energy resource strategies that will meet TVA's mission and serve the people of the Valley for the next 20 years. In 2015, TVA completed the Integrated Resource Plan and associated Supplemental EIS. Since 2015, several industry-wide changes have led TVA to begin development of the new IRP and associated EIS ahead of the 5-year cycle identified in the 2015 IRP. Natural gas supplies are abundant and are projected to remain available at lower cost. The electric system load is expected to be flat, or even declining slightly, over the next ten years. The price of renewable resources, particularly solar, continues to decline. Consumer demand for renewable and distributed energy resources (including distributed generation, storage, demand response, energy services, and energy efficiency programs) is growing.

Proposed Issues To Be Addressed

Based on discussions with both internal and external stakeholders, TVA anticipates that the scope of the IRP EIS will include the cost and reliability of power, the availability and use of renewable and distributed energy resources, the effectiveness and implementation of demand side management options, the effect of energy efficiency programs, and the relationship of the economy to all of these options. The IRP EIS will address the effects of power production on the environment, including climate change, the effects of climate change on the Valley, and the waste and byproducts of TVA's power operations.

Because of its nature as a planning document, the IRP will not identify specific locations for new resource options. Site-specific environmental effects of new resource options will be addressed in later site-specific assessments tiered off this programmatic EIS. Therefore, in this programmatic environmental impact statement, TVA anticipates that the environmental effects examined will primarily be those at a regional level with some extending to a national or global level. Preliminary issues identified by TVA that will be reviewed in this analysis include:

- emissions of greenhouse gases,
- fuel consumption,
- air quality,
- water quality and quantity,
- waste generation and disposal,
- land use,
- ecological,
- cultural resources,
- socioeconomic impacts and environmental justice.

TVA invites suggestions concerning the list of issues which should be addressed. TVA also invites specific comments on the questions that will begin to be answered by this IRP:

- How do you think energy usage will change in the next 20 years in the Tennessee Valley region?
- Should the diversity of the current power generation mix (e.g., coal, nuclear power, natural gas, hydro, renewable resources) change? If so, how?
- How should distributed energy resources be considered in TVA planning?
- How should energy efficiency and demand response be considered in planning for future energy needs and how can TVA directly affect electricity usage by consumers?
- And how will the resource decisions discussed above affect the reliability, dispatchability (ability to turn on or off energy resources) and cost of electricity?

Analytical Approach

TVA employs a scenario planning approach when developing an IRP. The major steps in this approach include identifying the future need for power, developing scenarios and strategies, determining potential supply-side and demand-side energy resource options, developing portfolios associated with the strategies and ranking strategies and portfolios. The 2015 IRP, developed with extensive public involvement, evaluated six alternative energy resource strategies which differed in the amount of purchased power, energy efficiency and demand response efforts, renewable energy resources, nuclear generating capacity additions, and coal-fired generation. The alternative strategies were analyzed in the context of five different scenarios that described plausible future economic, financial, regulatory and legislated conditions, as well as social trends and adoption of technological innovations. TVA then developed a preferred alternative, the

Target Power Supply Mix, based on guideline ranges for key energy resources. In developing the Target Power Supply Mix, TVA took into account its least-cost planning requirement and customer priorities of power cost and reliability, as well as other comments it received during the public comment periods. The Target Power Supply Mix established ranges, in MW, for coal plant retirements and additions of nuclear, hydroelectric, demand response, energy efficiency, solar, wind, and natural gas capacity. TVA anticipates using an analytical approach similar to that of the 2015 IRP/EIS described above. The number of alternative energy resource strategies and scenarios to be evaluated may differ from the 2015 IRP/EIS and will be determined after the completion of scoping.

Scoping Process

Scoping, which is integral to the process for implementing NEPA, provides an early and open process to ensure that (1) issues are identified early and properly studied; (2) issues of little significance do not consume substantial time and effort; (3) the draft EIS is thorough and balanced; and (4) delays caused by an inadequate EIS are avoided.

With the help of the public, TVA will identify the most effective energy resource strategy that will meet TVA's mission and serve the people of the Valley for the next 20 years. To ensure that the full range of issues and a comprehensive portfolio of energy resources are addressed, TVA invites members of the public as well as Federal, state, and local agencies and Indian tribes to comment on the scope of the IRP EIS. As part of the IRP process and in addition to other public engagement opportunities, TVA is assembling representatives from key stakeholders to participate in a working group that will discuss tradeoffs associated with different resource options and assist TVA in developing an optimal energy resource strategy.

Comments on the scope of this IRP EIS should be submitted no later than the date given under the DATES section of this notice. Any comments received, including names and

addresses, will become part of the administrative record and will be available for public inspection.

After consideration of the comments received during this scoping period, TVA will summarize public and agency comments, identify the issues and alternatives to be addressed in the EIS, and identify the schedule for completing the EIS process. Following analysis of the issues, TVA will prepare a draft EIS for public review and comment. Notice of availability of the draft EIS will be published by the U.S. Environmental Protection Agency in the Federal Register. TVA will solicit written comments on the draft IRP and EIS and also hold public meetings for this purpose. TVA expects to release the draft IRP and EIS in late 2018. TVA anticipates issuing the final IRP and EIS in 2019.

Dated: February 8, 2018.

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M. Susan Smelley,

Director,

Environmental Compliance and Operations.

[FR Doc. 2018-03027 Filed: 2/13/2018 8:45 am; Publication Date: 2/14/2018]