Appendix D: TVA 2015 IRP Recommendations by Resource Type

Coal: Continue with announced plans to retire units at Allen, Colbert, Johnsonville, Paradise and Widows Creek. Evaluate the potential retirement of Shawnee Fossil Plant in the mid-2020s if additional environmental controls are required. Consider retirements of fully controlled units if cost effective.

Nuclear: Complete Watts Bar Nuclear Unit 2 and pursue additional power uprates at all three Browns Ferry units by 2023. Continue work on Small Modular Reactors as part of technology innovation efforts and look for opportunities for cost sharing to render these more cost-effective for our ratepayers.

Hydro: Pursue an additional 50 MW of hydro capacity at TVA facilities and consider additional hydro opportunities where feasible. Demand Response: Add between 450 and 575 MWs of demand reduction by 2023 and similar amounts by 2033, dependent on availability and cost of this customer-owned resource.

Energy Efficiency: Achieve savings between 900 and 1,300 MW by 2023 and between 2,000 and 2,800 MWs by 2033. Work with our local power company partners to refine delivery mechanisms, program designs and program efficiencies with the goal of lowering total cost and increasing deliveries of efficiency programs.

Solar: Add between 150 and 800 MW of large-scale solar by 2023 and between 3,150 and 3,800 MW of large-scale solar by 2033. The trajectory and timing of solar additions will be highly dependent on pricing, performance and integration costs.

Wind: Add between 500 and 1,750 MW by 2033, dependent on pricing, performance and integration costs. Given the variability of wind selections in the scenarios, evaluate accelerating wind deliveries into the first 10 years of the plan if operational characteristics and pricing result in lower-cost options.

Natural Gas (Combustion Turbine and Combined Cycle): Add between 700 and 2,300 MW by 2023 and between 3,900 and 5,500 MW by 2033. The key determinants of future natural gas needs are trajectories on natural gas pricing and energy efficiency and renewables pricing and availability.

Source: Tennessee Valley Authority, *Integrated Resource Plan* (2015), 116-17.