

APPENDIX B – SCOPING REPORT

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ENVIRONMENTAL IMPACT STATEMENT

SCOPING REPORT

**SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2
LICENSE RENEWAL
Hamilton County, Tennessee**

**PREPARED BY:
TENNESSEE VALLEY AUTHORITY**

September 2010

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Introduction

An important mission of the Tennessee Valley Authority (TVA) involves the generation, transmission, and sale of reliable and affordable electric energy. TVA operates the nation's largest public power system, producing four percent of the electricity in the nation. It serves about nine million people in a seven-state power service area. The TVA Act requires the TVA power system to be self-supporting and operated on a nonprofit basis. The TVA Act also directs TVA to sell power at rates as low as feasible. Over the past five years, about 30 percent of TVA's annual generation has been from nuclear power plants.

Operation of Sequoyah Nuclear Plant (SQN) provides a major component of TVA's generating assets. SQN operates under licenses with 40-year terms that would end in 2020 (Unit 1) and 2021 (Unit 2) if the licenses are not renewed. TVA proposes to submit an application to the U.S. Nuclear Regulatory Commission (NRC) requesting renewal of its SQN operating licenses. Renewal of the current operating licenses would permit each unit to operate for an additional 20 years, and would help TVA respond to future demands for power generation within the TVA Power Service Area.

Following the requirements of regulations implementing the National Environmental Policy Act (NEPA), TVA is preparing a supplemental environmental impact statement (SEIS) to evaluate the impacts of renewing SQN operating licenses and alternatives to renewal. See Appendix A for more information about NEPA. Although NEPA regulations do not require that a public scoping process be used for the preparation of an SEIS, TVA decided to employ public scoping for this SEIS. The scoping process involves requesting and using comments from the interested public, organizations, and agencies to help identify the issues and alternatives that should be addressed in a NEPA document. This document summarizes the input that TVA received during the scoping process and defines the scope of the "*Supplemental Environmental Impact Statement for Sequoyah Nuclear Plant Units 1 and 2 License Renewals.*"

The final decision to seek license renewals for SQN Units 1 and 2 has not been made at this time. TVA is preparing this SEIS to supplement the original "*Sequoyah Nuclear Plant Units 1 and 2 Final Environmental Statement*" (FES) (TVA 1974) to inform decision makers, agencies, tribal representatives, and the public about the potential for environmental impacts associated with a decision to continue operation of SQN Units 1 and 2 for the extended 20-year license terms. The draft SEIS will be made available for public comment. In making its final decision, TVA will consider the assessment in this SEIS, including input provided by reviewing agencies, tribes, and the public.

The license renewal (LR) process requires an aging management and time-limited analysis review of plant equipment and programs potentially impacting safety and regulated events, accident scenario evaluations, and an environmental review. The reviews must demonstrate that plant systems, structures, and components will be adequately managed during the period of extended operations. In addition to TVA's SEIS, a separate environmental report (ER) will be developed as part of TVA's LR application to NRC. The ER will contain information similar to the SEIS, but will be based upon NRC requirements. The SEIS will support development of the ER. The ER will support the NRC's review of the environmental consequences of granting license extensions. The NRC's environmental review will likewise be conducted in accordance

with NEPA, and will also provide opportunities for input from the public, tribes, and other agencies.

Sequoyah Nuclear Plant

SN is located in Hamilton County in southeast Tennessee on about 630 acres adjacent to the Tennessee River at Mile 484.5, near the cities of Soddy Daisy, Cleveland, and Chattanooga (Figure 1). The site includes two Westinghouse Electric Corporation pressurized water reactors known as SN Units 1 and 2, with a power output capacity of approximately 1200 MW of electricity each.

The former Atomic Energy Commission (now the NRC) granted TVA a provisional construction permit in May 1970. Construction at the SN site was completed in 1980. Unit 1 received its full power license on September 17, 1980, and began commercial operation on July 1, 1981. Unit 2 received its full power license on September 15, 1981 and began commercial operation on June 1, 1982. Both units have performed well with consistently high levels of availability and generating capacity throughout their nearly 30 years of operation.

Project Description, Purpose, and Need

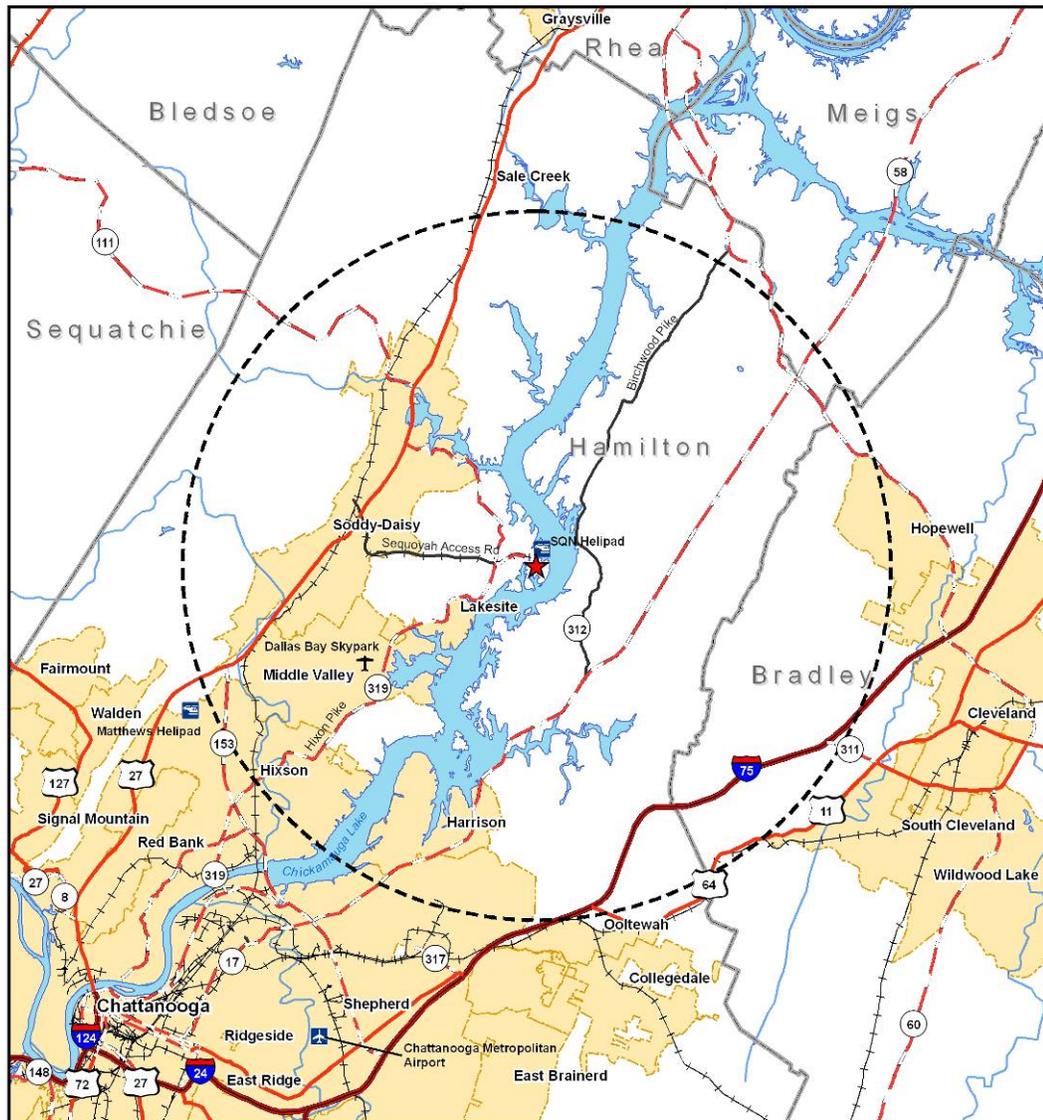
TVA is committed to providing reliable, affordable power to meet the needs of TVA customers. Historically, net system requirements grew at an average rate of 2.3 percent (1990–2008) before the recent economic downturn. Consistent with current forecasting and power system planning models, TVA expects peak load and net system power requirements to increase through 2029. As part of TVA's *"Integrated Resource Plan"* (IRP) currently in development, TVA is updating the future load forecast and associated power system planning models.

TVA proposes to submit a license renewal application (LRA) for both units at SN. On August 5, 2009, TVA informed the NRC of its intention to submit an LRA (TVA 2009).

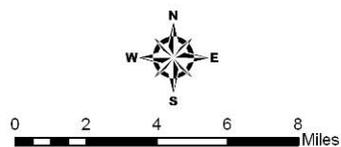
The purpose of the proposed action is to obtain extended licenses to operate SN Units 1 and 2 to help meet the identified need for power between 2020 and 2041. SN provides approximately 2400 MW of electricity, which is typically used to supply base load power in the TVA power service area. SN is a major component of TVA's generating assets. In fiscal year 2009, SN met about 11 percent of TVA's total energy need. SN supplies about one-third of the power generated by TVA's nuclear power plants.

The extended 20-year operational period for both SN units has the benefit of assuring future base load power generation, avoiding the large capital outlays associated with new construction, and avoiding the environmental impacts that result from siting and construction of a new power generating facility that would be needed to replace the power currently generated by SN.

Extending the license for SN Units 1 and 2 through 2040 and 2041 also continues its potential availability to support TVA's interagency agreement with the U.S. Department of Energy (DOE) to produce tritium until 2035. SN Units 1 and 2, along with Watts Bar Unit 1, are licensed to produce tritium for DOE, although TVA currently does not produce tritium at SN.



- Legend**
- ★ Site Center
 - ⊠ 10-Mile Radius
 - Stream
 - Surface Water
 - Cities and Towns
 - County
 - ✈ Heliport
 - ✈ Small Airport/Airfield
 - ✈ Airport
 - Interstate
 - U.S. Route
 - State Highway
 - Railroad



Source:
(ArcGIS 9 2005) Data & Maps
(NTAD 2008) Highways, Airports, Rail, Water
(USCB 2008) City Tiger Line/Shapefiles
Prepared by: F. Woolridge; May 20, 2010

Figure 1. Location of Sequoyah Nuclear Plant

Related Environmental Documents

Previous NEPA reviews contributing to the information and evaluations to be contained in the subject SEIS include the following:

Final Environmental Statement, Sequoyah Nuclear Plant Units 1 and 2 (TVA 1974)

TVA prepared and submitted a comprehensive FES prior to construction activities for SQN Units 1 and 2. This FES included impact analyses for the plant site, surrounding areas, and the proposed transmission corridors. Information from this document was analyzed and updated where needed to develop the SEIS.

In 1978, as requested by the NRC, TVA amended the FES with revised analysis of impacts to the aquatic environment from changes to the plant made prior to its operation. In 1979, the NRC issued an environmental impact appraisal that concluded potential environmental consequences were amenable to acceptable impact control and were appropriately addressed by the EPA in their drafting of the NPDES permit for operation of SQN.

Environmental Assessment and Finding of No Significant Impact for Low-Level Radwaste Management, Sequoyah Nuclear Plant (TVA 1980)

In 1980, TVA revised its plans for treatment and storage of low-level radioactive wastes (LLRW) at SQN. TVA prepared an EA to consider the potential environmental impacts of this revised plan. The proposed management plan was threefold, consisting of (1) establishing a temporary LLRW management plan, including temporary storage, (2) installing equipment for volume reduction and solidification of LLRW, and (3) constructing facilities to safely store LLRW for the operational life of the plant. TVA concluded that construction and operation of the LLRW facility had no significant impact on the environment. Although the facility was constructed, it was not used during the 1980s because LLRW from SQN was transported off-site to a licensed facility. The SEIS contains updated information about the LLRW storage facility at SQN and addresses the environmental impacts of managing LLRW should SQN operating licenses be renewed.

Environmental Assessment and Finding of No Significant Impact - Change in Expiration Dates of Facility Operating License Numbers DPR-77 and DPR-79, Tennessee Valley Authority, Sequoyah Nuclear Plant, Units 1 and 2 (TVA 1988)

The original operating license terms for SQN, as supported by the 1974 FES, were to end on May 27, 2010. Accounting for the time that was required for plant construction, these terms represented an effective operating license term of approximately 29 years and four months for Unit 1 and 28 years and eight months for Unit 2. TVA submitted an amended application that requested an extension of the operating license expiration dates, so the fixed period of the licenses would be that allowed 40 years from the date of the operating license issuance for both units. Based on TVA's amended application and associated EA, the NRC staff concluded that there were no significant radiological or non-radiological impacts associated with the extension of the licenses.

Energy Vision 2020- Integrated Resource Plan and Final Programmatic Environmental Impact Statement (TVA 1995)

In December 1995, TVA completed this comprehensive environmental review of alternative means of meeting demand for power on the TVA system through the year

2020. The alternative adopted by the TVA Board was a portfolio of various supply-and demand-side energy resources, which included operation of SQN.

Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS) (NRC 1996)

The subject SEIS will incorporate information from the GEIS (NUREG-1437) in which the NRC considered the environmental effects of 20-year renewals of nuclear power plant operating licenses (results are codified in 10 CFR Part 51). The GEIS identifies 92 environmental issues that generally apply to nuclear plants or to plants with specific design or site characteristics. Generic conclusions on environmental impacts are described for 69 of those issues. To date, the NRC has issued 33 supplements to the GEIS for 60 currently-operating nuclear power units.

It is expected that the generic assessment in NRC's GEIS would be relevant to the assessment of impacts of the proposed action at SQN. Information from NRC's GEIS that is related to the current assessment would be incorporated in the subject SEIS by reference. Additional plant-specific review will be necessary for many remaining issues.

Environmental Assessment and Finding of No Significant Impact – Low Level Radioactive Waste Transport and Storage Watts Bar and Sequoyah Nuclear Plants (TVA 1999)

Due to the anticipated closure of an off-site radioactive waste disposal facility, TVA evaluated the effects of using the existing SQN on-site facility to store low level radioactive waste from SQN, as well as low level radioactive waste transported from Watts Bar Unit 1. TVA concluded there would be no significant impact from implementing the proposed transportation and storage. The SEIS contains updated information about the LLRW storage facility at SQN and addresses the environmental impacts of managing LLRW should SQN operating licenses be renewed.

Final Environmental Impact Statement for the Production of Tritium (DOE 1999)

On December 22, 1998, DOE announced that commercial light water reactors (CLWRs) would be the primary tritium supply technology for the nation's defense needs. The Secretary designated the Watts Bar Unit 1 reactor near Spring City, Tennessee, and SQN Units 1 and 2 as CLWRs available for tritium production. This EIS evaluated environmental effects associated with tritium production at these three units.

Environmental Assessment and Finding of No Significant Impact – Replacement of Steam Generators, Sequoyah Nuclear Plant Unit 1 (TVA 2000a)

TVA prepared an EA prior to replacement of the four steam generators in SQN Unit 1 during the March 2003 scheduled outage. Steam generators, a type of heat exchanger, are large cylindrical pieces of equipment used to produce steam for propelling the turbines that spin the generators to produce electric power. The EA evaluated the effects of replacing the steam generators and concluded there would be no or minimal environmental impact.

Environmental Assessment and Finding of No Significant Impact – Independent Spent Fuel Storage Installation Sequoyah Nuclear Plant (TVA 2000b)

TVA utilizes the NRC's General License to store spent fuel at the SQN onsite independent spent fuel storage installation (ISFSI) outdoor dry storage facility. A general

license is an option available to current commercial nuclear power licensees to store spent fuel outside of the spent fuel pool at an ISFSI. The general license requires the use of a fuel storage system that has been previously approved by NRC as demonstrated by the issuance of an NRC Certificate of Compliance.

TVA screened 13 sites for the construction of an ISFSI at SQN and prepared an EA evaluating the effects of a proposed location and alternatives. In April 2000, TVA issued a finding of no significant impact for constructing and operating the ISFSI between the entrance road to SQN and the 500-kV switchyard.

Environmental Assessment and Finding of No Significant Impact –Leading Edge Flow Measurement System Installation (TVA 2001)

TVA prepared an EA to evaluate the effects of installing a leading edge flow measurements (LEFM) system for the feed water supply to the steam generators. Installation of the LEFM system facilitated a power increase of 1.3 percent. TVA concluded there was no significant impact to the environment from installation of the LEFM system.

Supplemental Environmental Assessment and Finding of No Significant Impact – Independent Spent Fuel Storage Installation, Sequoyah Nuclear Plant, Hamilton County, Tennessee (TVA 2002)

TVA prepared this supplemental EA to evaluate a different proposed location for the ISFSI, as well as other changes proposed since the April 2000 EA (TVA 2000b). TVA concluded no significant impact to the environment would occur from constructing and operating the ISFSI on a site southwest of the Dry Active Waste building.

Environmental Assessment for SQN Unit 2 Steam Generator Replacement (TVA 2009a)

TVA prepared an EA prior to replacement of the four steam generators in Unit 2 at SQN during an outage scheduled for October 2012. TVA evaluated the effects of replacing the steam generators and concluded there would be no or very minimal environmental impact.

Environmental Impact Statement for the Integrated Resource Plan (IRP; TVA 2010b)

TVA is currently preparing the IRP, a comprehensive study of alternatives for meeting the future electrical energy needs of the Tennessee Valley. This document updates the *Energy Vision 2020* described above. The purpose of the IRP is to develop a plan that TVA can enact to achieve a sustainable future and meet energy needs of the Tennessee Valley over the next 20 years. The IRP EIS will evaluate the environmental impacts of proposed and alternative strategies with portfolios of supply- and demand-side energy resource options to meet the growing demand for energy in the region. The subject SEIS will use information and analyses from the IRP EIS process, particularly for load forecasting and evaluation of energy generation portfolios designed to meet forecast needs.

Scoping Activities

TVA sought public involvement to help determine the scope of and issues to be addressed in the subject SEIS, and to help identify additional alternatives to the proposed action. The major public involvement steps are listed below:

- April 9, 2010 TVA issued a press release and posted project-related scoping information, the notice of intent (NOI), a mailing list sign-up sheet, and an online comment option that was posted on the TVA Web site. The NOI was made available on the Federal Register Public Inspection Desk.
- April 12, 2010 The NOI was published in the *Federal Register* and mailed to inform other agencies, tribes, and the public of TVA's intent to prepare the SEIS. The public comment period officially opened.
- April 12 to May 11, 2010 TVA held a 30-day scoping comment period that resulted in the receipt of nine comments from seven commenters.

In addition, newspaper articles on the subject were published prior to and during the comment period by the news media, including:

- "TVA seeks 20-year extension of Sequoyah plant license," in the *Chattanooga Times Free Press*, published on Friday, April 9, 2010
<http://www.timesfreepress.com/news/2010/apr/09/tva-seeks-20-year-extension-sequoyah-plant-license/>
- "TVA seeks Sequoyah license extension," in the *Chattanooga Times Free Press*, published on Saturday, April 10, 2010,
<http://www.timesfreepress.com/news/2010/apr/10/tva-seeks-sequoyah-license-extension/#comments>
- "TVA Plant Assessment," on the WCYB website on Saturday, April 10, 2010,
<http://www.wcyb.com/pages/6775175.php?contentType=4&contentId=5901767>
- "TVA seeking Sequoyah license extension," in the Knoxville News Sentinel published on Sunday, April 11, 2010,
<http://www.knoxnews.com/news/2010/apr/11/state-local-briefs/>

Information about the proposed license renewal NOI to prepare an SEIS, including an interactive comment form and mailing list sign-up, was made available at <http://www.tva.gov/environment/reports/sgn-renewal/index.htm>. Additionally, the NOI was mailed to 30 federal and state agencies and organizations, as well as 15 federally recognized tribes.

The comments received during public scoping activities are summarized in Appendix B. All of the comments are pertinent to the scope of the SEIS and are being considered in the preparation of the SEIS.

Environmental Issues to be Addressed

The subject SEIS will evaluate the environmental consequences of the proposed action (to operate SQN Units 1 and 2 for an additional 20 years) and alternatives. As a supplement to the 1974 FES (TVA 1974), this SEIS will update the analyses of potential

environmental, cultural, recreational, and socioeconomic impacts resulting from plant operation and maintenance of existing facilities. The impact analyses will include, but not necessarily be limited to, the potential impacts on water quality and use; vegetation; wildlife; aquatic ecology; endangered and threatened species; floodplains; wetlands; land use; recreational and managed areas; visual, archaeological, and historic resources; noise; socioeconomics; environmental justice; solid and hazardous waste; geology and seismology; meteorology, air quality, and climate change; uranium fuels cycle effects and radiological impacts; nuclear plant safety and security including design-basis accidents, severe accidents, and intentional destructive acts.

In addition, the SEIS will address cumulative impacts associated with the proposed action and alternatives. Cumulative impacts are defined as “impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR Part 1508.7). Other actions considered in the analysis of cumulative effects include the operation of Watts Bar Units 1 and 2 (the latter currently under construction), and a single nuclear unit at the Bellefonte Plant Site (TVA 2010a).

Alternatives to be Addressed

TVA projects future power supply needs through ongoing forecasting and the comprehensive integrated resource planning effort currently in progress for the IRP. Information from these processes will be used to identify potential alternatives that meet (completely or partially) the TVA system electrical power needs.

In addition to maximizing use of SQN’s assets, supply-side and demand-side options will be evaluated to identify feasible alternatives for meeting the need for power. Alternatives may or may not require construction of new generating capacity. Options are considered feasible alternatives if they would substantially meet the project purpose and need, are based upon mature and available technology, and would not result in substantially greater air emissions or other environmental impacts.

Based upon information gathered during internal evaluation and public scoping, TVA anticipates analyzing two alternatives in the SEIS as described below. The final set of feasible alternatives will be determined in coordination with the ongoing IRP project.

Alternative 1 – Sequoyah Units 1 and 2 License Renewal, Action Alternative

Under Alternative 1, TVA would submit the LRA and, upon approval from the NRC, would continue to operate SQN Units 1 and 2 for an additional 20-year period beyond the expiration of the current licenses. The current operating license expiration dates are September 17, 2020 for Unit 1 and September 15, 2021 for Unit 2. If this alternative is chosen, SQN would be available as a base load generation plant until 2040 for Unit 1 and 2041 for Unit 2.

Continued operations would not include major construction or ground disturbing activities. SQN would continue to operate under the existing operational limits and permit requirements; no changes would be necessary to comply with current regulations. Other than the continued normal operations, refueling, and maintenance for an additional 20 years, no significant changes would be needed.

It is noted that if the LRA is approved and the DOE does not take responsibility for storing and/or disposal of spent fuel before additional storage space is needed, the existing ISFSI used for the temporary storage of spent fuel at SQN would require expansion. Expansion of the existing ISFSI is expected to be minor in construction scope and will be evaluated in the subject SEIS.

Alternative 2 – Sequoyah Units 1 and 2 Decommissioning, No Action Alternative

Under the No Action Alternative, TVA would not pursue renewal of the SQN operating licenses. Under the No Action Alternative, Units 1 and 2 would cease to produce power in 2020 and 2021, respectively. TVA would eventually have to shut down and decommission the plant at the end of operations.

Decommissioning decisions and actions would have to be made regardless of the alternative chosen. Decommissioning funding assurance is provided through a decommissioning trust fund that is maintained just for the sole purpose of covering decommissioning-related costs for both units. TVA reports on, and NRC reviews the adequacy of the funds to cover such costs on a periodic basis in accordance with NRC requirements (TVA 2009b). NRC's regulations pertaining to decommissioning funding are found in 10 CFR Part 50.75.

This alternative is subdivided into two sub alternatives, necessitated by the need to replace the power otherwise generated by SQN.

Alternative 2a – New Nuclear Generation

Under Alternative 2a, TVA would construct new nuclear powered generators and associated infrastructure to replace power that would no longer be generated by SQN. TVA would construct and operate an advanced reactor design that has been approved by the NRC.

Construction of a new nuclear power plant at SQN is not considered feasible due to the lack of available land on the current site until decommissioning of Units 1 and 2 is complete. The impacts of constructing a new nuclear power plant at an alternate site would be addressed. New plant construction would likely require the need for new transmission lines, new ISFSI and low level radiological waste storage facilities, and new intake and discharge to the Tennessee River or local water body. It is assumed that the new nuclear power plant will have an initial 40-year license term with the opportunity to renew for an additional 20-year license renewal.

Alternative 2b – New Natural Gas-Fired Generation

Under Alternative 2b, TVA would construct new natural gas-fired generators and associated infrastructure to replace power that would no longer be generated by SQN. Construction of a new gas-fired power plant at SQN is not feasible due to the lack of available land on the current site until decommissioning of Units 1 and 2 is complete. Combined-cycle gas turbine (CCGT) technology would likely be chosen, because the technology is mature, economical, and feasible. The impacts of constructing new CCGT unit(s) at an alternate site would be addressed. New plant construction would likely

require the need for new transmission lines, new natural gas pipeline(s), new intake and discharge to the Tennessee River or local water body.

Schedule for SEIS Preparation and Review

The following is a tentative schedule for completion of the SEIS.

Publish Notice of Availability (NOA) of the Draft SEIS in the <i>Federal Register</i>	November 2010
Draft SEIS Comment Period (45 days)	November – December 2010
Publish NOA of the Final SEIS in the <i>Federal Register</i>	April 2011
Consideration by TVA Board of Directors	June 2011
Issue Record of Decision	August 2011

References

(40 CFR Part 1508.7) Code of Federal Regulations. Title 40. Protection of Environment. Cumulative impact. <http://ceq.hss.doe.gov/nepa/regs/ceq/1508.htm#1508.7>. Accessed June 28, 2010.

(NRC 1996) Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)

(TVA 1974) Tennessee Valley Authority. Final Environmental Statement Sequoyah Nuclear Plant Units 1 and 2 (FES). February 13, 1974.

(TVA 1980) Tennessee Valley Authority. Environmental Assessment for Low-Level Radwaste Management, Sequoyah Nuclear Plant.

(TVA 1988) Tennessee Valley Authority. Environmental Assessment and Finding of No Significant Impact - Change in Expiration Dates of Facility Operating License Numbers DPR-77 and DPR-79, Tennessee Valley Authority, Sequoyah Nuclear Plant Units 1 and 2.

(TVA 1995). Tennessee Valley Authority. Energy Vision 2020 Integrated Resource Plan Environmental Impact Statement. December 1995.

(TVA 1999). Environmental Assessment and Finding of No Significant Impact – Low Level Radioactive Waste Transport and Storage Watts Bar and Sequoyah Nuclear Plants.

(TVA 2000a) Tennessee Valley Authority. Abbreviated Environmental Assessment and Finding of No Significant Impact – Replacement of Steam Generators at Sequoyah Nuclear Plant Unit 1.

(TVA 2000b) Tennessee Valley Authority. Environmental Assessment and Finding of No Significant Impact – Independent Spent Fuel Storage Installation Sequoyah Nuclear Plant.

TVA (2001) Tennessee Valley Authority. Environmental Assessment and Finding of No Significant Impact – Leading Edge Flow Measurement System Installation.

(TVA 2002) Tennessee Valley Authority. Environmental Assessment and Finding of No Significant Impact – Independent Spent Fuel Storage Installation, Sequoyah Nuclear Plant, Hamilton County, Tennessee . June 2002.

(TVA 2009) Tennessee Valley Authority. Expected Submittal Dates For Sequoyah Nuclear Plant License Renewal Applications. August 5, 2009.

(TVA 2009a) Tennessee Valley Authority. Sequoyah Nuclear Plant Unit 2 Steam Generator Replacements, Hamilton County, Tennessee. Final Environmental Assessment and Finding of No Significant Impact.

(TVA 2009b) Tennessee Valley Authority. Form 10-K (Annual Report). November 25, 2009.

(TVA 2010a) Tennessee Valley Authority. Single Nuclear Unit at the Bellefonte Plant Site, Jackson County, Alabama. Final Supplemental Environmental Impact Statement. Volumes 1 and 2.

(TVA 2010b) Tennessee Valley Authority. Integrated Resource Plan. TVA's Environmental & Energy Future Draft. September 2010.

Appendix A – The National Environmental Policy Act and
Environmental Impact Statement Process

Authority

Wholly owned by the U.S. Government, TVA was established by Congress in 1933 primarily to foster the social welfare of residents in the Tennessee Valley region and promote the wise use of the region's natural resources.

The subject SEIS evaluation will be performed within the framework of the National Environmental Policy Act (NEPA) 42 USC § 4321 et seq., Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA, 40 CFR Parts 1500-1508, and TVA's environmental review procedures.

National Environmental Policy Act

NEPA requires federal agencies to consider the impact of their proposed actions on the environment before making decisions that may result in physical impacts. If an action is expected to have a significant impact on the environment, the agency proposing the action must develop a study for public and agency review. This study is an analysis of the potential impacts to the natural and human environment from the proposed action as well as from a range of reasonable alternatives. This study is called an environmental impact statement (EIS). In making a decision on a proposed major action, the agency must consider the full range of alternatives addressed in the EIS. The CEQ regulations require federal agencies to make environmental review documents, comments, and responses a part of their administrative record.

Environmental Impact Statement Process

After the decision to prepare an EIS is made, the federal agency (TVA) prepares and makes available a notice of intent (NOI) to prepare an EIS. This notice briefly describes the proposed action, reasonable alternatives, and probable environmental issues to be addressed in the EIS. The NOI also describes the scoping process for the particular project, and where and when public scoping meetings will be held. Normally there is a public input period of 30 days from the date of publication of the NOI in the *Federal Register*. TVA has prepared this Scoping Document to summarize the public input and comments from interested agencies received on the proposed action, the alternatives to be evaluated, and environmental and other major issues relevant to the project.

Based in part on the information obtained and decisions made during the project scoping process, a Draft EIS is prepared. The completed Draft EIS is distributed to interested individuals, groups, and federal, state, and local agencies. It is transmitted to the U.S. Environmental Protection Agency (EPA), who publishes a notice of its availability in the *Federal Register*.

The Draft EIS public comment period begins with the publication of the notice of availability by EPA in the *Federal Register* and normally lasts at least 45 days. During this public comment period, the agency may hold public meetings as a forum to obtain comments on the Draft EIS. Notice of public meetings is distributed through appropriate media and direct mailings.

At the close of the Draft EIS public comment period, the agency will respond to the comments received and incorporate any required changes in the Final EIS. The completed Final EIS is sent to those who received the Draft EIS or submitted comments on the Draft EIS. It is also transmitted to EPA who publishes a notice of its availability in the *Federal Register*.

The agency makes the decision on the proposed action no sooner than 30 days after the notice of availability of the Final EIS was published in the *Federal Register*. This decision is based on the anticipated environmental impacts, as documented in the EIS, along with cost, schedule, technological and other considerations. The agency then issues a record of decision (ROD). The ROD normally includes: (1) what the decision was; (2) the rationale for the decision; (3) what alternatives were considered; (4) which alternative was considered environmentally preferable; and (5) any associated mitigation measures and monitoring, and enforcement requirements.

Appendix B – Summary of Scoping Comments

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Sequoyah Nuclear Plant License Renewal

A total of seven comment letters were received concerning this SEIS. The comments are summarized below and will be considered during the preparation of the SEIS:

State of Tennessee Department of Environment and Conservation; Water Supply

The proposed project will be in the Tennessee American and East Side Utility District's Source Water Protection Area. Notification should be given before any work in the area or in the event of any release to the [Tennessee] river. Subsurface discharges from the facility will need to be registered with the Underground Injection Control program.

Tennessee Wildlife Resources Agency

Requested a comprehensive report on the use of any and all biocides that may be used at the Sequoyah plant for any purpose, including a summary of all toxicity testing, methodology, test media, and test organisms for the period of 1990 – 2010.

Tennessee Historical Commission, State Historical Preservation Office (SHPO)

A total of three letters were received from this agency. Based on review of the NOI and the report "*TVA, Cultural Resources Assessment, Sequoyah Nuclear Plant Licensing, Unincorporated, Hamilton County, Tennessee,*" the SHPO concluded that the project area contains no historic properties eligible for listing in the National Register of Historic Places.

United Keetoowah Band of Cherokee Indians in Oklahoma

No objection to the license renewal.

Seminole Tribe of Florida, Tribal Historic Preservation Office (STOF-THPO)

No objection to findings at this time. Request that the STOF-THPO be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are inadvertently discovered during construction.

Alabama-Coushatta Tribe of Texas, Tribal Historic Preservation Office

Concurrence that no known impacts (to) religious, cultural, or historical assets of the Alabama-Coushatta Tribe are anticipated at this time by proposed relicensing of SQN. Requested notification in the event of inadvertent discovery of human remains and/or archaeological artifacts during activities at SQN.

Partnership for Affordable Clean Energy (PACE)

The scope of the SEIS should include the potential negative environmental and economic impacts of having to replace 2,400 MW of base load generation with other options that may be intermittent.

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