



Wolf Creek Generating Station

License Amendment Request for Power Uprate with Measurement Uncertainty Recapture (MUR)

NRC Pre-Submittal Meeting

November 17, 2026



WCGS Attendees

- Matt Hall, Senior Director Strategic Projects
- Dustin Wirth, Director Nuclear and Regulatory Affairs
- Craig Menke, Director Engineering Projects
- Billy McDaniel, Senior Engineering Project Manager
- Adam Young, Capital Mods Engineering Manager



Agenda

- Station Overview
- Purpose
- Proposed MUR Uprate
- Approach
- Summary of Engineering Reviews
- Plant Modifications
- Precedents
- Schedule
- Questions



Station Overview

- Location: Burlington, KS
- Operator: Wolf Creek Nuclear Operating Corporation
- Reactor Type: Pressurized Water Reactor
- Licensed MWt: 3,565
- Reactor Type: Westinghouse Four-Loop
- Commissioning Date: September 3rd, 1985
- 4.5% Power Uprate in 1993
- License Renewal in 2008 extending until 2045



Purpose

- Present the proposed measurement uncertainty recapture (MUR) power uprate application for Wolf Creek Generating Station.
- Discuss the planned license amendment request (LAR) and current project schedule, including a targeted submittal next spring, 2027.
- Discuss the engineering reviews being performed.
- Discuss required plant modifications.
- Provide important milestones for the WCGS LAR submittal.



Proposed MUR Uprate

- Revise the Operating License and Technical Specifications to increase the Reactor Thermal Power from 3565 MWt to 3626 MWt, approximately 1.7%. Technical Specifications and Bases affected by the new power level will be updated.
- Install a new CALDON Ultrasonic Leading Edge Flow Meter (LEFM) CheckPlus System to improve plant calorimetric heat balance measurement accuracy to approximately $\pm 0.3\%$.
- Establish an allowed outage time in the WCGS Technical Requirements Manual to remain at MUR power level in the event of a non-functional LEFM CheckPlus System or the loss of Plant Performance Computer.



Approach

- The LAR will be prepared using the guidance from Regulatory Issue Summary (RIS) 2002-03, “Guidance on the Content of MUR Power Applications.”
- The total feedwater flow measurement uncertainty calculation approach will be consistent with ASME PTC 19.1, “Performance Test Code for Measurement Uncertainty.”
- Supporting Sensia proprietary and non-proprietary uncertainty calculations will be included in the LAR submittal.
- Install LEFM under 10 CFR 50.59 before LAR submittal approval as plant calorimetric will not change until after LAR submittal.

Summary of Engineering Reviews-NSSS

- Revised Nuclear Steam Supply System (NSSS) design parameters will be developed for 102% of current reactor thermal power (3636 MWt) plus RCP net heat input (14 MWt), which will bound the MUR power level.
- All NSSS components and auxiliary systems will be evaluated for the revised NSSS design parameters.
- No changes to NSSS design basis transients are expected based on revised NSSS design parameters.
- There are no expected changes to Reactor Trip setpoints and Engineered Safety Features Actuation Systems setpoints due to the MUR power uprate.



Summary of Engineering Reviews-BOP

- The revised NSSS design parameters and current plant data will be used in the evaluation of Balance of Plant (BOP) components and systems.
- New operating margins, instrument setpoints, and administrative limits will be established for MUR Power Levels.
- Evaluation to show that MUR power uprate does not involve an unreviewed environmental question and does not involve a change in the Environmental Protection Plan.



Plant Modifications

- Some of the expected significant modifications include:
 - LEFM Check-Plus System installation.
 - Adding Main Control Board LEFM trouble annunciation.
 - Select changes to the Plant Process Computer Programs to support the MUR power calorimetric calculations.



Precedents

- Prior MUR power uprate LARs have been reviewed for applicability, including associated RAIs and SEs.
 - Farley Units 1 and 2
 - Watts Bar Nuclear Unit 2
 - Oconee Units 1, 2, and 3
 - Millstone Unit 3



Schedule

- WCGS MUR LAR submittal to the NRC expected by the end of April 2027.
- NRC approval requested within 6 months of LAR submittal.
- MUR implementation expected in fall 2028.



Questions?