NRR-DMPSPEm Resource

From: Galvin, Dennis
Sent: Monday, July 30, 2018 10:58 AM
To: Ellis, Kevin Michael
Cc: Sahay, Prem; Venkataraman, Booma
Subject: Robinson Supplemental RAI – LAR to Revise TS to Add a 2nd Qualified Offsite Power Circuit and Revise UFSAR to Operate LTCs in Automatic Mode (CAC No. MG0276; L 2017-LLA-0308)
Attachments: Robinson LAR - Transmission Upgrade Final Supplemental RAI for Duke Energy L-2017-LLA-0308 2018-07-30.pdf

Mr. Ellis,
By letter dated September 27, 2017 (Agencywide Documents Access and Management System Accession No. ML17270A041), as supplemented by letters dated May 16 and July 11, 2018 (ADAMS Accession Nos. ML18137A353 and ML18192C179), Duke Energy Progress, LLC (the licensee) submitted a license amendment request (LAR) for H. B. Robinson Steam Electric Plant Unit No. 2. The proposed amendment would revise the Technical Specifications (TSs) to reflect the addition of a second qualified offsite power circuit. In addition, the proposed amendment requests approval to change the Updated Final Safety Analysis Report (UFSAR) to allow for the use of automatic load tap changers (LTCs) on the new (230 kilovolt (kV)) and the replacement (115kV) startup transformers.
The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information is needed to complete its review. The enclosed RAI was e-mailed to the licensee in draft form on July 25, 2018 (ADAMS Accession No. ML18206B061). The licensee did not request a clarification call. The licensee agreed to provide responses to the RAI by August 15, 2018. The NRC staff agreed with this date.
If you have any questions, please contact me at (301) 415-6256.
Respectfully,
Dennis Galvin
Project Manager
U.S Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Operating Reactor Licensing
Licensing Project Branch 2-2
301-415-6256
Docket No. 50-261

Hearing Identifier: NRR_DMPS
Email Number: 500

Mail Envelope Properties (Dennis.Galvin@nrc.gov20180730105800)

Subject: Robinson Supplemental RAI – LAR to Revise TS to Add a 2nd Qualified Offsite Power Circuit and Revise UFSAR to Operate LTCs in Automatic Mode (CAC No. MG0276; L 2017-LLA-0308)
Sent Date: 7/30/2018 10:58:19 AM
Received Date: 7/30/2018 10:58:00 AM
From: Galvin, Dennis

Created By: Dennis.Galvin@nrc.gov

Recipients:
"Sahay, Prem" <Prem.Sahay@nrc.gov>
Tracking Status: None
"Venkataraman, Booma" <Booma.Venkataraman@nrc.gov>
Tracking Status: None
"Ellis, Kevin Michael" <Kevin.Ellis@duke-energy.com>
Tracking Status: None

Post Office:

Files	**Size**	**Date & Time**
MESSAGE	1481	7/30/2018 10:58:00 AM
Robinson LAR - Transmission Upgrade Final Supplemental RAI for Duke Energy L-2017-LLA-0308 2018-07-30.pdf	91308	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST REGARDING REVISION TO TECHNICAL SPECIFICATION 3.8.1 AND ADDITION OF A SECOND QUALIFIED OFFSITE CIRCUIT WITH NEW STARTUP TRANSFORMERS AND LOAD TAP CHANGERS IN AUTOMATIC MODE

DUKE ENERGY PROGRESS, LLC

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

DOCKET NO. 50-261

CAC NO. MG0276; EPID L-2017-LLA-0308

By letter dated September 27, 2018, (Agencywide Documents Access and Management System Accession No. ML17270A041), as supplemented by letters dated May 16 and July 11, 2018 (ADAMS Accession Nos. ML18137A353 and ML18192C179), Duke Energy Progress, LLC (the licensee) submitted a license amendment request (LAR) for the H. B. Robinson Steam Electric Plant Station, Unit 2 (Robinson or HBRSEP). The proposed amendment would revise the Technical Specifications (TSs) to reflect the addition of a second qualified offsite power circuit. In addition, the proposed amendment requests approval to change the Updated Final Safety Analysis Report (UFSAR) to allow for the use of automatic load tap changers (LTCs) on the new (230 kilovolt (kV)) and the replacement (115 kV) startup transformers.

EEOB RAI-5

Robinson was licensed to draft General Design Criteria (GDC) published in the in Federal Register on July 11, 1967, as described in the Robinson UFSAR Section 3.1 (ADAMS Accession No. ML17298A849). Robinson UFSAR Section 3.1.2.39, "Emergency Power," states, in part, that:

> An emergency power source shall be provided and designed with adequate independency, redundancy, capacity, and testability to permit the functioning of the engineered safety features and protection systems required to avoid undue risk to the health and safety of the public. This power source shall provide this capacity assuming a failure of a single active components. (GDC 39).

NUREG-0800, the Standard Review Plan (SRP), Section 8.2 (ADAMS Accession No. ML100740246), Subsection III.1.E states in part that the NRC staff should evaluate the capacity and electrical characteristics of the offsite power system to ensure that there is adequate capability to supply the maximum connected load during all plant conditions.[1]

LAR Section 3.3.3 includes summaries of transient voltage analyses for various plant configurations and grid transients with the new Startup transformer (SUT) load tap changer

[1] Section 8.2 Subsection III.1.E of the SRP provides guidance for evaluating conformance to 10 CFR 50, Appendix A, GDC 17, which is comparable to draft GDC 39. The NRC staff has used Section 8.2 Subsection III.1.E with due consideration.

(LTC) in either the automatic or manual position. Section 3.3.3.6 provides a summary of the scenario designated Grid Transient - Plant Trip with Fast Bus Transfers to ensure that the 480 V degraded grid voltage relay (DGVR) and loss of voltage relay (LVR) do not time out. This section indicates that an analysis was performed with the LTC in the automatic position in the following statements:

> "Transient Stability Analysis were performed for plant 100% power alignments (N1, N2, N3, N4, and N5). Multiple cases were analyzed for each bus alignment. One case was with the LTC in the automatic position. …..The Analysis performed with the LTC in automatic position used an initial time delay of half a second and an operating time delay of 2 seconds."

However, neither LAR Section 3.3.3.6 nor the July 11, 2018 Supplement discussed the results (or conclusions) of the transient analysis for this scenario with LTC in the automatic position. Applicable conclusions also do not appear to be in the transient analysis conclusion section of the LAR (LAR Section 3.3.3.7).

The NRC staff requests the licensee to provide a summary of the evaluation results from the transient analysis for the plant in 100% power alignments (N1, N2, N3, N4 and N5) with the new LTCs in the automatic position for the scenario "Grid Transient – Plant Trip with Fast Bus transfer," including whether the licensee evaluation of the transient analysis identified any adverse impacts on the DGVR and the LVR setpoints and any safety equipment used for operations.