

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. 52-046

RAI No.: 408-8522
SRP Section: 08.02 – Offsite Power System
Application Section: 8.2
Date of RAI Issue: 02/17/2016

Question No. 08.02-10

By letter dated August 3, 2015, the applicant provided a response to RAI 7936, Question 08.02-2. In the response, the applicant discussed the generator circuit breaker (GCB).

Part 4 of RAI 7936, Question 08.02-2 discusses maintenance strategies for the specific type of breaker and the applicant provided general inspection and maintenance tests for a air-blast GCB. By letter dated January 15, 2016, the applicant provided a response to RAI 8104, Question 08.03-01-13, in which the onsite power system analysis technical report ARP1400-E-E-NR-14001-P (Rev. 1) provides a continuous current rating of 43 kiloamps for the main isophase bus. Considering the continuous current rating for the main isophase bus, please specify whether an air-blast or SF6 GCB will be used. Please revise the RAI response to RAI 7936, if needed, specifically the discussions on the breaker cooling system and maintenance strategies, based on the selection of the type of GCB used.

Response

In the design certification (DC) stage, there is not a specific type of generator circuit breaker (GCB) that is defined. Any type of GCB (e.g., air-blast or SF6) can be used for the actual plant, if it properly meets the technical requirements.

From the experience of the reference plant (Shin-Kori nuclear power plant Units 3 & 4), the air-blast type GCB was determined to be one type that is suitable for the GCB application in the APR1400.

The GCB model chosen in the reference plant, which has the same continuous and short-time current ratings as the APR1400 GCB, is air-blast type “PKG2T” manufactured by Alstom Grid SAS. Therefore, the response to RAI 7936, Question 08.02-2, which was made on the basis of an air-blast GCB, remains applicable and no changes to the provided response is necessary.

Impact on DCD

There is no impact on the DCD.

Impact on PRA

There is no impact on the PRA.

Impact on Technical Specifications

There is no impact on the Technical Specifications.

Impact on Technical/Topical/Environmental Reports

There is no impact on any Technical, Topical, or Environmental Report.