Paper 19: Build and optimize the electrical architecture of a 600MW H2 Electrolyzer plant

Authors: Cécile Gaudeaux (Air Liquide), Tripti Mishra (Air Liquide)

Abstract:

Hydrogen landscape is evolving and with each passing year new challenges and development opportunities are open for engineers to solve and look for optimization ways in engineering to bring down the total investment cost for electrolyser projects.

Air Liquide started 10 years ago working on Electrolysis plants selling Green H2 to industrial customers. The plant in design and construction phase were, until now, in range from 1 MW up to 200 MW.

A new challenge is now in front of us while we are working on developing a solution for a 600MW electrolysis plant.

This paper will present the different challenges faced by the process and electrical engineers to propose the best solution, economically acceptable, reliable and maintainable as per operation requirement and also compliant with the grid code.

The paper would focus on the various strategies elaborated by the team to answer all requirements.