

EUR24_26 - Multi-arrays H2 electrolysis unit - How to build the electrical architecture?

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Abstract:

Hydrogen is currently enjoying a renewed and widespread momentum in many national and international climate strategies. Many governments and companies are putting significant resources on the development of hydrogen technologies. A low-carbon hydrogen economy offers promising opportunities not only to fight climate change, but also to enhance energy security and develop local industries in many countries.

Air Liquide started working on H2 Electrolysis already few years ago and can claim to operate the largest plant in the world (20MW PEM in Canada).

This paper will present the steps to follow to design the electrical installation when going to a multi-array H2 electrolysis plant.

We will go through the parameters to be considered, the ones coming from regulation and local standards as well as the ones dictated by the operation and maintenance teams.

By increasing the size of the plant, we are reaching the capacity of the equipment available on the market and some of the principles could have to be challenged.