INP Reference

Engineering of hydrogen plant in Frenkendorf

LOCATION: Frenkendorf, Switzerland

SYSTEM/TECHNOLOGY: Hydrogen production, battery storage

SERVICES: Project management, Basic-engineering and pre-engineering, Solution development / Feasibility studies

INDUSTRY BRANCH/TYPE OF PLANT: Green Energy

CLIENT: mr H2 AG

ACTIVITY PERIOD: 2023-2024

Project description

mr h2 AG is building a hydrogen production plant to supply the existing gas station on site and consumers in the surrounding area.

A containerized electrolysis system with a capacity of approx. 1MW (18kg H2/h) is to be used. Expansion options to increase hydrogen capacity up to 6 MW has already been planned. The hydrogen produced will have a quality of 3.7. For future use, the current trailer filling system is to be modified and the maximum possible number of trailer parking spaces has to be planned. The trailers can be used as buffer storage. It should be examined whether the heat generated by the process can be used for district heating and the oxygen produced can be utilized.

The goal is to construct an electrolysis plant with storage and supply of hydrogen for the existing filling station and future trailer filling at a specified target plant price with a maximum number of full-load operating hours per year.

INP Services

INP provided the following services:

- Customer workshop to coordinate input parameters, plant size, and project goals
- Development of the process flow diagram with energy and material flows/technical parameters, including expansion options
- Process and plant planning for the entire plant, including machinery and plant engineering, electrical engineering, and control technology
- Design of the necessary components: electrolysers, hydrogen processing, H2 compressors,
- H2 transfer station at filling station, H2 storage, H2 filling stations for trailers, piping and fittings (BOP), transformers, switchgear, controls and regulations
- Design and planning of interfaces such as electrical supply, connection to the water and sewage network, connection to the heating network, connection to the filling station

POINTS OF CONTACT



Michael Ohmer
Leiter Energie- und WärmeVersorgung
INP Deutschland GmbH
Werkstraße 5
67354 Römerberg
Deutschland
Tel. +49 6232 6869-0
michael.ohmer@inp-e.com
www.inp-e.com

INP Reference

- Documentation of the design and planning
- Market research and offers from different manufacturers
- Consideration of noise protection, risk assessments, fire and explosion protection measures in planning
- Specifications for construction planning
- Support for the preparation of documents for submission to the approval authorities
- Project coordination
- Reporting
- Economic analysis and detailed cost planning