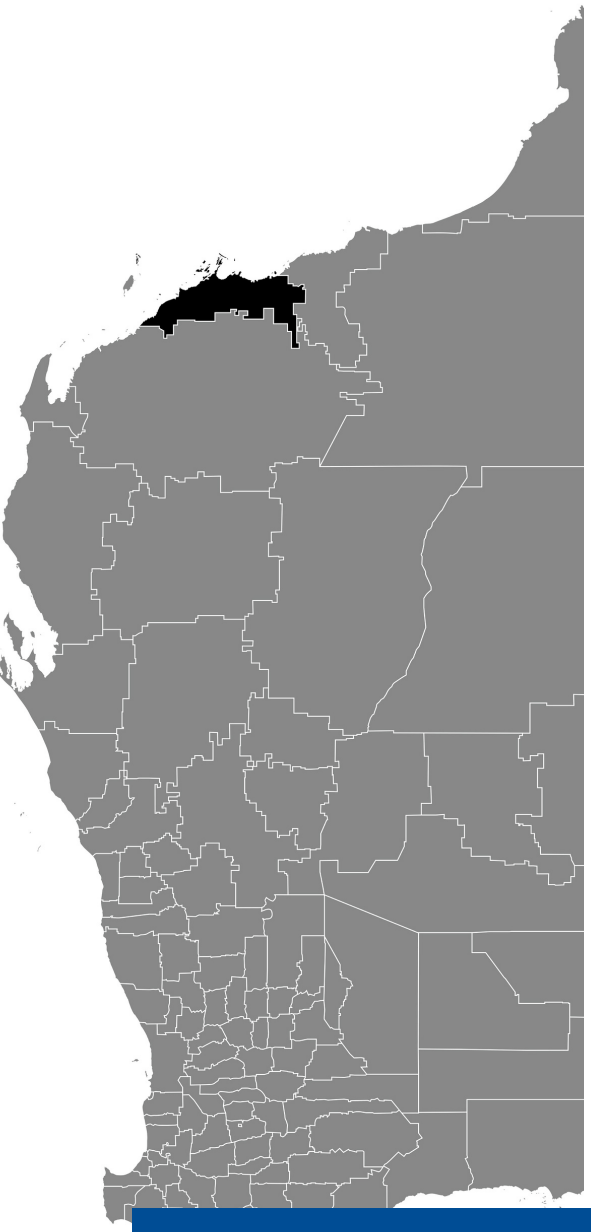

Operations are scheduled to commence in 2024, and this production of ammonia using green hydrogen will be a first for the Australian market.

Yokogawa to Provide Integrated Control System for Australian Green Hydrogen Project

First-ever use in Australia of green hydrogen as feedstock for ammonia production - plant

Yokogawa Australia has been selected by Technip Energies to provide the integrated control system for the initial phase (“phase 0”) of the YURI Green Hydrogen Project (hereafter, YURI), which will construct the largest of its kind industrial-scale renewable hydrogen production facilities in Australia.

The YURI project is being undertaken in the Pilbara region of Western Australia, by YURI Operations Pty Ltd, a joint venture between ENGIE Renewables Australia Pty Ltd and Mitsui & Co., Ltd. in partnership with Yara Clean Ammonia. Construction of these facilities is being carried out by a consortium consisting of the engineering, procurement, construction and commissioning (EPCC) companies Technip Energies and Monford Group Pty Ltd.

They will construct an 18 MW solar power plant, an 8 MW battery energy storage system (BESS), and a 10 MW electrolyzer. Using carbon-free solar energy, the facility will be able to produce up to 640 tons of green hydrogen per year.

The hydrogen will be used as a feedstock for the production of green ammonia* at an adjacent ammonia plant operated by Yara Pilbara Fertiliser Pty Ltd (YPF). YPF is a wholly owned subsidiary of Yara International ASA, which is one of the world's largest producers of nitrogen-based mineral fertilizers.

For this project, Yokogawa Australia will supply an integrated control system (ICS) centered on the Yokogawa Collaborative Information Server (CI Server). With its support of a variety of communications standards, CI Server will enable centralized management and allow rapid decision-making by integrating the handling of large amounts of data from the many different kinds of equipment in use not only at the hydrogen product facility, but also the adjacent YPF ammonia plant.

These factors and the scalability of this solution to accommodate future expansion in production facilities carried much weight in Technip Energies' evaluation of the Yokogawa Australia project proposal, as did the ability of Yokogawa Australia's Technical Excellence Center in Perth, Western Australia, to provide technical support and engineering services backed by many years of experience in providing cutting-edge solutions to a wide range of industries in Australia.

"We are excited to work with Technip Energies and our partners on this flagship green energy project. In the midst of major changes in the business environment, many companies are trying to create value by transforming existing businesses and working with new partners. For this reason, the integration of operational data between companies, not to mention between different plants, is also becoming necessary. Through the realization of the system of systems concept in this project, Yokogawa will provide value to that end. With our core competence in measuring and connecting, we will help to widen the use of new energy resources such as hydrogen and ammonia."

Koji Nakaoka, Yokogawa vice president and head of the company's Energy & Sustainability Business Headquarters & Global Sales Headquarters

*Ammonia produced by synthesizing nitrogen and green hydrogen that has been produced using carbon-free renewable energy.

The project shares knowledge on the effectiveness of the development, construction and operation of a first of a kind renewable hydrogen production plant in Australia, and its integration with an ammonia plant.