

Engineering consultant services

Feasibility Study for Solar Green H2 Park



Location

South Africa



Client

EMVELO



Expertise

Bankable Feasibility Study,
H2

Our services



RWETI conducted a pre-feasibility study and was retained to undertake a detailed bankable feasibility study report focusing on the following:

- Review of hydrogen technologies
- Conceptual design of electrolyser plant with auxiliaries
- Conceptual arrangement plant
- Operating concept
- Potential hydrogen utilisation and off-take
- Hydrogen storage and transport concepts

Project description

After a successful implementation of the 100 MW Ilanga CSP1 Solar Plant with integrated molten-salt storage facility near Upington, South Africa, EMVELO planned to develop the 2.000 MW Upilanga Solar Park to produce “green electricity”.

In connection with these plans, EMVELO also investigated using part of the green electricity to produce green hydrogen on-site for local use and/or international export.



In a first step RWE Technology International prepared a pre-feasibility study, evaluating the technical and economic parameters on a high level. Based on these results, EMVELO could secure further financing. In the next step, a deep dive into the project was conducted by the elaboration of a detailed bankable feasibility study.

This study investigates the technical feasibility of a 100 MW electrolyser facility and discusses the most suitable electrolyser technology, the required auxiliary facilities and the interaction with a variable renewable electricity source. It also indicates the expected output and sketches out different usage and transport options for hydrogen. The latter also includes such important aspects as the development of local hydrogen off-take and a hydrogen transport infrastructure in coordination with potential anchor clients.

