

MODULAR GREEN HYDROGEN DESIGN for Atmospheric & Pressurised Alkaline Electrolysers

Bechtel is a trusted engineering, construction and project management partner to industry and government. For more than 125 years, extraordinary teams at Bechtel have been bringing to life inspiring projects, building a legacy of leadership, innovation, and progress.

Full Scope of Services

Bechtel offers full end-to-end delivery services for our projects, from initial conceptual studies and masterplans, through feasibility, FEED stages of engineering, EPC delivery, commissioning, and start-up.

Scalable, Modular Green Hydrogen Designs

Bechtel has developed two 500MW scalable modular green hydrogen designs for pressurised and atmospheric alkaline electrolysers, along with options for PEM and liquefaction. The modular green hydrogen designs include electrical systems, electrolyser technology, compression and gas conditioning.

The modular pressurised and atmospheric alkaline electrolyser designs have been developed to be easily scalable for either smaller or larger projects. These modular designs allow easy scale up for GW-scale projects or down to 100 MW projects by using repeatable pre-engineered blocks.



Technology

Bechtel is technology neutral; our approach is to evaluate technologies objectively and to recommend those that reflect a project's specific requirements. This also means that we can work with clients preferred suppliers.

Leveraging EPC Insights and Constructability into Every Stage

Our highly experienced construction team has applied lessons learned from many projects to support constructability of the two modular designs. Bechtel also offers class-leading safety as part of design and construction.



Quality of Cost Estimate

Our approach to estimating relies on proven in-house developed estimating tools, fed by our database of equipment and bulk materials purchase orders, and market pricing analysis, supported by tried and tested estimating procedures. Combined with our modular atmospheric and pressurised alkaline electrolyser designs, Bechtel can provide clients with high-quality cost estimates quickly and efficiently.

Summary of Benefits

- Accelerated engineering
- Reduced engineering cost
- Modular and scalable design
- Easily adapted to each electrolyser suppliers design
- Pre-evaluated technologies and package vendors:
 - Electrical systems
 - Electrolyser technology
 - Compression
 - Gas conditioning
- Supports early procurement activities
- Constructability
- Better certainty for the total installed cost





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