

Green Ammonia

Move Forward with Confidence

CB&I is the world's leading designer and builder of tanks and storage facilities, including marine loading and unloading terminals. Owners and developers count on us to deliver solutions for the most complex low temperature and cryogenic storage infrastructure projects.

59,000+

Storage Structures Built

130+

Years Experience

25+

Locations Worldwide

100+

Countries Served

CB&I's project delivery model and six decades of ammonia experience help our customers de-risk challenging projects. Our engineers create cost effective, custom designs, procurement leverages our global supply chain and construction ensures on-time and safe project delivery. The search is over for your next green ammonia storage and terminal facility partner.

With CB&I, you can move forward with confidence.

Green Hydrogen to Ammonia Production

As owners and developers advance the energy transition and explore green hydrogen production, CB&I is uniquely positioned to leverage our experience with high pressure storage, low temperature and cryogenic storage, and associated hydrogen and gas handling systems to create hydrogen production and handling facility solutions for our customers.

Ammonia plays a key role in the energy transition with green hydrogen to ammonia production, a medium for bulk hydrogen transport, or directly as a fuel for power generation. CB&I has been designing and building ammonia storage solutions since 1956 and is best positioned to develop plans for your next green ammonia terminal.

Unique Challenges of Ammonia

Ammonia has specific chemical and physical properties that require special attention when designing and building ammonia storage and terminals. Preventing stress corrosion cracking (SCC) is one of the greatest challenges associated with building and maintaining ammonia storage tanks. Our in-house Welding Technology group specializes in welding engineering, metallurgical analysis, heat treatment, non-destructive examination and specialized training.

Through ongoing research, CB&I has developed ammonia-specific material requirements and proprietary welding techniques that minimize the risk of SCC. By selecting CB&I, you can expect best-in-class quality, material properties, and construction methods for your green ammonia storage facility.

Reducing Time to Market

Our phased contracting approach to green ammonia storage and terminal facilities supports direct partnership with our customers to develop the project scope from early concept through procurement and construction. It also adds additional flexibility for our customers to progress their project at a pace that is best suited for their needs.

Owners striving to meet aggressive decarbonization goals with green ammonia can take advantage of our fast tracked, phased execution plan to minimize the time from contract award to commissioning as much as possible. Alternatively, we can evaluate projects on a more methodical approach, progressing on a stage-by-stage basis before committing to a full EPC.

However you approach your project, CB&I de-risks ammonia project with our unique project delivery model.

Phase 1 Pre-FEED

Early engagement and preliminary design activities:

- Technology evaluation & selection
- Equipment selection
- Basis of design specification
- Preliminary facility plot plan
- Equipment list
- Preliminary process flow diagram
- Permitting support
- Budget pricing

Phase 2 FEED

Optimization of baseline design to achieve project execution and plant performance targets:

- Piping & instrumentation diagrams
- Electrical one-line diagram
- Control system architecture
- Equipment specifications & data sheets
- Firming facility plot plan
- Procurement of long lead equipment, e.g. electrolyzers
- Firm EPC pricing

Phase 3 EPC

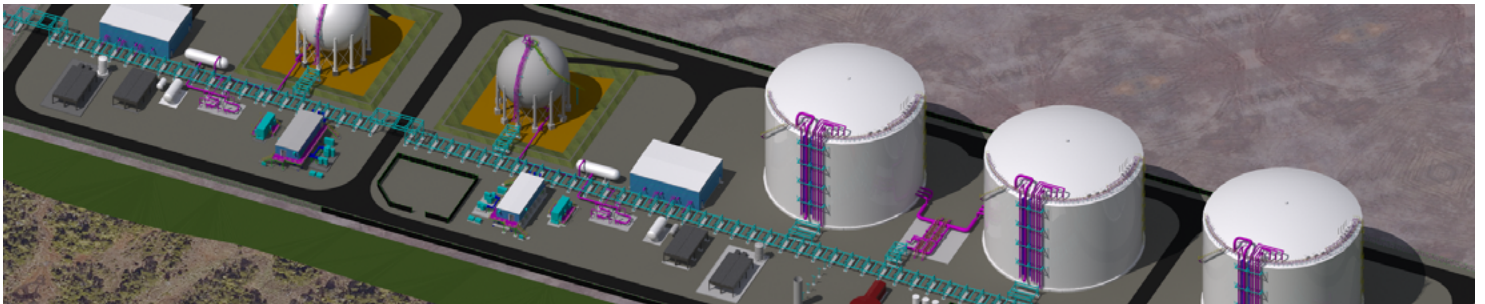
End-to-end responsibility from engineering through commissioning, performance testing and startup:

- Detail engineering
- Remaining material procurement
- Construction
- Project management
- Site management
- Commissioning, start-up, & operator training provided upon request

Regardless of specific circumstances for each project, our phased contracting approach ensures that valuable engineering ideas are incorporated early, costs and risks are minimized, long-lead equipment is secured and the overall development and EPC schedule is compressed.

Delivering Cost & Schedule Certainty

CB&I has a longstanding reputation for on-time and cost-effective project delivery. We self-execute as much of the project scope as possible to control the schedule, reduce risk and improve efficiencies. From concept to commissioning, we plan our execution and then execute our plan to provide schedule and cost certainty for our customers.



Houston, TX

915 N. Eldridge Parkway
Houston, TX 77079
USA
Tel: +1 832 513-4000

Dubai, UAE

6th Floor, Convention Tower
Dubai World Trade Center
Dubai, UAE
+971 50 628-8714



www.cbi.com