



Biogas & RNG Production Facilities

Move Forward with Confidence

CB&I is the world's leading designer and builder of tanks and storage facilities. Owners and developers count on us to deliver solutions for the most complex biogas and renewable natural gas (RNG) infrastructure projects.

60,000+

135+

25+

100+

Storage Structures Built

Years Experience

Locations Worldwide

Countries Served

CB&l's project delivery model and six decades of anerobic digestion 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 biogas production facility partner.

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

A Rich History in Gas Production & Utilization

As owners and developers look to pursue waste-to-energy initiatives, CB&I is uniquely positioned to leverage our experience with anaerobic digestion, low and high pressure gas storage, natural gas processing and handling systems, and gas utilization via combined heat and power systems (CHP) to design biogas production facilities for our customers.

Wastewater treatment facilities across North America have utilized CB&l's Egg Shaped Digesters (ESDs) in conjunction with our low and high pressure gasholders to capture methane from the sewage treatment process for decades. That biogas has been used to generate heat, electricity and most recently, renewable natural gas (RNG).

We leverage our in-house anerobic digestion technology to oversee the entire digestion process from design to commissioning. Our team works across the entire landscape of biogas infrastructure development, helping our customers achieve EPC solutions that include biogas generation, storage, upgrading of gas quality and utilization. Custom facility configurations can be developed to suit the needs of any facility.



A Tailored Approach for a Dynamic Market

Our phased contracting approach to gas utilization 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 alternative energy generation and utilization goals 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.

With either method of contracting, CB&I helps to reduce the project risk with a proven 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 & lifecycle analysis

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 delivery and on-budget execution. 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 worldwide.



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