

# The Benefits

## Project Management

Turn your goals into a definitive plan of action and execute that plan, following proven proprietary methodology to keep projects on track and within budget. Identify project objectives and successful criteria. Define individual tasks and ownership. Our project engineers work closely with you to align the project with your business strategy, define project goals, and establish successful criteria.

## Manufacturing Flexibility

MCR prides itself on our ability to manufacture over 75% of our biogas equipment onshore. You have project requirements, and we realize

that off-the-shelf products just won't do. Manufacturing flexibility and creativity are key components to our success. We unite engineers with our equipment manufacturing team and with our procurement team for a seamless integration.

## Support & Manage

Creating reliable and efficient energy solutions is important to your double bottom line. MCR can regularly maintain and support your project to meet optimum performance standards. MCR measures system productivity and performance metrics, and tracks trends.

# The Process

The initial steps taken toward site development will involve the compilation of a Basis of Design Document, which is presented to the site owner for approval. After the client signs the Basis of Design Document, MCR proceeds with the site layout and structural drawings. Upon engineer review and approval of the structural drawings, the mechanical and electrical drawings are completed.

Site preparation in the form of earthwork is conducted while the materials and equipment are on order. Construction continues upon receipt of materials and equipment on site.

Installation proceeding during the construction phase includes field piping, digester piping, biogas flare, digester pumps, digester electrical, generator and piping, hot water system, gas piping, gas-scrubbing equipment, utility building and electrical, and the separator system.

Our services also include startup, digester operations, troubleshooting, training, and comprehensive after-sales support.



## Turnkey General Contracting services for your Construction Design of Digester or RNG Upgrader Project

We offer anaerobic digester solutions, RNG upgrading systems including consultation, engineering, procurement, and construction. Our digesters are built with proven technology and backed by 30 years of experience and hundreds of successful biogas projects worldwide.

Project services also include startup, digester operations, troubleshooting, training, and warranty support.

### SERVICES

#### Design & Construction

- Turnkey projects:
  - \* Engineering
  - \* Procurement
  - \* Construction
  - \* Startup and commissioning
- Design plans à la carte (includes one-time licensing fee)
- Equipment procurement à la carte

#### Pre-Construction Services

- Estimates of costs
- Prepare project schedules
- Oversee site planning
- Perform an analysis of construction logistics
- Identify long-lead items
- Procure permitting
- Submit interconnection applications, and more

#### Support

- Maintenance
- Management
- Training
- Remote Monitoring

### PRODUCTS & APPLICATIONS

#### Generating, Reliable, Clean Energy

- RNG Systems
- CHP Systems
  - \* Island Mode
  - \* Grid Interconnection
- Anaerobic Digesters
  - \* Animal Waste
  - \* Food Waste
- Biogas Flares
- Digester Pumps
- Manure Separator Systems
- Gas Scrubbers
- Controls
- Gas Chillers
- Waste Water Treatment Plants
- Dairies
- Landfills
- Food Processing Facilities
- and more...



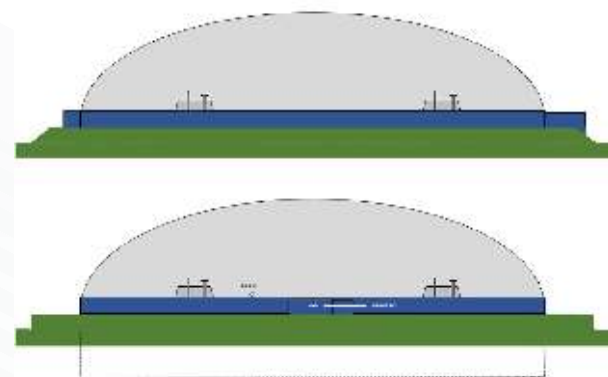


Martin Energy Group and Martin Construction Resource knew there was a better Digester. The problem, it had not been designed yet. By working as a united team we were able to Design and Build.

## Why the EM-21 digester stands out above the rest

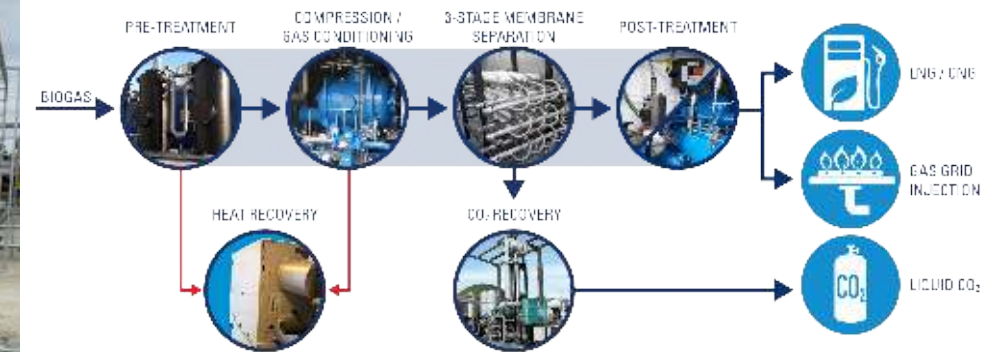
- 1) In-ground – safe, easy maintenance and clean out
- 2) Cleanout without removing the cover!!!
- 3) Enables easy crust control if needed
- 4) Easily change mixer props with through roof hatches
- 5) Flexible, double-membrane cover
- 6) Proven heating coil system – no external heating years later

- Performance
- Maintenance
- Safety
- Cost Effectiveness



## RNG Upgraders: Creating biomethane out of biogas

Bright Biomethane system uses Triple Pass Membrane Technology to separate methane from biogas.



Source: [bright-renewables.com/technology-biogas-upgrading/](http://bright-renewables.com/technology-biogas-upgrading/)

### Technology

In the membrane unit, the gas is separated by means of an imposed pressure difference over the membrane. Two gas streams will be obtained from the plant; a product gas, with a high methane value, and a CO<sub>2</sub>-rich gas. As a result of highly selective membranes and the recuperation of methane, the highest possible methane yield can be achieved. Depending on the application the gas can be upgraded to the preferred methane value.

### Application

One of the applications is to inject the obtained gas into a national gas grid. It can also be used as transportation fuel (CNG/LNG) for vehicles. In both applications the patented 3 stage separation process ensures that the gas meets the requirements for a specific application. The residual heat and the CO<sub>2</sub> can also be utilized. A special heat recovery system can be installed to produce high temperature water and CO<sub>2</sub> may be recovered and liquefied to provide an additional value stream.

