

# **Liquefaction Plants**

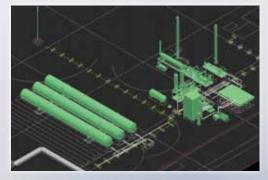








Chart brazed aluminum heat exchangers (BAHX) offer improved thermal performance and operating efficiency versus coil wound heat exchangers (CWHE)

#### ECONOMY

- Reduced capital cost
- Compact design 300 to 1000m<sup>2</sup>/m<sup>3</sup> heat transfer surface area for BAHX vs. 50 to 150m<sup>2</sup>/m<sup>3</sup> for CWHE
- Modular construction
- Maximized shop fabrication for reduced installation costs and schedule
- BAHX are proven for smallscale, mid-scale and baseload LNG liquefaction plants

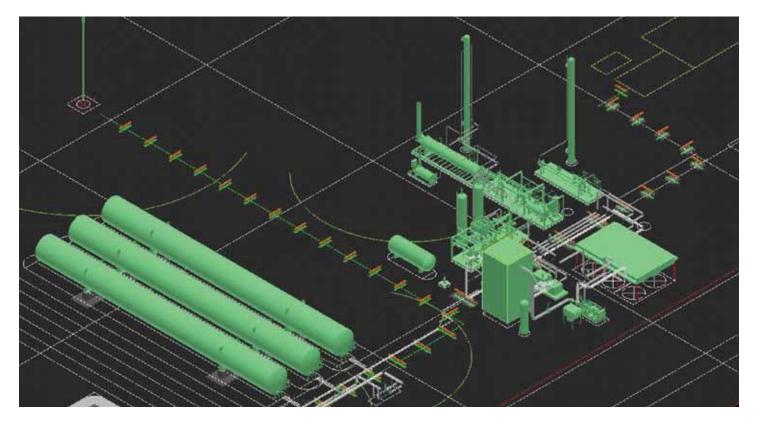


#### EFFICIENCY

- Superior thermal performance
- High thermodynamic efficiency
- Close approach temperatures
- Multi-stream capability
- High pressure permitted on ALL streams
- Simplified start-up



# LNG standard plant solutions for monetizing small scale gas reserves



C100N – 100,000 gallons per day (165 tons per day) liquefaction capacity
C250IMR – 250,000 gallons per day (400 tons per day) liquefaction capacity
C450IMR – 450,000 gallons per day (725 tons per day) liquefaction capacity

- Chart scope includes all equipment required to liquefy pipeline quality natural gas
- Plants can incorporate 'bolt on' modules to handle gas pre-treatment, nitrogen rejection and natural gas liquids (NGL) recovery for a variety of different raw gas compositions
- All plants feature Chart brazed aluminum heat exchangers for improved thermal performance and operating efficiency
- Chart proprietary liquefaction process technology Nitrogen Cycle for C100N and IPSMR<sup>®</sup> for C250IMR and C450IMR
- Key equipment, comprising heat exchangers, cold box and storage tanks, is designed and manufactured in-house

### Lower Capital Cost + Faster Construction + Faster LNG to Market = Increased Profitability

- Standardized 'off the shelf' designs
- Maximized shop fabrication, minimized field construction
- Proven technology, minimal (re) engineering
- Simple plant operation
- Reduced maintenance downtime
- Flexibility to add capacity by incorporating additional LNG trains

## Applications

Driven by the 3E Parameters – Economy, Efficiency & Energy Independence – LNG is a key part of the energy future

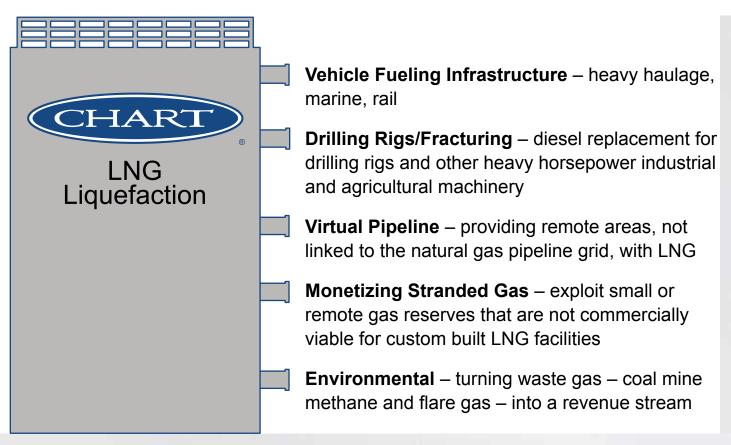
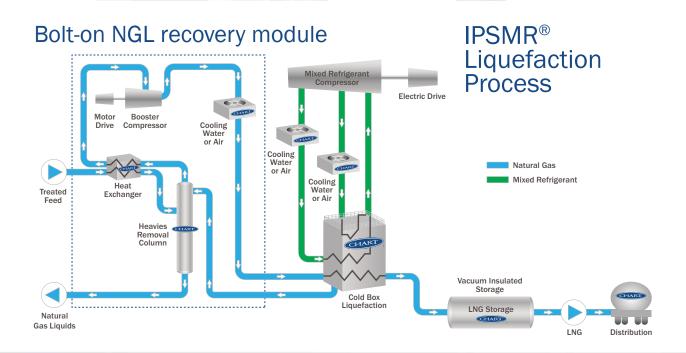


Chart standard LNG plants provide customers with a cost efficient, safe alternative to diesel and other distillate fuels.

## Engineering, Procurement, Fabrication

A Chart standard LNG plant is a package solution comprising process technology, detailed mechanical design, Chart manufactured proprietary equipment and other specialized capital equipment.

This focused, yet flexible, EPF model perfectly positions Chart to operate across the supply chain as the company of choice for owners, operators, end-users and EPC contractors alike.



#### Typical custom build LNG plant schedule





## \_iquefaction Plants

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