

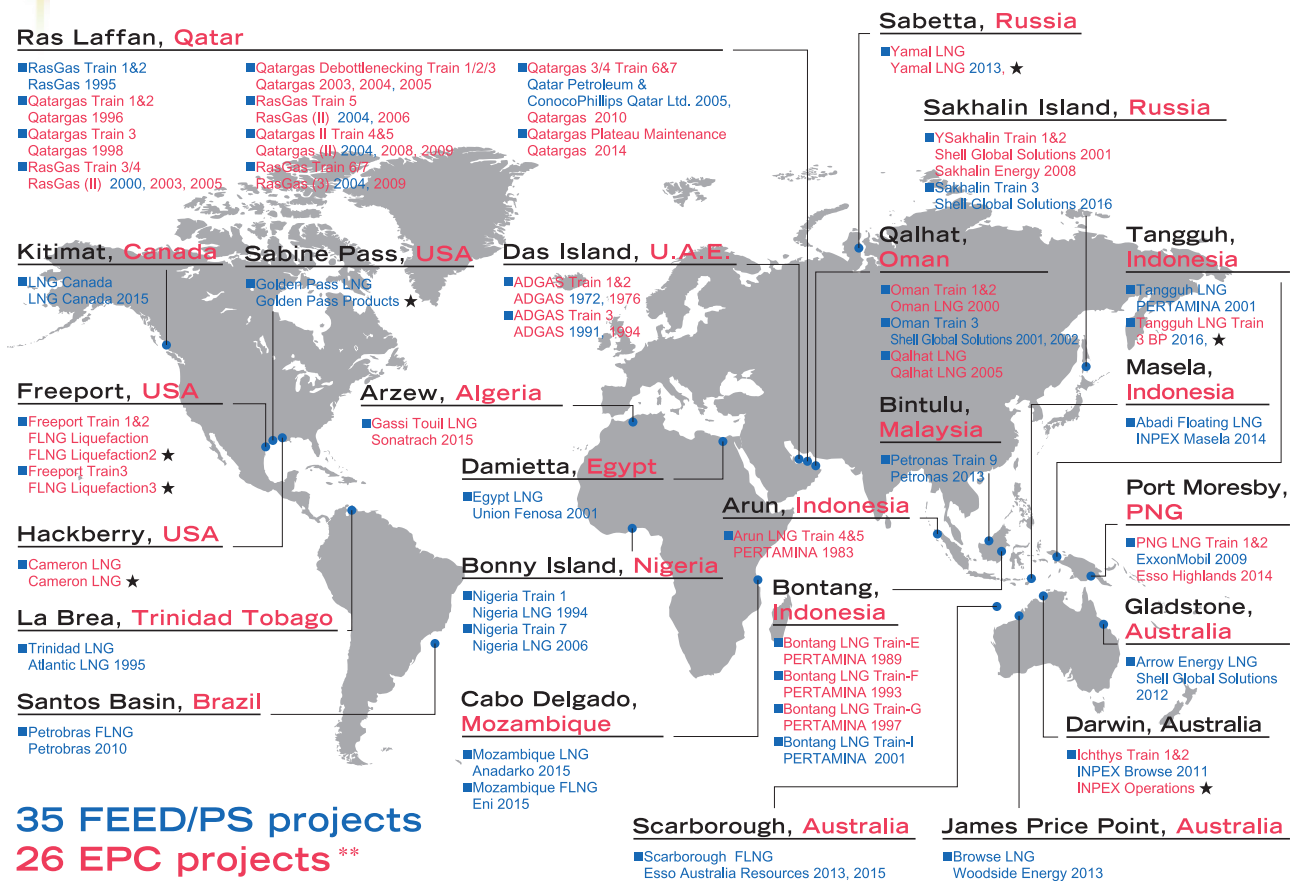
3+1 Benefits

- Fast Production**
- Low Investment Cost**
- One Team Operation**

CHIYODA GROUP Expertise

- Single responsibility (Pre-EPC~EPC~O&M)
- Wide business area (upstream~downstream)
- Reliable plant start up
- Continuous support and collaboration with clients

LNG Project Experiences



CHIYODA Small-Scale LNG

Standardized Design & Integration Approach



CHIYODA CORPORATION

Minato Mirai Grand Central Tower
4-6-2, Minatomirai, Nishi-ku, Yokohama
220-8765, Japan

www.chiyoda-corp.com



FTSE4Good

Selected in the FTSE4Good index series
(As of March, 2017)

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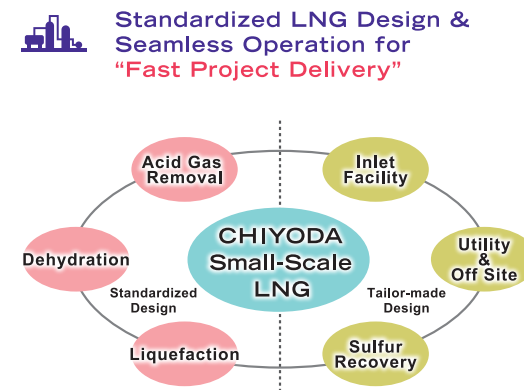


CHIYODA SMALL-SCALE LNG CONCEPTS

Fast Production

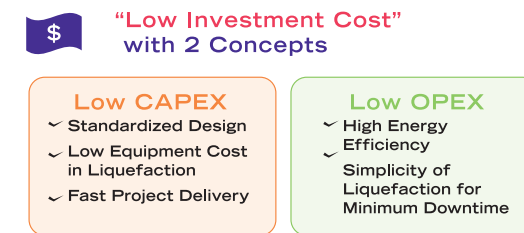
LNG projects include many stages and long design, procurement, and construction periods. Recovering investments in shorter time scale is always crucial for investors. CHIYODA Small-Scale LNG can deliver faster LNG production, contribute to **shorten payback period**, and **improve investor returns**.

- » Seamless Pre-EPC & EPC
- » Standardized Design
- » Modularized Design



Low Investment Cost

LNG business needs **massive investment** for engineering, construction, and operation. CHIYODA Small-Scale LNG offers lower CAPEX and OPEX with optimized design methodologies that provide new opportunities for new investors in small scale LNG business. The key is to reduce initial investment cost to achieve project viability.



One Team Operation

Chiyoda group has single responsibility from the initial to final stage of projects. A key factor for realizing successful project completion is to form "Seamless Operation with One Team" together with the clients to minimize project cost and optimize the schedule.



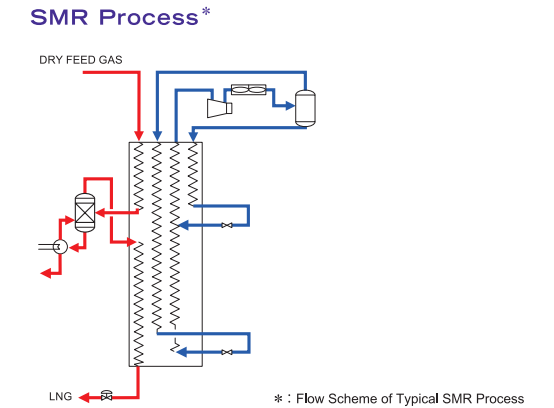
LIQUEFACTION PROCESS SELECTION

CHIYODA Small-Scale LNG can apply either single mixed refrigerant or the CHIYODA Advanced N₂ Cycle to its liquefaction process to maximize project economics.

Single Mixed Refrigerant Process

Single mixed refrigerant (SMR) contributes to efficient and adaptable operation appropriate for base load production.

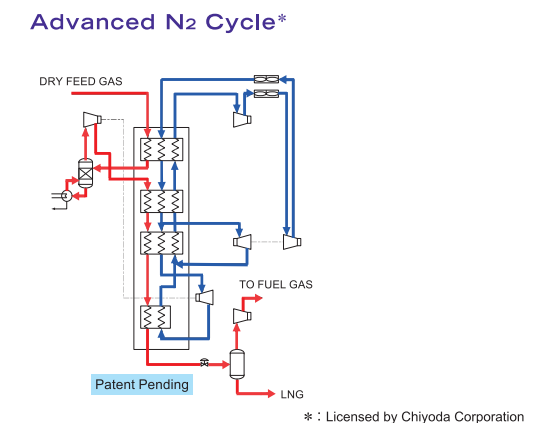
- » Higher Energy Efficiency Achieved by Mixed Refrigerant
- » Flexibility in Operation
- » Low CAPEX with Cold Box Application and Minimum Equipment
- » Suitable for On-Shore / Off-Shore Application



CHIYODA Advanced N₂ Cycle

CHIYODA Advanced N₂ Cycle offers **simple and efficient operation** suitable for compact plant with production under 0.3 MTPA.

- » Simpler and Faster Start-up
- » Readily Available Refrigerant
- » Inherently Safe Plant
- » Approximate 10% improvement in Energy Efficiency Compared to Generic N₂ cycles
- » Suitable for On-Shore / Off-Shore Application



SMALL-SCALE GAS & LNG VALUE CHAIN DEVELOPMENT WITH CHIYODA GROUP

Chiyoda group provides full support to clients for the entire LNG business value chain - upstream field development, LNG plant, LNG receiving terminals, regasification and power generation facilities.

