

Global LNG Technology Insights and Evaluation – Small LNG Trains Regain Momentum

<https://marketpublishers.com/r/G6C8CDCFFEEEN.html>

Date: June 2012

Pages: 84

Price: US\$ 3,500.00 (Single User License)

ID: G6C8CDCFFEEEN

Abstracts

Global LNG Technology Insights and Evaluation from LNGReports is a complete report on liquefaction technologies. The report provides all the technical and commercial aspects of developing a liquefaction terminal. Recent trends in liquefaction technology along with industry outlook are covered. Various technology providers available along with their technologies, operational and planned projects are provided. Further, all key components in development of liquefaction process are detailed. Leading constructor profiles are discussed in detail. Further, current status, feasibility and capital investment details are included for all planned LNG terminals. Latest technology trends and recent developments are also provided in the report.

Research Highlights

Global LNG Supply to increase at a compounded annual growth rate of 5.9% over the decade

LNG industry scope widening rapidly with 38 new liquefaction terminals scheduled for operation by 2020

Against the historic trend, demand for small sized trains will be constructed between 2015 and 2020

Over 68% of liquefaction terminals are developed through Air Products' technologies including SMR, C3MR, SplitMR and AP-X technologies

APCI-C3MR dominates the global liquefaction industry based on its proven

technology, high efficiency and simple process

New technologies including APCI DMR, Chart Energy & Chemicals Inc - IPSMR, LNG Limited - OSMR and Shell PMR continue to emerge to meet specific terminal requirements

An increasing number of constructors prefer ConocoPhillips Optimized cascade process

Global LNG capital investments to witness strong growth with Asia Pacific leading the way

Scope

Liquefaction technology trends and outlook to 2020

Evaluation of all available base load liquefaction technologies

Black & Veatch's PRICO, APCI (SMR, C3MR, SplitMR, Ap-X, DMR), ConocoPhillips Optimized Cascade Process, Linde MFC, LNG Limited- OSMR, Shell (C3MR, DMR, PMR) processes are evaluated

Dominant technologies by geography, train size, investment and period of construction

Basic understanding of Liquefaction Process- Overview, liquefaction cycles, components (heat exchangers, acid removal unit, dehydration, mercury removal, fractionation, storage tank)

Operational and Planned LNG projects- technology, train size, capacity and capex details

All available Small Scale LNG technology providers are compared

Business Profiles of Leading Constructors along with their projects and contacts are provided

Global LNG supply and demand forecast to 2020

LNG Capital investment forecasts by year and geography, type to 2015 are included

Reasons To Purchase

Gain understanding of the entire liquefaction terminal construction process

Evaluate all available technologies and providers through comparison of their processes, projects and costs

Design your preferred technology by comparing with other terminals in similar geographies, train sizes and macro environmental conditions

Identify potential opportunities of providing technology through information on planned terminals

Keep informed of upcoming liquefaction technologies that can impact the current business environment

Design your future strategies with LNG industry outlook, upcoming markets, capex and supply-demand forecasts

Keep updated with the latest trends and recent developments in liquefaction technologies

Contents

1 TABLE OF CONTENTS

- 1.1 List of Tables
- 1.2 List of Figures

2 GLOBAL LNG OUTLOOK TO 2020- TECHNOLOGY AND MARKET PERSPECTIVE

- 2.1 Role of Liquefaction Technology in Current LNG Market Conditions
 - 2.1.1 Liquefaction Unit Accounts for 30-40% of Total Plant Capital Cost
- 2.2 Liquefaction Process Overview
 - 2.2.1 Liquefaction process block diagram
 - 2.2.2 Acid Gas Removal Unit
 - 2.2.3 Dehydration and Mercury Removal Unit
 - 2.2.4 Liquefaction and Fractionation
 - 2.2.5 LNG Storage Tank
- 2.3 Global LNG Capital Expenditure Forecast, 2011- 2016
 - 2.3.1 LNG Capex Forecast by Region, 2011- 2015
 - 2.3.2 LNG Capex Forecast by Type, 2011- 2015
- 2.4 Emerging LNG suppliers and buyers globally
- 2.5 LNG Capacity Forecast by Country, 2011- 2020
 - 2.5.1 LNG Liquefaction Capacity Forecast by Country, 2011- 2020
 - 2.5.2 LNG Regasification Capacity Forecast by Country, 2011- 2020
- 2.6 Global LNG Supply and Demand Outlook, 2011- 2020
 - 2.6.1 LNG Supply Forecast by Country, 2011- 2020
 - 2.6.2 LNG Demand Forecast by Country, 2011- 2020

3 LIQUEFACTION TECHNOLOGY TRENDS TO 2020

- 3.1 Demand for Small sized Liquefaction Trains Remains Robust over the Decade
- 3.2 Over 68% of liquefaction terminals are developed through Air Products' technologies
- 3.3 APCI- C3 MR Process Accounts for over 51% of Global LNG Capacity
- 3.4 New LNG Plant Builders Prefer ConocoPhillips Optimized Cascade Process
- 3.5 New Technologies Continue to Emerge to Cater Emerging LNG Markets Globally
- 3.6 ConocoPhillips Process Dominates in American Markets
 - 3.6.1 Dominant LNG Technologies in Americas
 - 3.6.2 Dominant LNG Technologies in Africa

- 3.6.3 Dominant Technologies in Asia Pacific
- 3.6.4 Dominant Technologies in Europe
- 3.6.5 Dominant Technologies in Middle East
- 3.7 Development of new plants in diversified geographies Pose Tough Challenges for Constructors
- 3.8 Of 156 Trains in 2020, 97 Terminals will be of APCI Technologies

4 INSIGHTS INTO LIQUEFACTION TECHNOLOGIES

- 4.1 Main Components in Liquefaction Unit
 - 4.1.1 Compressors and Condensers
 - 4.1.2 Compressor Drivers
 - 4.1.3 Heat Exchangers
 - 4.1.4 Refrigerant
- 4.2 Basic Liquefaction Process
- 4.3 Liquefaction Cycles
- 4.4 Key Liquefaction Technologies

5 GLOBAL LNG PROCESSES AND OPERATIONAL DETAILS

- 5.1 Black and Veatch's PRICO Process and Terminals
 - 5.1.1 PRICO Process Description
 - 5.1.2 Terminals Constructed Using PRICO Process
- 5.2 APCI- SMR Liquefaction Process and Terminals
 - 5.2.1 APCI- SMR Process Description
 - 5.2.2 Terminals Constructed Using APCI- SMR Process
- 5.3 APCI- DMR Liquefaction Process and Terminals
 - 5.3.1 APCI- DMR Process Description
 - 5.3.2 Terminals Constructed Using APCI- DMR Process
- 5.4 APCI- C3MR Liquefaction Process and Terminals
 - 5.4.1 APCI- C3MR Process Description
 - 5.4.2 Terminals Constructed Using APCI- C3MR Process
- 5.5 APCI- C3MR/ SplitMR Liquefaction Process and Terminals
 - 5.5.1 APCI- C3MR/ SplitMR Process Description
 - 5.5.2 Terminals Constructed Using APCI- SplitMR Process
- 5.6 AP-X Liquefaction Process and Terminals
 - 5.6.1 AP-X Process Description
 - 5.6.2 Terminals Constructed Using AP- X Process
- 5.7 ConocoPhillips Optimized Cascade Process and Terminals

- 5.7.1 ConocoPhillips Optimized Cascade Process Description
- 5.7.2 Terminals Constructed Using ConocoPhillips Optimized Cascade Process
- 5.8 Linde MFC Liquefaction Process and Terminals
 - 5.8.1 Linde MFC Liquefaction Process Description
 - 5.8.2 Terminals Constructed Using Linde MFC Process
- 5.9 LNG Limited- OSMR Liquefaction Process and Terminals
 - 5.9.1 LNG Limited- OSMR Liquefaction Process Description
 - 5.9.2 Terminals Constructed Using LNG Limited- OSMR Process
- 5.10 Shell Liquefaction Processes- C3 MR, DMR, PMR and Terminals
 - 5.10.1 Shell Liquefaction Processes Description
 - 5.10.2 Terminals Constructed Using Shell Liquefaction Technologies

6 SCOPE AND EVALUATION OF VARIOUS LIQUEFACTION TECHNOLOGIES

- 6.1 Comparison of Global Liquefaction Technology Providers
- 6.2 Comparison of Global Liquefaction Technology by Capacity
- 6.3 Comparison of Global Liquefaction Technology by Train Size
- 6.4 Comparison of Global Liquefaction Technology by Region

7 GLOBAL PLANNED LNG PROJECTS- TECHNOLOGY AND INVESTMENT DETAILS

- 7.1 Asia Pacific Planned Projects - Constructor, Technology, Capex and Current Status
- 7.2 Europe Planned Projects - Constructor, Technology, Capex and Current Status
- 7.3 Middle East Africa Planned Projects - Constructor, Technology, Capex and Current Status
- 7.4 Americas Planned Projects - Constructor, Technology, Capex and Current Status

8 LEADING LNG CONSTRUCTION CONTRACTORS

- 8.1 Technip
 - 8.1.1 Technip- Quick facts
 - 8.1.2 Technip- Business Segments
 - 8.1.3 Technip- Liquefaction Projects
 - 8.1.4 Technip- FLNG Construction Contracts
 - 8.1.5 Technip Contact Information
- 8.2 Chiyoda Corporation
 - 8.2.1 Chiyoda Corporation- Quick Facts
 - 8.2.2 Chiyoda Corporation- Business Segments

8.2.3 Major projects in progress

8.2.4 Chiyoda Corporation- Contact Information

8.3 Bechtel Corporation

8.3.1 Bechtel Corporation- Quick Facts

8.3.2 Bechtel Corporation- Major Projects Accomplished

8.3.3 Bechtel Corporation- Ongoing Projects

8.3.4 Bechtel Corporation- Contact Information

9 LATEST TECHNOLOGY TRENDS AND NEWS

9.1 FMC Technologies Awarded Prelude FLNG contract - 15 May, 2012

9.2 Siemens awarded long-term service agreement for Santos GLNG - 10 May, 2012

9.3 GDF Suez Inks Deal with Cameron LNG – 3 May, 2012

9.4 Chart to supply equipment to an LNG project in Eastern Australia – 26 April, 2012

9.5 Black & Veatch selected for a major LNG liquefaction project in China – 24 April, 2012

9.6 Air Products to supply LNG technology to Ichthys LNG – 24 April, 2012

10 APPENDIX

10.1 LNG Supply Chain Analysis

10.1.1 Introduction to LNG

10.1.2 Typical LNG Components

10.1.3 Upstream

10.1.4 Liquefaction

10.1.5 Regasification

10.1.6 Storage & Transportation

10.2 Abbreviations

10.3 LNG Conversions

10.4 Sources and Methodology

10.5 About LNGReports

10.6 Disclaimer

List Of Tables

LIST OF TABLES

Table 1: Typical Liquefaction Plant Capital cost Break Up (%)
Table 2: Global Planned LNG Capex Forecast by Region, \$billion, 2011- 2015
Table 3: Global Planned LNG Capex Forecast by Type, \$billion, 2011- 2015
Table 4: Emerging LNG Sellers and Buyers, 2012- 2020
Table 5: Global LNG Liquefaction Capacity Forecast by Country, mtpa, 2011- 2020
Table 6: Global LNG Regasification Capacity Forecast by Country, mtpa, 2011- 2020
Table 7: Global LNG Supply Forecast by Country, million tonnes, 2011- 2020
Table 8: Global LNG Demand Forecast by Country, million tonnes, 2011- 2020
Table 9: LNG Technology wise Liquefaction Capacity, 2011
Table 10: LNG Technologies of Planned Terminals
Table 11: LNG Technology Wise Planned Capacity, 2012- 2020
Table 12: Type of Heat Exchangers Used in Different Liquefaction Technologies
Table 13: PRICO Process- Liquefaction Terminals
Table 14: APCI- SMR Process- Liquefaction Terminals
Table 15: APCI- DMR Process- Liquefaction Terminals
Table 16: APCI- C3MR Process- Liquefaction Terminals
Table 17: APCI- SplitMR Process- Liquefaction Terminals
Table 18: AP- X Process- Liquefaction Terminals
Table 19: ConocoPhillips Optimized Cascade - Liquefaction Terminals
Table 20: Linde MFC Process- Liquefaction Terminals
Table 21: LNG Limited- OSMR Process- Liquefaction Terminals
Table 22: Shell LNG Technologies- Liquefaction Terminals
Table 23: Comparison of Global Liquefaction Technology Providers - Base load
Table 24: Comparison of Global Liquefaction Technology Providers – Small Scale
Table 25: Leading Technology Providers- Processes, Trains and Capacity, 2020
Table 26: Comparison of Global Liquefaction Technology by Region
Table 27: Asia Pacific Planned LNG Terminals- Technical and Construction Details-I
Table 28: Asia Pacific Planned LNG Terminals- Technical and Construction Details-- II
Table 29: Europe Planned LNG Terminals- Technical and Construction Details
Table 30: Middle East Africa Planned LNG Terminals- Technical and Construction Details
Table 31: Americas Planned LNG Terminals- Technical and Construction Details

List Of Figures

LIST OF FIGURES

Figure 1: LNG Process Flow Diagram
Figure 2: Typical Acid Removal Process
Figure 3: Typical Dehydration Unit
Figure 4: Global Planned LNG Capex Forecast, 2011- 2016
Figure 5: Evolution of Train Sizes, 1960- 2020
Figure 6: Train Sizes of Planned Terminals, 2012- 2020
Figure 7: Liquefaction Terminals by Technology Provider, 2011
Figure 8: Dominant Technologies in Americas, 2020
Figure 9: Dominant Technologies in Africa, 2020
Figure 10: Dominant Technologies in Asia Pacific, 2020
Figure 11: Dominant Technologies in Europe, 2020
Figure 12: Dominant Technologies in Middle East, 2020
Figure 13: LNG Trains Count by Technology, 2020
Figure 14: AP-XTM Liquefaction Process for Large Trains
Figure 15: Basic Refrigeration Process Flow Diagram
Figure 16: LNG Capacity by Technology Provider, 2020
Figure 17: LNG Technology by Train Size, 2020

COUNTRIES COVERED

Australia, Indonesia, Papua New Guinea, Russia, Iraq, Angola, Algeria, Nigeria, US, Canada, Venezuela

COMPANIES MENTIONED

Technip, Chiyoda Corp, Bechtel Corp, Air Products & Chemicals (APCI), ConocoPhillips, Linde AG, Black & Veatch, Shell, Linde AG, Chart Energy & Chemicals Inc, LNG Limited

I would like to order

Product name: Global LNG Technology Insights and Evaluation – Small LNG Trains Regain Momentum

Product link: <https://marketpublishers.com/r/G6C8CDCFFEEEN.html>

Price: US\$ 3,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G6C8CDCFFEEEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970