



Report and Recommendation of the President to the Board of Directors

Project Number: 47928
November 2013

Proposed Loan Petronet LNG Limited Dahej Liquefied Natural Gas Terminal Expansion Phase 3 (India)

This is an abbreviated version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 27 October 2013)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	\$0.0162
\$1.00	=	Rs61.84

ABBREVIATIONS

ADB	–	Asian Development Bank
BPCL	–	Bharat Petroleum Corporation Limited
GAIL	–	GAIL (India) Limited
GSPL	–	Gujarat State Petronet Limited
IOCL	–	Indian Oil Corporation Limited
LNG	–	liquefied natural gas
mmtpa	–	million metric tons per annum

NOTES

- (i) The fiscal year (FY) of Petronet LNG Limited ends on 31 March. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2012 ends on 31 March 2012.
- (ii) In this report, “\$” refers to US dollars.

Vice-President	L. Venkatachalam, Private Sector and Cofinancing Operations
Director General	T. Freeland, Private Sector Operations Department (PSOD)
Director	M. Barrow, Infrastructure Finance Division 1, PSOD
Team leaders	M. Pateguana, Investment Specialist, PSOD S. Shah, Principal Investment Specialist, PSOD
Team members	S. Durrani-Jamal, Senior Economist, PSOD C. Gin, Principal Counsel, Office of the General Counsel J. Gomez, Safeguards Officer (Environment), PSOD B. Raemaekers, Senior Guarantee and Syndication Specialist V. Ramasubramanian, Safeguards Specialist, PSOD J. Ventura, Senior Investment Officer, PSOD

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Project Identification and Description	1
B. Development Impact, Outcome, and Outputs	2
C. Alignment with ADB Strategy and Operations	3
D. [Confidential information has been deleted]	3
E. [Confidential information has been deleted]	3
F. [Confidential information has been deleted]	3
III. THE PROPOSED ADB ASSISTANCE	4
A. The Assistance	4
B. Value-Added by ADB Assistance	4
C. [Confidential information has been deleted]	4
IV. POLICY COMPLIANCE	4
A. Safeguards and Social Safeguards	4
B. Anticorruption Policy	5
C. Investment Limitations	6
D. Assurances	6
V. RECOMMENDATION	6

[Confidential information has been deleted]

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan [Confidential information has been deleted] to Petronet LNG Limited for the Dahej Liquefied Natural Gas Terminal Expansion Phase 3 in India.¹

II. THE PROJECT

A. Project Identification and Description

1. Project Identification

2. India faces chronic energy shortages which have been one of the major constraints on and bottlenecks to efficient economic growth. Developing liquefied natural gas (LNG) infrastructure is therefore critical for India's energy security and for the power industry. This second expansion of the Dahej LNG Terminal capitalizes on the success of Dahej's successful first- and second-phase terminals financed by the Asian Development Bank (ADB), and aims to help address energy shortage in India. ADB has assisted Petronet LNG's growth in a phased manner. In January 2004, ADB helped finance Petronet LNG's first terminal through an equity investment [Confidential information has been deleted]. The first terminal began commercial operations in April 2004 with a capacity of 5 million metric tons per annum (mmtpa). [Confidential information has been deleted]. To meet the still growing unmet demand for natural gas in India, ADB financed the first expansion of Petronet LNG [Confidential information has been deleted]. The first terminal expansion project commenced operations in July 2009 within the original cost and time estimates. [Confidential information has been deleted], as per the extended annual review report, the project was rated *highly successful*. In particular, the development impact of the project and business success was rated *excellent*, and Petronet LNG's environmental, social, health, and safety performance as well as its investment outcomes were rated *satisfactory*.

3. Natural gas is increasingly a choice for cleaner fuel in India but domestic production remains insufficient to meet growing demand. This unmet demand is being filled by imported LNG. As the market leader, Petronet LNG is ideally placed to lead this much-needed LNG expansion in India. In preparation for the second Dahej expansion, the borrower approached ADB for financing based on the strong relationship ADB has established, ADB's profile in the market, and its ability to provide long-term financing and help catalyze other financing for the project, particularly given the somewhat unsettled financial market conditions in India. From initial discussions with Petronet LNG, the project team believed that the project possesses sound business fundamentals and ADB's participation will provide long-term financing needed for the project. It will also confirm ADB's confidence in the sector and support for the Dahej expansion [Confidential information has been deleted].

2. Project Design

4. The project will involve the expansion to 15 mmtpa of the existing Dahej LNG terminal, which has a current capacity of 10 mmtpa. The project will, to a large extent, use the existing facilities. Additional facilities will include two storage tanks and regasification facilities, and installation of associated utilities and facilities. The project site is located at Dahej in the Gulf of

¹ The design and monitoring framework is in Appendix 1.

Khambhat in Gujarat. The project design is based on a take-or-pay toll, with Petronet LNG acting as a tolling agent [Confidential information has been deleted].

5. [Confidential information has been deleted].

3. The Borrower

6. The borrower, Petronet LNG, was incorporated in April 1998 and is a public limited company established under the Companies Act, 1956. Given that the total equity participation of public sector utilities and/or entities is 50%, Petronet LNG is considered a nongovernment company, enjoys the autonomy available to companies in the private sector, and is subject to the same regulations and competition that any other private sector company faces. Petronet LNG is promoted by a strong shareholder group composed of India's leading oil and natural gas companies: BPCL, rated Baa3 by Moody's; GAIL, rated Baa2 by Moody's; IOCL, rated AAA by Crisil ; and Oil and Natural Gas Corporation Limited, rated Baa1 by Moody's. Each promoter holds a 12.5% stake. In addition, GDF Suez is the strategic partner of Petronet LNG with 10% equity, and ADB and public shareholders are the other shareholders.

7. Petronet LNG currently owns and operates two LNG import and regasification terminals, one with a capacity of 10 mmtpa at Dahej in Gujarat and the other with a capacity of 5 mmtpa at Kochi in Kerala. In addition, the borrower is in the process of constructing a second LNG jetty at Dahej to provide increased flexibility in port operations. Petronet LNG is locally rated AA+ by ICRA Limited and India Ratings and Research, reflecting its strong business fundamentals. [Confidential information has been deleted].

B. Development Impact, Outcome, and Outputs

1. Impact

8. The second expansion of the Dahej LNG terminal is intended to strengthen the development impact of the first two phases by helping India to move toward its target of greater natural gas use and by enhancing its energy security. The project development impact includes the diversification of the energy base in an environmentally sustainable manner. The project will help reduce the unmet energy demand in India, which has been one of the major constraints and bottlenecks for efficient economic growth. As of August 2013, the power sector in India had a cumulative generation installed capacity of approximately 227 gigawatts (GW) and the energy deficit was approximately 20.43 GW.²

2. Outcome

9. The outcome of the project will be increased supply of natural gas to power plants, fertilizers plants, transporters and domestic consumers. The majority of the LNG is destined for north and west India where the gas will be fed into the national grid as a cleaner fuel for electricity generation. It will also help meet the enormous demand for natural gas for fertilizer production. The project is expected to contribute to the introduction of city gas distribution in several cities where residential and commercial consumers will benefit from increased availability of piped gas. The additional supply of 5 mmtpa will translate to greenhouse gas emission reductions of approximately 3.15 million tons of carbon dioxide equivalent per annum.

² Government of India, Central Electricity Authority. 2013. *Monthly All India Installed Generation Capacity Report*. Delhi.

It is expected that through expanded operation of the terminal, the project will continue to improve skills and operational know-how of local staff.³

3. Outputs

10. The duly completed and operated expansion facilities of the terminal will increase the available capacity of LNG in India by 5 mmtpa.

C. Alignment with ADB Strategy and Operations

1. Consistency with Strategy 2020 and Country Strategy

11. The project is consistent with ADB's Strategy 2020, which has environmentally sustainable growth as one of the three strategic agenda items. Strategy 2020 emphasizes investment in infrastructure and promoting private sector participation. In addition, Strategy 2020 highlights ADB's operational emphasis on expanding the use of clean energy sources.⁴

12. The project is aligned with India's country partnership strategy, 2013–2017 specifically with regard to emphasis on environmental sustainability and infrastructure development, including expansion of energy access and catalyzing private sector investment.⁵

2. Consistency with Sector Strategy and Relevant ADB Operations

13. The project is consistent with ADB's Energy Policy, which stresses the importance of energy security and transition to a low-carbon economy, and reduction of emissions of greenhouse gases.⁶

3. Lessons from Previous Operations

14. The previous project experience demonstrated that two main factors to be considered in designing new project: (i) long-term, fixed-cost financing is crucial for infrastructure development in India because of the limited capacity of Indian financial institutions to provide this type of financing; and (ii) ADB's participation in Petronet helped strengthen its operations as a private sector entity and ADB's presence was catalytic in helping Petronet raise additional financing.

D. [Confidential information has been deleted]

E. [Confidential information has been deleted]

F. [Confidential information has been deleted]

³ City gas distribution network is used for transportation, as well as for domestic and commercial gas supply.

⁴ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

⁵ ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila

⁶ ADB. 2009. *Energy Policy*. Manila.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

15. The proposed loan to Petronet LNG [Confidential information has been deleted] will be provided from ADB's ordinary capital resources. [Confidential information has been deleted]

B. Value-Added by ADB Assistance

16. The proposed transaction merits ADB's assistance for the following reasons:
- (i) ADB's participation will provide long-term, fixed-cost funding which is required for successful implementation of the project and is not easily available in the market, particularly with current financial market uncertainty in India. The majority of Petronet LNG revenues are fixed through its tolling contract and it would like its financing costs to be also fixed over the tenor of the financing, which is not possible with Indian banks. Through long-tenor, fixed-cost loan pricing, ADB will assist Petronet LNG in providing better financial management and help amortize the high up-front capital costs over the long life of the asset to ensure project viability.
 - (ii) ADB's participation can potentially catalyze participation by commercial cofinanciers that would otherwise not have considered supporting the project. Such participation will assist the borrower in diversifying its funding sources from domestic banks for future projects.
 - (iii) The loan will also confirm ADB's confidence in the sector and support for its much-needed expansion.
 - (iv) ADB's continued support to Petronet LNG's growth and participation in the third round of financing will add assurance for local and foreign financial institutions to co-lend because the project will be structured with best local and international practices and will adhere to high environmental and social standards.

C. [Confidential information has been deleted]

IV. POLICY COMPLIANCE

A. Safeguards and Social Safeguards

17. In compliance with ADB's Safeguard Policy Statement (2009), the project is classified category A for impacts on the environment and category C for both involuntary resettlement and indigenous peoples. The environmental impact assessment report was disclosed on ADB's website on 2 August 2013 in accordance with the disclosure requirement of ADB's Safeguard Policy Statement. The existing terminal and proposed expansion site are part of an existing industrial region and no environmentally sensitive areas or endangered terrestrial or marine flora or fauna exist. The plant generates limited air emissions, domestic waste water, solid and hazardous waste, and noise pollution. The 38.62 hectare site for expansion is government land allotted on a long-term lease to Petronet LNG by the Gujarat Industrial Development Corporation. The site is not inhabited and is not occupied or used for productive purposes, either by individuals or the community. As a result, there will be no resettlement impacts and no persons will be either physically or economically displaced by the proposed expansion. Impacts on indigenous peoples are unlikely as there is no habitation or village with concentrations of scheduled tribes in the vicinity of the site. Since the commencement of its operations in Dahej in 2004, Petronet LNG has had a strong involvement with the communities through its corporate

social responsibility initiatives in infrastructure, health, education, and community development. A public consultation was conducted and a grievance redress mechanism is in place to address concerns and suggestions from the communities. The facility has an established environmental, health, and safety cell with documented procedures on training, permitting, and incident recording. It is also certified to ISO 9001, ISO 14001, and OSHAS 18001 standards. The facility provides for safe and healthy working conditions for its staff as well as its contractors. Likely operational risks are identified and appropriate measures are in place, including an emergency response and disaster management plan. The potential environmental and social impacts of the project have been identified and effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts have been incorporated in the environmental and social impact assessment document.⁷

18. A corporate audit was conducted on Petronet LNG's quality, health, safety, and environment systems and procedures and its past and current performance against the objectives, principles, and requirements of the Safeguard Policy Statement. The audit confirms that the existing LNG terminal operations are in accordance with ADB's environmental safeguard requirements. Since lands for the Petronet LNG terminals and facilities are allotted by the government, Petronet LNG's quality, health, safety, and environment systems currently do not formally incorporate procedures to screen, assess, and address impacts pertaining to involuntary resettlement and indigenous peoples. Petronet LNG is committed to (i) enhance the quality, health, safety, and environment manual to include the social safeguard and social protection requirements of ADB; and (ii) adopt a corporate environmental and social management system to comply with ADB requirements and adequately manage the project's social and environmental impacts before the first disbursement. In addition, Petronet LNG will prepare and submit monitoring reports on the implementation of the environmental and social management system and the subproject. The institutional capacity and commitment of Petronet LNG to manage the project's social and environmental impacts and risks are deemed adequate. Information disclosure and stakeholder consultations are conducted in accordance with ADB requirements.

19. Based on the review and assessment of the existing terminal's operations and the current procedures for procurement, the audit confirmed that national labor laws and regulations [confidential information has been deleted] are followed, monitored, and reported. The audit also confirmed Petronet LNG's commitment to provide work opportunities to the local community during construction. The project is classified as having no gender elements. ADB will ensure that the investment documentation includes appropriate provisions requiring Petronet LNG to comply with national labor laws [confidential information has been deleted] for the ADB-financed portion of the project, in compliance with ADB's Social Protection Strategy.⁸

B. Anticorruption Policy

20. Petronet LNG was advised of ADB's Anticorruption Policy (1998, as amended to date) and Policy on Combating Money Laundering and the Financing of Terrorism (2003). Consistent with its commitment to governance, accountability, and transparency, ADB will require Petronet LNG to institute, maintain, and comply with internal procedures and controls following international best practice standards for the purpose of preventing corruption, money laundering

⁷ This consists of 16.00 hectares of land already available to Petronet LNG and 22.62 hectares of land transferred to the Gujarat Industrial Development Corporation from the Gujarat state Forest Department. The nearest village (Luwara village) is about 1.5 kilometers away.

⁸ ADB. 2003. *Social Protection Strategy*. Manila (adopted in 2001).

activities, and the financing of terrorism, and to covenant with ADB to refrain from engaging in such activities.

C. Investment Limitations

21. The proposed direct loan is within the medium-term country, industry, group, and single-project exposure limits for nonsovereign investments.

D. Assurances

22. Consistent with the Agreement Establishing the Asian Development Bank (the Charter), the Government of India's no objection to the proposed assistance to Petronet LNG will be obtained. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the Board of Directors.

V. RECOMMENDATION

23. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan [Confidential information has been deleted] to Petronet LNG Limited for the Dahej Liquefied Natural Gas Terminal Expansion Phase 3 in India from ADB's ordinary capital resources, with such terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

Takehiko Nakao
President

11 November 2013

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and/or Indicators with Baselines	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
Impact Diversified energy base in India in an environmentally sustainable manner	Share of natural gas in total domestic energy production to increase from 12.6% in 2013 (64.75 mtoe) to 16.0% in 2022 (135.40 mtoe)	Government statistics, Twelfth Five-Year Plan (2012–2017) Government of India, Central Electricity Authority	Assumption Price competitiveness of LNG compared to other energy sources Risk Deterioration in macroeconomic climate in India
Outcome Increased supply of natural gas to power plants, fertilizers plants, transporters and domestic consumers	Up to additional 18 mmscmd of natural gas supply of which: <ul style="list-style-type: none"> i. 6.75 mmscmd of natural gas or 1633 MW to power plants ii. 6.75 mmscmd of natural gas to fertilizers iii. 4.50 mmscmd gas to city gas distribution (transportation use and domestic consumption) GHG emission reductions of approximately 3.15 million tons CO ₂ equivalent per annum	Petronet LNG's operating reports Petronet LNG's financial statements Development Effectiveness Report	Assumptions Stable LNG supply Timely completion of the second jetty at Dahej terminal
Output Expansion of LNG terminal and associated utilities and facilities completed	The available capacity of LNG in India increases by 5mtpa once the terminal phase 3 becomes operational by 2017 Locally purchased goods and services of up to \$200 million by 2018 Up to 2,500 workers employed during construction	Project reporting ADB annual reviews Lender's technical advisor reports Development Effectiveness Report	Assumption The project reaches financial close, and is commissioned as planned. Risk The contractors are not able to execute the project on budget and on time.
Activities with Milestones <ol style="list-style-type: none"> 1. Financial close by Q2 2014 2. Construction works start immediately after award of EPC contracts 3. Completion of the planned construction work by June 2017 			Inputs Loan Funding from ADB and Indian banks and shareholders

ADB = Asian Development Bank; CO₂ = carbon dioxide; EPC = engineering, procurement, and construction; LNG = liquefied natural gas; mmscmd = million standard cubic meters per day; mtpa = million metric tons per annum; MW = megawatt; mtoe = million tons of oil equivalent.

Sources: ADB; GAIL (India) Limited; Government of India, Central Electricity Authority; Government of India, Intergovernmental Panel on Climate Change; Gujarat State Petronet Limited; and Petronet LNG Limited.