ADB

Report and Recommendation of the President to the Board of Directors

Project Number: 48330
July 2015

Proposed Loan
Lukoil Overseas Shah Deniz
Shah Deniz Stage II Gas Field Expansion Project (Azerbaijan)

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 29 June 2015)

Currency unit	–	Azerbaijan manat/s (AZN)
AZN1.00	=	$0.95356
$1.00	=	AZN1.04770

ABBREVIATIONS

ADB	–	Asian Development Bank
bcm	–	billion cubic meters
EBITDA	–	earnings before interest, taxes, depreciation, and amortization
EITI	–	Extractive Industries Transparency Initiative
ESIA	–	environmental and social impact assessment
EU	–	European Union
GSA	–	gas supply agreement
km	–	kilometer
LNG	–	liquefied natural gas
LOSD	–	Lukoil Overseas Shah Deniz
MMBtu	–	million British thermal units
PSV	–	Punto di Scambio Virtuale
SD I	–	Stage I development of the Shah Deniz gas field
SD II	–	Stage II development of the Shah Deniz gas field
SDPSA	–	Shah Deniz Production Sharing Agreement
SGC	–	Southern Gas Corridor
SOCAR	–	State Oil Company of the Azerbaijan Republic
SOFAZ	–	State Oil Fund of the Republic of Azerbaijan
US	–	United States

NOTES

(i) The fiscal year of Lukoil Overseas Shah Deniz ends on 31 December.

(ii) In this report, “$” refers to US dollars.

Vice-President	S. Groff, Vice-President-in-Charge, Private Sector and Cofinancing Operations
Director General	T. Freeland, Private Sector Operations Department (PSOD)
Director	D. Purka, Infrastructure Finance Division 1, PSOD
Team leader	A. Patil, Senior Investment Specialist, PSOD
Team members	I. Aoki, Investment Specialist, PSOD
	P. Bailet, Senior Counsel, Office of the General Counsel (OGC)
	S. Hassan, Investment Specialist, PSOD
	A. Hirose, Advisor, OGC
	T. Minnich, Principal Investment Specialist, PSOD
	N. Peters, Safeguards Specialist, PSOD
	A. Porras, Senior Safeguards Officer, PSOD
	V. Ramasubramanian, Safeguards Specialist, PSOD
	A. Seissebayev, Investment Officer, PSOD
	K. Taniguchi, Senior Economist, PSOD
	C. Uy, Operations Assistant, PSOD
	J. Ventura, Senior Investment Officer, PSOD

CONTENTS

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan facility of up to $475 million, comprising (i) an A-loan of up to $250 million; and (ii) a B-loan of up to $225 million, to Lukoil Overseas Shah Deniz (LOSD) for the Shah Deniz Stage II Gas Field Expansion Project in Azerbaijan.[1]

II. THE PROJECT

A. Project Identification and Description

1. Project Identification

2. The Shah Deniz gas field is one of the world's largest gas fields, with 938 billion cubic meters (bcm) of gas reserves. In 1996, the State Oil Company of the Azerbaijan Republic (SOCAR) signed the Shah Deniz Production Sharing Agreement (SDPSA) with six foreign oil and gas companies led by BP (the operator) for the exploration, development, and production of natural resources from the Shah Deniz gas field. Construction and development of stage I of the gas field started in 2003 and gas production commenced in December 2006. In September 2013, subsequent to the discovery of a new high-pressure reservoir within the Shah Deniz gas field, gas supply agreements (GSAs) for the stage II expansion of the gas field were signed with nine European energy companies. In December 2013, the SDPSA partners announced their investment decision for development of stage II of the Shah Deniz gas field.

3. PJSC Lukoil (Lukoil or the sponsor) has a 10% interest in the SDPSA. Lukoil approached the Asian Development Bank (ADB) in June 2014 to partly finance its share of the capital expenditure for the project.[2] From initial discussions between ADB and Lukoil, ADB viewed that the project possessed sound fundamentals, including the financial strength of the sponsor, high-quality project preparatory work, an experienced operator, and strong local employment-generation potential. The project is the largest gas field development project to date in Azerbaijan, and will help increase the total gas production in Azerbaijan from 20 bcm per annum in 2014 to 36 bcm per annum by 2022. ADB's experience in structuring emerging and frontier market transactions will be crucial for the successful execution of the project and to demonstrate the bankability of large-scale financings for future upstream and downstream processing projects in Azerbaijan.

2. Project Design

4. The Shah Deniz gas field is a high-temperature, high-pressure gas field located 70 kilometers (km) offshore to the southeast of Baku, lying beneath water depths of 50–500 meters. It has a reservoir thickness of more than 1,000 meters and is 22 km long. The gas field contains nine vertically stacked reservoir units, which are targeted for depletion in two stages. The gas-initially-in-place estimate for the gas field is 938 bcm.[3] Stage I of the gas field has been operational since December 2006.

5. Stage II development of the Shah Deniz gas field includes the construction of two new bridge-linked offshore production platforms, 26 subsea wells drilled with two semi-submersible rigs, 500 km of subsea pipelines, and expansion of the onshore gas processing terminal at

---

1 The design and monitoring framework is in Appendix 1.

2 Capital expenditures for the project are funded by SDPSA partners in proportion to their percent interest in the SDPSA.

3 Gas initially in place refers to the total amount of gas that is potentially in a reserve.

Sangachal. Gas extracted from the stage II development of the gas field will be delivered from Azerbaijan to Europe via the separate Southern Gas Corridor (SGC). The SGC consists of three sections: (i) the South Caucasus Pipeline from the Caspian Sea to the Georgia–Turkey border, (ii) the Trans-Anatolian Natural Gas Pipeline from the Georgia–Turkey border to the Turkey–Greece border, and (iii) the Trans Adriatic Pipeline from the Turkey–Greece border to Italy.

6. The SDPSA sets the basic principles, rights and obligations, production sharing, cost reimbursement, and other terms and conditions of the Shah Deniz project. A steering committee consisting of an equal number of members from each SDPSA partner is responsible for managing the consortium. BP, designated as the operator for the project by the SDPSA partners, is responsible for construction and operation of the Shah Deniz gas field. SOCAR is responsible for entering into GSAs on behalf of the SDPSA partners. The remaining SDPSA partners, including Lukoil, are purely financial investors and are not involved in day-to-day operations of the project. Table 1 lists the composition of the SDPSA.

Table 1: Composition of the Shah Deniz Production Sharing Agreement

Company	Share of Total (%)
BP	28.8
State Oil Company of the Azerbaijan Republic	16.7
Turkish Petroleum Overseas Corporation	19.0
Petronas	15.5
Lukoil	10.0
Naftiran Intertrade Company	10.0
Total	**100.0**

Source: BP.

7. After accounting for operating costs and capital expenditure, revenues from the project are shared between the SDPSA partners and the Government of Azerbaijan according to the terms and conditions specified in the SDPSA.

3. The Borrower and the Sponsor

8. The borrower is LOSD, a company established with the sole purpose of developing Lukoil's interest in the Shah Deniz project.

Confidential information deleted.

9. The sponsor, Lukoil, is one of the world's leading vertically integrated oil and gas companies active in exploration and production of oil and gas, production of petroleum products and petrochemicals, and marketing and distribution of these products. Lukoil does not have any government ownership, and its equity and depository receipts are traded publicly on the Frankfurt, London, and Moscow stock exchanges. As of 6 July 2015, Lukoil had a market capitalization of $36.6 billion and a long-term credit rating of BBB– from Standard & Poor's.

B. Development Impacts, Outcome, and Outputs

10. **Impacts.** The successful development of the stage II expansion of the Shah Deniz gas field, the largest natural gas field in Azerbaijan, will lead to the following beyond-project development impacts. First, the overall Azerbaijan natural gas sector will expand by encouraging foreign operators to develop similar gas reserves and will bring in much-needed technical knowledge, development experience, and foreign capital. Second, the increase in gas production and opening of the European market to Azerbaijan gas exports will support regional integration and diversify Azerbaijani exports of natural gas. Third, a successful experience of

foreign commercial banks financing a large project in Azerbaijan will help increase foreign direct investment for the development of other upstream gas field development projects as well as midstream and downstream petrochemical projects, which use natural gas as feedstock.

11. **Outcome.** The project will result in successful production of natural gas from stage II of the Shah Deniz gas field, with first production estimated in 2018 and peak production of 16 bcm per annum achieved by 2022.

12. **Outputs.** Successful implementation of the project will result in the environmentally safe and technically sound development of the largest proven gas reserve in Azerbaijan. The project is also expected to generate employment for over 16,000 people during 2014–2022.

C. Alignment with ADB Strategy and Operations

13. **Consistency with ADB Strategy and country strategy.** The project supports two of the five core areas of operations under ADB's Strategy 2020: infrastructure, and regional cooperation and integration.[4] Catalyzing investments by increasing private sector participation is one of the five strategic drivers of change under Strategy 2020. Following its Midterm Review of Strategy 2020, ADB is committed to be a provider of catalytic solutions to upper middle-income countries such as Azerbaijan, which include increasing leveraging opportunities with private capital.[5] The project is also aligned with ADB's country partnership strategy, 2014–2018 for Azerbaijan, which supports ADB's participation in the development of natural resources in instances where it would be instrumental in attracting third-party commercial sources of credit.[6] ADB's presence in such transactions will help these projects adopt international due diligence, governance, and transparency standards.

14. **Consistency with sector strategy and relevant ADB operations.** The project is consistent with ADB's Energy Policy, which provides for assistance to gas field development, and transportation and distribution of gas.[7] The policy also promotes effective regional cooperation in the energy sector to strengthen energy security. ADB endorsed the Extractive Industries Transparency Initiative (EITI) in 2008 and became a supporting organization to enhance revenue transparency in ADB-assisted energy extractive projects. Azerbaijan has been an EITI member country since February 2009, and regularly publishes publicly available reports which disclose revenues earned from the extraction of its natural resources as well as the taxes and other payments received from foreign oil and gas companies operating in the country. The SDPSA has also been publicly disclosed.

15. The project strongly complements ADB's ongoing initiatives in the energy sector in the region. ADB's continued intervention in oil and gas in the region will help improve standards of corporate governance and transparency in the sector.

D. Project Cost and Financing Plan

16. In addition to the initial capital expenditure, development of the stage II expansion of the Shah Deniz gas field will require ongoing capital expenditure as new wells must be drilled to

---

[4] ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020.* Manila.
[5] ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific.* Manila.
[6] ADB. 2014. *Country Partnership Strategy: Azerbaijan, 2014–2018.* Manila.
[7] ADB. 2009. *Energy Policy*. Manila.

maintain production and compensate for depleted wells. The overall project is estimated to cost $28,590 million.

17. The above capital expenditure will be separately funded by each of the SDPSA partners in proportion to their percent interest in the SDPSA. Lukoil, with its 10% interest in the SDPSA, is required to fund $2,859 million of the total project cost.

Confidential information deleted.

E. Implementation Arrangements

18. Table 4 summarizes the implementation arrangements.[8]

Table 4: Summary of Implementation Arrangements

Aspects	Arrangements
Regulatory framework	SOCAR has the authority to carry out exploration and development of all crude oil and natural gas resources in Azerbaijan, including the portion of the Caspian Sea within the jurisdiction of Azerbaijan. Exploration, development, and production from the Shah Deniz gas field is being carried out under the SDPSA. The SDPSA sets the basic principles, rights and obligation, production sharing, cost reimbursement, and other terms and conditions for the Shah Deniz project. The current composition of the SDPSA is as follows: BP (28.8%), SOCAR (16.7%), Petronas (15.5%), Turkish Petroleum Corporation (19%), PJSC Lukoil (10%), and Naftiran Intertrade Company (10%). The SDPSA governs the main compensation and cost recovery mechanism, which compensates the SDPSA operator (BP) for all operating costs. The balance of the production is shared between the Government of Azerbaijan and SDPSA partners according to an industry typical R-factor model, which compensates the SDPSA partners at higher levels when capital expenditure is higher.
Operations arrangements Revenue structure	The CUPA governs the sale of gas from the Shah Deniz gas field to the eventual end-use off-takers. BP is appointed as the sellers' representative and agent for the sale of gas to AGSC. The shareholder composition of AGSC is similar to that of the SDPSA. For the sale of gas from the stage II development of the Shah Deniz gas field, AGSC has entered into 25-year GSAs for with European buyers and Turkish buyers. AGSC has also entered into GSA options with buyers in Azerbaijan and Georgia. In addition, each party to the SDPSA has the right to sell the by-product condensate from the Shah Deniz gas field in proportion to their shareholding.
Transportation arrangements	Gas extracted under the project will be delivered to end-use off-takers via the SGC. The SGC consists of three sections: the South Caucasus Pipeline from the Caspian Sea to the Georgia–Turkey border, the TANAP from the Georgia–Turkey border to the Turkey–Greece border, and the TAP from the Turkey–Greece border to Italy. AGSC has entered into gas transportation agreements with the South Caucasus Pipeline, the TANAP, and the TAP. The gas transportation agreements are coterminous with the GSAs.
Implementation period	Gas production from stage II is expected to commence in 2018, gradually ramping up during 2018–2021 and stabilizing at 16 bcm per annum from 2022 onward.
Construction arrangements Engineering, procurement, and construction	BP, as SDPSA operator, will construct the main offshore works and will subcontract specialized subsea construction works and onshore construction works to a number of contractors.
Operation and maintenance	BP has been designated as the operator of the project by the SDPSA partners, and will be responsible for operation and maintenance activities.
Performance monitoring	Key performance indicators will be reported by LOSD and monitored by the Asian Development Bank and other senior lenders. In addition, during the construction phase, the senior lenders will appoint an independent lenders' technical advisor to monitor progress and verify project completion on behalf of the lenders.

[8] Details of Implementation Arrangements (accessible from the list of linked documents in Appendix 2).

AGSC = Azerbaijan Gas Supply Company, bcm = billion cubic meters, CUPA = consolidated upstream purchase agreement, GSA = gas supply agreement, LOSD = Lukoil Overseas Shah Deniz, SDPSA = Shah Deniz Production Sharing Agreement, SGC = Southern Gas Corridor, SOCAR = State Oil Company of the Azerbaijan Republic, TANAP = Trans Anatolian Natural Gas Pipeline, TAP = Trans Adriatic Pipeline.
Source: BP.

F. Projected Financial and Economic Performance

19. Confidential information deleted.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

20. The proposed ADB assistance to LOSD to finance its share of the Shah Deniz stage II gas field expansion project comprises (i) an A-loan of up to $250 million, and (ii) a B-loan of up to $225 million. ADB will fund the A-loan from its ordinary capital resources, while the B-loan will be funded by participating international commercial banks.

B. Value Added by ADB Assistance

21. The proposed transaction merits ADB's assistance for the following reasons:

(i) The ADB loan will play a leading catalytic role as it facilitates the raising of large-scale, long-term, commercial project financing from international banks, which will set a precedent for international banks to participate in upcoming projects in the oil and gas sector in the country.

(ii) ADB's participation in the transaction will further consolidate Azerbaijan's commitment under the EITI to improve corporate governance and transparency in the oil and gas sector in the country.

C. Risks

22. **Timely completion of the Southern Gas Corridor.** If all three components of the SGC are not constructed and commissioned before project completion, the SDPSA partners will face loss in revenue and/or liquidated damages under the GSAs to European and Turkish off-takers.

23. **Demand risk.** Overall gas demand in Europe is expected to grow at an average 0.5% per annum from 2015 to 2027. While demand from the residential sector is likely to remain stable because of the increasing focus on energy efficiency measures, demand from the power generation sector is expected to grow at 1.4% per annum during 2015–2027 as Europe seeks to reduce its reliance on coal-fired and nuclear power plants.

24. **Gas and condensate pricing risk.** The US dollar gas sale price in the various GSAs is based on a formula linked to European gas prices at the Italian Punto di Scambio Virtuale (PSV) hub and/or Dated Brent crude oil prices. The condensate sale price is linked to the Dated Brent crude oil prices. The outlook for gas prices in 2015 remains negative. Continued low gas and crude oil prices beyond project completion in 2019 will reduce cash flows from the project.

25. **Sponsor risk.** Although the recent drop in global oil prices has affected the financial performance of the sponsor, Lukoil's long-term credit rating remains at investment grade (BBB–) and is underpinned by Lukoil's relatively low leverage, strong liquidity, large resource base, and stable profitability.

26. Confidential information deleted.

27. Confidential information deleted.

28. Confidential information deleted.

29. Confidential information deleted.

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

30. In compliance with ADB's Safeguard Policy Statement (2009), the project is classified category A for environment, category B for involuntary resettlement, and category C for indigenous peoples. The potential environmental and social impacts of the project have been identified and effective measures to avoid, minimize, mitigate, and compensate for the adverse impacts are incorporated in the safeguard reports and plans. In line with ADB's Safeguard Policy Statement requirements for financing of existing facilities, an environmental and social compliance audit for the existing facilities of stage I of the project (SD I) and ongoing construction activities as part of stage II expansion of the gas field (SD II) was carried out. The audit did not find any non-compliance of ADB policies associated with the ongoing construction activities. The institutional capacity and commitment of the borrower to cause the operator to manage the project's social and environmental impacts are deemed adequate.

31. The borrower will be required to ensure that the operator will comply with national labor laws and, pursuant to ADB's Social Protection Strategy, will take measures to comply with the internationally recognized core labor standards.[9] The borrower will report regularly to ADB on the compliance of the operator (and its contractors) with such laws.

B. Anticorruption Policy

32. LOSD was advised of ADB's policy of implementing best international practice relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the investment documentation includes appropriate provisions prohibiting corruption, money laundering, and the financing of terrorism, and remedies for ADB in the event of noncompliance.

C. Investment Limitations

33. The proposed loans are within the medium-term, country, industry, group, and single-project exposure limits for nonsovereign investments.

D. Assurances

34. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),[10] ADB will proceed with the proposed assistance upon establishing that the Government of Azerbaijan has no objection to the proposed assistance to LOSD. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the ADB Board of Directors.

---

[9] ADB. 2003. *Social Protection*. Manila (adopted in 2001).
[10] ADB. 1966. *Agreement Establishing the Asian Development Bank.* Manila.

V. RECOMMENDATION

35. I am satisfied that the proposed loans would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve a loan facility of up to $475,000,000, comprising (i) an A-loan of up to $250,000,000 from ADB's ordinary capital resources; and (ii) a B-loan of up to $225,000,000 funded from participating international commercial banks, to Lukoil Overseas Shah Deniz for the Shah Deniz Stage II Gas Field Expansion Project in Azerbaijan, 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

14 July 2015

DESIGN AND MONITORING FRAMEWORK

Impacts the project is aligned with:

Expansion of the natural gas sector in Azerbaijan by 2022 (Source: Oil Strategy of Azerbaijan)

Regional integration through increased exports and opening of the European market to Azerbaijan natural gas exports improved by 2022 (Source: Oil Strategy of Azerbaijan)

Foreign direct investment for natural resource development and processing projects in Azerbaijan increased by 2022 (Source: Oil Strategy of Azerbaijan)

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Increased natural gas production	a. Volume of annual peak gas production from the Shah Deniz gas field of 26 bcm per annum achieved by 2022 (2014 baseline: 9.9 bcm per annum)	ADB periodic reviews Semiannual company reports on operations Statistics and information published by press, trade journals, and market consultants	Delays in completion of TANAP and TAP projects
Outputs 1. Natural gas production and processing facility expanded	1a. Number of new bridge linked production platforms constructed and commissioned increased by 2 by 2018 (2014 baseline: 1) 1b. Number of new subsea wells drilled increased by 26 by 2018 (2014 baseline: 5)	1a, 1b. Semiannual construction progress reports by lenders' technical consultant 1a, 1b. Project completion certificate by lenders' technical consultant 1a, 1b. ADB periodic reviews	Unanticipated technical challenges during drilling of wells
2. Increase in local employment generation	2a. Number of local resident workers employed during construction (2014–2022) increased to 16,000 (2014 baseline: 3,000)	2a. BP environment and social safeguards monitoring reports	
Key Activities with Milestones 1.1. Confidential information deleted. 1.2. Confidential information deleted.			

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
1.3. Confidential information deleted.			
Inputs Confidential information deleted.			
Assumptions for Partner Financing Not applicable			

ADB = Asian Development Bank, bcm = billion cubic meters, BSTDB = Black Sea Trade and Development Bank, EBRD = European Bank for Reconstruction and Development, TANAP = Trans-Anatolian Natural Gas Pipeline, TAP = Trans Adriatic Pipeline.

Sources: Asian Development Bank.

LIST OF LINKED DOCUMENTS
(Confidential)

1. Sector Overview
2. Details of Implementation Arrangements
3. Contribution to the ADB Results Framework
4. Financial Analysis
5. Economic Analysis
6. Country Economic Indicators
7. Summary Poverty Reduction and Social Strategy
8. Safeguards and Social Dimensions Summary