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R128-16  
Corrigendum 1  
6 December 2016

## Corrigendum to Document R128-16 Proposed Partial Credit Guarantee Shah Deniz Gas Field Expansion Project (Azerbaijan)

The following corrections have been made in the above document to address an error regarding the estimated CO<sub>2</sub> reduction from the project as confirmed by BP, the operator for the project through the borrower, Southern Gas Corridor CJSC:

- |   |  |
|---|--|
| (i) Project at a Glance, Climate Change Information                   | For CO <sub>2</sub> reduction (tons per annum), replace "1,994,230" with " <b>141,614</b> "  |
| (ii) Linked Document No. 4: Contribution to the ADB Results Framework | <p>For the Level 2 Results Framework Indicators (Outputs and Outcomes) column, replace "(tCO<sub>2</sub>-equivalent per year) across the Shah Deniz Production Sharing Agreement period (between 1996 to 2048) with "<b>(average tCO<sub>2</sub>-equivalent per year) across the Shah Deniz life of field (between 2018–2040)</b>"</p> <p>For the Targets column, replace "1,994,230" with "<b>141,614</b>"</p> <p>For Source, replace "Shah Deniz Stage II Environment and Social Impact Assessment and Environment and Social Compliance Audit" with "<b>BP</b>"</p> |

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(For consideration by the Board on or about 25 November 2016)

R128-16  
4 November 2016

## Proposed Partial Credit Guarantee Shah Deniz Gas Field Expansion Project (Azerbaijan)

1. The Report and Recommendation of the President (RRP: AZE 49451-002) on the proposed partial credit guarantee for the Shah Deniz Gas Field Expansion Project is circulated herewith.
2. This Report and Recommendation should be read with (i) *Country Partnership Strategy: Azerbaijan, 2014–2018* which was circulated to the Board on 8 September 2014 (DOC.Sec.M16-14); and (ii) *Country Operations Business Plan: Azerbaijan, 2016–2018*, which was circulated to the Board on 10 December 2015 (DOC.IN.438-15).

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# Report and Recommendation of the President to the Board of Directors

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Project Number: 49451-002  
November 2016

## Proposed Partial Credit Guarantee Shah Deniz Gas Field Expansion Project (Azerbaijan)

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Asian Development Bank

## **CURRENCY EQUIVALENTS**

(as of 5 October 2016)

Currency unit – Azerbaijan manat (AZN)

AZN1.00 = \$0.6211

\$1.00 = AZN1.61

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
AzSD	–	Azerbaijan (Shah Deniz) Limited
bcm	–	billion cubic meters
EITI	–	Extractive Industries Transparency Initiative
ESCAR	–	environmental and social compliance audit report
MOF	–	Ministry of Finance
MMBtu	–	million British thermal units
PCG	–	partial credit guarantee
PSA	–	production sharing agreement
PSOD	–	Private Sector Operations Department
SGC	–	Southern Gas Corridor Closed Joint-Stock Company
SGCU	–	SGC Upstream LLC
SOCAR	–	State Oil Company of Azerbaijan Republic
SOFAZ	–	State Oil Fund of the Republic of Azerbaijan
SPS	–	Safeguard Policy Statement (2009)

## **NOTE**

In this report, “\$” refers to US dollars.

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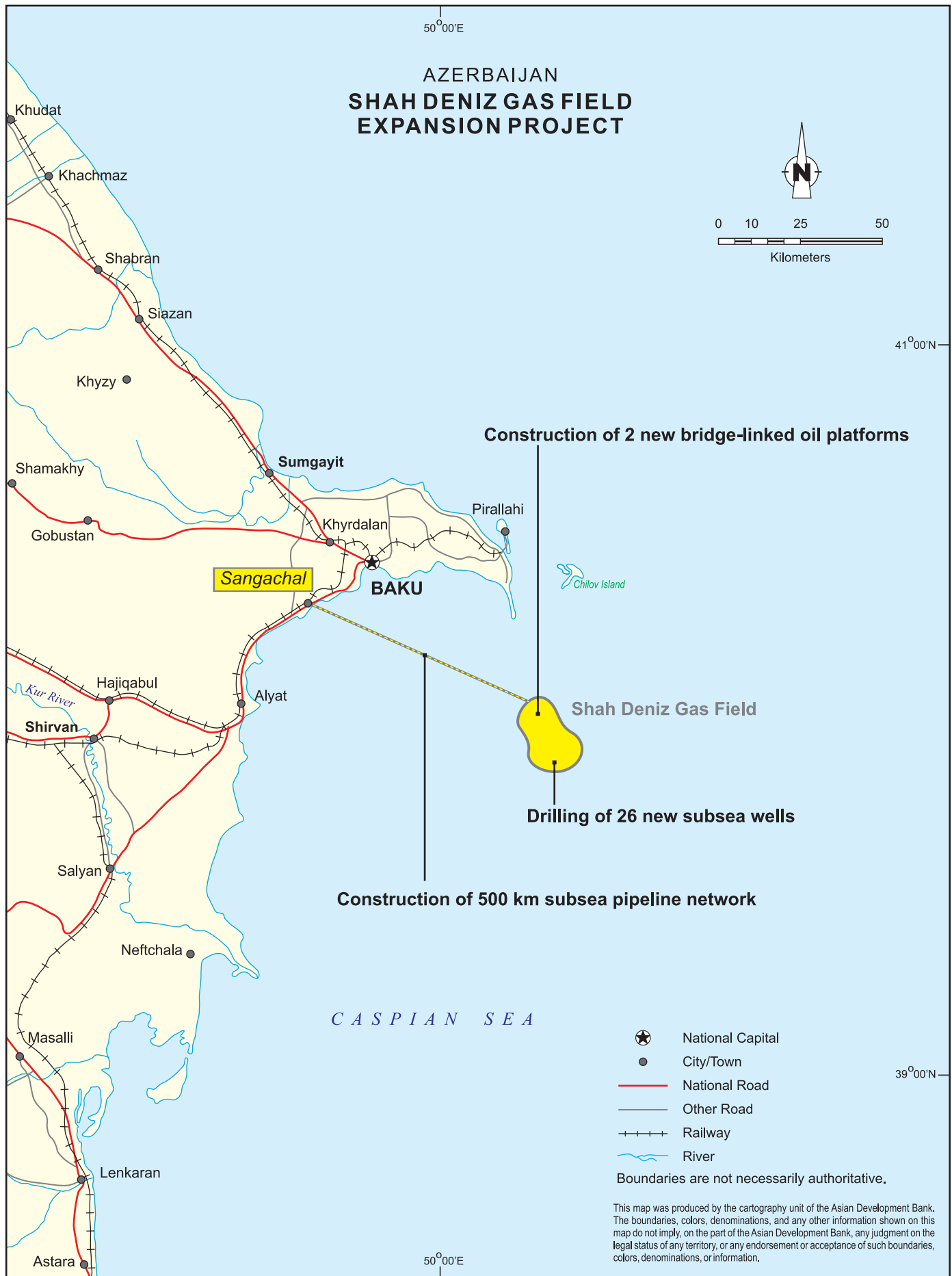
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## PROJECT AT A GLANCE

1. Basic Data		Project Number: 49451-002	
Project Name	Shah Deniz Gas Field Expansion Project	Department /Division	CWRD/CWEN
Country	Azerbaijan	Executing Agency	Southern Gas Corridor Closed Joint-Stock Company
Borrower	Southern Gas Corridor Closed Joint-Stock Company		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Energy	Oil and gas transmission and distribution		500.00
		Total	500.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	CO <sub>2</sub> reduction (tons per annum)	141,614
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium
Regional integration (RCI)	Pillar 1: Cross-border infrastructure Pillar 2: Trade and investment		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Partnerships (PAR)	Commercial cofinancing International finance institutions (IFI) Private Sector Regional organizations	No gender elements (NGE)	
Private sector development (PSD)	Promotion of private sector investment		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Regional	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG8, SDG9		
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: A Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		500.00	
Sovereign Partial Credit Guarantee (95%) - Ordinary Capital Resources		500.00	
Net Direct Value Added Cofinancing		26.30	
Sovereign Partial Credit Guarantee - Uncovered Portion (5%)		26.30	
Counterpart		3,992.70	
Others		3,992.70	
Total		4,519.00	
9. Effective Development Cooperation			
Use of country procurement systems		No	
Use of country public financial management systems		No	





## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed partial credit guarantee (PCG) for the Shah Deniz Gas Field Expansion Project.<sup>1</sup> The PCG will be issued to credit enhance loans extended by eligible commercial lenders to the Southern Gas Corridor Closed Joint-Stock Company (SGC) for its financing needs for the project, covering up to \$500 million in principal amounts plus regular interest and guarantee fees payable thereon.<sup>2</sup>

2. The project will increase Shah Deniz gas field's annual gas production capacity from 9.8 billion cubic meters (bcm) in 2015 to 26 bcm by 2022.<sup>3</sup> The additional gas will be exported to Europe, Georgia and Turkey. This is the first step in creating the Southern Gas Corridor as an alternative for gas deliveries to Europe from the Caspian region and the Middle East. The project supports regional cooperation and integration, a core operational area in Strategy 2020 of the Asian Development Bank (ADB),<sup>4</sup> and will improve Europe's energy security by diversifying its gas sources. Sustained revenues from gas exports will fund social and infrastructure spending to help diversify Azerbaijan's economy away from its dependency on hydrocarbons. The project will create over 19,000 temporary and 1,800 permanent local jobs.

## II. THE PROJECT

### A. Rationale

3. **Economy and energy sector.** Azerbaijan has extensive energy resources, with proven oil reserves in excess of 7 billion barrels and over 1,100 bcm of natural gas reserves. In 2015, it produced 841,000 barrels of oil and 18.2 bcm of gas.<sup>5</sup> Since 1994, the government has successfully pursued a strategy of developing the oil and gas sector as the country's primary source of economic growth. It has been operated in line with international best practices and under a predictable contractual framework, attracting strong private sector participation with an estimated \$60 billion in foreign direct investment in the country during 1994–2014.<sup>6</sup> In 2014, the energy sector employed about 1.4% of Azerbaijan's officially reported workforce of 4.6 million.

4. Azerbaijan's rapid transition to an upper middle-income country has been made possible by the exploitation of its hydrocarbon resources, high levels of public expenditure, and market-based economic reforms.<sup>7</sup> The associated high growth rates since 2001 have resulted in a significant drop in the percentage of the population living below the national poverty line: from 49% in 2001 to 5% in 2013. The oil and gas industry has played an important role in poverty reduction, with hydrocarbons contributing approximately 31% of the country's gross domestic product and approximately 87% of the country's total gross exports in 2015.<sup>8</sup>

5. Azerbaijan has an extensive gas network, and is a net exporter of oil, gas, and electricity. Through the State Program on Socioeconomic Development of Baku City and its

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<sup>1</sup> The Private Sector Operations Department (PSOD) of the Asian Development Bank (ADB) provided a nonsovereign loan to Lukoil Overseas Shah Deniz to finance its stake in the project in 2015 and is proposing a similar \$500 million loan to SGC for the same project.

<sup>2</sup> The design and monitoring framework is in Appendix 1.

<sup>3</sup> The project finances the Shah Deniz Stage II expansion of the gas field and production facilities and additional capital expenditure requirements and operational expenditure outlays related to the Shah Deniz Stage I project.

<sup>4</sup> ADB. 2008. *Strategy 2020. The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*.

<sup>5</sup> BP. 2016. *BP Statistical Review of World Energy June 2016*. London.

<sup>6</sup> The Oil and Gas Year. 2015. *The Oil & Gas Year Azerbaijan 2015*. Dubai: Wildcat International.

<sup>7</sup> ADB. 2014. *Country Partnership Strategy: Azerbaijan, 2014–2018*. Manila.

<sup>8</sup> Standards & Poor's Rating Services. 2016. *Azerbaijan Country Rating Update, 29 January*. London.

Settlements, Azerbaijan's gasification rate increased from 78.5% in 2013 to 86.7% in 2015; the government plans to reach 90% national gasification by 2018. The power sector is the largest gas consumer. Over 90% of power is generated using gas, and power generation consumes about half of the 9.8 bcm of gas consumed annually. The electrification rate is 100%. Gas is currently exported to Iran, Georgia, and Turkey. Diversification of the export base by accessing larger markets is needed to secure stable revenues from gas production. Economic diversification to reduce reliance on the hydrocarbon sector has been a significant challenge.

6. **Project.** The Shah Deniz gas condensate field is located about 70 kilometers offshore, southeast of Baku, Azerbaijan. It is one of the largest gas fields in the world, with over 1,000 bcm of gas.<sup>9</sup> The Shah Deniz gas field development is a public-private partnership between Azerbaijan and five international companies, led by BP (through its subsidiary, BP Exploration [Azerbaijan]) as the operator. Shah Deniz gas will be exported to Europe, via Georgia, Turkey, Greece, and Albania (the Southern Gas Corridor).<sup>10</sup> Exploration, development, and production are governed by the Shah Deniz production sharing agreement (PSA), which was executed in 1996.<sup>11</sup> BP is responsible for the development and operation of the gas field and the laying and operation of the South Caucasus Pipeline Expansion. All other Shah Deniz PSA partners are acting purely as financial investors, and not involved in day-to-day operations.<sup>12</sup>

7. The Shah Deniz gas field is being developed in two stages. The initial development, Shah Deniz Stage I (Shah Deniz-I) began production in 2006. Despite the use of pioneering technologies, it was developed in only 7 years and has become a reliable gas supplier to Azerbaijan, Georgia, and Turkey. Full gas field development under Shah Deniz Stage II (Shah Deniz-II) is underway, with about 93% of procurement and 72% of construction completed. Completion of full field development of the Shah Deniz is on target, with gas scheduled to be supplied to Georgia and Turkey in late 2018, and to Europe in 2020. Once completed, Shah Deniz-II will produce 16 bcm of gas per annum, in addition to the 9.8 bcm from Shah Deniz-I. Daily production of gas condensate will increase from 45,000 barrels to 105,000 barrels.

8. The State Oil Company of Azerbaijan Republic (SOCAR), a vertically integrated state-owned oil and gas company, is responsible for the exploration, exploitation, and marketing of petroleum and petrochemical products in domestic and international markets. The State Oil Fund of the Republic of Azerbaijan (SOFAZ) was established in 1999 to convert the country's hydrocarbon reserves into financial assets that generate perpetual income.

9. To ensure the success of the fully developed Shah Deniz gas field and gas delivery to Europe, in October 2013 the President of Azerbaijan signed a decree establishing a State Commission.<sup>13</sup> A subsequent presidential decree in February 2014 established SGC to consolidate the financing and management of Azerbaijan's ownership interests in Shah Deniz and the transmission of gas to Europe.<sup>14</sup> SGC, through its wholly owned subsidiary SGC Upstream (SGCU), acquired a 6.67% interest in Shah Deniz and contracted to purchase an

<sup>9</sup> BP. Shah Deniz Stage I Project. [http://www.bp.com/en\\_az/caspian/operationsprojects/Shahdeniz/SDstage1.html](http://www.bp.com/en_az/caspian/operationsprojects/Shahdeniz/SDstage1.html).

<sup>10</sup> The Southern Gas Corridor comprises (i) the South Caucasus Pipeline and South Caucasus Pipeline Expansion from the Sangachal Terminal in Azerbaijan through Georgia to Turkey; (ii) the Trans-Anatolian Pipeline through Turkey and Greece; and (iii) the Trans-Adriatic Pipeline through Albania and the Adriatic Sea to southern Italy. Long-term gas offtake agreements are in place.

<sup>11</sup> While currently in effect until 2036, the Shah Deniz PSA may be extended until 2048.

<sup>12</sup> Current Shah Deniz PSA partners are BP (28.83%), Turkish Petroleum Overseas (19.00%), Petronas (15.50%), Naftiran Intertrade (10.00%), Lukoil (10.00%), SOCAR (10.00%), and SGC (6.67%).

<sup>13</sup> The State Commission was established by the Order of the President of the Republic of Azerbaijan to oversee the transportation of Azeri natural gas to world markets along the Southern Gas Corridor, dated 29 October 2013.

<sup>14</sup> SGC is 51% owned by the Republic of Azerbaijan, represented by the Ministry of Economy, and 49% by SOCAR.

additional 10% interest (the completion of which is expected to take place in 2023), from SOCAR's wholly owned subsidiary Azerbaijan (Shah Deniz) Limited (AzSD).<sup>15</sup> SGC's indirect stake in BP's cash call contributions and its concurrent investments in the Southern Gas Corridor to date have been financed by (i) approximately \$1.7 billion in equity from its shareholders, (ii) \$2.5 billion in 10-year SGC bonds subscribed by SOFAZ, (iii) \$1.0 billion in 10-year Eurobonds issued in March 2016, and (iv) revenues generated by the Shah Deniz-I and South Caucasus Pipeline projects.

10. The 10% interest held by AzSD will be transferred to SGCU upon completion of closing conditions, which include the full and unconditional repayment in 2023 of certain outstanding bonds issued by SOCAR. The deferred sales and purchase agreement provides that SGCU will make progress payments for the cash call requirements of the 10% interest, and AzSD will continue to meet all expenditures, receive all income, and perform all obligations relating to the 10% interest.<sup>16</sup> Pursuant to the Resolution of the State Commission of July 2014,<sup>17</sup> all revenues received by SOCAR from this 10% interest are to be used to support SGC's financing needs.

11. **Financing need.** The Shah Deniz-II investment for 2016–2040 was estimated at \$27.1 billion in July 2016, less than the originally budgeted amount of \$28.5 billion. Savings stem from cost efficiencies and the devaluation of the Azerbaijan manat. Shah Deniz shareholders invest through pro rata share cash call payments invoiced by BP under the Shah Deniz joint operating agreement. The cash calls are primarily for the Shah Deniz-II expansion costs and, secondarily, some relatively small ongoing capital and operational expenditures related to the Shah Deniz-I gas production. SGC's share in these cash calls is estimated at \$2.9 billion for 2016–2020.

12. Low hydrocarbon prices and consequential unfavorable financial market conditions resulted in the government requesting multilateral financing institutions to help finance the Shah Deniz-II and the pipeline projects, totaling \$51 billion in aggregate investments by 2020. ADB has been requested to consider financing SGC's cash calls for Shah Deniz-II. To help overcome adverse market conditions, it is proposed for ADB to (i) issue a PCG covering up to \$500 million in principal payments plus interest and guarantee fees against the non-honoring of a Ministry of Finance (MOF) guarantee to commercial banks for SGC's borrowing, and (ii) provide a nonsovereign loan of up to \$500 million.<sup>18</sup> The government may request further support from ADB for 2018–2020 cash calls should financing costs through the financial markets remain high.

13. **Development impact.** Globally depressed oil prices and the halving of the value of the Azerbaijan manat against the United States dollar in 2015 have placed pressure on Azerbaijan's economic growth and balance of payments. As a result, government revenues and the country's foreign exchange reserves have decreased significantly. The downgrading of Azerbaijan's credit rating in early 2016 increased Azerbaijan's financing costs and adversely affected access to commercial funds. SOFAZ was responsible for 50.8% of the national budget in 2014 and 46.5% in 2015.<sup>19</sup> Low oil and gas prices, however, have decreased SOFAZ's net holdings.

<sup>15</sup> SGC's initial 6.67% interest was purchased from SOCAR in 2014, which SOCAR purchased from Statoil in 2013.

<sup>16</sup> Finalization of project documentation, including the PCG, will be subject to satisfactory legal due diligence on AzSD being completed and appropriate contractual provisions applicable to AzSD being agreed with AzSD and SGC.

<sup>17</sup> Resolution of the State Commission on determination of the financing mechanism of the Projects by Southern Gas Corridor CJSC (SGC) in order to ensure the operation of the Southern Gas Corridor in connection with the transportation of Azerbaijani Gas to world markets. 9 July 2014.

<sup>18</sup> ADB. Forthcoming. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Southern Gas Corridor CJSC for the Shah Deniz Gas Field Expansion Project in Azerbaijan*. Manila.

<sup>19</sup> Government of Azerbaijan, Ministry of Finance. 2015. *The Law on State Budget 2015*. Baku.

14. ADB assistance to SGC to meet financial commitments to Shah Deniz will allow SOFAZ and the government to use oil and gas revenues for social expenditures and continued efforts to diversify the economy away from the oil and gas sector. Based on a diagnostic analysis of the economy, the government has identified priority sectors<sup>20</sup> to help achieve such diversification as specified in a 2016 presidential order, providing basic directions to develop a new comprehensive national economic vision.<sup>21</sup> These sectors are relatively more labor intensive and their further development is expected to have a positive impact on employment, and particularly demand for skilled jobs. The government's focus on vocational training is also expected to accommodate such increase in demand for skilled jobs.

15. **Added value of the partial credit guarantee.** The use of the PCG is essential for SGC to continue meeting its financial obligations toward the Shah Deniz gas field expansion and pipeline projects through private sector participation, despite the current unfavorable market conditions. Without ADB's credit enhancement, SGC's ability to meet its participation obligations with funding from commercial lenders is likely to be prohibitively expensive. Although ADB's PCG will help lower SGC's cost of financing, it reflects commercially feasible risk-based pricing for an export revenue-generating project, while sharing underlying project and commercial risks with commercial lenders for the uncovered portion. In contrast to making a direct loan, the proposed PCG instrument allows ADB to leverage the use of its own capital resources.

16. **ADB support.** ADB's support for government efforts to improve the sector include interventions in energy efficiency, power sector financial sustainability, renewable energy, and private sector participation.<sup>22</sup> The government reaffirmed its commitment to addressing sector issues through the 2016 presidential order (footnote 21), and the draft State Program on Efficient Use of Energy Resources and Energy Efficiency of End Customers (2016–2020), which calls for tariff reforms to recover costs and achieve commercially viable operations.<sup>23</sup>

17. ADB's country partnership strategy, 2014–2018 (footnote 7) has a focus on energy. The project aligns with the commitment by ADB to provide catalytic solutions for upper middle-income countries like Azerbaijan under the Midterm Review of Strategy 2020.<sup>24</sup> It supports two Strategy 2020 core operation areas (infrastructure and regional cooperation and integration) and one strategic driver of change (catalyzing investments through private sector participation).

## B. Impact and Outcome

18. The impact of the project is aligned with sustained revenues from oil and gas exports, which will facilitate diversification of the country's economy.<sup>25</sup> The outcome will be increased production and exports of gas from the Shah Deniz gas field. The project will help diversify Europe's energy sources and contribute to the development of multi-seller, multi-buyer markets.

## C. Outputs

<sup>20</sup> These sectors include agriculture, manufacturing, logistics, tourism, and education (vocational training).

<sup>21</sup> Government of Azerbaijan. 2016. *Presidential Order of 16 March 2016. Basic Directions of the Strategic Roadmap on the National Economy and Main Economic Sector*. Baku.

<sup>22</sup> ADB's support comprises (i) ADB. 2014. *Technical Assistance to the Republic of Azerbaijan for Preparing an Enabling Environment for Private Sector Participation in the Power Sector*. Manila; and (ii) ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to the Republic of Azerbaijan for the Power Distribution Enhancement Investment Program*. Manila.

<sup>23</sup> ADB understands that this program is expected to be approved by end of 2016.

<sup>24</sup> ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

<sup>25</sup> Government of Azerbaijan. 2012. "Azerbaijan 2020: Look into the Future" Development Concept. Baku.

19. The project's outputs are (i) Shah Deniz-II natural gas production and processing facility under construction, (ii) greater efficiency in the gas sector, and (iii) jobs created during construction and operations. The ADB PCG will help SGC secure financing, and proceed with the (i) construction of two new bridge-linked oil platforms, (ii) drilling of 26 new subsea wells, (iii) construction of a new 500-kilometer subsea pipelines, (iv) consolidation of the government's interests in Shah Deniz within a single entity, and (v) creation of over 19,000 temporary and 1,800 permanent local jobs during the construction and operation of Shah Deniz-II. Based on industry averages, about 15% of the permanent local jobs are expected to be for women.<sup>26</sup>

## D. Investment and Financing Plans

20. The total remaining financing requirement for the Shah Deniz-II gas field expansion project is estimated at \$27.1 billion during 2016–2040. The combined share of SGCU and AzSD (16.67%) during 2016–2020 is estimated at \$2.9 billion (Table 1).

**Table 1: Project Investment Plan (\$ million)**

Item	Amount
<b>A. Base Cost<sup>a</sup></b>	
1 Cash calls for 6.67% SGCU share (2016–2020)	1,161
2 Cash calls for 10% AzSD share to be transferred to SGCU under DSPA (2016–2020) <sup>b</sup>	1,733
3 Cash calls for ongoing capital expenditures (2021–2040)	1,186
<b>Subtotal (A)</b>	<b>4,080</b>
<b>B. Contingencies</b>	<b>439</b>
<b>Total (A+B)<sup>c</sup></b>	<b>4,519</b>

AzSD = Azerbaijan (Shah Deniz) Ltd., DSPA = deferred sale and purchase agreement, SGCU = SGC Upstream LLC.

<sup>a</sup> As of July 2016. These figures reflect cash call amounts net of contingencies.

<sup>b</sup> Excludes lump-sum payments by Southern Gas Corridor Closed Joint-Stock Company (SGC) to AzSD for the 10% DSPA share.

<sup>c</sup> Excludes financing charges estimated at \$296 million, which includes charges for the Asian Development Bank guaranteed commercial loan (estimated at \$76 million) and guarantee fees for 2016–2020.

Source: Lenders' technical advisor, SGC, and Asian Development Bank estimates.

21. ADB will provide a PCG<sup>27</sup> to support a commercial loan of up to \$526.3 million made to SGC by a consortium of international banks and guaranteed by Azerbaijan, acting through MOF. The commercial loan will be for SGC's estimated financing requirements in 2016 and 2017 on terms based on prevailing market tenors and interest rates, taking into account the MOF guarantee and ADB's PCG.<sup>28</sup> The PCG will be backed by ADB's ordinary capital resources and provide up to 95% in nonpayment cover for up to \$526.3 million in principal (i.e., guaranteed principal amount of up to \$500 million),<sup>29</sup> plus accrued regular interest and guarantee fees for up to the full term of the loan up to a maximum aggregate liability of \$785 million. ADB will charge guarantee and commitment fees,<sup>30</sup> based on ADB's equivalent pricing

<sup>26</sup> Women's participation in construction is limited in the country, particularly in gas fields. The project may provide more employment opportunities for women in nonphysical operations and maintenance. These were preferences expressed by women during the due diligence process.

<sup>27</sup> Pursuant to ADB. Credit Enhancement Operations. *Operations Manual*. OM D9/BP. Manila (para. 15), ADB's anchor investments are ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Lukoil Overseas Shah Deniz Stage II Gas Field Expansion Project in Azerbaijan*. Manila; and ADB. 2016. Project Preparatory Technical Assistance for Azerbaijan Shah Deniz Stage II Investment Plan. Manila (TA 9106-AZE).

<sup>28</sup> Should SGC's actual 2016 and 2017 financing needs be lower than currently estimated, SGC may use any undrawn principal amounts under the ADB-guaranteed commercial loan for its 2018 financing needs.

<sup>29</sup> The non-guaranteed 5% portion (up to \$26.3 million) constitutes net direct value added commercial cofinancing.

<sup>30</sup> For each interest period, guarantee fees are charged on the guaranteed percentage of outstanding principal and accrued interest and guarantee fees payable for the period. Commitment fees are charged during the availability

for sovereign loans.<sup>31</sup> Following nonpayment by SGC and, subsequently, MOF, the lenders may claim under ADB's PCG. ADB will receive a sovereign counter-guarantee and indemnity from the Republic of Azerbaijan, under which the government will indemnify ADB for any payments made, or any loss incurred, by ADB under the PCG. The financing plan is in Table 2.

**Table 2: Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Commercial financing	1,667	36.9%
Asian Development Bank PCG covered commercial loan <sup>a</sup>	526	11.6%
Other commercial financing	1,141	25.3%
Asian Development Bank (Nonsovereign) <sup>b</sup>	500	11.1%
SGC equity and bond financing	2,352	52.0%
<b>Total<sup>c</sup></b>	<b>4,519</b>	<b>100.0%</b>

PCG = partial credit guarantee, SGC = Southern Gas Corridor Closed Joint-Stock Company.

<sup>a</sup> Principal amount based on 95% coverage.

<sup>b</sup> ADB. Forthcoming. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Southern Gas Corridor CJSC for the Shah Deniz Gas Field Expansion Project in Azerbaijan*. Manila.

<sup>c</sup> Excludes estimated financing charges during implementation of \$296 million from 2016 to 2020.

Source: Southern Gas Corridor Closed Joint-Stock Company and Asian Development Bank estimates.

## E. Implementation Arrangements

22. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.<sup>32</sup>

**Table 3: Implementation Arrangements**

Aspects	Arrangements
Implementation period	November 2016–December 2017
Estimated completion date	31 December 2017
Management	
(i) Oversight body	Ministry of Finance
(ii) Executing agency	Southern Gas Corridor Closed Joint-Stock Company
Retroactive financing	Retroactive financing for SGC's share interest in BP 2016 cash calls and AzSD 2016 progress payment notices paid by SGC, subject to ADB policies and procedures.
Expected disbursements under commercial loan	Disbursements for 2016–2017 cash call-related payments as agreed between SGC and lenders. <sup>a</sup>
ADB PCG Exposure	Exposure will, at any given time, be in accordance with the agreed disbursement and repayment schedule under the ADB PCG-backed commercial loan.

ADB = Asian Development Bank, AzSD = Azerbaijan (Shah Deniz) Limited, PCG = partial credit guarantee, SGC = Southern Gas Corridor Closed Joint-Stock Company.

<sup>a</sup> Should SGC's actual 2016 and 2017 financing needs be lower than currently estimated, SGC may use any undrawn principal amounts under the ADB-guaranteed commercial loan to its 2018 financing needs.

Source: Asian Development Bank estimates.

## III. DUE DILIGENCE

### A. Technical

23. The lenders' technical advisor reviewed BP's overall Shah Deniz-II development plans and concluded that the design and engineering are satisfactory.<sup>33</sup> It also agreed with BP's range of gas-initially-in-place estimates, confirming that sufficient allowance for uncertainty and critical

period of the loan (until the loan is fully disbursed) over the difference between the committed guaranteed principal amount, and the guaranteed percentage of outstanding principal, accrued interest, and guarantee fees.

<sup>31</sup> The final terms of the PCG are subject to endorsement by the ADB Pricing and Credit Enhancement Committee.

<sup>32</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

<sup>33</sup> Report of lenders' technical advisor for Azerbaijan: Shah Deniz Gas Field Expansion Project (July 2016).

issues have been provided for in the estimation process. Estimates for Shah Deniz-II of the gas-initially-in-place show that there will be sufficient resources to deliver the annual gas production of 16 bcm. The technical advisor concurred with BP's detailed drilling plans, which employ state-of-the-art drilling methods and technology. BP has a well-established capital value management process and the latest progress report shows Shah Deniz-II is not only well underway, but ahead of schedule and 5% under budget.

## **B. Economic and Financial**

24. The financial analysis focused on SGC's financial sustainability as the entity responsible for Azerbaijan's interests in the Southern Gas Corridor projects. Projections are based on gas and condensate sales agreements and transit fees. Prices are based on forecasts from the lenders' market consultant, which include the following assumptions regarding Italian Punto di Scambio Virtuale hub prices: \$4.32 per million british thermal units (MMBtu) in 2017, below \$5 per MMBtu until 2020, and an average price of \$8.32 per MMBtu for 2021–2032. Oil prices are based on assumptions of \$55 per barrel in 2017, \$60 in 2018, and \$65 for 2019–2032. With these base case assumptions, SGC can meet its debt service obligations with a minimum debt service coverage ratio of 1.2 during the loan life. A sensitivity analysis shows that debt service coverage ratios remain above 1.0 under downside oil and gas price and project expenditure scenarios. Another analysis of SGC's financial internal rate of return, using net profit as net cash flow, results in an estimated financial internal rate of return of 6.7%, higher than the estimated weighted average cost of capital of 4.3% for SGC and 3.1% for Shah Deniz PSA.<sup>34</sup>

25. The project's economic benefit to Azerbaijan's economy is export revenues from Shah Deniz gas sales. The economic internal rate of return is estimated to be 14.9%, which is greater than the economic opportunity cost of capital of 12.0%. The sensitivity analysis also suggests sufficient robustness of the project under all tested assumptions.

26. While these analyses show the project's financial and economic viability, SGC faces a challenge in raising commercial financing to meet its sizable upcoming financing needs. However, any shortfall will be covered by additional contributions from SGC shareholders in accordance with a State Commission resolution (footnote 17), providing an established mitigation mechanism to the potential challenge.

27. As a key source of funds for SGC, SOFAZ's financial strength was also analyzed. Its assets have grown rapidly from \$2.5 billion in early 2008 to \$35.1 billion as of mid-2016. However, the 2015 drop in oil and gas prices adversely impacted SOFAZ's revenues and asset base. As of the end of 2015, the Shah Deniz gas field had contributed \$2.4 billion to SOFAZ since the commissioning of Shah Deniz-I in 2007. Based on the oil and gas price forecast by the lenders' market consultant, Shah Deniz is expected to contribute an additional \$10 billion to SOFAZ by 2035. While SOFAZ provides security to SGC, implementation of Shah Deniz-II and the pipelines will further strengthen the financial sustainability of SOFAZ.

## **C. Governance**

28. SGC's financial management risk is considered moderate. While it has a sound financial management system and structure, securing large financing in a timely manner will continue to be a challenge. Lack of experience with multilateral financing institutions while relying substantially on such financing is also a challenge. SGC has put forth mitigation measures by

<sup>34</sup> ADB's nonsovereign lending to SGC (footnote 18) shares the same analysis.

engaging legal and financial advisors and through the early engagement of multilateral financial institutions. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and SGC. The specific policy requirements and supplementary measures are described in the project administration manual (footnote 32).

29. Project procurement is conducted in accordance with BP's procurement practices as agreed among the parties to the joint operating agreement.<sup>35</sup> The lenders' technical advisor confirmed that BP Azerbaijan's procurement strategy and supply chain management are well established. With approximately 93% procured and 72% completed, the project is ahead of schedule and actual costs are 5% under budget. The first gas is scheduled to be delivered in 2018. ADB is satisfied that the project's procurement has been conducted following normal commercial practices, with due attention to economy and efficiency as required for procurement in relation to loans guaranteed by ADB.

30. Integrity due diligence was conducted by ADB's Private Sector Operations Department (PSOD) for its proposed nonsovereign loan (footnote 1). For this PCG proposal, the Central and West Asia Regional Department has relied on the outcome of PSOD's integrity due diligence. No significant or potentially significant integrity issues were identified in relation to SGC. Azerbaijan is an early member of the Extractive Industries Transparency Initiative (EITI) and was given *compliant* status in 2009. The EITI redefined its standards in 2013 and now includes more comprehensive requirements for civil society engagement. Against these new standards, Azerbaijan was downgraded to *candidate* status in 2015. During its recent October 2016 meetings, EITI's board concluded that Azerbaijan has made meaningful progress with considerable improvements, maintaining the country's *candidate* status. The government is expected to continue implementing corrective actions to regain "compliant" status in 2017.

## **D. Poverty and Social**

31. The project will provide additional economic benefits and support government policies by (i) providing revenues for the development of other sectors, (ii) modernizing the oil and gas sector, (iii) promoting the efficient use of energy resources, and (iv) increasing sector efficiency. The community engagement and workforce management plans of BP recognize key social issues for communities in the vicinity of the gas terminal. Specific recruitment targets for named communities are included in construction contracts. Over 20,000 people were involved in construction activities in Azerbaijan by the end of 2015; 80% were Azerbaijani nationals.

## **E. Safeguards**

32. In compliance with ADB's Safeguard Policy Statement (2009) (SPS), the project is classified *category A* for environment, *B* for involuntary resettlement, and *C* for indigenous peoples. Potential environmental and social impacts of the project were identified and effective measures to avoid, minimize, mitigate, and compensate for adverse impacts are incorporated in safeguard reports and plans. An environmental and social impacts assessment was performed for Shah Deniz-II and disclosed on ADB's website in July 2014. In line with ADB's SPS requirements for financing of existing facilities, an environmental and social compliance audit report (ESCAR) for the existing facilities of Shah Deniz-I was carried out in May 2014. Another ESCAR on the ongoing Shah Deniz-II construction activities was produced in July 2015 and

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<sup>35</sup> Shah Deniz Joint Operating Agreement dated 5 March 1997.



updated in August 2016.<sup>36</sup> The audit found the project in compliance with the ADB SPS, with no corrective action plan required. SGC's institutional capacity and commitment to ensure that BP properly manages the project's social and environmental impacts are deemed adequate.

33. The project is located in Sangachal Bay in the Caspian Sea, which contains high biodiversity areas; the environment and social impact assessment indicates the project area is not located in areas of high biodiversity. The Shah Deniz-II contract area overlaps with the migration routes and spawning areas of some fish species. The impact assessment indicates that construction impacts on fish will be minimal. Fishing is the dominant threat to fish populations in the Caspian Sea. Existing fish population monitoring programs established for Shah Deniz-I are satisfactory to ADB and will continue. The Shah Deniz area may have some overlap with Caspian seal migration pathways. BP engages with and provides support to the Caspian Sea conservation programs. BP has in place an ecological and wildlife management plan. ADB will require a commercial loan provision that SGC, to the extent permissible under the project agreements, procure that the operator implements the project in compliance with the relevant plans and ADB's SPS requirements.

34. Under the terms of the Shah Deniz PSA, SOCAR has transferred all lands required for the Shah Deniz-II project to the operator. The audit confirmed that no resettlement issues, including access rights or temporary usage of lands, existed as a result of the Shah Deniz-I facilities and the sites proposed for expansion of the terminal as part of Shah Deniz-II. No indigenous communities are located in the project area, and no indigenous peoples' impacts are expected. The operator has prepared and implemented a small-scale fishing livelihood management plan to address economic displacement of 48 fishermen. All affected fishermen have resumed their fishing activities at the same location, except for six fishermen, who voluntarily chose to move to another location about 40 kilometers from the Sangachal Bay. These fishermen have reported additional impacts due to increased transportation costs and the lower productivity at the new fishing location. The operator is trying to address these unanticipated impacts in consultation with the affected fishermen. The operator will monitor implementation of the fishing livelihood management plan and prepare a closure report once all residual grievances are satisfactorily addressed. Through ADB-required commercial loan provisions, SGC will be required to procure to the extent possible under its project powers that the operator complies with national labor laws and, pursuant to ADB's Social Protection Strategy, will take measures to comply with internationally recognized core labor standards.<sup>37</sup> Similarly, SGC will report regularly to ADB on the compliance of the operator (and its contractors) with such laws. Information disclosure and consultations with affected people are expected to be conducted in accordance with ADB requirements.<sup>38</sup> Such reports will be similar in scope and contents to the ESCAR.

## **F. Risks and Mitigating Measures**

35. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>39</sup> The project's integrated benefits and impacts are expected to outweigh the costs.

<sup>36</sup> Earlier drafts of the ESCAR were disclosed on the ADB website beginning in mid-2015; the final ESCAR was disclosed on 28 September 2016.

<sup>37</sup> ADB. 2003. *Social Protection*. Manila (adopted in 2001).

<sup>38</sup> Summary Poverty Reduction and Social Strategy; and Safeguards and Social Dimensions Summary (accessible from the list of linked documents in Appendix 2).

<sup>39</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Pipelines are not completed as planned.	Project progress is based on BP's extensive experience and expertise, and it is anticipated that Shah Deniz Stage II (and its downstream pipeline projects) will be completed within budget and on time.
Diversion of Shah Deniz revenues or lack of sufficient financing in a timely manner leads to SGC's noncompliance with Shah Deniz agreements.	The State Commission established a financing mechanism to cover SGC's financing needs for the project (and the pipeline projects), obliging SOCAR to direct net revenues earned by it from its 10% participating interest in Shah Deniz and the pipeline projects to an equity injection in SGC.
Inadequate gas and gas condensate sales revenues due to the persistence of low oil and gas prices or a drop in demand or take-off.	Oil price forecasts from international market consultants, providing best available projections, are adopted.
Construction activities fail to meet the national environmental safeguard standards and ADB's Safeguard Policy Statement (2009).	The operator (BP) produces environmental and social monitoring reports based on international practices that are acceptable to ADB. Progress is scrutinized by all participating shareholders, which are internationally reputable companies.
Change in loan market conditions affecting appetite and costs of funds of lenders to participate in the ADB PCG-covered loan facility.	Macroeconomic indicators and responses to commercial market soundings have been positive. The market for PCG-covered loans is relatively stable as lenders take limited credit exposure on the Government of Azerbaijan. Lead arrangers are incentivized by an all-in pricing grid-based structuring fee to achieve lowest pricing to SGC.

ADB = Asian Development Bank, PCG = partial credit guarantee, SGC = Southern Gas Corridor Closed-Joint Stock Company, SOCAR = State Oil Company of Azerbaijan Republic.

Source: Asian Development Bank.

#### **IV. ASSURANCES AND CONDITIONS**

36. The government and SGC acknowledged that ADB will require the commercial lenders to include in the loan agreement with SGC (to be negotiated) certain undertakings arising from ADB policy requirements with respect to the project, including those concerning prohibition of corruption, money laundering and financing of terrorism, safeguards, gender, and procurement, as well as appropriate reporting requirements. SGC will be required to provide cash call statements, payment notice statements, and proofs of payment for the project cash calls and deferred sales and purchase agreement progress payments to ADB to substantiate the intended use of proceeds of the ADB-guaranteed loan.

37. As a condition to effectiveness of the PCG, a sovereign counter-guarantee and indemnity issued by the Republic of Azerbaijan in favor of ADB shall have been duly executed and all of its effectiveness conditions (other than the effectiveness of the PCG or such other conditions as may be agreed by ADB) shall have been satisfied.

#### **V. RECOMMENDATION**

38. I am satisfied that the proposed partial credit guarantee (PCG) would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the PCG covering up to \$500 million of principal amounts plus accrued interest and PCG guarantee fees, in favor of commercial lenders to Southern Gas Corridor Closed Joint-Stock Company for the Shah Deniz Gas Field Expansion Project, for up to the full term of the loan up to a maximum aggregate liability as set out in paragraph 21 above and on terms and conditions substantially in accordance with those set forth in this report.

Takehiko Nakao  
President

4 November 2016

## DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with			
Sustained revenues from oil and gas exports that will facilitate diversification of the country's economy <sup>a</sup>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<b>Outcome</b>  Increased production and exports of gas from the Shah Deniz gas field	Volume of annual peak gas production from the Shah Deniz gas field (SD1 and SD2) of 26 bcm per annum achieved by 2022 (2015 baseline: 9.8 bcm per annum)	BP's annual progress report	Full operations of Shah Deniz-II are delayed.  Pipeline projects are not completed as planned.
<b>Outputs</b>  1. Shah Deniz-II natural gas production and processing facility under construction  2. Greater efficiency in gas sector  3. Jobs created during construction and operations	1a. Progress in construction of two new bridge-linked offshore platforms to be commissioned by 2020 (2015 baseline: 0) 1b. Progress in drilling of 26 new subsea wells to be operationalized by 2020 (2016 baseline: 10) 1c. Progress in construction of 500 km of new subsea pipelines to be completed by mid-2020 (2015 baseline: 0 km)  2. Progress in consolidation of government's interests in Shah Deniz within a single entity (2016 baseline: government interests represented by SOCAR and SGC)  3. Creation of over 19,000 temporary jobs during construction (2014–2022) (2015 baseline: 16,000) and 1,800 permanent local jobs (15% of which are expected to be for women) during operation of Shah Deniz-II by 2022 (2016 baseline: 0)	1a–c. BP's annual progress report  2. SGC annual financial reports  3. BP's environment and social safeguards monitoring report	Unanticipated technical challenges during drilling of wells.  Complex structure of contracts that involve many subcontractors and joint ventures leads to delays in project implementation and/or technical or safety problems during construction.  Limited experience working with multilateral financing institutions, while relying substantially on such financing, leads to delay in securing financing.

**Key Activities with Milestones**

1. Commercial loan signing, counter-guarantee and indemnity execution, and ADB PCG execution (December 2016)
2. Satisfaction or waivers of conditions precedent for disbursements (December 2016)
3. Disbursement December 2016 to December 2017<sup>b</sup>
4. Continued payments of cash calls by SGC to meet participation requirements until December 2017<sup>b</sup>

**Inputs**

ADB PCG-covered commercial loan: \$526.3 million (utilizing OCR counter-guaranteed by the Republic of Azerbaijan)<sup>c</sup>

ADB: \$500.0 million nonsovereign loan<sup>d</sup>

Commercial financing: \$1,140.7 million

SGC's equity and bond financing: \$2,352.0 million

**Assumptions for Partner Financing**

Not Applicable

ADB = Asian Development Bank, bcm = billion cubic meters, km = kilometer, OCR = ordinary capital resources, PCG = partial credit guarantee, SGC = Southern Gas Corridor Closed Joint-Stock Company, SOCAR = State Oil Company of Azerbaijan Republic.

<sup>a</sup> Government of Azerbaijan. 2012. "Azerbaijan 2020: Look into the Future" *Development Concept*. Baku.

<sup>b</sup> Should SGC's actual 2016 and 2017 financing needs be lower than currently estimated, SGC may use any undrawn principal amounts under the ADB-guaranteed commercial loan for its 2018 financing needs, resulting in potential disbursements and cash call payments in 2018.

<sup>c</sup> This value may be reduced if cofinancing or other sources of funding can be obtained. Principal amount based on 95% coverage.

<sup>d</sup> The ADB Private Sector Operations Department is also considering to provide financing.

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=49451-002-3>

1. Counter-Guarantee and Indemnity Agreement
2. Sector Assessment (Summary): Energy
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Financial Analysis
7. Economic Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Environmental Impact Assessment
11. Environmental and Social Compliance Audit
12. Resettlement Plan
13. Risk Assessment and Risk Management Plan

**Supplementary Documents**

14. Financial Management Assessment
15. Mechanics and Consideration under the Deferred Sale and Purchase Agreement
16. Summary of Partial Credit Guarantee