



# Technical Assistance Report

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Project Number: 44463-013  
Research and Development Technical Assistance (RDTA)  
May 2012

## Turkmenistan–Afghanistan–Pakistan–India Natural Gas Pipeline Project, Phase 3 (Financed by the Regional Cooperation and Integration Fund)

Asian Development Bank

## ABBREVIATIONS

ADB	–	Asian Development Bank
GSPA	–	gas sales and purchase agreement
HCA	–	host country agreement
SPCC	–	special purpose consortium company
TA	–	technical assistance
TAPI	–	Turkmenistan–Afghanistan–Pakistan–India Natural Gas Pipeline
TWG	–	technical working group

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Type</b>	–	Research and development technical assistance (RDTA)
<b>Targeting classification</b>	–	General intervention
<b>Sector (subsector)</b>	–	Energy (electricity transmission and distribution pipelines)
<b>Themes (subthemes)</b>	–	Regional cooperation and integration (cross-border infrastructure), economic growth (widening access to markets and economic opportunities), private sector development (public–private partnerships)
<b>Location (impact)</b>	–	Regional and national (high), urban (medium), rural (low)

## NOTE

In this report, "\$" refers to US dollars.

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## I. INTRODUCTION

1. The Turkmenistan–Afghanistan–Pakistan–India Natural Gas Pipeline (TAPI)<sup>1</sup> Project of the Asian Development Bank (ADB) aims to export up to 33 billion cubic meters of natural gas per year through a proposed pipeline, approximately 1,800-kilometer long, from Turkmenistan to Afghanistan, Pakistan, and India. Project cost was estimated at \$7.6 billion in 2008. TAPI will be operated by a special purpose consortium company (SPCC) and led by a commercial entity (consortium lead). Turkmenistan, Afghanistan, Pakistan, and India (the parties)<sup>2</sup> have the option to invest in the SPCC. Design and construction will take about 4 years, after the pipeline consortium lead is selected and consortium agreements are signed.

2. TAPI presents an opportunity for regional cooperation on an unprecedented scale, linking the economies of the four countries. The Strategy for Regional Cooperation in the Energy Sector identifies TAPI as one link in the inter-energy relationship among the Central Asia Regional Economic Cooperation (CAREC) countries. TAPI's aims are strategically aligned with CAREC's objectives of ensuring (i) energy security through balanced development of regional infrastructure and institutions, (ii) stronger integration of markets, and (iii) economic growth through enhanced energy trading. TAPI is a high-priority flagship project in the energy sector under CAREC 2020. For India, the South Asia Regional Cooperation Strategy and Programs, 2011–2015 also makes the energy sector a priority.

3. Despite Turkmenistan's huge gas reserves, the sixth largest in the world, it only has access to the Russian, Iranian, and Chinese markets. Neighboring gas-scarce countries like Afghanistan, Pakistan, and India could be huge potential markets. Afghanistan needs a secure energy source to increase both its capacity to generate electricity and the current electrification rate from 20% to 33%.<sup>3</sup> Pakistan's acute power shortage was over 5,000 megawatts in 2011. Power disruptions were due to several factors, including depletion of the domestic gas supply, increased competition for gas, and a lack of affordable and reliable alternative energy sources. Northern India experienced a power deficit of approximately 3,000 megawatts in 2011. This regional cooperation project will foster economic growth through increased investments and trade, and align the parties' interests, which will help bring about regional stability and security. Increasing the use of natural gas to generate electricity will reduce damage to the environment, as natural gas emits 43% fewer carbon emissions than coal, commonly used in India, for each unit of energy delivered.<sup>4</sup>

4. At the parties' request, ADB has been TAPI's secretariat since 2002.<sup>5</sup> ADB's role has been instrumental in facilitating and balancing the interests of the parties. TAPI is being implemented in four phases. Phase 1 was completed with the signing in December 2010 of the gas pipeline framework agreement, intergovernment agreement, and heads of agreement relating to the gas sales and purchase agreement (GSPA). Phase 2 will end with the expected signing of the GSPA in 2012. ADB has organized 14 ministerial-level steering committee

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<sup>1</sup> The technical assistance (TA) first appeared in the business opportunities section of ADB's website on 2 May 2012.

<sup>2</sup> "Parties" refer to representatives of the governments of Turkmenistan, Afghanistan, Pakistan, and India.

<sup>3</sup> Afghanistan's National Development Strategy, Energy Sector 2007/2008–2012/2013 aims at a 33% access rate for electricity by 2015.

<sup>4</sup> Cheniere Energy, Inc. LNG Market Fundamentals Global Gas Demand.  
[http://www.cheniere.com/lng\\_industry/global\\_gas\\_demand\\_shtml](http://www.cheniere.com/lng_industry/global_gas_demand_shtml)

<sup>5</sup> The role of the secretariat involves preparation of studies needed for the governments' decision-making process, and facilitation of negotiations among the parties to secure the necessary agreements to make TAPI a reality.

meetings and 16 technical working group (TWG) meetings thus far.<sup>6</sup> ADB also financed several technical studies and the drafting of agreements.<sup>7</sup> The parties have asked ADB to continue as secretariat in phase 3 for the SPCC consortium lead selection, establishing the SPCC, and finalizing GSPA-related operational agreements. The pipeline will be constructed in phase 4.

## II. ISSUES

5. TAPI is a mutually beneficial long-term solution for the four countries. With the opening up of new markets, landlocked Turkmenistan will be able to diversify its gas exports to the east, where there is already a tremendous (and growing) demand for energy. Afghanistan, Pakistan, and India will gain a steady supply of affordable gas to power their growing economies. TAPI will go through southern Afghanistan, providing job opportunities during construction and operation and an enabling environment for developing industrial capacities in the area.

6. In view of the project's size and complexity, it will be essential to select a consortium lead that can (i) attract financing, (ii) manage construction, and (iii) reliably operate the pipeline. The potential consortium leads of this caliber that have shown interest thus far indicated such prerequisites as: (i) equity investment by representative firms of the government, (ii) on-shore gas participation rights in Turkmenistan, and (iii) security arrangements. The parties have not yet reached a consensus on how to manage these expectations and need further evidence of what is actually required. Market and merits/demerit analysis are needed to consider all the options in dealing with and balancing the requirements of potential consortium leads.

7. Lessons learned from previous technical assistance (TA) projects showed that: (i) ample time, (ii) strong coordination, (iii) timely monitoring, and (iv) analytical backing for the various options are needed when negotiating among the parties. For example, the negotiations for the model GSPA took much longer and needed much more background work than anticipated. GSPA-related agreements and consortium-related agreements are expected to require the same strategy and care.

## III. THE TECHNICAL ASSISTANCE

### A. Impact and Outcome

8. The impact of the project will be enhanced energy trading between Turkmenistan, Afghanistan, Pakistan, and India. The project's outcome is a natural-gas pipeline consortium established and engaged under a public-private partnership.

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<sup>6</sup> The steering committee consists of petroleum and natural resources ministers and oversees the work of the TWG. The TWG comprises representatives from domestic gas companies, who carry out negotiations.

<sup>7</sup> ADB. 2002. *Technical Assistance for the Feasibility Study of the Turkmenistan-Afghanistan-Pakistan Natural Gas Pipeline Project*. Manila (TA 6066-REG); ADB. 2003. *Technical Assistance for the Turkmenistan-Afghanistan-Pakistan Natural Gas Pipeline Project (Phase II)*. Manila (TA 6153-REG); ADB. 2007. *Technical Assistance for Strengthening Central Asia Regional Economic Cooperation, 2007-2009*. Manila (TA 6409-REG); ADB. 2010. *Technical Assistance for Turkmenistan-Afghanistan-Pakistan-India Natural Gas Pipeline*. Manila (TA 7632-REG); and ADB. 2011. *Technical Assistance for Turkmenistan-Afghanistan-Pakistan-India Natural Gas Pipeline (Phase 2)*. Manila (TA 7756-REG) all totaling \$2.6 million.

## B. Methodology and Key Activities

9. **Stage 1.** After the signing of the GSPAs, representatives of the parties and ADB will meet with prospective consortium leads and financiers at road shows to determine the market and the conditions under which qualified firms would participate in TAPI. Four road shows will be organized at oil and gas hubs in Asia, Europe, and North America.

10. The TA will finance the cost of the road shows (venue, refreshments, conference equipment, and translation services). An international individual consultant (oil and gas expert) will be engaged to structure the road shows, coordinate the invitations, and ensure the participation of suitable prospective private investors. After the road shows, the consultant will prepare a project investment market study report detailing the potential consortium leads, financiers, and prerequisites for participation; set out the merits and demerits; and make recommendations for a strategy to attract bidders and promote competition. A legal advisor will be available to answer questions on the GSPA, gas pipeline framework agreement, heads of agreement, and intergovernment agreement. Several resource persons will be engaged under the TA to advise on security, safeguards, and commercial, oil, and gas aspects during the road shows and subsequent TWGs. ADB will continue to facilitate and organize discussions and negotiations at both TWG and steering committee levels.

11. **Stage 2.** Subject to the successful completion of stage 1, the TA will finance the finalization of GSPA-related agreements, including the operations agreement and network code.<sup>8</sup> ADB will continue to facilitate negotiations at both TWG and steering committee levels for GSPA-related agreements. ADB will also continue to facilitate discussions at TWG and steering committee levels until conclusion of the consortium agreement and host country agreements (HCAs) and any other pertinent agreements, when requested by the parties. An individual consultant will be recruited under the TA to provide legal advice during these negotiations. Key activities will include organization of at least five TWG meetings and two steering committee meetings between June 2012 and June 2014.

12. A national consultant will be recruited for stages 1 and 2 to provide: (i) logistical support for the road shows and TWG and steering committee meetings, (ii) analytical support, and (iii) TA administrative support at ADB headquarters.

13. The outputs of the TA will be (i) a project investment market study report, and (ii) signed relevant agreements including the operations agreement, network code, consortium agreement, and HCA. The parties will endorse the project investment market study report prepared by the consultant.

## C. Cost and Financing

14. The total cost of the TA is estimated at \$1,500,000 equivalent, to be financed on a grant basis by the Regional Cooperation and Integration Fund under the Regional Cooperation and Integration Financing Partnership Facility.<sup>9</sup> Cost estimates and financing plan are in Appendix 2.

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<sup>8</sup> The operations agreement sets out the contractual obligation of buyers and the seller with regard to operation of the TAPI pipeline (e.g., gas measurements, allocation of gas, dispute resolution, etc). This agreement is closely linked to the GSPA and is required for negotiations of the network code, which is an agreement between the buyers and the pipeline operator.

<sup>9</sup> Established by ADB. The parties will contribute approximately \$850,000 equivalent by paying for their staff's road shows and TWG and steering committee meeting expenses.

#### **D. Implementation Arrangements**

15. ADB will be the executing agency for the TA. Disbursement under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

16. The TA will require 16 person-months of international and 24 person-months of national consulting services. Two international individual consultants and 1 national consultant will be required for this TA. A legal advisor (international consultant), oil and gas expert (international consultant), and coordinator (national consultant) will be engaged as individual consultants. Individual consultants are more appropriate and cost-effective than firms because of the specialized skills required for this TA.

17. The TA will also require 15 person-days of various resource persons, including experts in oil and gas, safeguards, and security, and commercial experts.

18. Consultants and resource persons will be engaged in accordance with the Guidelines on the Use of Consultants by ADB and Its Borrowers (2010, as amended from time to time). The procurement of venues and translation services under this TA will be carried out in accordance with ADB's Procurement Guidelines (2010, as amended from time to time).

19. The TA will be completed in 25 months, from 1 June 2012 to 30 June 2014. The overall results of the TA will be disseminated in various fora, including through regional cooperation meetings, and energy community of practice. As certain contractual outputs of the TA are confidential, these will not be disseminated.

#### **IV. THE PRESIDENT'S DECISION**

20. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,500,000 on a grant basis for the Turkmenistan–Afghanistan–Pakistan–and India Natural Gas Pipeline Project, Phase 3, and hereby reports this action to the Board.



<b>Activities with Milestones</b>			<b>Inputs:</b>
<b>1. Project investment market report</b>			Regional Cooperation and Integration Fund: \$1,500,000
1.1	Road shows in North America, Europe, and Asia	June–July 2012	
1.2	Issuance of investment market report	August 2012	
<b>2. Operations agreement, network code, consortium agreement, and host country agreements</b>			
2.1	17th technical working group (TWG) meeting: operations agreement, model network code, and transit fee framework agreement negotiations	June 2012	
2.2	18th TWG meeting and 16th steering committee meeting: road show outcomes, finalization of operations agreement, model network code, and transit fee framework agreement negotiations	July 2012	
2.3	Signing of operations agreement	August 2012	
2.4	19th TWG meeting: transaction advisory meeting kick-off	August 2012	
2.5	20th TWG meeting: transit fee framework agreement signing	January 2013	
2.6	21st TWG meeting: transaction advisory meeting (consultation on shortlisting of consortium leader)	August 2013	
2.7	Signing of consortium agreement	March 2014	
2.8	22nd TWG meeting: kick-off meeting for network code and host country agreement negotiations	April 2014	
2.9	Network code signing	May 2014	
2.10	23rd TWG meeting and 17th steering committee meeting; host country agreements finalization	June 2014	
2.11	Host country agreements signing	June 2014	

Source: Asian Development Bank.

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

Item	Total Cost
<b>Regional Cooperation and Integration Fund<sup>a</sup></b>	
1. Stage 1: Preparation of project investment market study report	
a. International consultants	
i. Legal advisor <sup>b</sup>	235.00
ii. Oil and gas expert	50.00
iii. Resource persons, 4 <sup>c</sup>	50.00
b. National consultant	15.00
2. Workshops, trainings, seminars, and conferences	
a. Road shows <sup>d</sup>	270.00
2. Stage 2: Facilitation of technical working group and steering committee meetings	
a. International consultants	
i. Legal advisor	450.00
ii. Resource persons	130.00
b. National consultant	75.00
2. Workshops, trainings, seminars, and conferences	
a. Technical working group and steering committee meetings <sup>e</sup>	30.00
3. Miscellaneous administration and support costs	50.00
4. Contingencies	145.00
<b>Total</b>	<b>1,500.00</b>

<sup>a</sup> Established by the Asian Development Bank.

<sup>b</sup> Seven technical working group meetings and four road shows.

<sup>c</sup> Four resource persons: oil and gas, safeguards, commercial, and security experts to assist ADB during the four road shows and seven technical working group meetings.

<sup>d</sup> Four locations: venue, translation services.

<sup>e</sup> Seven technical working group meetings: translation services includes airfare, remuneration, and per diem for two translators.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The Turkmenistan-Afghanistan-Pakistan Project was first conceived in the 1990s. The heads of state of Turkmenistan, Afghanistan, and Pakistan met in Islamabad on 30 May 2002 and announced their plans to cooperate on implementing the project. As a result of this meeting, a steering committee comprising energy ministers of the three countries was established. The Asian Development Bank (ADB) was designated as the lead development partner following the first steering committee meeting held in Ashgabat in July 2002.

2. A framework agreement was signed by the heads of state in August 2002. The draft heads of agreement, model host country agreement (HCA), model gas sales purchase agreement, model gas transportation agreement, and prequalification documents for private sector participation were completed. The governments reviewed only the HCA and the prequalification documents for private sector participation. With ADB's support, a preliminary feasibility study was prepared in 2003, and an updated study was completed in April 2008. Risk mitigation, market, underground storage, and preliminary security studies were also prepared.

3. In December 2010, the gas pipeline framework agreement and intergovernment agreement were signed during the heads of state summit in Ashgabat. The agreement included India as an official member of what is now referred to as the Turkmenistan–Afghanistan–Pakistan–India Natural Gas Pipeline (TAPI) Project.

4. The current project scope will build a 1,800-kilometer pipeline from the gas fields in Turkmenistan to off-take points in Afghanistan, Pakistan, and India, at an estimated cost of \$7.6 billion. At the operations stage, a pipeline will be built from the Turkmenistan-Afghanistan border to off-take points in Afghanistan, Pakistan, and India.

**A. Legal Advisor** (international, 12 person-months, intermittent)

### **1. Objective and Purpose of the Assignment**

5. The parties will establish a pipeline company together with the private sector to build and operate the pipeline. During project preparation, ADB will engage the services of a legal advisor. The advisor will provide professional and impartial advice to ADB and all parties in finalizing agreements and contracts for the project. These agreements and contracts include, but are not limited to, the gas sales and purchase agreement, HCA, consortium agreement, operations agreement, and network code. The agreements were drafted and will be finalized based on each country's inputs. Each government is expected to have its own counsel for contract negotiations. The advisor will not, by virtue of this assignment, be precluded from seeking appointment or being appointed by any of the parties to the project (including, without limitation, any government, ADB, any investor, or any party providing financing to the project) to advise on any aspect of the project after the conclusion of this assignment, provided that if the advisor wishes to seek an appointment as counsel for lenders providing financing to the TAPI project, he or she will, prior to any such appointment, obtain clearance or a waiver from the relevant parties to the project with respect to any professional conflict that may arise in connection with this assignment and the advisor's proposed role as counsel to the lenders.

6. The advisor will attend to four 3-day TAPI road shows and advise ADB and parties on legal issues that may arise as a result of meeting with prospective project developers, financiers, and insurers.

7. Subject to the successful completion of stage 1, and request from the governments for ADB's future involvement, the advisor will be required to provide the following inputs for stage 2 of the project:

- (i) attendance at 17th and 18th TWG meetings to facilitate negotiations of the operations agreement and HCAs;
- (ii) attendance at 19th, 20th, and 21st TWG meetings to advise ADB and the parties on transaction advisory matters;
- (iii) attendance at 22nd and 23rd TWG meetings to facilitate finalization of the network code and HCA;
- (iv) preparation of minutes following attendance at each meeting; and
- (v) revision of abovementioned agreements following attendance at each meeting and receipt of any further comments from the parties.

## **2. Output and Reporting Requirements**

8. Expected outputs for the assignment are final drafts of the operations agreement, HCA, network code, and consortium agreement, acceptable to ADB, the parties, and prospective consortium leader. For reporting purposes in ADB, the advisor will be under the guidance of the energy specialist, Energy Division, Central and West Asia Department (CWEN).

9. The assignment is expected to commence in June 2012, and continue until June 2014. The advisor's inputs will be required on an intermittent basis.

## **3. Experience and Qualifications**

10. The legal advisor will have over 15 years of experience in securing and finalizing contractual agreements in the oil and gas industry sector. The advisor is expected to be familiar with international laws governing such legal and financial transactions.

### **B. Oil and Gas Expert (international, 4 person-months, intermittent)**

#### **1. Objective and Purpose of the Assignment**

11. A portion of this technical assistance will be utilized to procure consulting services of an international oil and gas expert, who will assist ADB in identifying and confirming the requirements of potential commercial entities for participation in TAPI as consortium lead.

12. The commercial entities' requirements will be sought during ADB's organized road shows at major oil and gas hubs in Asia, North America, and Europe.

13. The oil and gas expert will prepare a list of potential participants and investors such as private oil companies, insurers, and financiers. The expert will be responsible for inviting participants to the road shows and ensuring their attendance. There will be four road shows.

14. Prior to the road shows, the expert will advise ADB on their content and assist ADB with the preparation of the pre-road show information packet.

15. The expert will be required to attend all the road shows with ADB representatives and advise them on various requirements that potential consortium leads may propose.

16. After the road shows, the expert will prepare the project investment market study report (PMIR), which will list and assess all necessary requirements for participating in TAPI by commercial entities who were met at the road shows.

17. Finally, the expert will be required to participate in one TWG meeting (at the same location as the final road show) to present the draft findings of the PMIR.

## 2. Output and Reporting Requirements

18. The expected output is the PMIR, which will be circulated to the parties. For reporting purposes in ADB, the expert will be under the guidance of the energy specialist, CWEN.

**Table A3: Tentative Schedule and Deliverables**

Location	Activity	Deliverable
Home office	Compilation of list of potential participants for road show	List of participants
	Following ADB's endorsement of the list, contacting and scheduling of the participants	Confirmation of attendance from participants
	Review of the pre-road show information packet	
Asia	Attendance of pre-road show meeting with the TAPI countries and a trial run of the Asian road show	
North America	North American road show	
Europe	European road show	
Asia	Final Asian road show	Draft findings of the PMIR
	Presentation of draft findings of the PMIR	
Home office	Updating and finalizing the final PMIR	Final PMIR

ADB = Asian Development Bank, PMIR = project investment market study report, TAPI = Turkmenistan–Afghanistan–Pakistan–India.

Source: Asian Development Bank

## 3. Experience and Qualifications

19. The expert will have had recent extensive interaction with global energy firms and/or financiers of international energy pipelines at a senior level and at least 20 years of experience in the oil and gas sector. Previous work experience in South Asia and Central Asia is preferred.

**C. Turkmenistan-Afghanistan-Pakistan-India Coordinator** (national, 24 person-months)

20. A national consultant will provide statistical, analytical, and administrative support to the ADB initiatives on TAPI. The consultant will be based in Manila and will have the following specific responsibilities:

- (i) updating information on TAPI initiatives;
- (ii) providing logistical support in organizing and conducting TAPI meetings, seminars, and workshops;
- (iii) collecting statistical data and maintaining a database in support of TAPI reports and publications;
- (iv) maintaining an orderly and up-to-date resource library (including electronic copies) of TA files, TAPI documents, consultants' reports, and other research and background papers on regional cooperation;
- (v) processing requests for consultant engagement and contract variations; providing general administrative support on TAPI;
- (vi) ensuring the smooth flow of documents and communications between CWEN and various divisions of the Central and West Asia Department, the South Asia Department, and the resident missions; and
- (vii) performing other related tasks as may be assigned.