Periodic Financing Request Report

Project Number: 47282-004
MFF Number: 0090
November 2016

Afghanistan: Energy Supply Improvement Investment Program (Tranche 2)

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 24 November 2016)

Currency unit	–	afghani/s (AF)
AF1.00	=	$0.0149
$1.00	=	AF66.83

ABBREVIATIONS

ADB	–	Asian Development Bank
DABS	–	Da Afghanistan Breshna Sherkat (Afghanistan Electricity Company)
FAM	–	facility administration manual
FCAS	–	fragile and conflict affected states
IEE	–	initial environmental examination
MFF	–	multitranche financing facility
NEPS	–	North East Power System
NESP	–	National Energy Supply Program
NPC	–	National Procurement Commission
PMO	–	program management office

WEIGHTS AND MEASURES

km	–	kilometer
kV	–	kilovolt
kWh	–	kilowatt hour
MW	–	megawatt

NOTES

(i) The fiscal year (FY) of the Government of Afghanistan and its agencies ends on 20 *December*. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2015 ends on 20 December 2015.

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

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CONTENTS

TRANCHE AT A GLANCE

1. Basic Data — **Project Number:** 47282-004

Project Name	Energy Supply Improvement Investment Program Tranche 2 (Formerly Multitranche Financing Facility II: Energy Development 2014-2023)	**Department /Division**	CWRD/CWEN
Country	Afghanistan, Islamic Republic of	**Executing Agency**	Da Afghanistan Breshna Sherkat (DABS)
Borrower	Afghanistan, Islamic Republic of		

2. Sector	**Subsector(s)**	**ADB Financing ($ million)**
✓ Energy	Electricity transmission and distribution	188.23
	Total	**188.23**

3. Strategic Agenda	**Subcomponents**	**Climate Change Information**	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project	Medium
Regional integration (RCI)	Pillar 1: Cross-border infrastructure		
4. Drivers of Change	**Components**	**Gender Equity and Mainstreaming**	
Partnerships (PAR)	Bilateral institutions (not client government) International finance institutions (IFI) Official cofinancing	No gender elements (NGE)	✓
5. Poverty and SDG Targeting		**Location Impact**	
Geographic Targeting	Yes	Nation-wide	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG7, SDG8, SDG9		

6. Risk Categorization: Low

7. Safeguard Categorization **Environment:** B **Involuntary Resettlement:** B **Indigenous Peoples:** C

8. Financing

Modality and Sources	Amount ($ million)
ADB	**188.23**
Sovereign MFF-Tranche (Grant): Asian Development Fund	188.23
Cofinancing	**226.77**
Afghanistan Infrastructure Trust Fund - Grant	225.77
People's Republic of China Regional Cooperation and Poverty Reduction Fund - Grant	1.00
Counterpart	**5.00**
Government	5.00
Total	**420.00**

9. Effective Development Cooperation

Use of country procurement systems	No
Use of country public financial management systems	No

Date of Receipt by ADB of PFR: 2 October 2016 Tranche Number: 2

10. Country Operations Business Plan

CPS	https://www.adb.org/sites/default/files/institutional-document/82618/icps-afg-2014-2015.pdf
COBP	https://www.adb.org/sites/default/files/institutional-document/177136/cobp-afg-2016-2018.pdf

11. Tranche Summary

The project will expand power imports from Turkmenistan through an asynchronous power interconnection, establish a unified power grid in Afghanistan, and extend the power grid into central Afghanistan. The 500-MW converter station will allow Turkmen power into the Afghan grid under the ten-year power purchase and sales agreement signed in November 2015. The Doshi-Bamyan line will expand the grid to eight additional provinces, distribute power to nearly 150,000 people, and provide redundancy to the existing transmission network. The project has transmission and distribution system linkages with several projects assisted by ADB and other development partners. The project is fully aligned with the National Energy Supply Program of the Government of Afghanistan.

Impact: Improved access to sustainable energy supplies across Afghanistan, aligned with the targets of the National Energy Supply Program of the Government of Afghanistan (program-defined)
Outcome: Increased supply of imported and indigenous power

Outputs: (i) New 500 megawatts high voltage direct current back to back voltage source convertor station commissioned at Dashte Alwan, (ii) New 180 kilometers of 220-kV transmission line commissioned from Doshi to Bamyan, and (iii) New 220/20-kV substation commissioned in Bamyan with a distribution network 3,000 kilometers with 20,000 new connections.

Implementation Arrangements: Da Afghanistan Breshna Sherkat (DABS) will be the executing agency.

Project Readiness: Due diligence was performed on the 4 turnkey projects by the two teams of project preparatory consultants recruited by ADB under a PPTA and by DABS under G-0134. DABS Project Management Office was established, staffed, and has been operational since 2009. The project preparatory consultants undertook the pre-design and have finalized the bidding documents, and would remain engaged in bid evaluation till the contract award anticipated in Q2 2017. The implementation supervision consultant who will monitor construction works is under recruitment under Tranche 1 of the MFF (G-0464/0465) and will be fielded in Q1 2017.

12. Significant Developments in the MFF and Previous Tranches

Tranche 1 of the MFF was approved on 8 December 2015. Procurement is underway and physical works on the two turnkey contracts is expected to begin in Q1 2017. None of the undertakings and covenants are due yet. The Government however is making considerable progress and has approved the Electricity Services Law 6 months ahead of time. The DABS Business Plan has also been drafted and shared with ADB, which was due in end 2017.

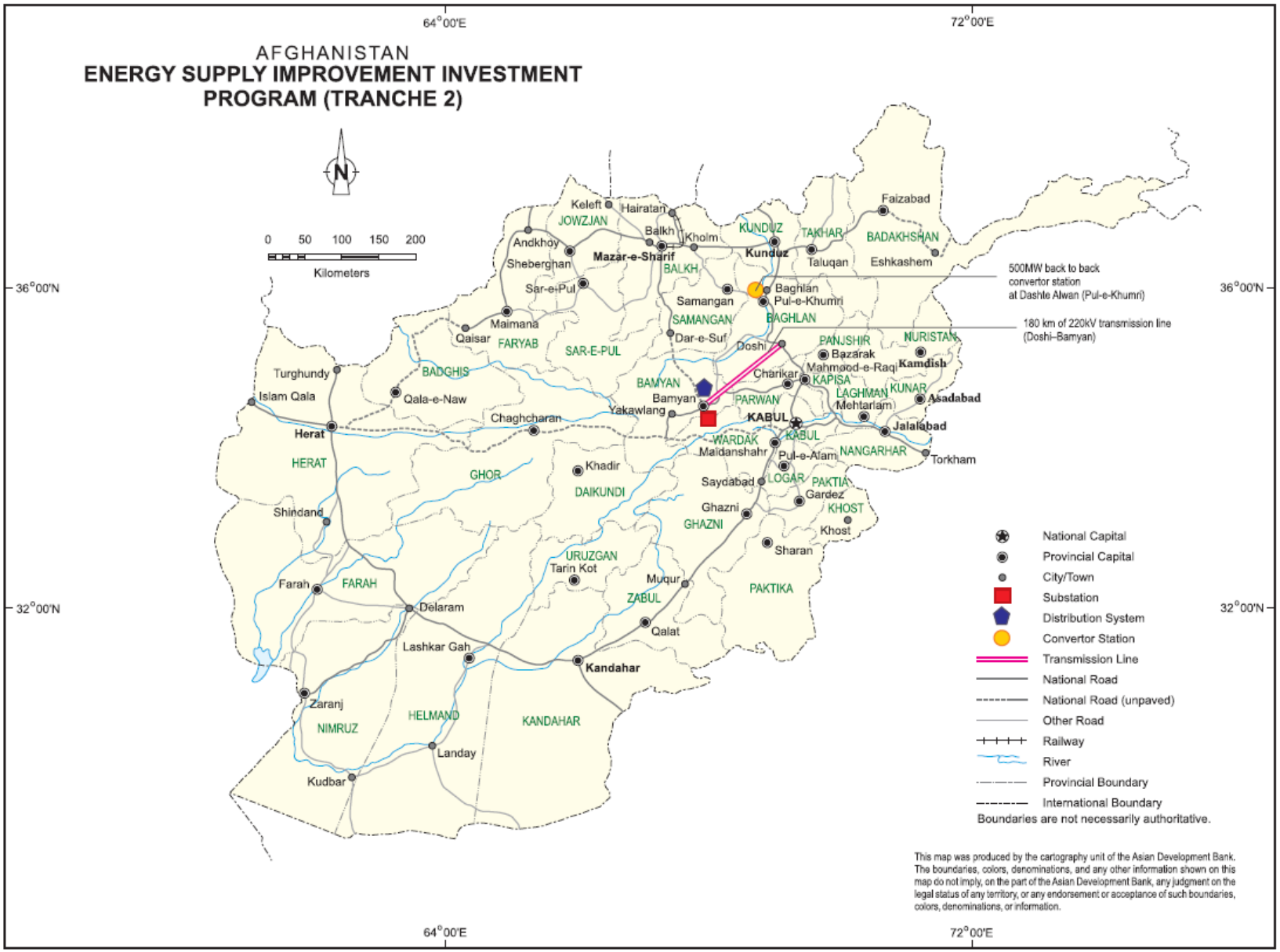
13. Milestones

Estimated Approval	Estimated Completion*
5 December 2016	31 December 2022

14. Linked Documents

	Required Document	Disclosure Date
(i) Environment	IEE - Initial Environmental Examination	
Weblink:	https://www.adb.org/projects/documents/afg-energy-supply-improvement-investment-t2-iee	31-OCT-2016
(ii) Involuntary Resettlement	RP - Resettlement Plan	
Weblink:	https://www.adb.org/projects/documents/afg-energy-supply-improvement-investment-t2-rp	31-OCT-2016

* For Tranches, this refers to the financial closing date.


AFGHANISTAN
ENERGY SUPPLY IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 2)
64°00'E
72°00'E
36°00'N
32°00'N
0 50 100 150 200
Kilometers
500MW back to back convertor station at Dashte Alwan (Pul-e-Khumri)
180 km of 220kV transmission line (Doshi–Bamyan)
Keleft
Hairatan
JOWZJAN
Andkhoy
Balkh
Kholm
KUNDUZ
TAKHAR
BADAKHSHAN
Faizabad
Sheberghan
Mazar-e-Sharif
Kunduz
Taluqan
Eshkashem
BALKH
Sar-e-Pul
Baghlan
Pul-e-Khumri
Samangan
Maimana
SAMANGAN
BAGHLAN
Qaisar
FARYAB
SAR-E-PUL
Dar-e-Suf
Doshi
PANJSHIR
NURISTAN
Bazarak
Kamdish
Mahmood-e-Raqi
Turghundy
BADGHIS
Charikar
KAPISA
BAMYAN
Islam Qala
Qala-e-Naw
Bamyan
PARWAN
LAGHMAN
KUNAR
Asadabad
Yakawlang
Mehtarlam
Chaghcharan
KABUL
Herat
WARDAK
KABUL
Jalalabad
Maidanshahr
Pul-e-Alam
NANGARHAR
Torkham
HERAT
Khadir
GHOR
Saydabad
LOGAR
PAKTIA
DAIKUNDI
Gardez
Shindand
Ghazni
KHOST
GHAZNI
Khost
Sharan
URUZGAN
Tarin Kot
Muqur
Farah
FARAH
PAKTIKA
ZABUL
Delaram
Qalat
Lashkar Gah
Kandahar
Zaranj
NIMRUZ
HELMAND
KANDAHAR
Landay
Kudbar
National Capital
Provincial Capital
City/Town
Substation
Distribution System
Convertor Station
Transmission Line
National Road
National Road (unpaved)
Other Road
Railway
River
Provincial Boundary
International Boundary
Boundaries are not necessarily authoritative.
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I. BACKGROUND

1. In 2015, the Islamic Republic of Afghanistan entered into a Framework Financing Agreement with the Asian Development Bank (ADB) for a multitranche financing facility (MFF) to finance the Energy Supply Improvement Investment Program in an amount not exceeding $750 million from ADB's Special Funds (ADF) resources and $450 million as ADB-administered joint cofinancing, totaling $1.2 billion. On 4 December 2015, the ADB Board of Directors approved the investment program with the Afghanistan Electricity Company (Da Afghanistan Breshna Sherkat [DABS]), the Ministry of Energy and Water, and the Ministry of Mines and Petroleum as the executing agencies. After security, law and order, access to energy is the highest priority for households and businesses in Afghanistan.[1] Development of the energy sector remains the top priority in Afghanistan's development program.[2] The MFF is designed to reinforce ongoing projects and finance new investments to boost energy trade and regional cooperation, strengthen the country's energy infrastructure, increase energy supply to accelerate the electrification rate, and improve operational efficiency in the sector.

2. **Energy situation.** Energy demand in Afghanistan has grown at nearly double the economic growth rate since 2005. Afghanistan is among the lowest 5% in per capita energy consumption globally and is a net energy importer. In 2015, the per capita annual power usage stood at 176 kilowatt-hours (kWh) compared to an average of 500 kWh in neighboring countries. More than 78% (4,454 gigawatt-hours [GWh]) of its total power supply (5,691 GWh) came from Iran (15.9%), Tajikistan (24.4%), Turkmenistan (10.5%), and Uzbekistan (27.5%), with the rest generated through indigenous hydropower and thermal sources.[3] Lack of domestic generation remains the key challenge for energy security in Afghanistan.[4] The demand–supply imbalance constrains growth and income opportunities, creates disparities in economic development, and fuels ethnic and regional tensions, insecurity, and discontent. The key challenges are (i) a lack of generation capacity, (ii) constraints in transmission and distribution systems, (iii) weak financial management and sustainability of sector entities due to inadequate and non-cost-reflective upstream tariff frameworks, and (iv) inadequate sector regulations.

3. **Sector progress.** Despite impediments, the sector has reduced technical, fiscal, and governance deficits. Access to electricity increased from 5% in 2001 to 32% in 2016, system losses dropped from 70% in 2002 to 25% in 2016, collection rates increased from 50% in 2002 to 90% in 2015, revenues have increased 15% every quarter since 2009, and the sector was corporatized through the formation of DABS in 2009 and the Afghan Gas Enterprise in 2011.

4. **Road map and strategic context.** The country's $10.1 billion National Energy Supply Program (NESP) road map 2013–2030, focuses on energy supply, transmission and distribution, efficiency, reinforcing institutions and private sector participation, and capacity support and regulatory strengthening.[5] It underscores the need to construct indigenous generation (gas, coal,

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[1] The Asia Foundation. 2015. *A Survey of the Afghan People*. Survey confirms that households consume 85% of power, followed by commercial users (7%), government (5%), and others (3%).

[2] Government of Afghanistan. 2016. *Afghanistan National Infrastructure Plan (2017–2021)*. Kabul.

[3] Government of Afghanistan, Ministry of Economy. 30 September 2016. *Energy Sector Status Summary Report of the Inter-Ministerial Commission for Energy*. Kabul.

[4] The absence of a water treaty with neighboring countries impedes the development of indigenous hydropower, while the refusal by mining investors to meet their contractual obligations is stalling coal or gas-to-power projects.

[5] Government of Afghanistan, Ministry of Energy and Water. 2013. *National Energy Supply Program*. Kabul. It has an investment plan of $10.1 billion, of which $7.3 billion is for generation and network integration, $1.7 billion for major transmission links, and $1.1 billion for sub-transmission and distribution in provinces. The NESP was jointly endorsed by the Government of Afghanistan and international development partners in 2013.

and hydropower).[6] However, as domestic projects will take time to develop (footnote 4), high reliance on imports will continue in the medium term to meet the growing demand. Building a 500-kilovolt (kV) transmission ring to connect major load centers would accelerate expansion of the distribution network and increase electrification in all major cities. The road map also stresses the phased development of renewable energy projects in 15 off-grid provinces,[7] development and certification of gas reserves, and rehabilitation of gas wells to support anchor loads and energy-intensive industries, as identified in the gas development master plan.[8]

5. **Policy framework**. The government is implementing the energy sector road map, policy framework, and the envisaged investment plan as confirmed in its power sector master plan,[9] 2012–2032 and gas development master plan, 2015–2035, both of which are integrated into the NESP.[10] The enacted Electricity Services Law 2015 provides a legal and regulatory framework and a transparent structure for private sector participation. The power subsector in Afghanistan has made substantial progress in meeting the strategic objectives and milestones set out in NESP including (i) greater efficiency from existing operations (rehabilitation of hydropower plants and transmission and distribution networks); (ii) improvement in sector governance (formulation of electricity services law, renewable energy policy and autonomous power utility, and institutionalization of operations and management system); (iii) promotion of rural electrification (development of off-grid networks); and (iv) investments in new capacity (development of additional generation, transmission, and distribution systems).

6. **Investment program**. The International Conference on Afghanistan, held in Brussels on 5 October 2016, pledged $15.2 billion for the country's reconstruction during 2017–2020, of which nearly $3 billion will be allocated to power sector investments. Out of this, nearly $600 million is earmarked for the energy sector in 2017. The Inter-Ministerial Commission for Energy (ICE), supported by ADB, proved to be the most effective mechanism for brainstorming and reaching coherent agreements on an investment and governance agenda.[11] ICE supports collaboration between the government, the development partners and the private sector in (i) sector planning and harmonization to avoid overlapping, (ii) sequencing of investments, and (iii) analytical work related to Afghanistan's energy sector.

7. On 8 December 2015 under the MFF investment program, ADB approved tranche 1 (ADF Grant 0464/0465-AFG) amounting to $275 million, which was made effective on 7 April 2016. The remaining balance for subsequent tranches stands at $925 million. For tranche 2, the Government of Afghanistan, in October 2016, requested ADB to finance the new 500-megawatt (MW) back-to-back converter station at Dashte Alwan to connect a new 500-kV interconnection line with Turkmenistan, approved under tranche 1, with another 500-kV line stretching to Kabul.[12] In addition, tranche 2 will include a 180-kilometer (km) 220-kV transmission line from

[6] The international private investors have expressed interest to develop gas and coal powered plants, and development partners are assisting in rehabilitating existing and constructing new hydro plants.
[7] ADB. 2014. *Technical Assistance to the Islamic Republic of Afghanistan for Renewable Energy Development.* Manila (TA 8808-AFG, $1.0 million, approved on 12 December).
[8] ADB. 2013. *Technical Assistance to the Islamic Republic of Afghanistan for the Gas Development Master Plan.* Manila (TA 8401, $1,500,000, approved on 11 July).
[9] ADB. 2010. *Technical Assistance to Afghanistan for the Power Sector Master Plan.* Manila (TA 7637-AFG, $1.5 million, approved on 6 November).
[10] Footnote 5. Due to fiscal constraints, the government is expected to finance only 5% ($500 million) of the NESP.
[11] ADB. 2013. *Technical Assistance to Afghanistan for Supporting the Inter-Ministerial Commission for Energy.* Manila (TA 8328-AFG, $1.5 million, approved on 22 February).
[12] ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant for the North–South Power Transmission Enhancement Project to the Islamic Republic of Afghanistan for the Energy Sector Development Investment Program.* Manila (G-0374/0375-AFG, approved on 25 November).

Doshi to Bamyan, a 220/20-kV substation, and a distribution network for 20,000 connections in the central Afghanistan. The tranche 2 are consistent with NESP.

8. **Technical issues.** Afghanistan's power system is not synchronized with any of the four countries from which it imports power. Further, the national power network is split into 10 power islands—increasing the costs of supply and reducing reliability. The isolated networks operate asynchronously and cannot be interconnected because of differences in operational phase angles and frequency variations. While the potential peak power demand is 2,500 MW, the existing power infrastructure is only capable of delivering only 850 MW. A unified national grid is needed to secure power supply from a balanced energy mix, achieve diversification, and share reserve capacity within the country, as well as strengthen Afghanistan to be an electricity transit corridor between energy-rich Central Asia and energy-poor South Asia. Afghanistan is an anchor in the regional Turkmenistan–Uzbekistan–Tajikistan–Afghanistan–Pakistan (TUTAP) and the proposed Turkmenistan-Afghanistan-Pakistan (TAP) power interconnection projects.[13]

9. **The proposed project.** The 500-MW converter station is the critical step towards expanded power imports through asynchronous power interconnection and establishing a unified power grid in Afghanistan. The converter will allow Turkmen power into the Afghan grid under the ten-year power purchase and sales agreement signed in November 2015 between the two countries. The second component under the project, the Doshi–Bamyan line, will extend grid power to the country's central highlands and expand the grid to eight additional provinces, distribute power to nearly 150,000 people, and provide redundancy to the existing transmission network. The project has transmission and distribution system linkages with several projects assisted by ADB and other development partners.[14] Requisite coordination was undertaken through ICE to effectively complement the country's NESP with ADB investments in Afghanistan.

10. The project will directly address the two most critical impediments in the Afghan power system, namely, the lack of power supply and absence of a unified grid. All cities across Afghanistan experience severe load-shedding and only 40% of the winter power demand will be met in 2016.[15] To address generation deficit, Afghanistan is developing a combination of domestic fossil fuel, hydropower, and renewable energy generation projects complemented by diversified imports. The project will evacuate domestic generation as well as allow provision of energy transit services between energy-rich Central Asia and energy-deficient South Asia.

11. On 2 October 2016, the second periodic financing request was submitted to ADB for project financing. The design and monitoring framework is in Appendix 1.

II. ASSESSMENT OF IMPLEMENTATION

12. The MFF implementation is satisfactory. Tranche 1 (Grant 0464/0465), approved on 8 December 2015, has two turnkey contracts and three consulting packages. The turnkey

[13] TUTAP is a regional power project under the Central Asia South Asia Regional Electricity Markets framework. Phase 1 of TUTAP (Afghanistan–Uzbekistan 220-kilovolt [kV] line) was commissioned in 2009. Phase 2 (Afghanistan–Tajikistan 220 kV line) was commissioned in 2011. Phase 3 will be completed under tranches 1 and 2 of the MFF. TUTAP meets Afghan power needs and can complement regional trade with winter power exports to Tajikistan and Pakistan. TAP, currently in concept stage, will have two phases to interconnect Turkmenistan with Afghanistan and Pakistan utilizing existing power infrastructure as well as promote collaboration through new transmission investments in three countries.

[14] In addition to the project's linkage with an ongoing ADB-assisted project (see para. 8), the project will complement investments of (i) the United States Government to construct transmission links and distribution networks in east and south Kabul with supplied power from northern Afghanistan, and (ii) the World Bank to develop distribution networks between Kabul and Dashte Alwan, which will be energized from northern Afghanistan power imports.

[15] Load shedding implies deliberate shutdown of power to prevent failure of the system and manage demand strain.

contracts are under procurement and the requests for proposal for the consulting packages are being sent to the shortlisted firms. All contracts are expected to begin from April 2017. The framework financing agreement and tranche covenants are ongoing with no social safeguards issues outstanding and no covenants overdue. The ADB project cycle in Afghanistan highlights systemic portfolio problems, including slow procurement, lack of security, weak capacity of the government, and lack of project readiness. A targeted approach from project concept to project commissioning for fragile and conflict affected states (FCAS), as agreed with the Government of Afghanistan under the Enhanced Delivery Approach Paper, is under implementation. As numerous donors (on- and off-budget) finance investments, a sound coordination mechanism is critical to avoid overlaps and system planning failures. A key lesson learnt is the extended lead time taken by the National Procurement Commission (NPC) to award contracts.

III. PERIODIC FINANCING REQUEST

A. Impact and Outcome

13. The impact of tranche 2 will be improved access to sustainable energy supplies across Afghanistan, in line with the targets of the National Energy Supply Program of the Government of Afghanistan. The outcome will be increased supply of imported and indigenous power.

B. Outputs

14. The project outputs will be (i) a new 500-MW high-voltage direct current back to back voltage source converter station commissioned at Dashte Alwan, (ii) a new 180 km of 220-kV transmission line commissioned from Doshi to Bamyan, and (iii) a new 220-kV/20-kV substation at Bamyan with a distribution network of 3,000 km and 20,000 new connections.

C. Investment and Financing Plans

15. The project is estimated to cost $420 million. It will be financed by ADB through (i) a grant from its Special Fund resources ($188.23 million), (ii) Afghanistan Infrastructure Trust Fund [AITF] ($225.77 million) and (iii) the People's Republic of China Regional Cooperation and Poverty Reduction Fund [PRCF] ($1 million), both Funds to be administered by ADB, and (iii) Government of Afghanistan ($5 million equivalent).[16] A summary breakdown of the investment plan is shown in Table 1. A detailed breakdown of the investment is provided in the Facility Administration Manual (FAM) in Appendix 4.

Table 1: Tranche 2 Investment Plan
($ million)

Item			Amount[a]
A.	**Base Cost**[b]		
	1.	500 MW Converter Station Turnkey Contract	240.00
	2.	220-kV Transmission Line (Doshi to Bamyan) Turnkey Contract	75.00
	3.	220-kV/20-kV Substation Turnkey Contract	20.00
	4.	Distribution Network of 20,000 Connections	25.00
	5.	Security and Demining	15.00
	6.	Land Acquisition and Resettlement	1.60
		Subtotal (A)	**376.60**
B.	**Contingencies**[c]		**40.00**
C.	**Financing Charges During Implementation**[d]		**3.40**
		Total (A+B+C)	**420.00**

kV = kilovolt, MW = megawatt

[16] AITF financing partners include the governments of Japan, the United Kingdom, the United States, and Afghan National Army Trust Fund. The German Development Bank (kfW) will join AITF by the end of 2016.

[a] Includes business receipt tax of 4% (estimated at $14.4 million) and customs payments varying from 2% to 10% on imported equipment (estimated at $5.6 million), to be financed from ADB, AITF and PRC fund resources.
[b] In 2016 prices.
[c] Physical contingencies computed at 10% for civil works and 5% for non-civil works. The annual inflation rates factored into price contingencies estimates are 1.9% in 2015–2023 (foreign exchange costs) and 5.0% in 2015–2023 (local currency costs).
[d] Includes interest during construction, calculated at 1% for the loan between the government and DABS. Interest during implementation is capitalized in the loan.
Source: Asian Development Bank estimates.

16. The government has requested that security costs and local taxes and duties are financed through ADB and ADB-administered funds, consistent with the approach taken in recent ADB-financed projects in Afghanistan.[17] The World Bank also follows this practice.

17. The project financing plan is in Table 2. The government has requested financing not exceeding $415 million, including a grant[18] from ADB's Special Fund resources in the amount of $188.23 million, a grant from the ADB-administered AITF in the amount of $225.77 million, and a grant from ADB-administered PRCF in the amount of $1.0 million. The proceeds of all grants will be re-lent to DABS by the government on terms acceptable to ADB, including a financing period of 32 years, an 8-year grace period, an interest rate of 1% per annum during the grace period and 1.5% per annum thereafter. The government will finance $5.0 million equivalent to cover costs related to land acquisition, resettlement, environment management plan (mitigation during design, construction, and operations) and interest during construction.

Table 2: Financing Plan[a]

Source	Amount ($ million)	Share of Total (%)
Asian Development Bank	188.23	44.81
Afghanistan Infrastructure Trust Fund	225.77	53.75
People's Republic of China Regional Cooperation and Poverty Reduction Fund	1.00	0.002
Government	5.00	0.01
Total	**420.00**	**100.00**

[a] Cofinancing will fund all four turnkey contracts and will be front-loaded for disbursement purposes.
Sources: Consultants, DABS, ADB estimates.

D. Implementation Arrangements

18. DABS will be the executing agency. It is a 100% state-owned corporate integrated utility, incorporated in March 2008 and operational since 1 October 2009 through a presidential decree.

19. DABS has an established, full-time program management office (PMO) since 2009 that administers all ADB-assisted energy projects in Afghanistan, amounting to over $1.05 billion. The PMO administers all consulting and procurement contracts and is responsible for preparing project plans, bid evaluation reports, progress reports, applications for withdrawal of funds, and any other reports required by ADB. The PMO has 30 personnel. The staff comprises a project director, engineers, procurement specialists, financial specialists, and safeguards specialists.

[17] See memo approved by ADB President (16 November 2011) and agreement between ADB and the Government of Afghanistan (dated 27 February 2012) on financing of taxes and duties for ADB-assisted projects in Afghanistan; ADB. 2008. *Cost Sharing and Eligibility of Expenditures for ADB Financing. Operations Manual.* Manila (para. 8); and ADB. 2005. *Innovation and Efficiency Initiative, Cost Sharing and Eligibility of Expenditures for Asian Development Bank Financing: A New Approach*. Manila.
[18] A country's eligibility for ADF grants under the revised grant framework is determined by its risk of debt distress. The latest debt sustainability analysis determined that Afghanistan had a high risk of debt distress and was, therefore, eligible to receive 100% of its ADF allocation as grants.

20. The project's turnkey packages, including the converter station, transmission line, substation and distribution network, will be funded with cofinanced funds which will be front-end loaded for disbursement purposes. Asian Development Fund (ADF) resources will be disbursed only after 100% of the PRCF funds followed by the AITF funds have been disbursed. The project implementation supervision contract will be financed through tranche 1 of the MFF, approved in December 2015. It is expected that the cofinanced funds will finance the first $226.7 million of the estimated $360 million of four turnkey contracts, with ADB financing the residual. The use of contingency funds will follow the same disbursement procedure.

21. Procurement of works and goods to be financed under the project will be undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time). International competitive bidding will be used for the turnkey contract packages. ADB will disburse the funds for the turnkey contract packages through direct payment and commitment procedures. Universal procurement will apply to the project.

22. The implementation arrangements are summarized in Table 3 and described in detail in the updated FAM (Appendix 4).[19]

Table 3: Implementation Arrangements

Aspects	**Arrangements**		
Implementation period	January 2017–December 2022		
MFF availability period	31 December 2025		
Grant Closing Date	Physical = 31 December 2022, Financial = 30 June 2023		
Management			
(i) Oversight body	Ministry of Finance with the deputy minister of finance or equivalent as chair.		
(ii) Executing agency	DABS		
(iii) Implementation unit	Program management office is established in DABS, with 30 staff members.		
Procurement[a]	International competitive bidding	four turnkey contracts	$360 million
Consulting services	Not Applicable. Program Management and Implementation Supervision Consultants recruited under tranche 1 of the MFF.		
Retroactive financing and/or advance contracting	Required. Approved by the ADB Board for the Facility.		
Disbursement	The grant proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time)		

ADB = Asian Development Bank, DABS = Da Afghanistan Breshna Sherkat (Afghanistan power utility), MFF = multitranche financing facility.
[a] The project is eligible for universal procurement under ADB's Procurement Guidelines.
Source: Asian Development Bank.

E. Project Readiness

23. The project preparatory consultants performed due diligence on the four turnkey projects.[20] The government's and DABS' concurrence was obtained on the project scope and schedule. DABS' PMO is established, staffed and operational. The project preparatory consultants under Grant 0134 undertook the pre-design and finalized the bidding documents and will be engaged in bid evaluation until the contract award, which is anticipated in Q2 2017.[21] The implementation supervision consultant who will monitor construction works is under

[19] Facility Administration Manual (accessible from the list of linked documents in Appendix 2).
[20] Tranche 1 (G0464/0465) under MFF 0090 Energy Supply Improvement Investment Program has a component to conduct due diligence and prepare projects that are listed under the government's national energy supply program.
[21] ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility and Administration of Grant Energy Sector Development Investment Program*. Manila (MFF 0026-AFG, $570 million, approved on 28 November 2008).

recruitment and will be fielded in Q1 2017.[22] DABS has updated the Environmental Review and Assessment Framework for the MFF and has prepared an initial environmental examination (IEE) report for the project, including an environmental management plan (EMP), in accordance with ADB's Safeguard Policy Statement (2009) [SPS]. It was disclosed on ADB's website on 31 October 2016, in accordance with the SPS. A land acquisition and resettlement framework for the MFF has been updated and a land acquisition and resettlement plan (LARP) for tranche 2 has been prepared in consultation with affected households. It was disclosed on ADB's website on 31 October 2016, in accordance with the SPS.

F. Advance Contracting and Retroactive Financing

24. The bidding documents for the turnkey packages are expected to be issued in December 2016. All contracts are expected to be awarded and signed after the approval of the tranche by ADB. Retroactive financing is not expected for the project.

IV. DUE DILIGENCE

25. The project preparatory consultants undertook work during May–October 2016, including carrying out due diligence for the technical, financial, economic, and social safeguards impacts of the project. An ADB fact-finding mission in October 2016 (i) confirmed the project's viability based on consultant's input, (ii) guided DABS and the consultant on remaining tasks for project preparation, (iii) finalized the financial management, project financial, and economic analyses, and (iv) confirmed availability of cofinancing and government's counterpart financing.

A. Technical

26. The project will improve power stability and reliability through the integration of isolated power networks; will enable power imports from Turkmenistan with the possibility to export power Tajikistan and Pakistan. It will disperse power to the unserved provinces and will be a source of additional transit and sales revenues for DABS. The project will extend Afghan grid into the greenfield central highlands with a potential to energize eight additional provinces. The demand forecast in Afghanistan justifies the construction of a 500-MW converter station to enable asynchronous interconnection with Turkmenistan. Requisite load flow studies were conducted in 2014 to confirm 500-kV and 220-kV transmission connections. Further, the ongoing investments are adequate to evacuate and disperse this power across Afghanistan. Since there are more than three 500-kV lines (800 km) under construction and more than eight 220-kV transmission lines (740 km) under construction or in operation, the operations and maintenance (O&M) of the assets is being implemented. Voltage source converter (VSC) technology is selected for the back-to-back converter station, because of the Afghan grid's weakness. The converter station turnkey contractors will provide the O&M training to DABS staff for 3 years after its operation. DABS has institutionalized O&M protocols and systems. An O&M unit under the operations department has been established and strengthened, with adequate budgetary resources allocated from the utility's internal revenues.

B. Economic and Financial

27. For the economic and financial analysis, the four turnkey components under the tranche and the ongoing associated transmission lines from the Afghanistan–Turkmenistan border to the converter station are considered as one project system. As per NESP, the converter will feed

[22] Footnote 19.

incremental energy into the Bamyan power system as well as provide non-incremental supplies to the other provinces in northern, eastern and southern Afghanistan.[23]

28. The economic analysis showed a base case's economic internal rate of return of 13.5%. The economic internal rate of return is also robust under the adverse conditions of 10% increase in capital cost and 10% reduction in power import volumes, as projected by sensitivity analysis. It is, therefore, concluded that the economic viability and sustainability of both components would remain robust and above 12% under adverse conditions.

29. The financial analysis found the financial internal rate of return under the base case to be 4.2%. The financial internal rate of return is higher than the estimated weighted average cost of capital of 0.11% and remains robust under adverse conditions.

C. Governance

30. Financial management assessment (FMA) and procurement capacity assessments (PCA) of DABS were undertaken in 2015. The FMA found that DABS has not strictly been following the generally accepted accounting principles in compliance with international accounting standards. The pre-mitigation risks of partial compliance to international financial reporting standards, billing and roll out of commercial metering are high for the entity and substantial for the program; however, necessary reforms are underway to mitigate these risks. DABS' annual financial statements from FY2010 to FY2015 have been audited with disclaimers and qualified opinions. The project financial statements have also been prepared, audited, and submitted to ADB since 2010. The PCA confirms that the country's procurement system is weak but improving. The NPC, established in 2015 and chaired by the Afghan President, undertakes due diligence for approval of all contract packages. DABS has been implementing donor assisted projects and the PMO is proficient in the procurement procedures of donors.

31. The Government of the United States is implementing a capacity support component in DABS to introduce a new accounting manual and system.

32. The MFF is supporting DABS to develop its business plan and tariff model and framework by 30 June 2018. Adequate financial covenants (profitability and operational ratios) and operational covenants (technical, tariff, and loss reduction) will be instituted in subsequent tranches, following the completion of the business plan and findings of the tariff model.

33. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and DABS. The specific requirements and supplementary measures are detailed in the updated FAM (Appendix 4).

D. Poverty, Social, and Gender Dimensions

34. The project will increase grid connectivity and substitute diesel generators to improve the socioeconomic conditions and the environment, reduce the cost of doing business and cut poverty. The project does not entail direct impacts on affordability or operational employment opportunities. During construction, the contractor will ensure equal opportunities for all social groups, equal pay for equal work regardless of gender, and prohibition of child labor.

35. The MFF and tranche 2 are categorized as No Gender Elements; therefore, gender monitoring is not required. The benefits of electrification will benefit all, regardless of gender. The rural women engaged in agriculture will benefit from sustainable power supplies.

[23] Footnote 5.

36. Under the security and demining component, utilizing the FCAS approach, the project will allocate funds for community development to mitigate security risks and political grievances by creating goodwill and direct ownership for the project within communities in the provinces.

E. Safeguards

37. **Environment.** Tranche 2 is classified category B for the environment. DABS has updated the Environmental Review and Assessment Framework for the MFF and has prepared an initial environmental examination (IEE) report for the project, including an environmental management plan (EMP) in accordance with ADB's Safeguard Policy Statement (2009). It was disclosed on ADB's website on 31 October 2016. The environmental impacts are envisaged as site-specific and temporary that can be mitigated by EMP implementation. Due to challenging security environment, only two scoping sessions and preliminary group discussions were held in September with local communities of Bamyan, Kahmard, and Doshi districts. Detailed public consultations prior to construction will enable to update the IEE and EMP. EMP implementation will be reported to ADB through semiannual environmental monitoring reports. International environmental consultants will continue capacity support of DABS. Initial climate change screening has rated the project as medium risk and foundation design of structures will mitigate these risks. The climate risk assessment will be undertaken during the detailed design in 2017.

38. **Resettlement.** The project is category B for involuntary resettlement. Based on the preliminary project design, a land acquisition and resettlement framework for the MFF has been updated and a land acquisition and resettlement plan (LARP) for tranche 2 has been prepared in consultation with potentially affected households. It was disclosed on ADB's website on 31 October 2016, in accordance with the SPS. Initial survey suggests that nearly 42 households comprising 252 people will be directly and indirectly affected. However, only 14 households comprising 84 people may potentially experience severe impacts in terms of physical displacement. Once the contractor completes the detailed design including all tower locations, DABS will update the LARP with a relocation plan of affected households and submit to ADB for approval. No civil works will start until the LARP is fully implemented by DABS. Implementation of the LARP will be monitored semiannually with reports submitted to ADB for its review.

39. **Indigenous peoples**. Tranche 2 is category C for indigenous peoples. The field survey found that no ethnic minority, as defined by SPS, is involved or affected.

40. DABS will develop and implement an appropriate corrective action plan agreed upon with ADB to rectify any default on the safeguard requirements covenanted in the legal agreements or any other failure to comply with safeguards. These reports and any corrective action plans submitted by DABS during implementation will be disclosed on ADB's website.

F. Risks and Mitigating Measures

41. Major risks and mitigating measures are summarized in Table 4 and described in detail in the updated risk assessment and risk management plan (Appendix 10). The overall assessment is that risks have been identified and mitigated and that the integrated benefits and impacts are expected to outweigh the costs.

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Executing agency's non-experience with voltage	Sufficient technical training is being imparted to DABS by other development partners and by ADB. Training will also be provided during project design and implementation by

Risks	Mitigating Measures
source converter stations technology.	the contractor. A three-year O&M contract will be signed with the equipment manufacturer to mentor utility personnel.
Difficult security environment could affect procurement and thereby delay project implementation.	Procurement packaging will be minimized to four turnkey contract packages. International consultants are assisting DABS in project procurement and supervision. While security remains a key concern, experience in attracting qualified bidders is positive. Adequate funds are budgeted for security and demining activities during construction. The contractor will prepare project security plan, to be endorsed by the consultant, the government, and ADB. Project implementation period is fixed at 6 years.
Power Purchase and Sales Agreements are not enforced	These agreements are under implementation since 2002 and have been enforced effectively. Necessary penalty clauses have been instituted in the 2015 Power Purchase and Sales Agreement signed between the two countries.

ADB = Asian Development Bank, DABS = Da Afghanistan Breshna Sherkat, O&M = operation and maintenance.
Sources: Afghanistan Energy Information Center, Quarterly Reports of the Inter-Ministerial Commission for Energy.

G. Risk Categorization

42. The project is considered low risk due to (i) the ADF funding does not exceed $200 million, (ii) the sound record of ADB's experience in the sector and in the investment program, (iii) the reasonable experience of DABS in terms of externally financed projects, and (iv) the project's safeguards categorizations are other than A, as cited in paras. 37 to 39 respectively.

V. ASSURANCES AND CONDITIONS

43. The government and DABS have assured ADB that project implementation shall conform with all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the FAM and grant documents. The government and DABS have agreed with ADB on certain covenants for the project, which are set forth in the grant agreement and project agreement.

44. The grant agreement will not be effective until the subsidiary loan agreement between Afghanistan and DABS, and the project agreement between DABS and ADB, shall have been executed and shall have become effective in accordance with their terms.

45. Grant proceeds will not be disbursed for the turnkey contracts until an updated land acquisition and resettlement plan has been approved by ADB and implemented in a manner satisfactory to ADB. For the turkey contracts, ADF funds will be disbursed only after the full disbursement of the PRCF funds, followed by the complete disbursement of the AITF funds.

VI. RECOMMENDATION

46. On the basis of the approval by ADB's Board of Directors for the provision of grants under the multitranche financing facility in an aggregate principal amount not exceeding $1,200,000,000 to the Islamic Republic of Afghanistan for the Energy Supply Improvement Investment Program, it is recommended that the President approves:

(i) the proposed tranche as described in paragraph 17 of this report and such other terms and conditions as are substantially in accordance with those set forth in the draft grant and project agreements for the proposed tranche; and

(ii) the administration by ADB of the grant not exceeding the equivalent of $1,000,000 to the Islamic Republic of Afghanistan for the Energy Supply Improvement Investment Program for, to be provided by People's Republic of China Regional Cooperation and Poverty Reduction Fund.