



Periodic Financing Request Report

Project Number: 47282–006
MFF Number: 0090
November 2017

Afghanistan: Energy Supply Improvement Investment Program (Tranche 4)

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 8 November 2017)

Currency unit	–	afghani/s (AF)
AF1.00	=	\$0.0145
\$1.00	=	AF68.72

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
AITF	–	Afghanistan Infrastructure Trust Fund
DABS	–	Da Afghanistan Breshna Sherkat
EMP	–	environmental management plan
FAM	–	facility administration manual
FMA	–	financial management assessment
MEW	–	Ministry of Energy and Water
MFF	–	multitranches financing facility
NESP	–	National Energy Supply Program
PMO	–	program management office

WEIGHTS AND MEASURES

km	–	kilometer
kV	–	kilovolt
kWh	–	kilowatt hour
MVA	–	Megavolt ampere
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. FY2016 ends on 20 December 2016.
- (ii) In this report, "\$" refers to US dollars.

Vice-President	W. Zhang, Operations 1
Director General	S. O'Sullivan, Central and West Asia Department (CWRD)
Director	A. Bhargava, Energy Division, CWRD
Team leader	A. Aleem, Senior Energy Specialist, CWRD
Team members	A. Barseghyan, Energy Specialist, CWRD
	N. Djenchuraev, Senior Environment Specialist, CWRD
	H. Durrani, Senior Project Officer (Energy), CWRD
	H. Maruyama, Principal Procurement Specialist, Operations Services and Financial Management Department (OSFMD)
	J. Nicolas, Senior Social Development Specialist (Safeguards), CWRD
	D. Perkins, Senior Counsel, Office of the General Counsel
	D. Pham, Senior Financial Management Specialist, CWRD
	M. Rafi, Associate Safeguards Officer, CWRD
	N. Rive, Climate Change Specialist, CWRD
	A. Sakai, Energy Specialist, CWRD
	E. Webb, Senior Operations Assistant, CWRD

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TRANCHE AT A GLANCE

1. Basic Data		Project Number: 47282-008	
Project Name	Energy Supply Improvement Investment Program Tranche 4 (Formerly Multitranche Financing Facility II: Energy Development 2014–2023)	Department /Division	CWRD/CWEN
Country Borrower	Afghanistan, Islamic Republic of	Executing Agency	Da Afghanistan Breshna Sherkat
2. Sector	Subsector(s)	ADB Financing (\$ million)	
		Total	0.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG) Environmentally sustainable growth (ESG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive Environmental policy and legislation	Climate Change impact on the Project	Medium
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD) Knowledge solutions (KNS) Partnerships (PAR) Private sector development (PSD)	Institutional development Organizational development Application and use of new knowledge solutions in key operational areas Official cofinancing Regional organizations Conducive policy and institutional environment	No gender elements (NGE)	✓
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting Household Targeting SDG Targeting SDG Goals	Yes No Yes SDG7, SDG8, SDG9	Not Applicable	
6. Risk Categorization:	Low		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		0.00	
Cofinancing		60.00	
Afghanistan Infrastructure Trust Fund - Grant (Full ADB Administration)		60.00	
Counterpart		5.00	
Government		5.00	
Total		65.00	

TRANCHE AT A GLANCE

Date of Receipt by ADB of PFR: 4 October 2017	Tranche Number: 4	
9. Country Operations Business Plan		
CPS	https://www.adb.org/documents/afghanistan-interim-country-partnership-strategy-2014-2015	
COBP	https://www.adb.org/documents/afghanistan-country-operations-business-plan-2017-2019	
10. Tranche Summary		
<p>Technical and capacity constraints in Afghanistan have inhibited electrification rate at 32%, which is among the lowest 5% globally. 20 out of 34 provinces are not connected to grid supply which increases cost of doing business, deteriorates environment, and subdues sustainable development indicators. This constrains growth; creates disparities; and fuels ethnic and regional tensions, insecurity, and discontent. The proposed tranche will extend the national grid into eastern provinces with a population of nearly 2 million, and will allow evacuation of indigenous generation and extension of power interconnection towards Pakistan. The Tranche 4 will construct a 220-kilovolt (kV) transmission line between Kabul and Jalalabad. An additional transformer of 200 MVA (megavolt amperes) will be installed at this substation.</p> <p>Impact: Access to sustainable energy supply across Afghanistan improved.</p> <p>Outcome: Imported and indigenous power supplies to eastern Afghanistan increased</p> <p>Outputs: (i) Transmission capacity expanded in eastern Afghanistan, and (ii) Power distribution capacity increased in Nangarhar province</p> <p>Implementation Arrangements: Da Afghanistan Breshna Sherkat will be the executing agency.</p> <p>Project Readiness: Project preparatory consultants conducted due diligence that is concurred by the Government. The EA has a staffed and functional Program Management Office, which has implemented and commissioned more than 10 220-kV transmission line projects since 2009 and is versed with technical and operational aspects of turnkey contracting. The invitation to bid will be released in January 2018, immediately after the grant signing. ADB-funded program management and implementation consultants will assist the PMO in bid evaluation process. The project is designed in line with the FCAS Approach paper, to address procurement (readiness and broadening qualification requirements), security, and PMO capacity.</p>		
11. Significant Developments in the MFF and Previous Tranches		
<p>The MFF implementation is satisfactory, albeit slower than projected. Construction on 5 turnkey contracts under tranches 1 and 2 will begin in January 2018. Tranche 1 has 2 turnkey contracts and 3 consulting packages while tranche 2 has 4 turnkey contracts. Tranche 3, approved on 29 September 2017, awaits effectivity. Out of 14 Framework Financing Agreement (FFA) undertakings, 6 have been fully complied with, 7 are ongoing, and only 1 is overdue. The critical reforms including cost reflective tariff, preparation of interim business plan, operations and maintenance strategy, and the electricity services act have all been instituted and adopted. The tariff model and framework will be finalized and adopted in mid-2018, as committed. All tranche 1 and tranche 2 covenants are ongoing, except the submission of annual audited entity financial statements, which will be completed and submitted in Q1 2018. Currently, no environmental or social safeguards issues are outstanding. Upon contracts award, detailed design will be undertaken by turnkey contractors and all safeguards, including Initial Environmental Examination Reports (IEE) and Land Acquisition and Resettlement Plans (LARP) will be updated and implemented before physical construction begins. The Electricity Services Law, enacted in 2016 clarifies the roles of DABS and MEW, and provides the legal and regulatory framework for private sector participation in energy sector. DABS has completed its O&M strategy, in line with international best practice. As covenanted, DABS' O&M unit became operational in January 2017 and is overseeing the implementation strategy. ADB assisted DABS' business plan and its tariff model and framework, are on track for approval and adoption by 30 June 2018. Thereafter, DABS will regularly adjust tariffs to ensure full cost-recovery.</p> <p>The ADB project cycle in Afghanistan highlights systemic portfolio problems, including slow procurement, security concerns, 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 under the Enhanced Delivery Approach, 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. Lessons incorporated from ADB's ongoing investments in Afghanistan's energy sector include the need to (i) finance security, demining, and taxes through project costs; (ii) streamline procurement and implementation through use of turnkey contracting as the default choice, (iii) improve project readiness through advance actions, (iv) provide tranches flexible to match country's emerging needs in line with FCAS of Afghanistan, and (v) provide capacity support to DABS.</p>		
12. Milestones		
Estimated Approval	Estimated Completion*	
29 November 2017	31 December 2021	
13. Linked Documents		
	Required Document	Disclosure Date
MFF	Report and Recommendation of the President	
Weblink:	http://www.adb.org/projects/documents/afg-energy-supply-improvement-investment-program-rfp	10-DEC-2015
	Periodic Financing Request Report	
	http://www.adb.org/Documents/LinkedDocs/?id=47282-006-DraftPFRR	Disclosed upon approval
(i) Environment	IEE - Initial Environment Examination	
Weblink:	https://www.adb.org/projects/documents/afg-47282-006-iee	31-OCT-2017
	EARF - Environmental Assessment and Review Framework	
	https://www.adb.org/projects/documents/afg-47282-006-earf	31-OCT-2017
(ii) Involuntary resettlement	RF - Resettlement Plan	
Weblink:	https://www.adb.org/projects/documents/afg-47282-006-rp	31-OCT-2017
	RF - Resettlement Framework	
	https://www.adb.org/projects/documents/afg-47282-006-rf	31-OCT-2017

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

I. BACKGROUND

1. The ongoing Energy Supply Improvement Investment Program, approved in 2015, is assisting to reinforce first generation energy projects and finance new investments for trade and regional cooperation, strengthen the country's energy infrastructure to match growing demand, increase energy supply and the electrification rate, and improve operational efficiency in the sector.¹ The multitranche financing facility (MFF) Program is implementing components of the government's energy sector road map, policy framework, and the envisaged investment plan as confirmed in its power sector master plan,² 2012–2032 and gas development master plan, 2015–2035, both of which are integrated into a consolidated National Energy Supply Program (NESP).³ The \$10.1 billion NESP aims to i) increase the electrification rate from 30% to 83%, (ii) increase domestic generation from 20% to 67%, and (iii) strengthen power exchange and trade options by 2030.

2. **Energy Situation.** The critical capacity and technical constraints in the country's energy supply chain have limited electrification rate to only 32% thereby ranking Afghanistan in the lowest 5% in per capita energy consumption globally. The estimated suppressed demand is 3,000 megawatts (MW). The system is currently capable of wheeling only 1,300 MW due to lack of generation, transmission and distribution infrastructure. In 2016, nearly 77% (4,455 gigawatt-hours) of the total electricity supply was imported from Afghanistan's four neighboring countries. However, as the country's power system is not synchronized with any of these four importing countries, this is causing islanding of individual system. As the result, Afghan power network is split into 10 power islands which increases costs and reduces reliability of supply. This impedes efficient load dispatch and results in a higher probability of blackouts because of (i) lack of reserves and high dependency on feeds from importing countries, and (ii) lesser utilization of indigenous generation due to constraints in rearranging the loads. Lack of financing has left significant renewable energy and fossil fuel reserves untapped while the absence of transboundary water sharing arrangements with adjoining countries has resulted in sub-optimal hydropower development.

3. **Energy infrastructure constraints.** Of the 519 MW available installed capacity which can produce into 1,307 gigawatt-hours), 51% is thermal (diesel and furnace oil) with a generation cost of \$0.25–\$0.35 per kilowatt-hour, nearly four to five times cost of imported power. The remaining 49% (254 MW) is from hydropower, which is seasonal and has a capacity factor of less than 40%. No new hydropower, gas, or coal generation has been added since the 1980s.⁴ The lack of transmission and distribution infrastructure suppresses demand. The latent demand is nearly 3,000 MW. A unified grid will secure power supply from a balanced energy mix, achieve diversification, and share reserve capacity, as well as strengthen Afghanistan's role as 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) interconnection, Turkmenistan–Afghanistan–Pakistan–India (TAPI) natural gas pipeline project and Turkmenistan–Afghanistan–Pakistan (TAP) power interconnection project.

4. **Sector Progress.** Despite impediments, the sector has reduced the technical, fiscal, and governance deficits. Access to electricity increased from 5% in 2001 to 32% in 2017, system

¹ ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility and Administration of Grant Energy Supply Improvement Investment Program*. Manila (MFF 0090-AFG, \$1,200 million, approved on 4 December).

² ADB. 2010. *Technical Assistance to Afghanistan for the Power Sector Master Plan*. Manila (TA 7637-AFG, \$1.5 million, approved on 6 November).

³ Footnote 5. Due to fiscal constraints, the government is expected to finance only 5% (\$500 million) of the NESP.

⁴ The World Bank and the Government of the United States are assisting rehabilitation of three hydropower plants.

losses dropped from 70% in 2002 to 23% in 2017, collection rates increased from 50% in 2002 to 90% in 2016, revenues have increased 15% every quarter since 2009, and the sector was corporatized through the formation of corporate power utility Da Afghanistan Breshna Sherkat (DABS) in 2009 and the Afghan Gas Enterprise in 2011. The power subsector in Afghanistan made substantial progress in meeting the strategic objectives and milestones set out in 2012, including (i) greater efficiency from existing operations (rehabilitation of hydropower plants and transmission and/or 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).

5. For tranche 4, the Government of Afghanistan, in early 2017, requested ADB to finance extension of the north-east power grid to eastern load centers, interconnect isolated networks towards a unified grid, and underpin power system stability. The project preparatory consultant undertook work during July–October 2017, including due diligence for technical, financial, economic, and social safeguards impacts of the project. An ADB fact-finding mission fielded in late September 2017 (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 analysis and project financial and economic analyses; and (iv) confirmed availability of government’s counterpart financing.

6. **The Project.** Currently 20 out of 34 provinces in Afghanistan are not connected to the power grid supply which increases cost of doing business, deteriorates environment, and subdues sustainable development indicators. This in turn constrains growth opportunities in the east; creates disparities in the country’s economic development; and fuels ethnic and regional tensions, insecurity, and discontent. The proposed tranche will extend and strengthen the national grid into eastern provinces with a population of nearly 2 million, and will allow evacuation of indigenous generation as well as extension of TUTAP power interconnection towards Pakistan. The tranche 4 will construct a 190 kilometer 220-kilovolt (kV) transmission line between capital city Kabul and Nangarhar provincial capital Jalalabad. The transmission line will be connected to the 220/20-kV Arghundy substation (under construction in Kabul province under ADB assisted G-0184) at its western end, with an existing 220/20-kV sub-station in Jalalabad city (Nangarhar province) in eastern Afghanistan, at its eastern end. An additional transformer of 200 MVA (megavolt amperes) will be procured and installed at this substation. The proposed transmission line would provide significant value addition to (i) extend and supply Turkmen, Uzbek and Tajik imported power of up to 320 MW to eastern provinces under the ongoing power purchase and sales agreements,⁵ (ii) evacuate power from multiple photovoltaic solar projects of up to 100 MW (under implementation and planned) in the region, (iii) provide sustainable power to two industrial parks in eastern Afghanistan, (iv) strengthen supplies from 100 MW Naghlu hydropower plant, and (v) enable grid stability by interconnection with transmission lines in adjoining provinces. The transmission line will have capacity to energize additional 300,000 new connections to residential, commercial and industrial consumers. The project would ensure access to additional grid-electricity to existing and new customers in Jalalabad region. About 50 MW of power evacuated by the transmission line shall be used in the industrial park near Jalalabad. Nearly 150 MW of power shall be consumed by existing households and the new connections being added gradually by DABS in the area.

⁵ Under an existing approved framework, power purchase and sales agreement have been signed with Turkmenistan in 2015 to provide 300 MW (increased upto 500 MW) of power from 2019 – 2028. The power purchase agreements with Uzbekistan (300 MW) and Tajikistan (300 MW during May to Sep) are renewed annually.

II. ASSESSMENT OF IMPLEMENTATION

7. The MFF implementation is satisfactory, albeit slower than expected. Tranches 1 to 4 will be sequentially reinforcing transmission network and stability, expand grid access, and add indigenous renewable energy generation into the Afghan power system to augment grid power supplies. All major contracts under Tranche 1 (Grant 0464/0465) and Tranche 2 (G-0521/0522/0523) will be awarded by December 2017. Tranche 1 has two turnkey construction contracts and three consulting packages. Tranche 2 (Grant 0521/0522/0523) has three turnkey construction contracts. Out of 14 Framework Financing Agreement (FFA) undertakings, 6 have been fully complied with, 7 are ongoing, and only 1 is overdue. The critical reforms including cost reflective tariff, preparation of interim business plan, operations and maintenance strategy, and the electricity services act have all been instituted and adopted. The tariff model and framework will be finalized and adopted in mid-2018, as committed. All tranche 1 and tranche 2 covenants are ongoing, except the submission of annual audited entity financial statements, which will be completed and submitted in Q1 2018. Currently, no environmental or social safeguards issues are outstanding. The environmental and social safeguards documents will be revised and updated upon detailed design by the turnkey contractors. The construction activities related to the five turnkey contracts under Tranches 1 and 2 are expected to begin in end 2017. International consulting firms are being recruited to supervise implementation, prepare future projects, undertake analytical studies, and provide capacity support to the Government. Tranche 3 was approved on 29 September 2017 and awaits effectivity. Upon contracts award, detailed design will be undertaken by the turnkey contractors and all safeguards, including Initial Environmental Examination Reports (IEE) and Land Acquisition and Resettlement Plans (LARP) will be updated and implemented before actual physical construction begins.

8. **Roadmap and Strategic Context.** The NESP road map 2013–2030 focuses on energy supply, transmission and distribution, energy efficiency, reinforcing institutions and private sector participation, capacity support, and regulatory strengthening.⁶ To accelerate electrification rate increase, ADB-assisted investments have commissioned 630 kilometers (km) of transmission lines, 15,000 new power connections, and 6 gas wells to produce 1.2 million cubic meters/day. Under implementation projects financed by ADB include construction of 1,100 km of transmission lines, 150,000 new connections, 25 megawatts (MW) of generation capacity, and 2 additional gas wells. These investments will achieve building a 500-kilovolt (kV) transmission ring to supply major load centers and are a significant step towards a unified Afghanistan grid through the installation of converter stations to synchronize Turkmenistan imports with domestic generation and large-scale renewable energy development projects.

9. **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, 2012–2032 and gas development master plan, 2015–2035, both of which are integrated in the NESP. The enacted Electricity Services Law, 2016, provides a legal and regulatory framework, and a transparent structure for private sector participation.⁷ Lessons incorporated from ADB's ongoing investments in Afghanistan's energy sector include the need to (i) finance security, demining, and taxes as part of project costs; (ii) streamline procurement and implementation through the use of turnkey contracting as the default choice, (iii) improve project readiness

⁶ The NESP 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 subtransmission and distribution in provinces. Because of fiscal challenges, the government is expected to finance less than 5% (\$500 million) of the NESP.

⁷ Under the law, the Ministry of Energy and Water (MEW) will initially act as regulator. ADB will provide support to strengthen the tariff determination framework and possible regulatory support, under the MFF.

through advance actions, (iv) provide tranches flexible to match the country's emerging needs in line with the fragile and conflict affected situation of Afghanistan, and (v) provide capacity support to DABS in technical, financial, planning, operational, and social and environmental safeguards functions. The framework stresses the phased development of renewable energy projects in 15 off-grid provinces,⁸ development and certification of gas reserves, and rehabilitation of existing gas wells to support anchor loads and energy-intensive industries, as identified in the gas development master plan.⁹

10. Since 2010, the international program management consultants recruited under the Energy Sector Development Investment Program are providing on-the-job training to DABS personnel in the technical, financial management, procurement, and social safeguards functions.

III. PERIODIC FINANCING REQUEST

A. Impact and Outcome

11. The project impact is aligned with the improved access to sustainable energy supplies across Afghanistan (National Energy Supply Program and National Infrastructure Development Plan).¹⁰ The outcome is increased imported and indigenous grid power supplies to eastern Afghanistan.

B. Output

12. The project outputs are (i) transmission line expanded in eastern Afghanistan, and (ii) power distribution capacity increased in Nangarhar province.

C. Investment and Financing Plans

13. The tranche is estimated to cost \$65.0 million, and will be financed by ADB through AITF resources on a grant basis administered by ADB and by the Government. A summary of the investment plan is in Table 1 and the detailed breakdown is in the Facility Administration Manual (FAM) in Appendix 4.

Table 1: Tranche Investment Plan
(\$ million)

Item ^a	Amount
A Base Cost^b	
1. Turnkey Contract	50.00
2. Security and Demining	4.00
3. Land Acquisition and Resettlement	4.50
Subtotal (A)	58.50
B Contingencies^c	6.00
C Financing Charges During Implementation^d	0.50
Total (A+B+C)	65.00

⁸ 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).

⁹ 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).

¹⁰ The National Energy Supply Program is one of 24 national priority programs that have been jointly endorsed by the Government of Afghanistan and the country's international development partners in 2013. The National Infrastructure Plan was endorsed by the Government and donors in 2016.

- ^a Cost estimates include Afghanistan's business receipt tax and sales-type taxes (ranging 4-7%) and duties (10%).
- ^b In 2017 prices.
- ^c Physical contingencies computed at 8% of the base cost. Price contingencies computed at 0.5% on foreign exchange costs and 5.0% on local currency costs; includes provision for potential exchange rate fluctuations under the assumption of a purchasing power parity exchange rate.
- ^d Includes interest during construction calculated at an interest rate of 1.0% of the loan between Ministry of Finance and DABS. Interest during construction is capitalized during loan.

Sources: Consultants, DABS, ADB estimates.

14. The financing plan is in Table 2. The Government requested a grant not exceeding \$60.0 million from ADB-managed AITF resources.¹¹ The grant proceeds will be re-lent to DABS by the Ministry of Finance (MOF) 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. DABS will finance \$5.00 million equivalent to cover costs related to land acquisition and resettlement and the financing charges during implementation. The government requested that ADB finance security costs, local taxes and duties, including business receipts tax and customs payments, consistent with the approach taken with other recent ADB-financed projects in Afghanistan.¹²

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Afghanistan Infrastructure Trust Fund ^a	60.0	92.30
Government	5.0	7.70
Total	65.0	100.00

^a Financing partners: the governments of Japan, the United Kingdom, and the United States, and the governments of Australia, Belgium, Germany and the Netherlands through the North Atlantic Treaty Organization Afghan National Army Trust Fund. Administered by the Asian Development Bank
Sources: Consultants, DABS, ADB estimates.

D. Implementation Arrangements

15. DABS, a 100% state-owned corporate entity responsible for power generation, transmission, and distribution in Afghanistan, has been the executing agency for all ADB-assisted projects in Afghanistan since 2008. DABS was incorporated in March 2008 and operationalized on 30 September 2009 through a presidential decree.

16. DABS established a full-time program management office (PMO) in 2009, recruited under ADB's first energy MFF: Energy Sector Development Investment Program (MFF-0026).¹³ The PMO is operational and familiar with ADB policies and guidelines. It administers all consulting and

¹¹ AITF is an ADB-administered fund for infrastructure development financing in Afghanistan. The contributors include governments of Germany, Japan, the United Kingdom, the United States, and the Afghan National Army Trust Fund. The \$60 million cofinancing under AITF for Tranche 4 has already been disbursed into ADB account on 10 July 2017. This will be a joint cofinancing, administered by ADB through AITF.

¹² 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.

¹³ 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 2 December).

procurement contracts and is responsible for preparing project plans, bid evaluation reports, progress reports, applications for withdrawal of funds, and all other reports required by ADB.

17. The project's turnkey contract will be funded by the ADB managed AITF grant. Project implementation supervision, through the PMO in DABS, is financed through Tranche 1 of MFF–0090, with the assistance of the project implementation consultant engaged under MFF–0090. Project security plan will be prepared by the turnkey contractor, jointly approved and costed by ADB and the Government, and endorsed by the National Security Council in the Office of the President before commencement of project construction activities.

18. Procurement of works and goods will follow ADB's Procurement Guidelines (2015, as amended from time to time) using international competitive bidding for the turnkey contract package. ADB will disburse the funds for the turnkey contract package through direct payment and commitment procedures. The implementation arrangements are summarized in Table 3 and described in detail in the FAM (Appendix 4).¹⁴

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	January 2018–May 2022		
Grant closing date	31 December 2021		
MFF availability period	31 December 2025		
Management			
(i) Oversight body	Ministry of Finance, with Deputy Minister of Finance as chair		
(ii) Executing agency	Da Afghanistan Breshna Sherkat (Afghanistan's power corporation)		
(iii) Implementation unit	Program Management Office in DABS		
Procurement	International competitive bidding	Single Turnkey Contract	\$ 50.0 million
Consulting services	Program Management and Implementation Supervision Consultants were recruited under Tranche 1 of MFF–0090.		
Retroactive financing and/or advance contracting	Turnkey contractor will be engaged under advanced contracting. Retroactive financing is not required.		
Disbursement	The grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed upon between the Government and ADB.		

ADB = Asian Development Bank, DABS = Da Afghanistan Breshna Sherkat, MFF = multitranche financing facility
Source: Asian Development Bank.

E. Project Readiness

19. Project preparatory consultants conducted due diligence on the project.¹⁵ The government has concurred to the project scope, 4-year implementation schedule, and for DABS to be the executing agency for the project. DABS has an existing PMO that is staffed and operational. DABS has implemented and commissioned nearly 10 such 220-kV transmission line projects since 2009 and is fully versed with the technical and operational aspects of the turnkey contracting. The invitation to bid is scheduled to be released by end December 2017, immediately after the grant signing. ADB-assisted program management and implementation consultants will assist the PMO in bid evaluation and evaluation report preparation. The project has been designed in line with the enhanced Project Delivery Approach paper, including measures to address procurement

¹⁴ Facility Administration Manual (accessible from the list of linked documents in Appendix 4).

¹⁵ Tranche 1 (G0134) under MFF 0026 Energy Sector Development Investment Program has a component to conduct due diligence and prepare projects that are listed under government's national energy supply program.

(readiness and broadening qualification requirements), security, and PMO capacity.¹⁶ Lessons from the recent findings of the Special Inspector General for Afghanistan Reconstruction (SIGAR) of the United States Government for project monitoring and implementation will be instituted in project cycle and bidding documents. The necessary design consideration due to potential climate change impacts on project infrastructure including higher temperatures and potential flooding is being addressed through bidding documents at detailed design stage.

F. Advance Contracting and Retroactive Financing

20. The project will be open for international competitive bidding under single stage one envelop procurement modality comprising of one turnkey contract using ADB's standard bidding documents. Bidding documents are expected to be issued by end December 2017. The contract is expected to be awarded and signed in Q2 2018. Retroactive financing is not required for the project.

IV. DUE DILIGENCE

A. Technical

21. The tranche 4 project extends the country's national power grid into the eastern provinces of Afghanistan. The demand forecast in Afghanistan, confirmed by the power master plan as well as by the project preparatory consultants, justifies the construction of a 220-kV transmission line, with a capacity to evacuate up to 320 MW of power. The requisite load flow studies undertaken by the consultants confirm adequacy of the 220-kV interconnection between Kabul and Jalalabad. Ongoing investments are capable to evacuate and disperse this power across Afghanistan. The 220-kV transmission line would eventually also enable power evacuation from domestic hydro and solar plants in eastern Afghanistan into the national grid. Afghanistan has commissioned nearly 10 such transmission lines and international contractors are under procurement on other ADB and development partner-assisted projects to implement 500-kV and 220-kV transmission lines, as well as converter stations in Afghanistan.

B. Economic and Financial

22. The main benefit derived from the project is increased grid supply that the imported power and indigenous generation would evacuate into eastern provinces. The analyses compare the incremental costs and benefits of with- and without-project scenarios.

23. A financial evaluation was carried out in accordance with ADB's Guidelines for the Financial Management and Analysis of Projects. Tranche 4 is financially viable with the financial internal rate of return of 6.7%, which is greater than the weighted average cost of capital at 0.65%. A sensitivity analysis found the project's financial viability remained robust in the cases of: (i) 10% increase in capital costs; (ii) 10% increase in operating costs; (iii) 5% increase in power purchase costs, and (iv) one-year delay in completion.

24. The economic evaluation was completed in accordance with ADB's Guidelines for the Economic Analysis of Projects. The economic internal rate of return of 12.3% justifies the viability of Tranche 4. A sensitivity analysis found the project's economic viability remained robust in the cases of: (i) 10% increase in capital costs; (ii) 10% decrease in operating costs; (iii) 5% increase

¹⁶ ADB. 2016. *Afghanistan: Enhanced Project Delivery Approach Paper*. Manila.

in power purchase costs, (iv) one year delay in completion, and (v) 5% decrease in benefits, with the results comparing favorably with the economic opportunity cost of capital of 9.0% in all cases.

C. Governance

25. Financial management assessment (FMA) and procurement capacity assessments were undertaken for DABS in 2017. The FMA found that DABS has not been following the International Financial Reporting Standards (IFRS). The FMA states that pre-mitigation risks are substantial for the program, however necessary reforms are underway to mitigate these risks. DABS' annual financial statements from Fiscal Year (FY) 2010 to FY 2015, have been audited with disclaimers and qualified opinions. The annual financial statements for FY 2016 and FY 2017 have not yet been audited due to delayed recruitment of new auditor, which is expected in Q1 2018. The asset revaluation, one of the items under the reform program, was completed during financial year 2016.¹⁷ The project financial statements, except for FY 2016, have also been prepared, audited, and submitted to ADB since 2010. The 2017 procurement capacity assessment confirms that the country's procurement system is weak but improving. The National Procurement Authority, established in 2015, undertakes due diligence for approval of all contract packages, chaired by the Afghan President. DABS has been implementing donor-assisted projects, including ADB and the World Bank, and the PMO is extremely proficient with procurement procedures of donors.

26. DABS's financial performance is projected to be stable, with strong liquidity position, to support the project's operations and maintenance cost. The total profit including donation income grew by 1.5 times in 2011-2015, reaching 12% of total revenues of DABS. The share of international aid will continue an important contribution to DABS's capital investment to enable the company run sustainably. DABS's current capital investment includes grants and loans from the government and is projected for next 5 years. The United States government is implementing a capacity support component in DABS to introduce a new accounting manual and system.

27. Tranche 1 of the MFF is supporting DABS to update its business plan and develop 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 business plan and findings of the tariff model.

28. 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

29. The project will increase grid connectivity and substitute diesel generators with imported power supplies from Turkmenistan, Uzbekistan and Tajikistan 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.

¹⁷ The basis of qualified opinion in 2014 and 2015 was mainly due to no reliable information of existence, accuracy and completeness of the property, plant and equipment.

30. The MFF and tranche 4 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. The project will ensure adequate participation of women during implementation and operational stages. Further, recruitment of qualified women in DABS PMO has been institutionalized.

31. 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. Gender equity and women empowerment will be ensured during the process.

E. Safeguards

32. **Environment.** Tranche 4 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 2017. The environmental impacts are envisaged as site-specific and temporary that can be mitigated by EMP implementation. These primarily include ground clearing (removal of vegetative cover), vehicular and pedestrian traffic, borings for geotechnical surveys, fugitive dust, acoustic noise, visual and drilling to characterize subsurface conditions (e.g., soils, depth to groundwater) effect of electromagnetic fields and physical cultural resources. Due to challenging security environment, only 4 scoping sessions and preliminary group discussions were held in September 2017 with local communities of Kabul and Jalalabad districts. Detailed public consultations prior to construction will enable to update the IEE and EMP. EMP will be updated upon completion of detailed design by the turnkey contractor. 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 pylon structures will mitigate these risks. The broader and comprehensive climate risk assessment will be undertaken during the detailed design stage of the project.

33. **Resettlement.** The project is category B for involuntary resettlement. Based on the preliminary project design, a land acquisition and resettlement plan (LARP) for tranche 4 has been prepared in consultation with potentially affected households. The land acquisition and resettlement framework (LARF) is also updated and both documents were disclosed on ADB's website on 31 October 2017, in accordance with the SPS. Initial survey suggests that nearly 374 households comprising 1,870 people will be affected. However, only 7 households comprising 35 people may potentially experience severe impacts in terms of physical displacement. Once the contractor completes the detailed design including optimum line route and 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.

34. **Indigenous peoples.** Tranche 4 is category C for indigenous peoples. The field survey found that no ethnic minority, as defined by SPS, is involved or affected.

35. 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

36. Major risks and mitigating measures are summarized in Table 4. 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
Increased security risk during project implementation	Preparation of a security plan will be required from the contractor and the consultant. Project funds have been allocated to cover additional government security measures as identified in the security plan. Security measures will include coordination with the international Resolute Support force, Afghan National Police, and Afghan Public Protection Force. ADB is exploring alternative and more effective modalities for project security during implementation, including use of private security companies.

G. Risk Categorization

37. The project is expected to be considered low risk due to the following factors: (i) no ADB financing is contemplated for the project; (ii) sound record and adequate capacity of EA in implementing 220-kV transmission line contracts; (iii) ADB’s experience with the EA and in the sector; (iv) integrity concerns have not been identified; (v) low to medium climate risk is envisaged; (vi) safeguards classifications other than A, as cited in paras. 32 to 34; (vii) no waiver of an applicable ADB policy is envisaged; and (viii) high-level technology does not apply.

V. ASSURANCES AND CONDITIONS

38. The government and DABS have assured ADB that projects implementation shall conform with all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, 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.

39. 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.

40. Grant proceeds will not be disbursed for the turnkey contract until an updated land acquisition and resettlement plan has been approved by ADB and implemented in a manner satisfactory to ADB.

VI. RECOMMENDATION

41. On the basis of the approval by ADB’s Board of Directors for (i) the provision of grants and (ii) the provision and administration of grants, in both cases 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 approve the proposed tranche as described in para. 14 and such other terms and conditions as are substantially in accordance with those set forth in the draft externally financed grant and project agreements for the proposed tranche.