ADB

Report and Recommendation of the President to the Board of Directors

Project Number: 53165-001
November 2019

Proposed Programmatic Approach and Policy-Based Loan for Subprogram 1 Islamic Republic of Pakistan: Energy Sector Reforms and Financial Sustainability Program

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 14 November 2019)

Currency unit	–	Pakistan rupee/s (PRe/PRs)
PRe1.00	=	$0.00643
$1.00	=	PRs155.45

ABBREVIATIONS

ADB	–	Asian Development Bank
DISCO	–	distribution company
EFF	–	extended fund facility
GDP	–	gross domestic product
IMF	–	International Monetary Fund
LNG	–	liquefied natural gas
MOE	–	Ministry of Energy
MW	–	megawatt
NDT	–	NEPRA-determined tariff
NEPRA	–	National Electric Power Regulatory Authority
SESRP	–	Sustainable Energy Sector Reform Program
SOE	–	state-owned enterprise
SPBL	–	special policy-based loan
TA	–	technical assistance
WAPDA	–	Water and Power Development Authority

NOTES

(i) The fiscal year (FY) of the Government of Pakistan ends on 30 June. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2019 ends on 30 June 2019.

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

Vice-President	Shixin Chen, Operations 1
Director General	Werner E. Liepach, Central and West Asia Department (CWRD)
Director	Ashok Bhargava, Energy Division, CWRD
Team leaders	Asad Aleem, Principal Energy Specialist, CWRD
	Yuki Inoue, Finance Specialist (Energy), CWRD
Team members	Isabel Borcena, Senior Operations Assistant, CWRD
	Nurlan Djenchuraev, Senior Environment Specialist, CWRD
	Kelly Hewitt, Principal Energy Specialist, CWRD
	Ehtesham Khattak, Senior Project Officer (Energy), CWRD
	Shukhrat Khojaev, Project Officer, CWRD
	Hiranya Mukhopadhyay, Principal Public Management Specialist, CWRD
	Farzana Noshab, Senior Economics Officer, CWRD
	Patricia Rhee, Principal Counsel, Office of the General Counsel
	Encarnacion Carlotta Webb, Associate Project Analyst, CWRD
Peer reviewer	Yongping Zhai, Chief of Energy Sector Group, Sustainable Development and Climate Change Department

CONTENTS

Project Classification Information Status: Complete

PROGRAM AT A GLANCE

1. Basic Data			Project Number: 53165-001
Project Name	Energy Sector Reforms and Financial Sustainability Program (Subprogram 1)	**Department/Division**	CWRD/CWEN
Country	Pakistan	**Executing Agency**	Ministry of Finance
Borrower	Islamic Republic of Pakistan		
Country Economic Indicators	https://www.adb.org/Documents/LinkedDocs/?id=53165-001-CEI		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=53165-001-PortAtaGlance		

2. Sector	Subsector(s)	ADB Financing ($ million)
✓ Energy	Energy sector development and institutional reform	300.00
	Total	**300.00**

3. Operational Priorities

- ✓ Accelerating progress in gender equality
- ✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability
- ✓ Strengthening governance and institutional capacity

Climate Change Information

Climate Change impact on the Project	Low
ADB Financing	
Mitigation ($ million)	45.00

Sustainable Development Goals

SDG 9.1
SDG 12.2
SDG 13.a

Gender Equity and Mainstreaming

Some gender elements (SGE) ✓

Poverty Targeting

General Intervention on Poverty ✓

4. Risk Categorization: Complex

5. Safeguard Categorization **Environment:** C **Involuntary Resettlement:** C **Indigenous Peoples:** C

6. Financing

Modality and Sources	Amount ($ million)
ADB	**300.00**
Sovereign Programmatic Approach Policy-Based Lending (Concessional Loan): Ordinary capital resources	300.00
Cofinancing	**80.00**
Export-Import Bank of Korea - Programmatic Approach Policy-Based Lending (Loan) (Not ADB Administered)	80.00
Counterpart	**0.00**
None	0.00
Total	**380.00**

Currency of ADB Financing: US Dollar

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed programmatic approach for the Energy Sector Reforms and Financial Sustainability Program and (ii) a proposed policy-based loan to the Islamic Republic of Pakistan for subprogram 1 of the Energy Sector Reforms and Financial Sustainability Program.

2. The program will help Pakistan reduce financial, technical, and governance deficits in the energy sector, which adversely impact sector sustainability and affordability and Pakistan's fiscal balance and macroeconomic stability.[1] It will (i) secure financial sustainability by controlling accumulation and addressing reduction of circular debt; (ii) strengthen governance by rationalizing a competitive market road map, the separation of policy and regulatory functions in hydrocarbons, the appointment of appellate tribunals, the implementation of multiyear tariffs and the unbundling of the gas subsector; and (iii) reinforce infrastructure improvements through integrated planning to facilitate public and private sector investment across the energy supply chain.[2]

3. The program incorporates lessons from previous Asian Development Bank (ADB) policy-based programs and ADB's sector assistance program evaluation recommendations.[3] It is aligned with the $6 billion extended fund facility (EFF) of the International Monetary Fund (IMF)[4] and ADB's special policy-based loan (SPBL), the Economic Stabilization Program.[5] It is developed in consultation with key development partners, shares key energy policy actions with the EFF and SPBL, and deepens those interventions through policy actions in subprograms 1–3. It is linked with operational priority 2 (progress in gender equality), 3 (tackling climate change), and 6 (strengthening governance and institutional capacity) of ADB's Strategy 2030.[6]

II. PROGRAM AND RATIONALE

A. Background and Development Constraints

4. After experiencing gross domestic product (GDP) growth of 4.8% on average in fiscal years (FYs) 2015–2018, Pakistan's growth fell to 3.3% in FY2019 with unsustainable twin deficits: fiscal account deficit at 8.9% of GDP and current account deficit of 4.8% of GDP.[7] Accumulated losses of large state-owned enterprises (SOEs) have grown rapidly since FY2017, constraining the government's fiscal position. Energy SOEs, which comprise roughly 60% of total SOE assets, have been a major driver of these losses (footnote 5). The country's energy sector circular debt is a key constraint on reviving economic growth.[8] The World Bank estimated that Pakistan's power subsector inefficiencies cost the economy $18 billion (6.5% of GDP) in 2015.[9] The high cost and low quality of electricity supply have reduced the country's trade and export

[1] The design and monitoring framework is in Appendix 1.
[2] Circular debt arises from payables to power generators and fuel suppliers. These are caused by electricity system losses including commercial losses, non-payment of financial obligations by various types of end-users and regulatory deficiencies. Circular debt flow is the increase in payables towards suppliers in a certain period. Circular debt stock is the accumulated liabilities towards suppliers and lenders.
[3] ADB. 2019. *Sector Assistance Program Evaluation: ADB's Support to Pakistan Energy Sector (2005–2017)*. Manila.
[4] IMF. 2019. Pakistan: Request for an Extended Arrangement under the Extended Fund Facility—Press Release; Staff Report; and Statement by the Executive Director for Pakistan. *IMF Country Report*. No. 19/212. Washington, DC.
[5] ADB. Forthcoming. *Report and Recommendation of the President to the Board of Directors: Proposed Special Policy-Based Loan to the Islamic Republic of Pakistan for the Economic Stabilization Program*. Manila.
[6] ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.
[7] The IMF has projected the economic growth rate at 2.4% for FY2020 and 3.9% on average for FY2019–FY2024.
[8] Government of Pakistan, Ministry of Finance. *Economic Survey 2018–2019*. Islamabad.
[9] World Bank. 2018. Power Sector Distortions Cost Pakistan Billions. News release. 12 December 2018.

competitiveness.[10] Despite structural improvements under ADB's Sustainable Energy Sector Reform Program (SESRP) subprograms 1–3 during 2014–2017,[11] the suboptimal resolution of timely tariff adjustments and system inefficiencies persists. Rising capacity payments (fixed payments to power plants to remain online and available) from rapid generation investments is another challenge that requires deeper reforms and policy support from development partners.

5. **Evolution of circular debt.** The first major sector reforms, endorsed in 1992 after years of severe power shortages, covered four key elements: restructuring, private sector participation, creation of an independent regulator, and competitive power generation. This led to unbundling of the vertically integrated utility, Water and Power Development Authority (WAPDA).[12] Formulation of the National Power Policy and the announcement of incentives to attract private capital in 1994 led to $5 billion in private investment and 4,500 megawatts (MW) of new capacity, mostly oil-based because of its short gestation period. However, furnace oil prices rose from PRs2,800 per ton in 1997 to PRs75,000 per ton in 2019, pushing up electricity generation costs significantly. To moderate tariff increases, the government provided tariff differential subsidies to cover about two-thirds of the population with lower electricity consumption level. However, the deteriorating economic situation made it difficult for the government to sustain the subsidies, which combined with high technical and commercial losses, led to liquidity crises among distribution companies (DISCOs) that were unable to fully pay for electricity supply to generation companies, independent power producers, and WAPDA,[13] creating circular debt. By 2012, circular debt totaled PRs460 billion. Moreover, the liquidity crisis led to inadequate investment in critical infrastructure to meet growing electricity demand, resulting in capacity shortage of up to 7,000 MW, or 30% of total capacity, and 12–16 hours of daily load shedding across Pakistan.[14]

6. In 2013, the government paid off PRs480 billion of circular debt liabilities, giving a fresh start to the power subsector, but was not able to address all the root causes. Circular debt continued to increase, although close government monitoring through the IMF's EFF for 2013–2016[15] and ADB's SESRP slowed the pace. The sharp decline in international fuel prices in 2015 also helped control new circular debt accumulation. After the IMF and ADB programs were completed, however, circular debt soared during the general elections cycle in 2018, when generation facilities operated as much as possible to minimize load shedding regardless of cost and insufficient tariff adjustments. In parallel, during 2016–2018, power generation capacity increased by 12,200 MW through foreign direct investments and government–government contracts. Without addressing the underlying liquidity issues in the subsector, circular debt, which stood at PRs729 billion in June 2017, had increased to PRs1,600 billion by June 2019. Of this, 68% was from delayed tariff notifications, nearly 20% from the difference between the allowed and actual collections and losses by the National Electric Power Regulatory Authority (NEPRA), and nearly 10% from insufficient subsidies.[16]

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[10] ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Proposed Programmatic Approach and Policy-Based Loan for Subprogram 1 to the Islamic Republic of Pakistan for the Trade and Competitiveness Program.*

[11] ADB. 2014. *Report and Recommendation of the President to the Board of Directors: Proposed Programmatic Approach and Policy-Based Loan for Subprogram 1 to the Islamic Republic of Pakistan for the Sustainable Energy Sector Reform Program*. Manila (Loan 3126, $400 million, approved on 24 April). The program was cofinanced by the Japan International Cooperation Agency, and the World Bank. The IMF approved the EFF for 2013–2016 of $6.68 billion on 4 September 2013.

[12] WAPDA was unbundled into four state-owned power generation companies, the National Transmission and Despatch Company, and eight power DISCOs.

[13] WAPDA remained the owner of hydro power plants and the largest power generation company even after unbundling.

[14] Load shedding refers to planned supply interruptions.

[15] IMF. 2013. Pakistan: 2013 Article IV Consultation and Request for an Extended Arrangement under the Extended Fund Facility. *IMF Country Report*. No. 13/287. Washington, DC.

[16] Monthly reports of the Ministry of Energy.

7. **Inadequate tariffs and inefficient subsidies.** Until 2018, NEPRA determined tariffs (NDTs) as the cost of supply based on petitions from DISCOs, and the government notified end user tariffs with a mix of subsidies and NDTs. The gap between the notified tariffs and the NDTs was effectively the subsidy. Through the EFF and SESRP, the government successfully reduced subsidies from 1.8% of GDP in 2013 to 0.4% in 2017. However, the balance of payment and budget crises in FY2018 caused the government to fall short in its subsidy payments to DISCOs because of insufficient budget allocations. The lack of subsidy payments during the record surge of generation costs added to the unprecedented level of circular debt.

8. A multiyear tariff mechanism was implemented through SESRP to reduce tariff-setting delays.[17] However, lawsuits filed by DISCOs against NEPRA in 2016, claiming that NDTs were inadequate and had underestimated system losses and overestimated collections, stalled tariff updates and led to serious cash shortages for DISCOs. FY2015 tariffs were in place until 2018, during which time generation costs continued to increase rapidly. Generation fuel price changes are adjusted automatically in tariffs, but no such mechanism exists for an increase in capacity payments, including its foreign exchange component, impact of which became larger as the Pakistan rupee depreciated by nearly 48% against the United States dollar during 2016–2019. The stalled tariff revisions for 3 years led to a large backlog of uncharged system cost, contributing significantly to the rise of circular debt.

9. **High cost of generation.** In addition to administrative issues with tariffs and subsidies, the power generation mix contributed to high supply cost. Traditionally, incentive policies favored development of thermal power plants.[18] In 1994, hydro power comprised more than 80% of the generation mix, but by 2014, thermal power plants made up 73% of supply, increasing the power subsector's reliance on imported fuel and vulnerability to balance of payment crises.[19] Continuing to operate inefficient power plants because of the lack of monitoring of actual capacity (installed versus rated) and fuel availability exacerbates the issue. This will be partly addressed by the planned retirement of nearly 4,000 MW of inefficient thermal power plants upto 2024 as their power purchase agreements expire. However, new power plants with 8,000 MW of generation capacity will be added during 2019–2023, bringing total generation capacity to 35,500 MW that will add to higher capacity payments. Renewable energy development, infrastructure retrofitting, and commercially sound operations will be key to reducing costs in the mid to long run.[20]

10. **Unsustainable losses.** Electricity network losses and leakages also intensify the liquidity crisis. DISCOs estimate of 18.3% transmission and distribution loss and 10.0% nonrecovery of billed amounts leads to almost 29.0% revenue loss, 4% higher than FY2016 levels.[21] This puts DISCOs in a negative spiral of limited investments and increasingly poor efficiency, making system losses a recurring cause of circular debt.

11. **Weak governance.** Despite attempts to corporatize power SOEs, the corporate governance has remained weak and uneven across SOEs, losses have persisted, accumulating to over $2 billion in FY2018. The resulting lack of creditworthiness limits financing options and has made power SOEs primarily reliant on sovereign financing for capital projects.[22] With limited

[17] In this mechanism, the principles of regulating the returns and profits of licensees and the trajectory of the individual cost and revenue elements of the utilities are determined in advance for multiple years.
[18] The major incentive policies were the power policies of 1994, 2002, and 2015. The combined additional capacity based on these policies is 21,500 MW.
[19] Of about 18,705 MW generation capacity being added in 2017–2022, 21.0% is hydro power, 8.5% is solar, 3.5% is local coal, 39.0% is imported coal, 11.0% is nuclear, 14.0% is regasified liquefied natural gas, and 3.0% is imported.
[20] About $35 billion is being invested in 15 generation and transmission projects with take-or-pay contracts.
[21] DISCOs' transmission and distribution losses for FY2018 were 18.32%, against the NEPRA target of 15.30%.
[22] Government of Pakistan, Ministry of Finance. 2018. Annual Budget document FY2018–FY2019. Islamabad.

investments, DISCOs do not meet NDT's benchmark loss reduction and collection targets. Reliance on sovereign financing has also led to heavy public sector influence on their governance structures, and board and management positions at DISCOs are held mainly by government-affiliated personnel with inadequate sector experience. Incumbents sitting on multiple boards of energy entities exacerbate this issue. NEPRA publishes performance evaluation reports of key sector entities, but it lacks resources, and enforcing penalties and setting target loss levels in NDTs to encourage improvements remain the only corrective measures.

12. **Lack of integrated planning.** Since 1985, Pakistan has encountered intermittent energy supply–demand imbalances as a result of the absence of integrated planning. This has manifested in an uneven generation mix, unbalanced switching costs between gas and power subsectors, and mismatch between idle generation capacity and network availability. Despite rich solar and wind resources throughout the country, Pakistan lacks a coordinated policy to incentivize and drive up solar and wind deployment and continues to rely on high cost imported gas-based generation that negatively affects affordability. Further, power subsector planning needs to be coordinated with energy security policies, including the development of indigenous gas, coal, and hydropower resources. In the gas subsector, the large import of liquefied natural gas (LNG) since 2016 has helped curb the gas shortage, but its high price is posing a new challenge. Without an integrated energy sector planning, Pakistan has not been able to take advantage of its own resources to achieve an optimal mix of indigenous gas and LNG, and an optimal power generation mix from imported fuel, indigenous fuel, and renewable energy.

13. **Previous reform efforts supported by ADB.** The previous governments attempted to resolve such issues as tariff delays and high generation costs with ADB support through the Accelerating Economic Transformation Program (AETP) in 2008–2009 and the SESRP in 2014–2017.[23] Notable achievements of AETP include automatic fuel cost adjustment in tariffs and detailed analysis of causes of circular debt. Under SESRP, tariff rationalization and debt service surcharges were implemented, which were key in reducing subsidies. Three DISCOs received multiyear tariffs under new tariff guidelines. The single buyer in the power subsector was made into an independent entity and designated as the country's first market operator. The government amended the 1997 NEPRA Act substantially and clarified the government's policy-making functions and NEPRA's regulatory functions, especially in tariff setting. The amendments also provided the foundation for an electricity trading market and an appellate tribunal as a dedicated dispute settlement mechanism for NEPRA decisions.

14. However, the IMF program went off-track in 2010, hampering completion of the energy sector policy actions of AETP such as its circular debt resolution plan. After SESRP, tariff reforms did not yield results as court cases stalled new tariff notifications until 2019. The circular debt management plan developed in SESRP did not anticipate the surge of generation costs fully and relied too heavily on efficiency improvements and sales proceeds from DISCO privatization. Yet privatization proved to be more challenging than the government's expectation. NEPRA Act amendments would have provided new tools to control circular debt, but they were not enacted until April 2018. The combination of these factors set the previous reform efforts back, resulting in the current liquidity crisis.

B. Policy Reform and ADB's Value Addition

15. The new government has developed reform action plans in its new electricity policy and the concept of integrated energy planning. A large part of these efforts will be on optimizing the

[23] ADB. 2008. *Report and Recommendations of the President to the Board of Directors*. Proposed Program Cluster and Loans for Subprogram 1 to the Islamic Republic of Pakistan for the Accelerating Economic Transformation Program. Manila; and footnote 11.

use of the tools that were developed in previous efforts. ADB will support this reform through the proposed programmatic approach with three subprograms during 2019–2022. In developing the program, ADB has undertaken multiple diagnostic and analytical studies since 2018.[24] The findings recommended prioritizing the recurring financial sustainability issues to streamline the tariff notification cycle; strengthening energy accounting; and reducing generation costs by inducting solar, wind, and hydropower without capacity charges as well as by addressing the sector's governance and infrastructure constraints. The program's three pillars are financial sustainability (including actions for climate challenge), governance, and infrastructure.[25]

16. **Reform area 1: financial sustainability improved.** Through the programmatic approach, actions in this pillar will aim to address inefficient tariffs and subsidies, high generation costs, system losses, and lack of integrated planning. While accumulated circular debt poses a threat to the economy, the immediate priority is to stop further accumulation, or the flow, of circular debt and focus on the stock reduction through the subsequent subprograms. In subprogram 1, a series of tariff notifications in 2019, adjusted a backlog of PRs469 billion. Further, the tariffs are now based on the new uniform tariff mechanism under NEPRA Act amendments, which incorporate budgeted subsidies and cross-subsidization among DISCOs to help control sector deficits. A new circular debt reduction plan based on these tariff mechanisms, a historic level of system efficiency improvements, and an antitheft program that has recovered PRs89 billion since November 2018, among others, was developed to monitor quarterly targets and progress. These efforts and timely subsidy payments reduced circular debt flow from PRs38 billion per month in August 2018 to PRs21 billion per month in August 2019. When fully implemented the flow is expected to be further reduced to within PRs6 billion per month by 30 June 2021. Under this plan, the government also aims to reduce subsidies from 0.56% of GDP in FY2020 to 0.40% during FY2021–FY2023 through better targeting. The plan also includes indicative priority areas to address stock of circular debt, which is highlighted in para. 17 below. The Renewable Energy Policy 2019, assisted by ADB and other partners, targets 20% (10,000 MW) renewable energy capacity by 2025 and 30% (15,000 MW) by 2030, and aims to shift the generation mix to contain only 15% imported fuel by 2030.

17. In subprogram 2, the government plans to further amend the NEPRA Act to introduce an automatic mechanism for updating power generation costs in tariffs each quarter without government notification and instituting surcharges for balancing cost of supply. Generation costs comprise more than 75% of end user tariffs currently, and the automated mechanism will prevent the backlog of system costs even if tariff notifications are delayed. The government and NEPRA also aim to notify FY2021 tariffs before the fiscal year starts in July 2020, correcting the tariff notification schedule for the first time. With such progress, the circular debt reduction plan will be expanded to reduce circular debt stock. This may include (i) using the sales proceeds of some generation assets, (ii) divesting power subsector transmission and distribution SOEs through initial public offerings, (iii) rolling tariff subsidies into social assistance program targeting only the poorest households, and (iv) converting portions of stock into public debt. The National Electricity Policy and Plan will be approved as the foundation of integrated planning.

18. By subprogram 3, in parallel with monitoring of circular debt reduction plan targets, multiyear tariffs are planned to be introduced for all DISCOs to help NEPRA determine tariffs on time. A mechanism to link DISCOs' revenue margins with their performance is expected to

[24] Sector Assessment (Summary): Energy (accessible from the list of linked documents in Appendix 2). The assessment is based on findings from ADB. 2017. *Technical Assistance to the Islamic Republic of Pakistan for the Update on Energy Sector Plan*. Manila.

[25] The sequencing of reforms under each area is in the policy matrix in Appendix 4. Subprogram 1 will contribute $45 million to climate mitigation financing through declining carbon dioxide emissions by implementing a renewable energy policy ($15 million) and an unaccounted-for-gas reduction program ($30 million).

encourage efficiency improvements and provide more cash resources to control circular debt. Approval of the integrated energy plan (2020–2047) will help the government with energy planning and optimize energy systems, even beyond the scope of the programmatic approach.

19. **Reform area 2: institutional and regulatory governance strengthened.** For subprogram 1, NEPRA concluded public consultations for the market-oriented electricity subsector financial settlement model, which was developed with ADB support and is a key step in this continued effort since SESRP.[26] A cabinet committee approved the privatization plan of two regasified LNG-based power plants whose proceeds can help retire part of the circular debt stock. The Ministry of Energy (MOE) approved and initiated the separation of policy and regulatory functions in the petroleum subsector to streamline the sector's business processes and promote more investments. The MOE and the Ministry of Law and Justice initiated the establishment of an appellate tribunal as a dispute resolution mechanism for NEPRA decisions. The government also approved the requirement of female representation on SOE boards.

20. Subprograms 2 and 3 will induce professional management to improve the operational and financial parameters of sector entities, which will also facilitate private investments and ownership. Competitive selection of management personnel will raise the chances of appointing skilled managers. The separation of the technical and commercial segments in two DISCOs and the completion of the regasified LNG power plant privatization will pave the way for management contracts and other forms of private sector participation. The MOE's gas sector restructuring plan will be a plan for the unbundling of the gas sector into transmission and distribution companies, third-party access to gas transmission lines, and eventual private ownership in gas companies. The appellate tribunal for NEPRA decisions will be made operational, and results will be monitored by MOE.

21. **Reform area 3: energy (power and gas) infrastructure improved.** Infrastructure investments are urgently needed to improve system reliability, efficiency, and access, and to tackle circular debt technical issues. While the program will be complemented by ADB's investment portfolio and pipeline on transmission and distribution expansion,[27] it will also promote private investments in energy supply infrastructure. For subprogram 1, the MOE approved the gas loss reduction plan prepared by gas transmission SOEs. It has also revised the 2012 incentive policy to streamline regulatory approvals and encourage more rigorous oil and gas production investments to reduce the need for imported fuel for energy and transport.

22. Subprograms 2 and 3 will focus on off-grid and rural electrification, which constitutes power supply to about 30% of the population; continued auction of oil and gas concessions to reduce dependency on imported fuel for power generation and energy needs; implementation of net metering in five DISCOs;[28] and modernization of the electricity system operator, the National Power Control Center.

23. **Choice of programmatic approach.** The programmatic approach will provide multiyear policy engagement aligned with the EFF, SPBL, and other development partner programs. Continued engagement is key as complex reforms take multiple years to implement and yield results. Subprograms 2 and 3 will be designed as new lending programs based on indicative

[26] ADB. 2014. *Technical Assistance to the Islamic Republic of Pakistan for Strengthening the Central Power Purchasing Agency*. Manila.
[27] ADB. 2019. *Country Operations Business Plan: Pakistan, 2020–2022*. Manila.
[28] In such systems, the household renewable energy source is connected to a public utility power grid for transferring surplus power to the grid, allowing customers to offset the cost of power drawn from the utility.

policy actions to allow ADB to evaluate capacity constraints, adjust policy actions, and explore cofinancing partners.

24. **ADB's value addition.** ADB's value addition is based on its long-term engagement with policy-based and investment loans in Pakistan. The program builds on ADB's earlier policy interventions. Actions such as uniform tariffs and the appellate tribunal are based on the NEPRA Act amendments supported by SESRP and the circular debt reduction plan incorporates lessons from previous plans (para. 16). Sector assistance program evaluation recommendations to improve financial sustainability, strengthen sector governance and integrated planning, and support physical and technological investments became the program's reform areas. An ADB-assisted study on sector reforms provided the basis for formulating policy actions (footnote 24).

25. ADB can provide comprehensive support, and the government can identify and sequence key reforms with support from ADB's policy engagement from the programmatic approach. ADB will support reform implementation through technical assistance (TA) in areas such as developing and monitoring the progress of the circular debt reduction plan, implementing the market-based financial settlement model, and establishing the appellate tribunal.[29] ADB's pipeline loan projects are aligned with the identified infrastructure needs and supplement reform actions (footnote 27).

26. **Development partner coordination.** ADB is taking the lead in providing an energy-sector-focused policy program, which has been coordinated with and complements projects and programs of key development partners. The program underpins energy sector reforms in the IMF EFF and SPBL by addressing structural constraints and their negative impact on economic growth. Policy actions on tariff notification, the circular debt reduction plan, and automatic quarterly adjustments are in the EFF and SPBL, which support the upstream aspects of these actions, while the programmatic approach will further support downstream implementation and monitoring. All three reform areas are supported by ADB's TA projects, and the programmatic approach allows ADB to provide follow-up support for deepening reform initiatives. The circular debt reduction plan, jointly agreed by ADB, IMF and the World Bank, has been approved by the Ministry of Energy. The plan is endorsed by the Economic Coordination Committee of the Cabinet, which will monitor its implementation. The debt sustainability analysis, program monitoring, and the sequencing of disbursements of the subprograms have been fully coordinated with the IMF. [30] ADB has supported the preparation of the National Electricity Policy 2019, the Renewable Energy Policy 2019, and the 25-year Integrated Energy Plan with inputs from other development partners. The World Bank is preparing a development policy credit for approval in 2020 that includes policy actions to reduce circular debt stock to complement the ADB program. ADB is also coordinating with the Export-Import Bank of Korea, the German development bank, the French Development Agency, and the Japan International Cooperation Agency on the design of their complementary programs and on potential cofinancing plans.

C. Impacts of the Reform

27. The key impact of the program is reduced financial, technical, and governance deficits in the energy sector. By 2024 and with successful program implementation, new accumulation of circular debt per year will be reduced from PRs450 billion in FY2019 to PRs50 billion, accumulated payables will drop from PRs800 billion in 2018 to less than PRs250 billion, and the weighted average electricity generation cost will fall from $0.097 per kilowatt-hour in 2019 to $0.070 per

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[29] ADB. 2019. *Technical Assistance to the Islamic Republic of Pakistan for Preparing Sustainable Energy Projects*. Manila.

[30] Sequencing of Budget Support (Asian Development Bank and International Monetary Fund) in 2019 and 2020 (accessible from the list of linked documents in Appendix 2).

kilowatt-hour. The appellate tribunal is expected to resolve 60% of cases on NEPRA decisions within 6 months; such cases are currently taken to court, where decisions may take years.

28. Under the circular debt reduction plan, the government expects improvement in DISCOs' collections from 94.7% in 2019 to 99.4% in 2022 and in losses in six distribution companies by 1% annually, generating additional revenues of PRs118 billion by end FY2023. Better subsidy targeting is expected to reduce subsidy (para. 16).

D. Development Financing Needs and Budget Support

29. The average GDP growth rate for FY2019–FY2024 is forecast to average 3.9%, with inflation expected to rise to an average of 9.1%, which will continue to constrain government finances. The fiscal deficit is estimated to be 6.8% of GDP in FY2020 (about $16 billion) and expected to remain high until FY2021. The government's external financing needs are expected to be $29.9 billion in FY2020 and continue to increase through FY2024 (footnote 4). Of this, the IMF will provide $2.4 billion and ADB will contribute $2.1 billion in FY2020 (footnote 5). Sector-specific requirements constitute $600 million per year by implementing an energy (power and gas) loss reduction programs through expansion and rehabilitation of downstream energy infrastructure.

30. To support growing development financing needs, ADB proposes to provide $1 billion of policy-based loans through a programmatic approach to be implemented through three subprograms. For subprogram 1, the government has requested a concessional loan of $300 million from ADB's ordinary capital resources to help finance the program. The loan will have a 25-year term, including a grace period of 5 years; an interest rate of 2% per year during the grace period and thereafter; and such other terms and conditions set forth in the draft loan agreement. The Export-Import Bank of Korea has confirmed $80 million cofinancing for subprogram 1, and cofinancing options will be explored for subprograms 2 and 3. Financing under the proposed program is integrated into the IMF's debt analysis.[31] The development policy letter from the government is in Appendix 3.

E. Implementation Arrangements

31. The Ministry of Finance will be the executing agency and responsible for overall program monitoring and reporting, and the MOE and NEPRA will be the implementing agencies. Two TA projects will support the policy actions (footnotes 24 and 29). The programmatic approach will be implemented from 1 January 2019 to 31 December 2021, with subprogram 1 to be disbursed in one tranche. Based on ADB's assessment of documents received, all subprogram 1 policy actions have been completed, including with respect to policy actions 1 and 2 which are a subset of the EFF structural benchmarks and SPBL policy actions. The proceeds of the policy-based loan will be withdrawn following ADB's *Loan Disbursement Handbook* (2017, as amended from time to time). The loan closing date for subprogram 1 is 30 June 2020.

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[31] The IMF program includes general budget support financing plans of the government, including this programmatic approach and lending programs of all other development partners for 2019–2025. The Fiscal Responsibility and Debt Limitation Act 2005 of Pakistan (amended in 2016) allows the government to borrow above the 60% of GDP public debt ceiling by providing the justification for additional borrowing in the annual debt policy statement.

III. DUE DILIGENCE

A. Governance

32. ADB's governance risk assessment found such risks as (i) weak political support for and government ownership of sensitive reforms and (ii) weak institutional capacity.[32] The fiduciary systems assessment found one important area of concern: key reforms may not be implemented promptly because of budget constraints. While no major resource mismanagement risks at the implementing level could be discerned, areas relating to the sector's institutional capacity and financial sustainability were targeted for capacity development in the TA projects and the program's policy actions. ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and will be followed by the program. Pakistan is on the Financial Action Task Force gray list and will continue to implement the anti-money-laundering and counterterrorism reforms agreed in the action plan with the task force. The government is acting against corruption, with monitoring and reporting by the Public Accounts Committee of the parliament.

B. Poverty, Social, and Gender

33. While the consumption poverty rate in Pakistan declined from 50.4% in FY2006 to 24.3% in FY2016,[33] the multidimensional poverty rate remains high at 38.8% and has stark regional and urban–rural disparities: 54.6% in rural areas and 9.4% in urban areas.[34] Higher energy prices coupled with subdued growth and increased inflation and unemployment exacerbate the vulnerabilities of the poor.[35] Industrial and commercial sectors are affected by higher tariffs and unreliable power supply, and the hardest hit are the small and medium-sized enterprises that employ more than 70% of workforce. Policy reforms will reduce generation costs by promoting low-carbon solutions, and lower technical and commercial losses. Encouraging private sector participation in sustained and reliable oil and gas production investments will increase job opportunities in the energy sector directly and indirectly. Further, expanded energy access by developing a 5-year rural and off-grid electrification plan for underdeveloped districts to reduce time poverty of rural women—who comprise more than 50% of the workforce—will allow longer hours for study and skills training programs and generally improved health and quality of life.

34. Pakistan's female labor force participation rate is among the lowest globally: only 24.6% of women have access to formal labor markets.[36] Women's lack of access to formal labor markets, low literacy levels, limited mobility, and lack of land ownership and assets make them more vulnerable to economic shocks. Categorized as having *some gender elements*, subprogram 1 has two key policy actions with strong gender impacts: the MOE has (i) completed consultations and submitted the National Electricity Policy for approval by provinces, with measures to improve female employment in the sector; and (ii) implemented the policy that requires at least one female board member in public sector enterprises, including DISCOs.

C. Safeguards

35. Subprogram 1 is classified category C for the environment, involuntary resettlement, and indigenous peoples. Investment activities prohibited under ADB's Safeguards Policy Statement (2009) will be excluded.

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[32] ADB. 2008. *Guidelines for Implementing ADB's Second Governance and Anticorruption Action Plan (GACAP II)*. Manila.

[33] Consumption poverty is when consumption is below the threshold level of nutritional requirements.

[34] The multidimensional poverty index complements consumption poverty by reflecting deprivations that individuals face in other dimensions, such as education, health, and standard of living.

[35] World Bank. 2019. *Pakistan at 100: from Poverty to Equity*. Washington, DC.

[36] Pakistan Bureau of Statistics 2013.

D. Risks and Mitigating Measures

36. Major risks and mitigating measures are summarized in the table and described in detail in the risk assessment and risk management plan.[37]

Summary of Risks and Mitigating Measures

Risks	Mitigation Measures
Unanticipated resistance by stakeholders with vested interests impedes implementation.	The program is based on the government's policy and reform initiatives and is backed by strong political will and commitment. Requisite consultations have been made with industry associations and the private sector during the formulation of electricity and renewable energy policies, as well as NEPRA tariff hearings. The program is strongly supported by key development partners, and technical assistance has been provided to the government.
Lack of government commitment attributed to difficult fiscal position and political instability delays ADB program	The program rests on the government's policy and reform initiatives, backed by strong political commitment. ADB will continue policy dialogue and lead development partner coordination for energy sector reforms to ensure timely implementation of the medium-term development policy agenda.
Increased energy sector payables and slow recovery of energy sector entities discourage private sector investments.	The circular debt reduction plan envisages curtailment of debt flow through automatic quarterly adjustment of tariffs, improved line losses and recoveries, and full subsidy allocation. The plan will be measured at least quarterly by ADB missions, the IMF, and Cabinet Committee on Energy reviews.

ADB = Asian Development Bank, IMF = International Monetary Fund, NEPRA = National Electric Power Regulatory Authority.
Source: Asian Development Bank.

IV. ASSURANCES

37. The government and the Ministry of Finance have assured ADB that implementation of the program shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the loan agreement.

V. RECOMMENDATION

38. I am satisfied that the proposed programmatic approach and policy-based loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

(i) the programmatic approach for the Energy Sector Reforms and Financial Sustainability Program; and
(ii) the loan of $300,000,000 to the Islamic Republic of Pakistan for the Energy Sector Reforms and Financial Sustainability Program, from ADB's ordinary capital resources, in concessional terms, with an interest charge at the rate of 2% per year during the grace period and thereafter; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Takehiko Nakao
President

15 November 2019

[37] Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

DESIGN AND MONITORING FRAMEWORK

Country's Overarching Development Objective
Financial sustainability and self-reliance of energy sector achieved (Vision 2025)[a]

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Effect of the Reform Financial, technical, and governance deficits in the energy sector reduced	By 2024: a. Circular debt flow reduced to less than PRs50 billion (FY2019 baseline: PRs450 billion) b. Circular debt stock reduced to less than the target level to be determined in subprogram 2 (30 June 2019 baseline: PRs800 billion) c. Weighted average cost of generation lowered to $0.070 per kWh (2019 baseline: $0.097 per kWh) d. By 2024, power subsector appellate tribunal resolved 60% of complaints within 6 months of application submission on average (2019 baseline: not established)	a–b. Annual MOF economic surveys c–d. Annual NEPRA state of industry reports	Lack of government commitment attributed to difficult fiscal position and political instability delays ADB program.
Reform Areas under Subprogram 1 1. Financial sustainability improved	**By 2019:** 1.1 PRs469 billion of tariff adjustment backlog incorporated in notified tariffs (2018 baseline: pending since FY2016) 1.2 Scheduled amount of tariff differential subsidies released monthly (2018 baseline: 6-month delay)	1.1 Annual tariff notification by NEPRA 1.2 Daily updated news section of the NEPRA website	Unanticipated resistance by stakeholders with vested interests impedes implementation.
2. Institutional and regulatory governance strengthened	**By 2019:** 2.1 Policy requiring at least one female board member in public sector enterprises, including DISCOs; and shortlisted candidates for four DISCOs based on a competitive process implemented by the government (2018 baseline: none)	2.1 Annual NEPRA state of industry reports	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
	2.2 Privatization of two LNG power plants approved by CCOP (2018 baseline: not applicable) 2.3 Separation of policy and regulatory functions (upstream concessions) in the oil and gas subsector approved by the MOE (2018 baseline: not applicable)	2.2–2.3 Annual petroleum industry reports by OGRA, formal approval notification by the MOE	
3. Energy infrastructure improved	**By 2019:** 3. Revised oil and gas development plan with incentives approved by the government (2018 baseline: no revision since 2012)	3. Notification of the plan by the MOE	Increased energy sector payables and slow recovery of energy sector entities discourage private sector investments.

Budget Support
ADB
Subprogram 1: $300 million (concessional OCR loan)
Subprogram 2: $300 million in 2020
Subprogram 3: $400 million in 2021

Assumptions for Partner Financing for subprogram 1
Export-Import Bank of Korea: $80 million

ADB = Asian Development Bank, CCOP = Cabinet Committee on Privatization, DISCO = distribution company, ECC = Economic Coordination Committee of the Cabinet, FY = fiscal year, kWh = kilowatt-hour, LNG = liquefied natural gas, MOE = Ministry of Energy, MOF = Ministry of Finance, NEPRA = National Electric Power Regulatory Authority, OCR = ordinary capital resources, OGRA = Oil and Gas Regulatory Authority.

[a] Government of Pakistan, Ministry of Planning, Development and Reform. 2014. Islamabad.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

http://www.adb.org/Documents/RRPs/?id=53165-001-3

1. Loan Agreement
2. Sector Assessment (Summary): Energy
3. Contribution to the ADB Results Framework
4. Development Coordination
5. Country Economic Indicators
6. International Monetary Fund Assessment Letter[1]
7. Summary Poverty Reduction and Social Strategy
8. Risk Assessment and Risk Management Plan
9. List of Ineligible Items

Supplementary Documents

10. Economic Analysis
11. Fiduciary Systems Assessment
12. Sequencing of Budget Support (Asian Development Bank and International Monetary Fund) in 2019 and 2020

[1] The IMF confirmed that the Press Release No 19/402: IMF Reaches Staff-Level Agreement with Pakistan on the First Review under the Extended Fund Facility may serve as the IMF Assessment Letter.

DEVELOPMENT POLICY LETTER

No. 415-Adv-PM(Fin)/2019

Dr. Abdul Hafeez Shaikh
Adviser to Prime Minister on
Finance and Revenue

ISLAMABAD
November 12, 2019

Dear President Nakao, ADB and Deputy President Seung Joong, EXIM, Korea

The Government of Pakistan is implementing a comprehensive economic stabilization and recovery program to address macroeconomic challenges. In this regard, we have entered into a 39 months Extended Fund Facility arrangement with the International Monetary Fund (IMF) for an amount of $6 billion to implement our reform program. Our program aims at setting Pakistan on a medium term trajectory of sustained and balanced growth through implementation of stabilization policies and enduring structural reforms to strengthen our institutional framework. A resume of reforms being implemented, particularly in the energy sector is attached. These reforms would specifically focus on addressing the issue of accumulated power sector circular debt, currently estimated at about Rs1.6 trillion.

The circular debt reduction plan will focus on envisaged measures to be finalized in coordination with development partners. The plan will include (i) using the sales proceeds of some generation assets; (ii) divesting power subsector transmission and distribution of State Owned Enterprises (SOEs); (iii) rolling tariff subsidies, preferably into a social assistance program targeting the poorest households; and (iv) converting portions of Power Holding Private Limited debt stock into public debt. We believe that with the support of international financial institutions we will be able to implement the proposed measures to start reducing circular debt stock from the Financial Year 2021.

Implementing reforms in various sectors would need substantial funds. To fill up the gap, I would request you to extend financial assistance to the Government of Pakistan for carrying out the planned reforms, especially for enhanced social protection measures.

I look forward to continue to work closely with the ADB and KEXIM, Korea in our shared objective of improving Pakistan's economic prospects and development.

With kind regards,

Yours sincerely,

(Dr. Abdul Hafeez Shaikh)

Mr. Takehiko Nakao,
President,
Asian Development Bank

Mr. Kang Seung-Joong,
Deputy President,
Export-Import Bank of Korea

Annexure

Summary of Energy Sector Reforms

(i) Preparation of a Circular Debt Reduction Plan in consultation with the ADB, IMF and World Bank, encompassing measures that address circular debt flow and a time-bound roadmap of actions for retiring the circular debt stock;

(ii) Adoption of annual tariffs by power distribution companies for FY2018 and requisite tariff adjustments for FY2019 (Q1-Q4), to expedite delayed cost recovery of Rs 469 billion;

(iii) Approved time bound milestones for establishing an appellate tribunal under the National Electric Power Regulatory Authority Act, reducing non-payment through third-party settlement of billing disputes;

(iv) Formulation of the National Electricity Policy, enabling cost effective generation diversification, demand-side management efficiencies and increasing employment opportunities for women in the sector;

(v) Formulation of the Renewable Energy Policy 2019, facilitating low cost clean energy generation with enhanced economic value through emission reductions;

(vi) Approved roadmap and market-oriented electricity trading model improving transparency and incentivizing private sector investments;

(vii) Approved privatization of two liquefied natural gas fired power plants;

(viii) Enhanced energy sector supply chain through separation of hydrocarbon policy and regulatory functions and establishment of the Pakistan Petroleum Exploration and Production Regulatory Authority.

(ix) Cabinet ratified Unidentified Gas Reduction Plans, and approved incentive policy for increasing oil and gas block bid rounds through foreign direct investment and private sector participation.

POLICY MATRIX

Prior Actions completed in Subprogram 1[1]	Indicative Actions in Subprogram 2	Indicative Actions in Subprogram 3
Reform Area 1: Financial Sustainability Improved: To control accumulation of circular debt		
1. FY2018 tariff, quarterly adjustments for Q1–Q4 FY2019 were notified, adjusting tariffs for PRs469 billion of backlog.	1. Electricity tariff guidelines are updated based on National Electric Power Regulatory Authority (NEPRA) Act amendments (2018) 2. FY2021 tariff is notified before July 2020, correcting the annual tariff notification cycle 3. Multi-year tariff is determined and notified for three additional power distribution companies (DISCOs) for FY2021	1. FY2022 tariff is notified before July 2021 2. Multi-year tariff is determined and notified for all DISCOs
	4. Government of Pakistan (GoP) to approve a mechanism to link and cap the distribution margin of respective DISCOs with operational performance.	3. Implement the mechanism prepared under subprogram 2 to cap the distribution margin of respective DISCOs with its operational performance.
2. Ministry of Energy approved and started implementation of a circular debt reduction plan, including implementing antitheft drive, quarterly tariff notifications, and improve collections, to control the new accumulation of circular debt.[2]	5. Government updates the circular debt reduction plan to include measures to reduce accumulated payables and loans on Power Holding Private Limited used to pay off payables in the past (PHPL) 6. New accumulation of circular debt is kept below [PRs124 billion for FY2020] and PHPL debt is reduced and assumed as public debt as targeted in subprogram 2.	4. New accumulation of Circular Debt is maintained below [PRs74 billion for FY2021]. 5. Accumulated payables portion of circular debt is reduced to the targeted level set in subprogram 2 6. PHPL debt is restructured and reduced (targets to be determined and agreed based on the updates to the circular debt reduction plan in subprogram 2)
	7. NEPRA Act Amendment, that include automatic quarterly tariff adjustments and institution of surcharges, is submitted to the Parliament for approval.	

[1] The policy actions 1 and 2 to stabilize the sector finances, are aligned with ADB's Special Policy Based loan being considered concurrently by the Board. The program digs deeper into structural reforms through the remaining 9 policy actions under the program as well as under subsequent subprograms.

[2] Circular debt is payables from distribution companies to power generators and fuel suppliers. These are caused by electricity system losses including commercial losses, non-payment of financial obligations by end-users and regulatory deficiencies. Circular debt flow is the increase in payables towards suppliers in a certain period. Circular debt stock is the accumulated liabilities towards suppliers and lenders. Implementation of actions to curtail the circular debt flow started since 1 July 2019 by instituting cost reflective tariffs and accelerating recoveries of arrears.

Prior Actions completed in Subprogram 1[1]	Indicative Actions in Subprogram 2	Indicative Actions in Subprogram 3
3. Ministry of Energy has completed consultations and submitted the National Electricity Policy for approval by provinces, ensuring measures for a rationalized generation mix, demand side management and increased women employment in the sector	8. Council of Common Interests (CCI) approves the National Electricity Policy 2019 and the Integrated Energy Plan.	7. Implementation per milestones of the National Electricity policy and the Integrated Energy Plan (milestones to be confirmed)
4. Ministry of Energy approved and published the draft Renewable Energy Policy 2019	9. NEPRA approved the National Electricity Plan based on National Transmission and Despatch Company (NTDC) Integrated Generation, Transmission and Distribution expansion and Investment Program (IGTDP).	8. NEPRA approves the updates to the 5-year IGTDP by NTDC, establishing the annual update mechanism for planning
	10. Dispatch merit order guidelines approved based of efficiency of power plants net of subsidized fuel costs and input	
Reform Area 2: Institutional and Regulatory Governance Strengthened: To promote transparency through sector restructuring		
	11. NTDC has implemented its restructuring plan with at least 50% milestones achieved. (milestones to be finalized).	9. The plan to devolve powers for final approval of projects and arranging financing is completed from the GoP (Planning Commission/ CWDP/ECNEC) to the Boards of NTDC/DISCOs in accordance with the Companies Act 2017. Procedures for channelizing official GoP and foreign assistance and revised and simplified to enable quick appraisal and release of funds for undertaking infrastructure projects.
5. The Government implemented a policy to require at least one female board member for public sector enterprises including DISCOs, and shortlisted candidates for 4 DISCOs based on a competitive process.	12. GoP selects Board of Directors of all DISCOs based on a competitive process. 13. Boards of Directors of DISCOs and NTDC complete selection and appointment of the Chief Executive Officers based on a competitive process.	
6. NEPRA completed public consultations for the market-oriented electricity trading model and Economic Coordination Committee of the Cabinet (ECC) approved extension in its commercial operation date.	14. ECC approved the detailed mechanism of the competitive trading and bilateral contracting model. 15. Restructuring of 2 DISCOs approved under the Road Map.	10. A market-oriented bilateral contracting between power generators and suppliers is started with the Central Power Purchasing Agency Guarantee Limited (CPPA-G) as the settlement center.

Prior Actions completed in Subprogram 1[1]	Indicative Actions in Subprogram 2	Indicative Actions in Subprogram 3
7. Cabinet Committee on Privatization (CCOP) has approved the privatization of two Liquid Natural Gas (LNG) based power plants.	16. Two LNG based power plants are privatized with management control transferred.	
8. Ministry of Energy has approved separation of policy making and regulatory functions in the hydrocarbons sector and establishing Pakistan Petroleum Exploration and Production Regulatory Authority.	17. Gas concession authority and upstream regulatory authority (Pakistan Petroleum and Production Authority) are separately staffed and established. 18. ECC approves gas sector restructuring plan, including third party access to pipelines and direct purchase by users.	11. Gas sector restructuring milestones by 2021 are completed for full completion by 2022. 12. First contract of third-party access for gas pipelines are signed and become effective.
9. Ministry of Energy, in consultation with Ministry of Law and Justice, approved timebound targets to establish the Appellate Tribunal under the NEPRA Act amendments by end 2020.	19. Appellate Tribunal is staffed and established with governing rules and regulations and fully operationalized.	13. Appellate Tribunal adjudicates cases regarding NEPRA decisions (target to be determined in subprogram 2).
Reform Area 3: Energy Infrastructure Improved: To reinforce supply chain improvements		
10. The Cabinet has ratified the Unaccounted-for Gas (UFG) Reduction plan of Sui Southern Gas Company (SSGC) and Sui Northern Gas Company (SNGPL) with monitoring targets and implementation roadmap.	20. ECC approves SSGC and SNGPL UFG Reduction plans and implementation started with monitorable targets (to be determined). 21. ECC approves 5-year rural and off-grid electrification plan and implementation started.	14. UFG is reduced based on the loss reduction plan (target to be determined in subprogram 2). 15. Implementation of net metering policy across 5 DISCOs to increase share of renewable energy into grid. (targets to be determined)
11. Ministry of Energy approved an incentive policy for increasing bidding rounds for oil and gas blocks through smaller and continual rounds to encourage sustained and reliable exploration in oil and gas sectors	22. Exploration blocks are auctioned based on the new incentive policy initiated in accordance with the new plan approved under subprogram 1.	16. National Power Control Center is operationalized and modernized through installation of SCADA metering and energy accounting systems for network stability and economic dispatch.

CPPA = Central Power Purchasing Agency, DISCOs = distribution companies, ECC = Economic Coordination Committee, FPA = fuel price adjustment, FY = fiscal year, GENCOs = Power Generation Companies, GDP = gross domestic product, IPP = Independent Power Producer, LNG = liquefied natural gas, NEPRA = National Electric Power Regulatory Authority, NTDC = National Transmission and Despatch Company, WAPDA = Water and Power Development Authority.