

Project Administration Manual

Project Number: 54107-002

Loan Number: {LXXXX}

August 2021

Nepal: Electricity Grid Modernization Project – Additional Financing

ABBREVIATIONS

ADB	–	Asian Development Bank
EMP	–	environmental management plan
ESSD	–	Environmental and Social Services Department
GESI	–	gender equality and social inclusion
kV	–	kilovolt
MVA	–	megavolt ampere
MW	–	megawatt
NEA	–	Nepal Electricity Authority
PMD	–	Project Management Directorate
RIPP	–	resettlement and indigenous peoples plan

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Nepal Electricity Authority (NEA) is wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by NEA of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The original Loan 4014 for Project 54107-001 Nepal: Electricity Grid Modernization Project is financing high-priority electricity grid modernization investments in transmission and distribution systems in Nepal and supporting sector reform and the financial sustainability of Nepal Electricity Authority (NEA) (original project). The original project will complete the installation of smart meters in the Kathmandu Valley and the automation of existing grid substations throughout the country and finance the modernization of other distribution and transmission systems in various parts of the country. The \$156 million loan was approved on 26 November 2020, signed on 30 December 2020, and declared effective on 4 February 2021.¹

2. The proposed additional financing project (AF project) will further improve the country's transmission and distribution system. The government has sought assistance from ADB to enhance the capacity of the critical transmission and distribution network in line with NEA's Corporate Development Plan to improve electricity supply in critical load centers. These investments, which could not be accommodated in the ongoing project due to lack of readiness at the time the original project was processed, are needed to ensure efficient and reliable delivery of power to reach the target of 700 kilowatts per hour (kWh) per capita energy consumption by 2026. The proposed additional activities are strongly linked to the ongoing project's scope. They can be implemented efficiently under the same implementation arrangements and have high readiness. The outcome and impact of the project will remain unchanged.²

3. **Outputs and project scope.** The proposed AF project will yield expansion of Outputs 1 and 2 of the original project, contributing to the expansion, strengthening and modernization of both transmission capacity and the distribution network in project areas. Under Output 1 of the AF project, an additional 16 km of 132 kilovolts (kV) transmission lines will be constructed from Kohalpur to Nepalgunj and from Chovar to Lagankhel; plus an additional 477 megavolts amperes (MVA) of substation capacity will be introduced to the system, through the construction of substations in Dumkibas, Lagankhel, Mulpani and Nepalgunj. Under Output 2, an enterprise resource planning system and a revenue management system will be implemented to modernize and better integrate NEA's financial and customer information systems.

4. Effective gender mainstreaming activities will continue to be undertaken in this project to maximize gains of the original project where appropriate.

¹ ADB. 2020. [*Report and Recommendation of the President to the Board of Directors: Proposed Loan to Nepal for the Electricity Grid Modernization Project*](#). Manila.

² A design and monitoring framework is given in Section IX.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

	2020			2021										Responsibility
Indicative Activities	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct - Dec	
Advance contracting actions	X	X	X	X	X	X	X	X	X	X	X			NEA/ ADB
Retroactive financing actions				X	X	X								NEA
Establish project implementation arrangements					X	X	X							NEA
Loan negotiations										X				GON/ NEA/ ADB
ADB Board approval												X		ADB
Loan signing													X	GON/ NEA/ ADB
Government legal opinion													X	
Loan effectiveness													X	GON/ NEA/ ADB

ADB = Asian Development Bank, GON = Government of Nepal, NEA = Nepal Electricity Authority.

Sources: Asian Development Bank and Nepal Electricity Authority.

B. Overall Project Implementation Plan

- The project will be implemented over a period of 5 years after the loan effectiveness, including procurement and construction activities.

Table 2: Implementation Schedule

Description	2020				2021				2022				2023				2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project Formulation																												
Loan Preparation																												
Loan Signing and Effectiveness																												
Implementation																												
Output 1: Electricity transmission system in project areas strengthened and modernized																												
Prepare detailed design and update safeguard documents as required																												
Complete bidding process																												
Construct transmission lines and substations																												
Output 2: Electricity distribution system in project areas strengthened and modernized																												
Prepare detailed design for smart meters and distribution systems and update safeguards																												
Conduct procurement																												
Conduct awareness raising activities																												
Carry out installation of smart meters																												
Carry out installation of distribution systems																												
Carry out installation of Enterprise Resource Planning and Revenue Management System																												
Output 3: Capacity of NEA to implement its Corporate Development Plan strengthened																												
Prepare detailed plan to implement capacity building of NEA																												
Design and implement training and capacity of NEA staff on operation of substation automation																												
Detailed design and implementation of GESI Action Plan in regional offices																												
Prepare operations manual for commencement of power trading company operation																												
Update accounting manual to comply with national financial reporting and implement																												
Management Activities																												
Set up project implementation unit																												
Set up project performance monitoring system																												
Review missions																												
Preparation of progress reports and project completion report Completion Report																												



Signing and Effectiveness



Effectivity for the Entire Component



Effectivity for the Specific Activity

Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

Table 3: Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
Steering Committee chaired by Secretary, Ministry of Energy, Water Resources and Irrigation	Will be responsible to guide the project on strategic and policy decisions on implementation and coordinate inter-agency issues
Executing and Implementation Agency Nepal Electricity Authority Project Management Directorate	<ul style="list-style-type: none"> • Overall responsibility for (i) project management; (ii) implementation coordination; and (iii) function as project implementation unit to assist in day-to-day project implementation • NEA has overall responsibility for ensuring that environmental and social safeguards are implemented in compliance with ADB's Safeguard Policy Statement (2009), the EMP and RIPP, and national legislation. • PMD is responsible for the day-to-day implementation of safeguards for the project, ensuring appropriate project-wide mitigation and compensation measures as set out in the EMP and RIPP are executed in a timely manner. PMD is also responsible for conducting ongoing consultations, addressing grievances, supervising the contractors, and safeguards monitoring and reporting. • Preparing overall project implementation plan and consolidated annual work plan • Preparing standard bid documents to comply with ADB guidelines, including the relevant provisions of the final EMP and resettlement and indigenous peoples plan RIPP • Ensuring project compliance with loan covenants, including environmental and social safeguards, financial and economic plans, and GESI-AP • Procuring equipment and services • Ensuring project compliance with loan covenants, including environmental and social safeguards, financial, economic, etc. • Coordinating with ADB on matters related to disbursements • Maintaining project documents and submitting timely reports to ADB and the government • Obtaining necessary clearances • Preparing and submitting withdrawal applications to ADB
ADB	<ul style="list-style-type: none"> • Conduct regular project reviews and facilitate the implementation of the project • Monitor and review overall implementation in consultation with the executing agencies including: project implementation schedule, actions required with reference to the summary of poverty reduction and social strategy, environment management plan, and resettlement and indigenous peoples plan, timeliness of budgetary allocations and counterpart funding, project expenditure progress with procurement and disbursement, statement of expenditure when applicable, compliance with loan covenants, and likelihood of attaining project development objectives

ADB = Asian Development Bank; EMP = environmental management plan; GESI = gender equality and social inclusion action plan, NEA = Nepal Electricity Authority; PMD = Project Management Directorate; RIPP = resettlement and indigenous peoples plan.

Source: ADB.

B. Key Persons Involved in Implementation

6. The following are the key persons involved in project implementation:

Executing Agency

Nepal Electricity Authority
(NEA)

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Asian Development Bank

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Mission Leaders

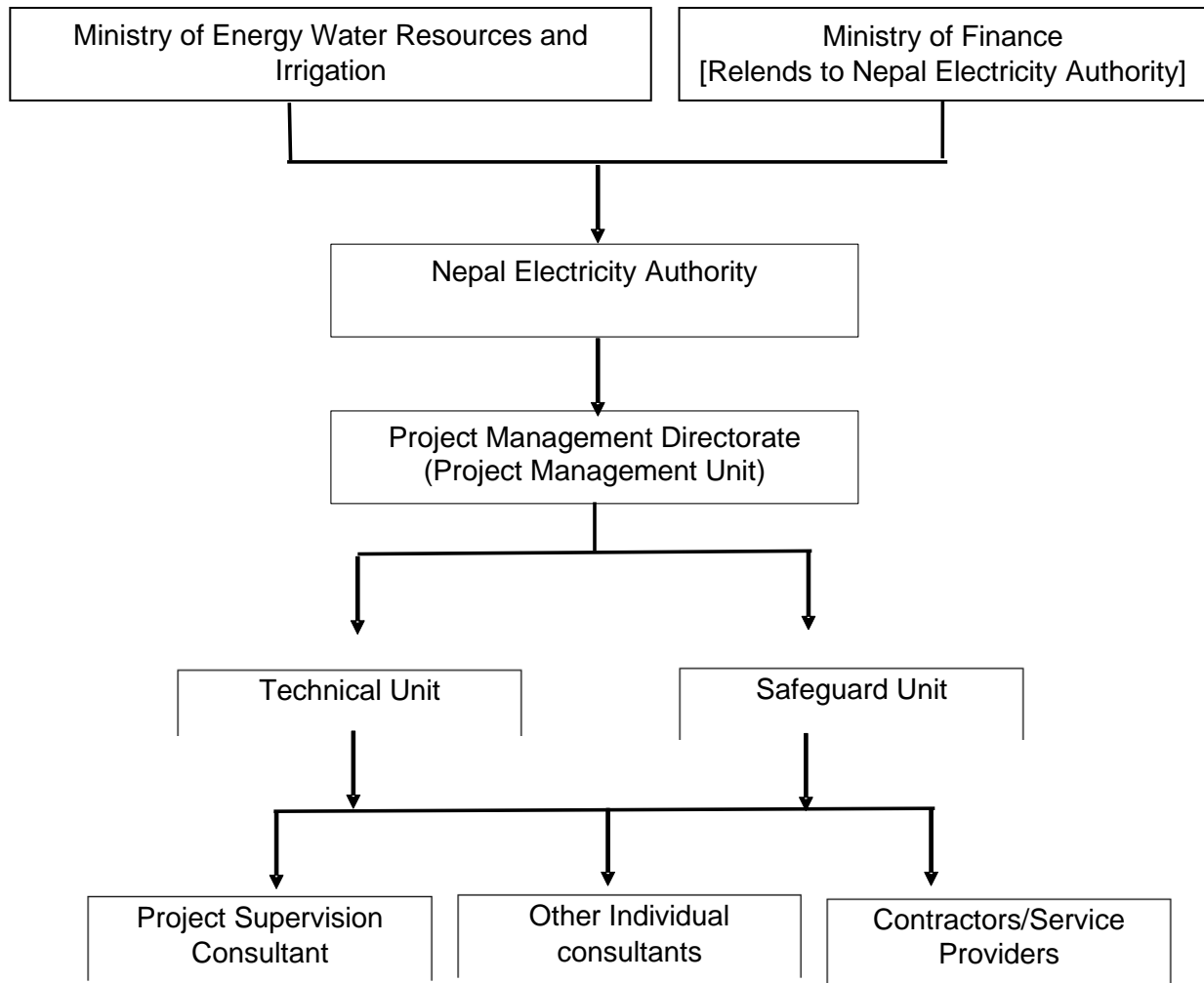
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Nepal Resident Mission
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C. Project Organization Structure

7. The key organizations involved in implementation of the project are in Figure 1 and the safeguards implementation arrangements are in Section VII.

Figure 1: Project Organization and Workflow Structure



IV. COSTS AND FINANCING

8. The overall project is estimated to cost \$270.0 million. The financing plan is shown in Table 4. The proposed ADB additional financing loan amount is \$60.0 million. A project loan financing modality is considered for this project.

9. For the proposed additional financing, climate mitigation is estimated to cost \$26.9 million and climate adaptation is estimated to cost \$0.5 million. ADB will finance 100% of mitigation costs and 100% of adaptation costs. Details are provided in the climate change assessment link document which can be accessed through Appendix 2.

10. Details are provided in Climate Change Assessment linked document which can be accessed through RRP Appendix 2.

Table 4: Financing Plan

Source	Current ^a		Additional Financing		Total	
	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
Asian Development Bank						
Ordinary capital resources (Concessional loan)	156.0	80.0	60.0	80.0	216.0	80.0
Government	39.0	20.0	15.0	20.0	54.0	20.0
Total	195.0	100.0	75.0	100.0	270.0	100.0

^a Refers to the original amount.

Source: Asian Development Bank estimates.

A. Cost Estimates Preparation and Revisions

11. Base cost estimates were prepared by NEA based on NEA's assessment of unit quantities and recent tender prices received by NEA for similar works. Contingencies and financial charges during implementation were estimated by ADB. The project investment plan is summarized in Table 6.

B. Key Assumptions

12. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: NPR120.42 = \$1.00 (as of 26 April 2021).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 5: Escalation Rates for Price Contingency Calculation

Item	2021	2022	2023	2024	2025	Average
Foreign rate of price inflation	1.6%	1.6%	1.7%	1.8%	1.8%	1.7%
Domestic rate of price inflation	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%

Source: Asian Development Bank.

C. Detailed Cost Estimates by Expenditure Category

Table 6: Detailed Cost Estimates by Expenditure-Category

Item	NPR million			USD million			% of Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs^{a/}							
1. Transmission reinforcement	3,854.2	1,548.4	5,402.6	32.0	12.9	44.9	68%
2. Distribution modernization	1,806.3	130.1	1,936.4	15.0	1.1	16.1	24%
3. Consultants							
a. Project implementation support	108.4	12.0	120.4	0.9	0.1	1.0	2%
Subtotal (A)	5,768.8	1,690.5	7,459.3	47.91	14.0	61.9	94%
B. Other Costs							
1. Environmental and social mitigation	0.0	120.4	120.4	0.0	1.0	1.0	2%
2. Project overheads ^{b/}	0.0	84.0	84.0	0.0	0.7	0.7	1%
3. Land	0.0	278.8	278.8	0.0	2.3	2.3	4%
Subtotal (B)	0.0	483.2	483.2	0.0	4.0	4.0	6%
Total Base Cost	5,768.8	2,173.7	7,942.6	47.9	18.1	66.0	100%
C. Contingencies							
1. Physical ^{c/}	303.5	97.1	400.5	2.5	0.8	3.3	5%
2. Price ^{d/}	1,581.8	496.0	2,077.8	3.7	0.9	4.6	7%
Subtotal (B)	1,885.3	593.0	2,478.3	6.2	1.8	7.9	12%
D. Financing Charges During Implementation							
1. Interest during implementation ^{e/}	158.2	0.0	158.2	1.1	0.0	1.1	2%
Subtotal (C)	158.2	0.0	158.2	1.1	0.0	1.1	2%
Total Project Cost (A+B+C+D)	7,812.4	2,766.7	10,579.1	55.2	19.8	75.0	114%

^{a/} In Q2 2021 prices. Includes taxes and duties of \$3.04 million.

^{b/} Includes estimated audit fees of NPR 25 million for the audit of the annual project financial statements for the period 2020-2024.

^{c/} Computed at 5.04% of base costs.

^{d/} Computed using ADB's forecasts of international and domestic inflation and includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^{e/} Computed using an interest rate of 1.0% during the construction period.

Sources: Nepal Electricity Authority (NEA) and Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 7: Allocation and Withdrawal of Loan Proceeds – ADB Loan

No.	Item	Total Amount Allocated for ADB Financing (\$) Category	Basis for Withdrawal from the Loan Account
1	Turnkey contracts – transmission and distribution	57,902,000	100% of total expenditure claimed*
2	Consultants: Project Management and Supervision	1,000,000	100% of total expenditure claimed*
3	Interest During Construction	1,098,000	Total amount due
Total		60,000,000	

ADB = Asian Development Bank,

*exclusive of taxes and duties.

Note: Sum may not tally due to rounding off.

E. Detailed Cost Estimates by Financier

Table 8: Detailed Cost Estimates by Financier

Table 6: Detailed Cost Estimates by Finance								
		ADB - COL		Government				Total Cost
		Conces sional OCR	% of Cost Category	Amount	Taxes and Duties	Total	% of Cost Category	
A. Investment Costs								
1.	Transmission reinforcement	42.9	96%	0.0	2.0	2.0	4%	44.9
2.	Distribution modernization	15.0	93%	0.0	1.1	1.1	7%	16.1
3.	Consultants							
	a. Project implementation support	1.0	100%	0.0	0.0	0.0	0%	1.0
	Subtotal (A)	58.9	95%	0.0	3.0	3.0	5%	61.9
B. Other Costs								
1.	Environmental and social mitigation	0.0	0%	1.0	0.0	1.0	100%	1.0
2.	Project overheads	0.0	0%	0.7	0.0	0.7	100%	0.7
3.	Land	0.0	0%	2.3	0.0	2.3	100%	2.3
	Subtotal (B)	0.00	0%	4.0	0.0	4.0	100%	4.0
Total Base Cost		58.9	89%	4.0	3.0	7.1	11%	66.0
C. Contingencies								
1.	Physical	0.0	0%	3.3	0.0	3.3	100%	3.3
2.	Price	0.0	0%	4.6	0.0	4.6	100%	4.6
	Subtotal (C)	0.00	0%	7.9	0.0	7.9	100%	7.9
D. Financing Charges During Implementation								
1.	Interest during implementation	1.1	100%	0.0	0.0	0.0	0%	1.1
	Subtotal (D)	1.1	100%	0.0	0.0	0.0	0%	1.1
Total Project Cost (A+B+C+D)		60.0	80%	12.0	3.0	15.0	20%	75.0

ADB = Asian Development Bank, COL = concessional.

Note: Numbers may not sum precisely because of rounding.

F. Detailed Cost Estimates by Outputs and/or Components

Table 9: Detailed Cost Estimates by Outputs

Item	Total Cost	Output 1 - Transmission Capacity		Output 2 - Distribution Modernization	
		Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs					
1. Transmission reinforcement	44.9	44.9	100%	0.0	0%
2. Distribution modernization	16.1	0.0	0%	16.1	100%
3. Consultants					
a. Project implementation support	1.0	0.7	74%	0.3	26%
Subtotal (A)	61.9	45.6	74%	16.3	26%
B. Other Costs					
1. Environmental and social mitigation	1.0	1.0	100%	0.0	0%
2. Project overheads	0.7	0.7	98%	0.0	2%
3. Land	2.3	2.3	100%	0.0	0%
Subtotal (B)	4.0	4.0	100%	0.0	0%
Total Base Cost	66.0	49.6	75%	16.4	25%
C. Contingencies					
1. Physical	3.3	3.3	99%	0.0	1%
2. Price	4.6	4.6	99%	0.1	1%
Subtotal (C)	7.9	7.8	99%	0.1	1%
D. Financing Charges During Implementation	1.1	1.1	98%	0.0	2%
Total Project Cost (A+B+C+D)	75.0	58.5	78%	16.5	22%

Source: Asian Development Bank.

G. Detailed Cost Estimates by Year**Table 10: Detailed Cost Estimate by Year**
(\$ million)

Item	Total Cost	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
A. Investment Costs							
1. Transmission reinforcement	44.86	0.0	1.6	9.5	14.2	12.7	6.8
2. Distribution modernization	62.63	0.0	1.6	3.5	5.5	5.5	0.0
3. Consultants							
a. Project implementation support	1.00	0.0	0.2	0.2	0.2	0.2	0.1
Subtotal (A)	61.94	0.00	3.42	13.31	19.92	18.40	6.89
B. Other Costs							
1. Environmental and social mitigation	1.00	0.0	0.3	0.3	0.5	0.0	0.0
2. Project overheads	0.70	0.0	0.0	0.1	0.2	0.2	0.1
3. Land	2.32	0.0	1.9	0.5	0.0	0.0	0.0
Subtotal (B)	4.01	0.00	2.12	0.83	0.71	0.21	0.15
Total Base Cost	65.96	0.00	5.54	14.14	20.63	18.61	7.04
C. Contingencies							
1. Physical	3.33	0.0	0.3	0.7	1.1	1.0	0.3
2. Price	4.62	0.0	0.2	0.7	1.4	1.6	0.8
Subtotal (C)	7.94	0.00	0.46	1.41	2.44	2.59	1.05
D. Financing Charges During Implementation	1.10	0.0	0.0	0.1	0.3	0.5	0.3
Total Project Cost (A+B+C+D)	75.00	0.00	6.02	15.65	23.33	21.65	8.35
% Total Project Cost	100.00	0.00	8.03	20.87	31.10	28.87	11.13

Source: Asian Development Bank.

with Nepal Financial Reporting Standards (NFRS). It is concluded that the overall pre-mitigation financial management risk of NEA is substantial. The government and NEA have agreed to implement an action plan as key measures to address the deficiencies for the original project. NEA's progress against the action plan was analyzed and risks were re-assessed. An updated financial management action plan (FMAP) was agreed with the government and NEA. The detailed Financial Management, Internal Control and Risk Assessment are provided in Table 11.

16. Brief history of financial management and sustainability improvement initiatives at NEA:

- Historically, NEA had been beleaguered with poor financial performance and weak financial management. Stagnant electricity tariffs, low revenue recovery and operational inefficiencies coupled with manual accounting and weak internal controls resulted in accumulation of huge financial losses and numerous audit qualifications every year. In a bid to turn around NEA, the government approved a financial restructuring plan for NEA in fiscal year (FY) 2011–FY2012. Under government's financial restructuring initiative, NEA's accumulated loss of over NRs27 billion (closing balance at the end of FY2010–FY2011) was written-off. In the same year, Electricity Tariff Fixation Commission (ETFC) approved an average tariff hike of 20% after a decade. Though these measures helped NEA in the short run, it needed periodic tariff hikes and further financial relief packages for medium- to long-term financial sustainability.
- To achieve institutional strengthening and improve its financial reporting, NEA called for competitive bids, under the World Bank funding, for implementation of ERP package in FY2014. However, the procurement process is still ongoing.
- In the absence of new tariff hike and significant enhancements in the financial management capacity, NEA's accumulated losses were NRs35 billion by the end of FY2015–FY2016, and the audit qualifications continued running over several pages every year.
- FY2016–FY2017 brought these positive changes for NEA. Substantial positive changes in the financial and operational performance of NEA were observed. This turn-around was made possible through combined efforts of NEA and the government of Nepal. A substantial tariff hike, an organization-wide program aimed at commercial loss reduction, significant drop in durations of load-shedding across NEA's electricity distribution area and a much-needed government-backed second financial restructuring plan (FRP-II), resulted in NEA posting a net profit of NRs1.5 billion in FY2016–FY2017—the first time in more than 10 years that a profit was recorded. Later, the profit almost doubled to NRs2.9 billion in FY2017–FY2018 and NEA posted a profit of NRs9.8 billion in FY2018–FY2019.
- To address its accounting woes, NEA prepared a time-bound audit qualification clearance plan in FY2017–FY2018 and put efforts to achieve various milestones, set under the plan. In parallel, NEA kick-started its institutional strengthening plans. It appointed consultants for NFRS implementation and update of accounting manuals. It called for fresh bids for ERP implementation and physical verification and revaluation of its fixed assets in 2019. It strengthened its internal audit function by hiring external professionals and adoption of a risk-based internal audit manual. NEA also appointed a dedicated director to head the function. It also sent its third financial restructuring proposal (FRP-III) to the government.

- Meanwhile, ETFC-the government body, which was responsible for tariff-determination of NEA, was dissolved in 2017 when Electricity Regulatory Commission (ERC) Act, 2017 was notified by the government. By 2019, ERC was functional and issued tariff guidelines. NEA submitted its tariff petition under the new tariff regulations in 2020 and a tariff order, with intent of progressive tariff rationalization, was issued later on.
- In 2020, NEA also published its corporate development plan covering the next 5-year period. The planning document, which focused on thematic goals and identified various activities and key performance indicators (KPIs) to achieve these goals, included a detailed investment plan, financing plan and projected financial statements.
- However, the well-intended and far-sighted FM improvement initiatives of NEA came to a halt in March 2020 when Nepal, along with the rest of the world, went into extended lockdowns to tackle the COVID-19 pandemic. The pandemic and the consequent lockdowns and travel restrictions, severely impacted NEA's financial position and temporarily stalled most of its reform activities. The economic downturn muffled the electricity demand and the government's relief packages resulted in poor revenue recovery for last 4 months.
- Now, with easing of lockdowns, things are likely to improve. NEA is already preparing an organization specific COVID-19 response plan and is slowly gaining momentum on its financial management reforms agenda.
- A brief timeline covering various FM related milestones achieved by NEA is provided in Figure 3.

Figure 3

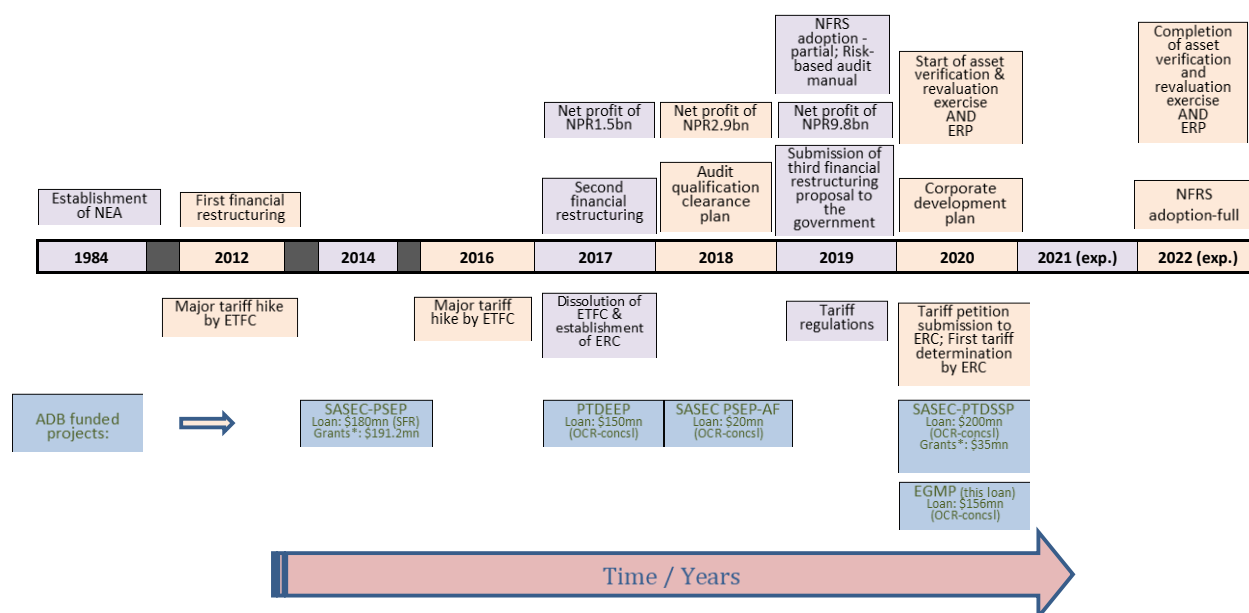


Table 11: Financial Management Internal Control and Risk Assessment (FMICRA)

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
1. Country specific risks	Substantial	Substantial	Weak governance	The government has initiated PFM and public procurement reforms at the national and local levels. ADB will assist with these in conjunction with other development partners but will do this at the project level. Projects will include measures to mitigate fiduciary risks while ensuring accountability and transparency. ADB will collaborate with other partners to strengthen the capacity of integrity institutions such as the Commission for the Investigation of Abuse of Authority and National Vigilance Centre.	No change
	Moderate	Moderate	Continued weak portfolio performance	On an overall country level, ADB will step up efforts to increase project performance by (i) establishing a project preparatory facility, (ii) applying new project readiness filters, (iii) extending project preparatory facility to core sectors, and (iv) building implementation capacity in key agencies. ADB will also (i) strengthen the monitoring and trouble-shooting system for project implementation; and (ii) improve the quarterly and annual country portfolio performance reviews.	No change

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
	Moderate	Moderate	Financing risk: Delays in releasing counterpart funds for the project.	Due to COVID-19 crisis, the financial position of government has further deteriorated. Effective project agreement needs to be established to counter the issue.	The risk has aggravated further because the crisis has deepened further and beyond expectations. However, NEA has not reported any funds release delays for the original project.
2. Entity specific risks	Moderate	Moderate	Financial risk: The approved tariff may be insufficient to recover costs undermining financial sustainability of NEA.	<p>NEA has posted a profit of NRs9.8 billion for FY2019.</p> <p>However, the company is facing critical challenges regarding recovery of dues from its consumers on account of COVID-19 crisis. Further, the demand has dropped. ERC is functional and has recently issued tariff order based on cost-recovery principles. Though, tariffs for domestic consumers have been reduced but tariffs for HT industrial consumers have been hiked.</p> <p>The decrease in tariffs for higher slabs under domestic category is likely to fuel electricity demand and is seen as a tariff rationalization step.</p> <p>The financial impact on account of COVID-19 is likely to be mitigated by the ERC in NEA's next tariff petition and is also likely to be reimbursed by the government. Further, NEA has constituted a committee and appointed</p>	<p>NEA has posted a net profit of NRs11 billion (provisional) for FY2020.</p> <p>The economic analysis wing, with inputs from other departments, is preparing a tariff petition. The petition will address the issue of financial impact of Covid-19 crisis on NEA and under-recovery of consumer dues. NEA will ensure that the petition and their tariff proposal are technically sound and in accordance with rules and regulations of the ERC.</p> <p>NEA will comply with the directives of the ERC in its June 2020 tariff order and submit necessary data and information to ERC in this regard.</p>

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
				consultant to prepare an NEA specific response plan. NEA has already appointed consultants who are assisting NEA in preparation of its tariff petition.	However, the petition is likely to be submitted after finalization of audit of FY2020 accounts, which has witnessed some delays due to Covid-19 related lockdowns. The audited financial statements of NEA for FY2020 are expected to be finalized by July 2021.
	Moderate	Moderate	Regulatory risk: There has been long standing debate on introduction of new NEA Act and Electricity Act in the country among the government circles. Among other reforms in the energy sector in the country, one of the key considerations is the unbundling of NEA into generation, transmission, and distribution entities. Since the project involves transmission and distribution enhancement, in the event of unbundling, project implementation may be jeopardized.	Appropriate provisions will be included in the legal agreement to ensure project continuation and uninterrupted progress in the event of any changes in NEA's organizational status.	No change.
Overall inherent risk	Moderate	Moderate			
A. Control Risk					

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
1. Executing agency	Low	Low	Compliance risk: NEA follows structured planning and technical assessment processes. It also has significant experience in implementing externally assisted projects and is familiar with ADB's financial management and disbursement requirements	Not required	No change
2. Staffing	Moderate	Moderate	Limited capacity of financial management staff, particularly in planning, has the potential to lead to delays and inadequacies in financial management of the project.	NEA has established a dedicated Project Management Directorate (PMD) for ADB projects, headed by a project director. PMD has a finance section which is responsible for financial management and reporting of all ADB funded projects. In addition, a dedicated accountant will also be included in each project unit involved in project implementation. NEA to ensure that accountants assigned to project unit are adequately qualified and possess experience of ADB funded projects. At the entity level, all APFS of ADB funded projects are also reviewed and approved by the finance directorate of NEA. The finance directorate comprises of two departments viz., corporate finance department and accounts department, each headed by a director.	No change

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)		EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
				The earlier vacant position of the director accounts department, noted in previous FMA, has been filled.	
3. Financial Management Information System	Substantial	Substantial	Limited automation of financial management systems could lead to inconsistencies and errors in financial reporting.	<p>NEA is in advance stage of bid evaluation process for selection of systems integrator (SI) for implementation of ERP.</p> <p>As the financial bid is higher than its initial estimates, NEA is likely to negotiate with the sole bidder.</p> <p>Appropriate provisions in the loan agreement/project agreement will be included to mitigate this risk.</p>	<p>The negotiations with the sole qualified bidder failed subsequently. NEA has requested the World Bank to cancel the bidding process for selection of the SI and invite fresh bids.</p> <p>NEA has learnt significantly from the failure of previous bidding processes. It has geared up itself for the next one. It is proactively reviewing its cost estimates and technical requirements. To minimize disruptions, NEA has planned to split the implementation process in 2 separate packages and invite 2 separate bids-separately for revenue management system (RMS) and integrated financial management information system (IFMIS). The split would enhance cost-</p>
					competitiveness and facilitate higher

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)		EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
					number of qualified bidders. The implementation will now be funded under the current loan (EGMP-additional financing)
4. Accounting manual	Moderate	Moderate	Out-of-date and inadequate accounting manuals could lead to inconsistencies and errors in financial reporting.	NEA has a comprehensive accounting manual in place, containing accounting policies, in accordance with IFRS, and chart of accounts. The manual was prepared by Deloitte in 2012. However, their approval was pending for a long time. Now, accounting manuals have been approved and NEA is likely to adopt them along with its NFRS compliance process.	NEA's Board has recently approved the accounting manuals prepared by its consultants-Deloitte. However, these manuals were prepared long time back and are required to be updated in line with NFRS. The activity of accounting manual update will be funded through Norwegian grant administered by ADB through technical assistance (TA) attached to the SASEC Power Transmission and Distribution System Strengthening Project (PTDSSP) loan.
5. Fixed Asset Management	Substantial	Substantial	External auditors have issued qualified opinions on fixed asset and inventory system. No fixed asset register with the required information was available. No physical verification of property, plant, and equipment was conducted.	NEA is in the process of hiring consultants for carrying out physical verification of assets and inventories, prepare fixed asset register and carry out valuation of fixed assets and inventories. The process of asset valuation is supported through a component under the World Bank financed Power Sector Reform and Sustainable Hydropower	NEA has awarded the contract to Deloitte India. Though the consulting firm commenced its work immediately, however the scope of the activities was limited on account of continuing lockdowns and travel restrictions. According to terms of the

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
				Development Project. Shortlisting of consultants has already been completed through EOIs and five international consulting firms have been shortlisted. RFP was sent to the shortlisted firms on 16 August 2019. Evaluation of bids is in process. As per the terms of RFP, the fixed assets valuation exercise needs to be completed within two years of contract award. Though the process is likely to be delayed further on account of COVID-19 crisis in the country.	contract, the consultants are required to complete their assignment within 18 months of hiring. Though the consultants are confident that the assignment will be completed as scheduled. However, an extension of around 2-3 months may be required to compensate for the loss of time due to continuing Covid-19 crisis.
6. Risk management	Moderate	Moderate	The government has decided to on-lend all foreign funded loans to NEA with repayments in equivalent foreign currency. Earlier, the foreign exchange risk was borne by the government. NEA has no experience in managing foreign exchange risk.	NEA has already drafted a policy to manage forex risk across NEA. The draft policy is under discussion and NEA is likely to adopt the policy in the next financial year.	Implementation of the forex risk management policy has been delayed on account of Covid-19 crisis. However, NEA has recently resumed consultations with its advisors. It is expected that the policy would be approved and implemented over the next financial year.
7. Internal Audit and controls	Substantial	Substantial	Currently, NEA has very limited qualified staff in its internal audit function. Further, internal audit manual has not been approved by the Audit Committee and the Board. The internal audit department is	The internal audit manual has now been adopted by the Board. It is likely to streamline the internal audit function at NEA.	NEA has strengthened and streamlined the internal audit department and its functioning. The department, headed by a dedicated and full-time director, reports to the Audit Committee

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
			functionally reportable to the managing director of NEA, while internal audit reports are submitted to audit committee for review and approval.		<p>on regular basis and their observations are forwarded to the Managing Director for implementation. Similar to the accounting manuals, the internal audit manuals were prepared long time back and are required to be updated now. The activity of internal audit manuals update will be funded by a Norwegian grant, administered by ADB through technical assistance (TA) attached to the PTDSSP) loan. NEA has also filled 3-4 senior level positions in the department which were earlier vacant for a long time. The department has also recruited 7 external qualified chartered accountants on contract basis to strengthen its function.</p> <p>The frequency of internal audit department's briefing to the Board of Directors has been increased from twice-in-a-year to thrice-in-a-year (trimester basis).</p>

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)		EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
8. Financial Reporting	Substantial	Substantial	The auditors have issued a qualified audit opinion on the financial statements of NEA for FY2017/2018 due to non-compliance with Nepal Financial Reporting Standards (NFRS).	<p>NEA has already prepared its accounts for FY2018–FY2019 based on NFRS.</p> <p>However, the compliance is partial as NEA has not completed its asset verification and revaluation process.</p> <p>An expedited compliance will be ensured through appropriate provisions in the loan/project agreement.</p>	<p>NEA has already prepared its accounts for FY2019 and FY2020 based on NFRS.</p> <p>However, NEA cannot be in full compliance with NFRS unless the asset verification and revaluation (and impairment) exercise is completed. NEA expects its financial statements to fully comply with NFRS during FY2022 in the wake of operational difficulties arisen out of COVID-19 crisis.</p> <p>NEA has strengthened its accounting policies and expects its financial statements for FY2020 and FY2021 to exhibit improvements in reporting areas over previous years.</p> <p>An expedited compliance will be ensured through appropriate provisions in the loan/project agreement.</p>
9. External Audit	Low	Low	NEA's financial statements are audited annually by the Office of the Auditor General	None required.	No change.

Risk Type/area	Risk rating		Risk description	Mitigation measures	
	EGMP processing (original project)	EGMP-additional financing (Current FM assessment)	EGMP-additional financing (now)	EGMP processing (Original Project)	EGMP-additional financing (Current FM assessment)
			(OAG) of Nepal, the supreme audit institution. Annual reports are normally issued within stipulated timelines.		
10. Reporting and Monitoring	Low	Low	Comprehensive monthly and quarterly financial management reporting systems are in place	None required.	No change.
Overall Control Risk	Substantial				
Overall Combined Risk	Substantial				

ADB = Asian Development Bank, APFS = audited project financial statement, EOI = expressions of interest, ERC = Electricity Regulatory Commission, FMA = financial management assessment, FY = fiscal year, HT = high tension, IFMIS = integrated financial management information system NEA = Nepal Electricity Authority, NFRS = Nepal Financial Reporting Standards, PFM = public finance management, PMD = Project Management Directorate, PTDSPP = Power Transmission and Distribution System Strengthening Project, RFP = request for proposal, RMS = revenue management system, SI = systems integrator, TA = technical assistance.

17. NEA and ADB have agreed on an action plan to address the following issues that the FMA identified. The financial management action plan is provided in Table 12.

Table 12: Financial Management Action Plan (FMAP)

Risk Description	Mitigation Actions	Responsibility	Timeframe	
			EGMP processing (original project)	EGMP-additional financing (Current FM assessment)
<u>Fixed asset and inventory management</u> External auditors have issued qualified opinions on fixed asset and inventory system. No fixed asset register with the required information was available. No physical verification of property,	Hiring of consulting firm for carrying out fixed assets verification, valuation and associated tasks Completion of fixed assets verification, valuation and preparation of NFRS complied fixed assets register	NEA	By December 2020 Within two years of hiring of consultant	Completed By July 2022

Risk Description	Mitigation Actions	Responsibility	Timeframe	
			EGMP processing (original project)	EGMP-additional financing (Current FM assessment)
plant, and equipment was conducted.				
<u>Other qualifications in audit opinion</u> NEA has defined accounting policies and procedures in place. However, during the recent years, external auditors have issued qualified opinions and highlighted persisting issues with regards to non-compliance with NFRS, reconciliations between accounting software and other softwares, various accounting policies, etc.	<p>Audit qualifications related to fixed assets will be resolved through completion of fixed assets valuation exercise. Reconciliations and other system related qualifications are likely to be resolved through installation of ERP. For other audit qualifications, NFRS adoption is being pursued by NEA. Following actions were agreed in this regard:</p> <p>Preparation of NFRS complied financial statements of NEA. Partial compliance to commence from FY2019. NEA has recently appointed consultants to take up the task of physical verification and revaluation of fixed assets. The process is expected to take 18 months, however the timeframe might need to be extended as a fallout of the COVID-19 crisis.</p>	NEA	FY2022	FY2022
<u>ERP installation</u> Various software are not integrated and result in reconciliation differences.	NEA to ensure that ERP-based IFMIS and RMS are implemented successfully	NEA	<p>Contract award for ERP SI firm completed by December 2020 and provide regular updates to ADB.</p> <p>Submission of time bound action plan for the implementation of the ERP system by June 2021. Nine modules incorporated in ERP and operationalized (CDP</p>	<p>The implementation of the ERP is now included as an output under the proposed loan (EGMP-additional financing).</p> <p>Hiring of project management consultants – Q2-2021 Bidding of RMS & ERP packages – Q3-2021 Hiring of RMS & ERP providers – Q1-2022 RMS & ERP providers to submit time</p>

Risk Description	Mitigation Actions	Responsibility	Timeframe	
			EGMP processing (original project)	EGMP- additional financing (Current FM assessment)
			target) by FY2024.	bound action plan for implementation of respective packages – Q2-2022 Implementation of ERP & RMS – as per plan (but not later than 2026)
<u>Internal audit function</u> Internal audit function lacks appropriate number of qualified staff. Risk based internal audit manual has been developed by NEA, however, it has not been approved by the audit committee. Internal audit department is functionally reporting to the MD.	Consider change in reporting structure of internal audit by directly reporting to the chairman or audit committee on regular basis.	NEA	By August 2020	Completed
	Approval of internal audit manual by the audit committee and the board of NEA.	NEA	Completed	Completed
	Update of internal audit manual. ADB to provide funding under the attached TA to PTDSSP loan from the Norwegian grant to assist NEA in update of internal audit manual.	NEA & ADB	By December 2020	By December 2021
	Increase level of qualified staff/outsourced consultants in the internal audit department to ensure effective implementation of risk based internal audit.	NEA	By August 2020	Completed
<u>Finance and accounting function</u> NEA has developed an accounting manual and are implementing most of its requirements. However, the same is not approved by the audit committee and the board of NEA. Further, the manual was developed in 2012 and may need to be updated to correspond with current NFRS and operational requirements of NEA.	Approval of accounting manual by the audit committee and the board of NEA.	NEA	Completed	Completed
	Update of accounting manual. ADB to provide funding under the attached TA to PTDSSP from the Norwegian grant to assist NEA in update of accounting manual.	NEA & ADB	By June 2021	By June 2022
<u>Foreign exchange risk</u> NEA does not have a policy in place to address foreign	Develop risk management policy to address NEA's potential exposure to foreign	NEA & ADB	Completed	Completed

Risk Description	Mitigation Actions	Responsibility	Timeframe	
			EGMP processing (original project)	EGMP-additional financing (Current FM assessment)
exchange risk. For new borrowings, NEA will have to bear foreign exchange risk on all loans to be on-lend by the government.	exchange risk. ADB to assist NEA in arranging and funding consultants for development of foreign exchange risk policy. Approval of the board for foreign exchange risk policy.	NEA	By August 2020	By July 2021
<u>Financial sustainability of NEA</u> Electricity tariffs that are reflective of efficient costs in the electricity supply would improve NEA's financial health and provide predictability for sustainable investment in the power sector.	NEA to file regular tariff applications to ERC following operationalization of ERC and promulgation of tariff regulations.	NERC & NEA	Completed	In accordance with the tariff regulations of the ERC
<u>Financial Management Targets under CDP</u> Financial management related activities envisioned in CDP may not be implemented by NEA.	The Corporate Development Plan (CDP) of NEA for five years from FY2020 to FY2024 has been approved by NEA board. Below are the specific action items (progress against these items should be included in the quarterly progress reports of NEA to be submitted to ADB): 1. Approval of MOF on the NEA CDP 2. Identify and separate Generation, Transmission and Distribution (GTD) assets and liabilities 3. Implementation of Enterprise Resource Planning software capable of generating financial statements of business unit 4. Determine per unit Generation, Transmission and Distribution cost of service 5. Create individual financial statements for the seven provincial Distribution Companies / Regional Offices	MOF/NEA NEA NEA NEA NEA	By Sept. 2020 FY2023 FY2024 FY2023 FY2023	By June 2021 FY2023 (No change) FY2024 (No change) FY2023 (No change) FY2023 (No change)
<u>Submission of APFS & AEFS</u> APFS and AEFS may not be submitted by NEA on timely basis. Quality of APFS submitted may not be appropriate.	NEA to submit audited project financial statements, along with required audit opinions on overall financials and use of loan proceeds and management letter, to ADB on annual basis, within six months of end of each	NEA	Annually from loan effectiveness date till loan closing date	Annually from loan effectiveness date till loan closing date

Risk Description	Mitigation Actions	Responsibility	Timeframe	
			EGMP processing (original project)	EGMP-additional financing (Current FM assessment)
	<p>financial year. NEA to ensure compliance with ADB financial management and reporting requirements in preparation of APFS.</p> <p>NEA to submit audited entity financial statements, along with audit opinion on compliance with financial covenants, on annual basis, within one month of approval of audited financial statements by NEA's board.</p>	NEA	Annually from loan effectiveness date till loan closing date	Annually from loan effectiveness date till loan closing date (No change)
<p><u>Submission of periodic progress reports</u> Periodic progress reports may not be submitted on timely basis by NEA to ADB</p>	NEA will provide ADB with quarterly progress reports in a format consistent with ADB's project performance reporting system, no later than 45 days after end of each quarter. The quarterly progress reports should include financial and disbursement report, variance analysis of physical and financial progress, details of utilization of funds and reconciliation with ADB loan financial information system (LFIS), status of implementation of FM action Plan and observations from internal and external audit.	NEA	Within 30 days of end of each quarter from loan effectiveness date till loan closing date	<p>Within 30 days of end of each quarter from loan effectiveness date till loan closing date</p> <p>(No change)</p>

AEFS = audited entity financial statement, APFS = audited project financial statement, CDP = Corporate Development Plan, ERC = Electricity Regulatory Commission, ERP = enterprise resource planning, FY = fiscal year, GTD = Generation, Transmission and Distribution, IFMIS = Integrated Financial Management Information System, LFIS = loan financial information system, MOF = Ministry of Finance, NEA = Nepal Electricity Authority, PTDSPP = Power Transmission and Distribution System Strengthening Project, RMS = revenue management system, TA = technical assistance, WB = World Bank.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

18. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time),⁴ and detailed arrangements agreed upon between the government and ADB. Online training for project staff on disbursement policies and procedures is available.⁵ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

⁴ ADB. 2017. [Loan Disbursement Handbook](#). Manila.

⁵ ADB. [eLearn](#). Manila.

19. The direct payment procedure is preferred. Supplier invoices will be sent to the PMU for initial verification in accordance with ADB's and NEA's procedures. The PMU accountant will prepare documentation for withdrawal of funds and the PMU Director will approve and submit to ADB with supporting documentation, as needed.

20. **Statement of expenditure procedure.**⁶ The statement of expenditure (SOE) procedure may be used for reimbursement of eligible expenditures up to \$100,000. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. Reimbursement of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

21. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is \$200,000 equivalent or 1% of the loan amount, whichever is lower. Individual payments below this amount should be paid by NEA and subsequently claimed to ADB through reimbursement, unless otherwise accepted by ADB. Use of ADB's Client Portal for Disbursements (CPD)⁷ system is mandatory for submission of withdrawal applications to ADB.

2. Disbursement Arrangements for Counterpart Fund

22. Disbursement for counterpart funds will be carried out in accordance with the applicable guidelines and practices of the government. Based on its forecast of expenditure, NEA submits its requirement for counterpart funds for the next financial year to the government and an allocation is made in the national budget. Funds are generally released to NEA twice a year, typically as payment to a special account opened in Nepal Rastra Bank by Nepal's Financial Comptroller General's Office as per Nepal's prevailing laws including Government Transaction Directives, 2019. The government's contribution to taxes and duties is by way of exemption; exemptions are granted after NEA and its suppliers submit requisite documentation to the Ministry of Finance.

C. Accounting

23. NEA will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following accounting principles and practices prescribed by the Government of Nepal. NEA will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

⁶ SOE forms are available in Appendix 7B and 7D of ADB's *Loan Disbursement Handbook* (2017, as amended from time to time).

⁷ The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>.

D. Auditing and Public Disclosure

24. NEA will cause the detailed project financial statements to be audited in accordance with Supreme Audit Institution's Audit Regulations, by an independent auditor acceptable to ADB. The audited project financial statements together with the auditor's opinion will be presented in the English language to ADB within 6 months from the end of the fiscal year by the NEA. The annual project financial statements should include withdrawal application wise reconciliation between amounts reported in the project financial statements and disbursements amount appearing in the Loan Financial Information System (LFIS) of ADB. LFIS can be accessed online and ADB will provide LFIS access to project staff on request.

25. The audited entity financial statements, together with the auditor's report and management letter, will be submitted in the English language to ADB within 1 month after their approval by the relevant authority. NEA will submit trimester financial statement and annual audited financial statement to the Ministry of Finance with verification of the disbursement.

26. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; and (ii) whether the proceeds of the loan were used only for the purpose(s) of the project. NEA shall, based on its consolidated entity financial statements, prepare the computations demonstrating compliance with the financial covenants as defined in the legal agreements every year. The statutory auditors of NEA or the auditors of NEA's project financial statement will provide an additional opinion on compliance with the financial covenants under applicable auditing standards.

27. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor. NEA will provide regular updates with ADB on progress against the FMAP provided in Table 12, through quarterly progress reports. Any delays in agreed timelines in the FMAP should be promptly communicated with ADB.

28. The government and NEA have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.⁸ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

⁸ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

29. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy 2018.⁹ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

30. All advance contracting and retroactive financing will be undertaken in conformity with ADB's *Procurement Policy (2017, as amended from time to time)* and *Procurement Regulations for ADB Borrowers (2017, as amended from time to time)*, and its associated Staff Instructions and/or Project Administration Instructions. The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The government and NEA have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

31. **Advance contracting.** In order to expedite project implementation, the government has requested advance contracting actions for all the works, goods and consulting services.

32. **Retroactive financing.** The government and NEA have been advised that the expenditures incurred for works are eligible for retroactive financing, provided these have been incurred before the effectiveness of the related loan agreement, but not earlier than 12 months preceding the signing of the loan agreement and as long as they do not exceed an amount of 20% of the loan.

B. Procurement of Goods, Works, and Consulting Services

33. All procurement of goods and works will be undertaken in accordance with ADB's *Procurement Policy (2017, as amended from time to time)* and *Procurement Regulations for ADB Borrowers (2017, as amended from time to time)*, and its associated Staff Instructions and/or Project Administration Instructions. Open competitive bidding (OCB) with international advertising will be used for the procurement of works and goods, works and consulting services using universal procurement given the project is co-financed.

34. **Achievement for Value for Money (VFM) through Strategic Procurement Planning.** The executing agency has developed a procurement plan for describing how the procurement activities support the development objectives of the project and deliver value for money under a risk-managed approach. Through strategic procurement planning, NEA will be able to achieve value for money by (i) strategic contract packaging where some small packages are consolidated to one bigger package with multiple lots to attract more competition; and (ii) application of lowest evaluated cost as the selection criteria.

35. An 18-month procurement plan indicating review procedures, goods, works, and consulting services contract packages is in Section C.

⁹ ADB. 2018. [Access to Information Policy](#). Manila.

36. All consultants will be recruited according to ADB's Procurement Policy and Procurement Regulations for ADB Borrowers (2017, as amended from time to time), and its associated Staff Instructions and/or Project Administration Instructions.¹⁰ The terms of reference for consulting services are detailed in Section D.

37. NEA has a reasonably adequate capacity in terms of knowledge of procurement and has a moderate procurement risk assessment as they have had previous ADB-funded projects as well as ad hoc staff to provide assistance to them. NEA is capable of handling ADB-funded projects including any advance action e.g., advance contracting that may need to be undertaken. NEA's procurement committee and staff have substantial experience in procuring works, goods, including the recruitment of consultants.

C. Procurement Plan

38. The procurement plan is prepared in accordance with the generic or country-specific templates prepared by the Procurement, Portfolio and Financial Management Department.

Procurement Plan

Basic Data		
Project Name: Electricity Grid Modernization Project (EGMP) – Additional Financing		
Project Number: 54107-002	Approval Number: Loan (TBD)	
Country: NEPAL	Executing Agency: Nepal Electricity Authority (NEA)	
Procurement Risk: Low	Implementing Agency: NEA	
Project Financing Amount: \$75.00 million ADB Financing: \$60.00 million Non-ADB Financing: Government: \$15.00 million	Project Closing Date: 31 March 2026	
Date of First Procurement Plan:	Date of this Procurement Plan: 22/07/2021	
Procurement Plan Duration: 18 months	Advance contracting: Yes	eGP: No

A. Methods, Review and Procurement Plan

Except as ADB may otherwise agree, the following methods shall apply to procurement of goods, works, non-consulting services, and consulting services.

Procurement of Goods, Works and Nonconsulting Services	
Method	Comments
Open Competitive Bidding (OCB) for Plant	International Advertising
Consulting Services	
Method	Comments
Open Competitive Bidding (OCB) using quality- and cost-based selection	International Advertising; Consulting Firm Full Technical Proposal; Quality Cost Ratio: 90:10

¹⁰ ADB. 2012. [ADB Handbook on Project Implementation](#). Manila.

B. List of Active Procurement Packages (Contracts)

The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan's duration.

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
A-1	Construction of 132 kV underground transmission line from Chobar to Lagankhel.	18	OCB	Prior	1S2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Plant Advance contracting -Yes
A-2	Construction of 132/11 kV Mulpani Substation.	12	OCB	Prior	1S2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Plant Advance contracting -Yes
A-3	Construction of 132 kV Kohalpur Nepalgunj Transmission Line and associated Substations at Nepalgunj.	12	OCB	Prior	1S2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Plant

Goods, Works, and Nonconsulting Services

Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							Advance contracting -Yes
A-4	Construction of 132/33/11 kV Substations at Dumkibas, Nawalparasi.	7	OCB	Prior	1S2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Plant Advance contracting -Yes
C-1	Supply and Installation of ERP.	14	OCB	Prior	IS2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Information Technology (SBD IT) Advance contracting -Yes
C-2	Supply and Installation of RMS.	6	OCB	Prior	1S2E	Q3 2021	Advertising: International Prequalification of Bidders -No Domestic Preference Applicable- Yes Bidding Document- Information Technology (SBD IT)

Goods, Works, and Nonconsulting Services

Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							Advance contracting -Yes

1S2E = single stage-two envelop, ERP = Enterprise Resource Planning, IT = information technology, kV=kilovolt, OCB=open competitive bidding, Q=quarter, RMS = Revenue Management System, SBD = standard bidding document.

Consulting Services

Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
E-1	Project Supervision Consultant	1.0	QCBS	Prior	FTP	Q3 2021	Type: Firm Assignment: International Quality-Cost Ratio: 90:10 Prequalification of Bidders: No Domestic Preference Applicable: NA Advance Contracting: Yes

FTP = full technical proposal, NA = not applicable, Q = quarter, QCBS = quality and cost-based selection.

C. List of Indicative Packages (Contracts) Required under the Project

The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e. those expected beyond the current procurement plan's duration).

Goods, Works and Nonconsulting Services

Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Comments

Consulting Services

Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Comments

D. List of Awarded and Completed Contracts

The following table lists the awarded contracts and completed contracts for goods, works, nonconsulting, and consulting services.

Goods, Works and Nonconsulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

Consulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

E. Non-ADB Financing

The following table lists goods, works, nonconsulting, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated Number of Contracts	Procurement Method	Comments

Consulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated Number of Contracts	Recruitment Method	Comments

F. Consultant's Terms of Reference

39. The detailed Terms and References (TOR) of the Consultants are presented in the Annex.

VII. SAFEGUARDS

40. **Environment (Category B).** The project is classified as environment category B. The project will scale up investments by including a 10.46 km of overhead transmission line through agricultural land from Kohalpur to Nepalgunj, a 6 km underground transmission line along urban roads crossing the Bagmati River and running adjacent to locally important physical cultural resources from Chobhar to Lagankhel, three new substations at Nepalgunj, Mulpani and Dumkibas, and one upgraded substation at Lagankhel. In accordance with the Environment Protection Rules (EPR) 2077 (2020) updated 2978 (2021) requisite national environment clearance is to be obtained for the transmission lines and substations by NEA before contract award.¹¹

41. Project impacts are site-specific, mostly moderate-minor in magnitude, and readily mitigated following national requirements and international good practice per the World Bank/International Finance Corporation Environment, Health and Safety guidelines. Construction impacts will occur in relation air and water quality, noise and vibration, and occupational and community health and safety, in particular related to working at height and with electricity infrastructure, and risks of communicable diseases in the context of the COVID-19 pandemic. The most significant construction impacts relate to disruption to local communities and road users in the Kathmandu Valley during underground cabling work, and to residential properties adjacent to the substations. Longer term impacts during operation and maintenance include occupational and community health and safety risks related to the presence of electricity infrastructure in local communities specifically requiring any structures (e.g., houses) falling in the Right of Way (ROW) of the Kohalpur to Nepalgunj transmission line to be resettled, pollution risks related to the use of hazardous materials, such as transformer oil, and waste management at substations, and climate change impacts related to use of SF6 (a potent greenhouse gas) in the new gas insulated substations requiring leakage to be monitored.

42. Kohalpur to Nepalgunj transmission line passes through an area where sarus crane and other migratory birds have been reported so “bird sensitive” features including diverters will be incorporated in the detailed design. Similar will also be incorporated into the Chobar to Lagankhel transmission line if an overhead line is necessary where it crosses Chobar gorge, although the preferred option is to place it underground or attach it to the existing bridge where it will pose no risk to birdlife – the detailed design and construction method for this crossing is to be determined with the input of Department of National Parks and Wildlife Conservation and other experts as needed. Chobhar to Lagankhel transmission line is within the proposed Pulchowki Conservation Area but since this has yet to be established, there is no protected area management authority to be consulted. However, a site-specific biodiversity management plan (BMP) will be developed by the contractor for approval by NEA prior to the commencement of any works. Department of Archaeology input will be sought on the detailed design and construction method for the Chobar-Lagankhel Transmission Line, and NEA will organize for a Department of Archaeology officer to monitor and supervise all construction works adjacent to physical cultural resources to ensure no damage is caused. A site-specific cultural heritage protection plan will be developed by the contractor for approval by NEA prior to the commencement of any works. Dumkibas substation is located on agricultural land in the Chure Conservation Area. Per ADB’s Safeguard Policy Statement (2009), these works are in accordance with the protected area management plan and

¹¹ Under the Environment Protection Rules (EPR) 2077 (2020) updated 2078 (2021) the overhead and underground transmission lines require a national IEE to be prepared for environment clearance to be granted. Substations below 220 kV do not usually require environmental clearance unless they are over 220 kV. However, as Dumkibas Substation is located in Chure Conservation Area it does require Brief Environmental Study to be prepared for environment clearance to be granted.

its management have been consulted. Chure Conservation Program Office has already approved the Bardhaghat-Sardi 132 kV double circuit transmission line to which it connects, and which is nearing completion. However, NEA will separately secure written confirmation with specific reference to the Dumkibas substation proposals as to the (i) actions required to ensure works are in accordance with their management plan; and (ii) measures that NEA can either deliver or fund to promote and enhance its conservation aims with an emphasis on conservation awareness raising and biodiversity security efforts. NEA will implement the promotion/enhancement measures agreed in parallel with construction works for which a lump sum of \$20,000 is allocated. A site-specific biodiversity management plan will be developed by the contractor for approval by NEA prior to the commencement of any works with an emphasis on avoiding worker disturbance to the nearby forest land.

43. An initial environmental examination (IEE) with environmental management plan (EMP) has been prepared following ADB's Safeguard Policy Statement (2009) and the environmental, health and safety provisions of Nepal. Since the project involves existing facilities (Lagankhel substation) an environmental audit has also been conducted. One other substation (Chobar) as an existing facility under construction is funded by an existing ADB project and so compliance will be reported separately under that project. Implementation arrangements including a mitigation plan, monitoring plan, corrective action plan for the existing substation, and reporting requirements (semi-annual monitoring reports during construction and operation, and quarterly safeguards progress reports) are detailed in the EMP, along with expected budget and performance indicators to be achieved. NEA will implement the relevant provisions of the EMP including the corrective action plan to all project components to ensure compliance with ADB's Safeguard Policy Statement 2009 and the environmental, health and safety provisions of Nepal. The EMP will be incorporated into all bidding and contract documents. Following contract award, Contractor's management plans are to be readied during detailed design and agreed with NEA before the commencement of works.

44. No associated facilities of the project have been identified. Project components having associated facilities unable to avoid significant irreversible impacts on protected areas, natural and critical habitat do not qualify for project financing under this project. The under construction Bardhaghat-Sardi 132 kV DC transmission line is not an associated facility of the project per ADB's Safeguard Policy Statement (2009) but due to its location in Chure Conservation Area reporting on its compliance with national requirements will be included in the scope of the project's environmental monitoring reports.

45. If there are any unanticipated impacts (including project scope or design changes) during project implementation, these will be reported by NEA, and the IEE and EMP updated and cleared by ADB before any related work commence or are cleared to continue. The IEE and EMP and any updates thereof will have to be published on ADB and NEA websites and follow the local disclosure requirements detailed in the Stakeholder Communication Strategy section of this PAM.

46. Meaningful consultations involving were undertaken with selected affected communities in 2021 as well as consultations with other concerned stakeholders e.g., Chure Conservation Program Office, Bird Conservation Nepal, and Community Forest User Groups. NEA will complete additional meaningful consultations, as per ADB's Safeguard Policy Statement (2009), during detailed design as part of EMP implementation, to ensure all affected communities have the opportunity to be involved in the design and that any concerns raised are duly addressed.

47. **Involuntary resettlement (category B) and Indigenous peoples (category B).** The project is to be categorized as B for involuntary resettlement and B for indigenous peoples.

48. The project will acquire 5.35 hectares (ha) of land for substation constructions and transmission tower footings area and 29.07 ha will be required for the ROW for new transmission lines. Construction activities will also occur within the premises of NEA or public land. Along the ROW, 2 residential structures and 1 community shed constructed in government land will fall under the ROW area of transmission line and the project anticipates only temporary impacts on one season of standing crops during construction period. 132 kV underground transmission line will mostly follow ROW of the existing roads and access roads and anticipated no impacts on private land and other associated assets.

49. The project will affect an estimated 168 households, comprising an estimated population of 1158 persons. 9 households comprising 50 persons are estimated to experience major impacts due to physical displacement from housing and/or loss of 10% or more of their productive assets (income generating assets). The other 72 of 81 households will experience limited impacts due to loss of land less than 10% of their total land holdings. A total of 25 structures (9 residential houses, 15 non-residential private, and 1 community structure are anticipated to be permanently affected. An additional 18.03 ha are needed for transmission line ROW). Two landless households need to be relocated from residences they established in the ROW area. An additional 18.03 ha are needed for transmission line ROW. The land under ROW will not be acquired and will be disturbed minimally during construction. After construction, use of the land will be restricted only in terms of height limitations for trees, prohibition on the construction of permanent structures, and periodic access by maintenance teams. Lands under the ROW will be open to agricultural use. Impacts from the ROW affect a total of 154 households, including 67 households already counted among those affected by construction of tower footings (i.e., 67 of the 81 households experiencing major impacts). Of the affected households, 57 are vulnerable including 40 Indigenous households. Additional survey work will be carried out with absentee households during implementation. Project implementation will further ensure that additional information is collected about livelihood compositions of affected people and that these data and indicators are tracked throughout the lifetime of the project to demonstrate that the project is appropriately managing resettlement impacts in line with ADB's Safeguard Policy Statement (2009) requirements. Project implementation will also ensure that affected people are adequately consulted about the projects impacts and safeguard avoidance, mitigation, and compensation measures and will solicit the inputs of affected people on these measures.

50. Compensation will be given according to ADB requirements for replacement cost of lost assets defined in ADB's Safeguard Policy Statement (2009). Compensation includes both replacement cost for list assets as well as additional allowances, including providing for transaction costs; interest accrued, transitional and restoration costs; and other applicable payments. The project will also provide additional assistance to vulnerable people and households, which includes women-headed households, indigenous households, persons with disabilities and other severely affected groups. To help mitigate livelihood impacts for vulnerable people and disadvantaged groups, the project will provide livelihood and skill development activities. The project will also define benefits-sharing arrangements in consultation with affected people.

51. Although the project will affect indigenous peoples, the project is not assessed to negatively affect the dignity, human rights, livelihood systems or culture and communal territories of indigenous people. The adverse impacts that are assessed for affected indigenous peoples are identified and mitigated in the context of the RIPP, which includes special compensation for indigenous peoples and other vulnerable groups, including Dalits. Project implementation will involve additional impact confirmation studies and will ensure that affected indigenous people are

adequately consulted about project impacts and safeguard avoidance, mitigation, and compensation measures. The project will solicit their participation of Indigenous Peoples in defining benefit sharing for affected indigenous peoples (IPs) and other vulnerable households, primarily in combination with an energy-based livelihood and skill development program. These measures will help both mitigate adverse impacts and enhance the livelihoods of local communities with a large proportion of indigenous households.

52. Budget for RIPP implementation has been prepared according to the assessed impacts. If the project scope changes, the RIPP will be updated accordingly. ADB will disclose the RIPP on its website and as provided under the resettlement plan (RP), NEA will need to follow disclosure requirements detailed in the Stakeholder Communication Strategy section of this PAM.

53. Observation of RIPP commitments will need to be incorporated into all bidding and contract documents, and contractors must agree to help ensure NEA compliance with the RP. All social experts will help ensure that engagements with the community strictly adhere to COVID-19 risk reduction protocols.

54. NEA and ADB will collaborate to improve collection and evaluation of project social performance information.

55. **Safeguards implementation.** NEA has implemented several ADB projects and has an adequate understanding of ADB's requirements for environment and social safeguards. NEA has some capacity to ensure compliance with safeguards, using the third-party services where needed and a recent study carried out jointly by ADB and the World Bank has identified further area for capacity development, including the following recommendations for strengthening institutional capacity on environmental and social risk management:

- develop an environmental and social management system;
- realign the structure of NEA to better integrate and strengthen environmental and social risk management;
- review the procedures for obtaining environment and social safeguards services with the view to streamlining these procedures;
- ensure adequate environment and social safeguards staffing and develop plan for capacity development; and
- form a corporate-level accountability mechanism and prepare guidelines for a corporate level grievance redress mechanism.

56. The project requires NEA to continue implementation of these reform measures by operationalizing the formal, fully functional environment and social safeguard unit within the PMD which will be headed by a director and supported by NEA staff and consultants with expertise on environment and social safeguards who will initially be appointed to support the project implementation.

57. Since the safeguards capacity of NEA can be strengthened, capacity development will be provided through the project supervision consultant (PSC) of the original project. Environment and social consultants with environment, health and safety, biodiversity, heritage, and social safeguards expertise are to be appointed under the PSC per the terms of references (TOR). For environment safeguards, the PSC will include an international environment specialist to provide necessary capacity development support and training to the NEA, as well as national counterparts to support further biodiversity and heritage assessments and management planning and

supervision. The PMD environment safeguards team will remain responsible for regular on-site supervision and monitoring. For social safeguards the PSC will include a senior international social specialist and senior national social specialist with experience in managing resettlement and consultation with Indigenous Peoples. Consultants should preferably be experienced with linear projects. A national community engagement specialist and national safeguards compliance data management specialist will also be engaged to (i) ensure that affected people are adequately consulted; (ii) track project safeguards performance; and (iii) maintain a socio-economic indicators database. In addition to supporting NEA with project supervision and monitoring and updating of safeguard documents, as required, the PSC safeguard specialists will be tasked with providing formal training sessions and on-the-job training for the project management and safeguard officers of NEA, as well as the contractors' management and safeguard officers including trainings on understanding ADB's Safeguard Policy Statement (2009) environment and social requirements, implementing the EMP and RIPP, and preparing combined environmental and social monitoring reports.

58. During project implementation, NEA is responsible for:

- (i) operationalizing before the commencement of works, including any pre-construction enabling works, the formal, fully functional environment and social safeguard safeguards unit in PMD which has recently been established under the original EGMP and providing requisite facilities and equipment to enable its operation;
- (ii) upon loan effectiveness, appointing suitably qualified and experienced environmental and social safeguards staff dedicated to the project, under the direction of the safeguards unit, as follows: (a) a full-time senior environment officer, (b) a full time senior social development officer, (c) a full-time senior health and safety officer, (d) a full-time senior biodiversity officer, (e) 8 full-time junior environmental social health and safety field officers who are to be based on-site during the construction period for the original EGMP loan plus 2 additional full-time junior ESHS field officers for the additional finance component, and (f) a full-time community engagement/grievance regress mechanism (GRM) officer to assist with completion of meaningful consultation and operationalizing the GRM;
- (iii) securing national environmental clearances for transmission lines before contract award;
- (iv) securing third-party support of Department of Archeology officials to monitor and supervise on a full time-basis construction works on Chobar-Lagankhel transmission line adjacent to locally important physical cultural resources for their duration to ensure no damage is caused;
- (v) implementing and supervising and monitoring implementation by the contractor of the EMP during detailed design, pre-construction, construction, operation and maintenance phases and incorporating the final EMP into the bidding and contract documents for each package before contract awards;
- (vi) continuing to consult with and secure written confirmation from the President of Chure Terai Madhesh Conservation Development Board as to actions required to ensure Dumkibas Substation works are in accordance with their management plan

and measures to promote and enhance its conservation aim, to comply with ADB's Safeguard Policy Statement (2009) requirements for legally protected areas;

- (vii) undertaking additional meaningful consultation, baseline data collection, assessment, and management planning actions as detailed in the EMP to comply with ADB's Safeguard Policy Statement (2009) requirements during detailed design;
- (viii) updating the IEE/EMP prior to applicable contract award, to ensure it reflects the national environmental clearances, required confirmations from the protected area management, additional meaningful consultations including public consultations for the national IEEs, and obtaining ADB's clearance prior to incorporation of the final EMP in the contract documentation. Once cleared, ADB will disclose the updated IEE online;
- (ix) ensuring that the relevant provisions of the final EMP and RIPP are included in bidding and contract documents. The contract will explicitly exclude the use of PCBs and any asbestos containing materials, require the contractor to undertake health and safety (H&S) risk assessment and develop a H&S plan including COVID-19 response, and to provide counterpart safeguards staff, as applicable to the project components under their contract;
- (x) updating the IEE/EMP and RIPP to ensure they reflect the detailed design for all project components and obtaining ADB's clearance prior to the commencement of any work, including any pre-construction enabling works. Once cleared, ADB will disclose the updated IEE and RIPP online;
- (xi) implementing the corrective action incorporated into the EMP before any works at existing facilities (Lagankhel substation) commence; and ensure works at Chobar Substation are undertaken in accordance with its EMP under the PTDEEP (Loan 3542) Project;
- (xii) ensuring that prior to connecting Dumkibas Substation to Bardhaghat-Sardi 132 kV DC transmission line all requisite national environmental clearance requirements have been complied with;
- (xiii) ensuring that, as reflected in the IEE, (a) construction works including related facilities at Dumkibas Substation (in Chure Conservation Area) are confined to agricultural land and within the boundaries of the proposed substation, and (b) the section of the Chobar-Lagankhel underground transmission line falling within the proposed Pulchoki Conservation Area is constructed solely within the existing roadway. No other works will take place in the boundaries or buffer zones of actual or proposed internationally or nationally important biodiversity or heritage areas;
- (xiv) implementing the RIPP and completing all land acquisition prior to physical and economic displacement, including informing all displaced persons of their entitlements and resettlement options and enabling the participation of Indigenous People in defining and implementing culturally-appropriate project benefits-sharing measures;

- (xv) before loan effectiveness, establishing and operationalizing a single project-level environmental and social GRM for affected persons (construction workers and local community members) in line with the provisions of the IEE and RIPP, including integrating with the original EGMP loan grievance redress committee headed by the NEA project manager for affected persons, and promptly addressing any grievances received throughout the project. Contact details for the GRM will be prominently displayed on notice boards at the project sites and widely communicated to the local affected communities within the project areas. Further details on the GRM are provided in the GRM section of this PAM;
- (xvi) continuing to undertake meaningful consultation (community liaison) for environment and social safeguards during implementation, including prior to finalization of detailed designs, once line routings and substation locations are confirmed, giving particular attention to consultations with women, indigenous peoples and other vulnerable groups. All ongoing consultation and grievance-related information, such as, minutes of the meetings and decisions will be documented and summarized in the environmental and social monitoring reports submitted to ADB;
- (xvii) locally disclosing the IEE and RIPP and other environmental and social safeguards documentation. This will include NEA web disclosure, but also ensuring that full copies of both the IEE and its executive summary, translated into Nepali, and, RIPP and summary, all translated into Nepali, are available at all local NEA offices, project substations, and on request at the project sites; notices should also be placed on noticeboards at the project sites and local NEA offices and pamphlets should be distributed in the project areas in Nepali, informing of the availability of the IEE, RIPP and other reports, with notice given that help with translation to Nepali and affected persons' dialects will be extended free of charge on request;
- (xviii) updating the IEE, EMP and RIPP as necessary if unanticipated impacts (including project scope or design changes) occur during implementation, and disclosing any updates to them, both locally and on NEA website; any such updates should also be submitted to ADB for clearance and disclosure on the ADB website before any works commence;
- (xix) ensuring adequate budget, institutional support, and staff resources are allocated to implement, supervise and monitor the EMP and RIPP including per bullet (ii) sufficient number of suitably qualified and experienced environmental, health and safety officers to cover supervision of all the concurrently ongoing contract packages. Costs for the implementation of the EMP and RIPP (except those which are to be implemented by the contractor) will be the responsibility of NEA;
- (xx) ensuring that all NEA project staff support and attend all capacity development and training activities provided, and facilitate the provision of the training venues, etc.;
- (xxi) preparing combined environmental and social monitoring reports semi-annually during project implementation up until the project is closed, or for a longer period if this is specified in the project completion report, and disclosing them locally and on NEA website and submitting to ADB for disclosure on the ADB website, as per disclosure requirements set out in the Stakeholder Communication Strategy section of this PAM. PMD is responsible for providing monitoring reports to ADB,

though it is expected that the activities of the PSC are also included in these reports. NEA will also report quarterly on safeguards within the progress reports; and

- (x) developing and taking all requisite corrective action in case of any non-compliance with the EMP and RIPP during implementation including repair of any property damage, financial compensation (insurance) for any health and safety incidents.

59. The contractor is required to comply with the relevant provisions of the EMP and RIPP during detailed design, preconstruction and construction, closely monitored by NEA supported by the PSC. The contractors will be delegated, through the contract, the requirement to undertake mitigation and monitoring actions as set out in the EMP and RIPP and to assist with the GRM, but ultimate responsibility for implementation lies with NEA. The final EMP is to be incorporated into all contract documents and contractors are to ensure that its requirements are cascaded down to all sub-contractors undertaking works relating to the project regardless whether they are formally or informally employed. In addition to the environmental and social safeguards staff and consultants at NEA and in the PSC to oversee EMP implementation, the contractors will be required by the contract to (i) employ at least one full time suitably qualified and experienced, dedicated, environment officer, and, at least one full time suitably qualified and experienced, dedicated, health and safety officer for each contract package in order to monitor and supervise safeguards work -- the environment officer appointed for monitoring and supervision at Dumkibas substation is to have an ecological background given the location in Chure Conservation Area; (ii) employ one part-time heritage officer for the Chobar – Lagankhel transmission line contract package affecting physical cultural resources; and (iii) nominate a community engagement/GRM officer for each contract package to keep affected persons informed of works and be available to receive and deal with any grievances at the project site level. These officers will be responsible for reporting environmental and social safeguards progress at least monthly to NEA and providing necessary inputs to NEA for the quarterly progress reports/semi-annual environmental and social monitoring reports for the duration of their contract. All of these positions shall be based on-site. In addition, the contractor is to ensure that each active construction site or team has an engineer based on-site full-time nominated to the role of EHS Supervisor supported by full time occupational health and safety (OHS) steward(s).

60. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the ADB's Safeguard Policy Statement (2009).

VIII. GENDER AND SOCIAL DIMENSIONS

61. Nepal's per capita gross domestic product is one of the lowest in the world at around \$1,034.8 in 2019.¹² Most of the country's population (about 80%) live in rural areas where poverty is more prevalent and severe.¹³ The government, through the Sustainable Development Goal #1, aims to further reduce poverty significantly by the end of 2030. However, limited access to modern energy resources and inefficient grid connectivity have been hindering development. The project aims to enhance the distribution capacity and improve the reliability and quality of electricity supply in the various parts of the country. The project will also relieve the existing distribution system of overloading and help reduce technical losses in the project areas. This will improve the

¹² ADB 2020. Nepal Macroeconomic Update, Volume 8, No. 2, September 2020.

¹³ World Bank Group. n.d. "Rural population (% of total population)," Data Bank, indicator. <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=NP>

efficiency of energy use and grid connectivity, and control electricity leakage, as needed. Further, the project activities also create employment for the local people during the implementation phase. People, including poor or disadvantaged consumers and women, will benefit from the project to jobs for skilled and unskilled labor during construction and beyond. Moreover, greater access to clean energy will improve urban and rural air quality, people's health, living conditions, and the quality of life.

62. The project is classified as effective gender mainstreaming (EGM) and a GESI action plan is prepared including 8 activities and 15 indicators/targets. Implementation, monitoring and reporting of GESI action plan will be supported by a full time GESI specialist (consultant) hired by NEA PMD under the project. The GESI consultant will provide necessary technical inputs on GESI to project staff, consultants and all project stakeholders. The appointed GESI consultant will be stationed at safeguard unit at NEA PMD who will work in close coordination with PMD and PSC. The GESI consultant will be responsible to coordinate with ADB GESI officer and other consultants. Project monitoring system will collect sex, caste, ethnicity disaggregated data of project beneficiaries and employment created by the project work. With support from GESI consultant, PMD will provide quarterly GESI progress report. PMD, NEA will ensure that sufficient budget is allocated for the implementation of GESI action plan in PSC's contract under the loan.

63. The project will support rolling out NEA's GESI Strategy and Operational Guidelines to NEA's regional offices mainly focusing on human resource (HR) management. Project's gender equality and social inclusion action plan highlights: (i) representation of women in public consultations, (ii) provision of women-friendly amenities in substations and capacity building for women, (iii) job creation for local women in substations, (iv) commissioning of women staff in distribution command and control centers in Kathmandu, (v) participation of women and excluded and vulnerable groups in awareness events on safe and efficient energy use, (vi) rollout of NEA's GESI Strategy and Operational Guidelines in select provincial offices, (vii) capacity development of NEA staff including women staff, and (viii) engagement of social development (GESI) specialists for the project. At least 2 key actions on HR that are specified in the guidelines and project GESI action plan will be implemented. These actions are aimed at institutionalization of GESI guidelines in NEA's operation. Support will also be provided for capacity building of women staff of NEA in technical skills as well as in leadership and management. In all technical training, there will be 30% women staff. The project also facilitates to have 30% women staff in new distribution command and control center in Kathmandu that will have women friendly work environment and infrastructure. The new automated 6 substations will also be constructed with women friendly water, sanitation and hygiene (WASH) facilities and separate toilets. Community focused awareness events on safe and efficient use of electricity will be conducted ensuring participation of at least 30% women and 30% excluded and vulnerable groups in newly connected areas.

GESI Action Plan (revised)

Activities	Indicators and Targets	Responsibility	Time Frame
Output 1: Power transmission system capacity increased and automated.			
1. Project related public consultations held in project areas	1.a Women represent at least 50% of participants in community-based consultations, with adequate representation from disadvantaged groups	NEA PMD, PSC	Year 1 onwards
Output 2: Power distribution system modernized and automated.			
2. Eight automated distribution substations constructed with women friendly amenities	2.a Substations at Madichaur, Keraun, Lapang, Borang, Pantang, Nepalgunj and Dumkibas and Mulpani included women-friendly amenities [separate toilet and water, sanitation and hygiene (WASH) facilities] (2019 baseline: 0)	NEA PMD contractor, PSC	Year 1 onwards
3. Employment generated for local women and men in substations construction	3.a Contractors agreed to: (i) provide equal employment opportunities to women and men for unskilled, semi-skilled and skilled jobs; ¹⁴ (ii) support equal pay for work of equal value; and (iii) enforce gender-related aspects of national core labor standards. 3.b Occupational Health and Safety (OHS), separate toilet and rooms for women workers established in labor camps at construction sites 3.c Unskilled, semi-skilled and skilled labor employment opportunities for women maximized in distribution substations construction (20% women) 3.d Sex disaggregated data of local workforce in substations construction collected, monitored and reported	NEA PMD, contractor, PSC	Year 1 onwards
4. Construction of a distribution command and control center in Kathmandu	4.a Distribution command and control center ¹⁵ in Kathmandu commissioned with at least 30% women staff (aligned with DMF indicator 2a) (2019 baseline: 0)	NEA	Year 2 onwards
5. Conduct awareness events on safe and efficient energy use for connected households in project areas	5.a At least 2,000 electricity consumers (30% women and 30% excluded and vulnerable groups*) in project areas reported increased knowledge on <i>safe and efficient energy use</i> (aligned with DMF indicator 2d) (2019 baseline: 0)	NEA and PSC	Year 2 onwards

¹⁴ Unskilled jobs are those that can be performed without having prior experience or knowledge and the offered remuneration is also relatively lower (e.g., porter, guard, labor and janitor). Semi-skilled jobs are jobs that require some level of prior experience or knowledge and for which individuals require guidance of seniors (e.g., helper, carpenter, mason, plumber, technician and junior supervisor). Skilled jobs are those that require sufficient level of prior experience or knowledge and ability of the individuals to perform the tasks independently without the guidance of a senior staff (e.g., carpenter, mason, driver, floor supervisor, and roller operator).

¹⁵ Distribution command and control center is a secure facility that provides centralized monitoring, control and command to ensure reliable electricity distribution.

Output 3: Capacity of NEA and electricity users in project areas strengthened			
6. Roll out NEA's GESI Strategy and Operational Guidelines (2020) in selected provincial offices ¹⁶	At least 2 key GESI-related HR actions from NEA's GESI Strategy and Operational Guidelines (2020) in selected provincial offices implemented (aligned with DMF indicator 3.c). These would include**: 6.a At least 40 NEA women staffs from selected provincial offices trained in <i>leadership and management skills</i> . (2019 baseline: 0) 6.b At least 40 NEA women staff from selected provincial offices trained in <i>customer service training</i> (2019 baseline: 0)	NEA central and provincial offices, PSC	Year 1 onwards
7. Capacity development of NEA staff on various skills	7.a At least 30 NEA staff (including 30% women) reported increased knowledge on NEA's <i>corporate development plan</i> (aligned with DMF indicator 3.a) (2019 baseline: 0) 7.b At least 30 NEA staff (including 30% women) reported increased knowledge on <i>automation of grid substations</i> (aligned with DMF indicator 3.b) (2019 baseline: 0)***	NEA and PSC/consulting team	Year 2-4
8. Appointment and hiring of GESI specialists	8.a Dedicated GESI staff appointed by NEA as GESI Focal Point, with clear TORs to be based at the Safeguard Unit of PMD. 8.b GESI consultant hired to support GESI-AP implementation and timely reporting of progress with adequate inputs throughout project period.	NEA, ADB PMD	Year 1

ADB = Asian Development Bank, GESI = gender equality and social inclusion, GESI-AP = GESI Action Plan, OHS = occupational health and safety, NEA-Nepal Electricity Authority, PMD = project management directorate, PSC = project supervision consultant, TOR = terms of reference.

*Excluded groups refer to those who have either passively or actively been denied full access to various rights, opportunities, and resources, and/or are less likely to receive the benefits of social, economic, and political investments; and vulnerable groups refer to those who cannot access various rights, opportunities, and resources because of their situational disadvantage and not because of their identity alone. Data will be disaggregated at reporting on activity results.

**Leadership and management training is targeted to officer level (6-9 levels); and Customer service training is targeted to assistant level staff who are directly involved in customer dealing services such as meter readers.

***Corporate development plan training is provided to senior managers; and Automation of grid substation training is provided to mid-level staff (5-8 levels)

¹⁶ NEA's provincial offices referred in the action plan are basically 7 provincial offices of Distribution and Consumer Service Directorate (DCSD). NEA has total 8,934 staff of which 12.6% are women. DCSD has total 6,187 staff. Women and men are equal in non-technical positions. Overall, percentage of women in assistant manager level (level 7 and up) is nearly 11% in NEA who can be expected to take leadership role in future.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

The revised design and monitoring framework strikes out content for deletion and underlines content to be added.

Impacts the Project is Aligned with (i) Reliable and efficient electricity for all achieved (<u>White Paper on Energy, Water Resources and Irrigation Sector's Current Status and Roadmap for Future</u>) ^a (ii) NEA developed as modern and sustainable corporate entity that provides reliable services to its customers (<u>NEA's Corporate Development Plan</u>) ^b			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Reliability, efficiency, and financial sustainability of electricity supply in Nepal improved	By 2027: a. System losses of Nepal reduced to 13% (2018 baseline: 15.3%) b. Annual per capita electricity consumption in Nepal increased to 700 kWh by December 2026 (2018 baseline: 198 kWh) ^c c. NEA's operating costs recovery increased to 100% (2018 baseline: 90%) (<u>OP 4.2 6.2</u>)	a–b. NEA annual reports c. NEA financial reports	R: Delay in the completion of planned energy-generation projects may underutilize the transmission and distribution networks.
Outputs 1. Electricity transmission capacity in project areas strengthened and modernized	By March 2026: 1a. 34 existing grid substations throughout the country automated (2019 baseline: 0) (OP 4.1.2) 1b. 25 km of 220 kV and <u>104 km 88 km</u> of 132 kV new transmission lines constructed (Dandakhet–Rahughat 132 kV transmission line: 25 km, Madichaur–Gorahi 132 kV transmission line: 40 km, Borang–Lapang 132 kV transmission line: 23 km, <u>Nepalgunj-Kohalpur transmission line 132 kV, 10 km, Chovar-Lagankhel transmission line 132 kV: 6 km</u> , Lapang–Ratomate 220 kV transmission line: 25 km) (2020 baseline: 0) (OP 4.1.2) 1c. New automated 220 kV grid substations totaling 400 MVA in Lapang and Rahughat; and 132 kV grid substations totaling <u>838.5 MVA 361.5 MVA</u> installed in Borang, Dandakhet, Keraun, Lapang, Madichaur, Pantang, Rahughat, <u>Lagankhel, Nepalgunj, Dumkibas, Mulpani</u> (2019 baseline: 0) (OP 4.1.2) 1d. Existing 144 km transmission lines (132 kV and 66 kV) upgraded with more efficient high-temperature low-sag conductors in Province 1, Province 2, and Bagmati Province (2020 baseline: 0) (OP 4.1.2)	1a–d. NEA progress reports	R: Prolonged impact of COVID-19 on global supply chains delay procurement of goods and services, resulting in delayed project completion.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
2. Electricity distribution system in project areas strengthened and modernized	<p>By March 2026:</p> <p>2a. Distribution command and control center in Kathmandu commissioned with at least 30% female staff. (2019 baseline: 0) (OP 4.3.1)</p> <p>2b. New smart meters for 350,000 customers in Kathmandu Valley installed (2019 baseline: 100,000) (OP 4.2.2)</p> <p>2c. Distribution system consisting of 30 km of 33 kV distribution lines in Morang district and four automated substations of 32 MVA 33/11 kV in various parts the country commissioned, benefiting 134,000 households with improved supply (Borang, Keraun, Madichaur, and Pantang) (2020 baseline: 0) (OP 1.3.1)</p> <p>2d. At least 2,000 electricity consumers in project areas (including at least 30% women and 30% members of <u>excluded and vulnerable disadvantaged</u> groups) reported increased knowledge on safe and efficient energy use. (2019 baseline: 0)</p> <p>2e. <u>Enterprise resource planning and revenue management system implemented</u> (2020 baseline: 0) (OP 4.2.2, OP 6.1.4)</p>	<p>2a–c. NEA progress reports</p> <p>2d–e. NEA project progress reports</p>	
3. Capacity of NEA to implement its corporate development plan strengthened ^d	<p>By March 2026:</p> <p>3a. At least 30 eligible NEA staff (including 30% women) reported increased knowledge on NEA's corporate development plan (2019/2020–2023/2024) (2019 baseline: 0) (OP 2.2 2.3.4)</p> <p>3b. At least 30 eligible NEA staff (including 30% eligible women) reported increased knowledge on operating automated grid substations (2019 baseline: 0) (OP <u>2.2</u> 2.3.4)</p> <p>3c. At least two key actions from NEA's GESI strategy and operational guidelines implemented in NEA's regional offices (2019 baseline: 0)</p> <p>3d. Accounting manual to ensure full compliance with NFRS updated and approved by NEA management by December 2023. (FY2019 baseline: NEA accounting manual is in place, but is not based on NFRS) (OP 4.2.2, OP 6.1, OP 6.1.4)</p> <p>3e. Operations manual to commence operation of NEA's NPTCL (as a separate</p>	<p>3a–b. Pre- and post-training assessments</p> <p>3c. NEA progress reports</p> <p>3d. Copy of approved accounting manual</p> <p>3e. Copy of operations manual</p>	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	entity) completed by December 2022 (2019 baseline: company established but trading not started) (OP 6.1)		

Key Activities with Milestones

1. **Electricity transmission capacity in project areas strengthened and modernized**
 - 1.1. Prepare detailed design and update safeguards documents as required (Q4 2021).
 - 1.2. Complete bidding process (Q4 2022).
 - 1.3. Complete installation of transmission lines and substations (Q1 2026).
2. **Electricity distribution system in project areas strengthened and modernized**
 - 2.1. Prepare detailed design for smart meters and distribution systems, and update safeguards documents as required (Q4 2021).
 - 2.2. Conduct procurement (Q2 2022).
 - 2.3. Conduct awareness-raising activities (Q4 2025).
 - 2.4. Carry out installation of smart meters (Q1 2026).
 - 2.5. Carry out installation of distribution systems (Q1 2026).
 - 2.6. Carry out installation of enterprise resource planning and revenue management system (Q1 2026).
3. **Capacity of NEA to implement its corporate development plan strengthened**
 - 3.1. Prepare detailed plan and implement capacity development of NEA (Q4 2025).
 - 3.2. Design and carry out training and capacity building of NEA's staff on operating substation automation (Q4 2025).
 - 3.3. Prepare and implement detailed action plan for implementing GESI strategy in NEA's regional offices (Q4 2025).
 - 3.4. Prepare operations manual for commencement of NPTCL operation (Q4 2025).
 - 3.5. Update and implement accounting manual to comply with remaining provisions of NFRS (Q2 2025).

Project management activities

Set up project implementation unit and project performance monitoring system.
 Conduct review missions.
 Prepare progress reports and project completion report.
 Prepare and submit audited project financial statements and submit audited entity financial statements to ADB on an annual basis.

Inputs

ADB: \$456216 million concessional ordinary capital resources loan (\$60 million additional)
 Government of Nepal: \$3954 million (\$15 million additional)

ADB = Asian Development Bank, COVID-19 = coronavirus disease, FY = fiscal year, GESI = gender equality and social inclusion, km = kilometer, kV = kilovolt, kWh = kilowatt-hour, MVA = megavolt-ampere, NEA = Nepal Electricity Authority, NFRS = Nepal Financial Reporting Standards, NPTCL = Nepal Power Trading Company Limited, OP = operational priority, Q = quarter, R = risk.

^a Government of Nepal; Ministry of Energy, Water Resources and Irrigation. 2018. [Present Situation and Future Roadmap of Energy, Water Resources and Irrigation Sector \(White Paper\)](#). Kathmandu.

^b NEA. 2019. *Corporate Development Plan. 2019/2020–2023/2024*. Kathmandu.

^c Similar to the Power Transmission and Distribution System Strengthening Project, infrastructure assets to be constructed under this project are dispersed all over the country, and hence both projects use a national target. ADB. 2020. [Report and Recommendation of the President to the Board of Directors: Proposed Loan, Administration of Grant, and Administration of Technical Assistance Grant to Nepal for the South Asia Subregional Economic Cooperation Power Transmission and Distribution System Strengthening Project](#). Manila.

^d To be supported by project implementation consultants.

Contribution to Strategy 2030 Operational Priorities:

The expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2). In addition to the OP indicators tagged in the DMF, this operation will contribute results for OP 7.1.2: Measures to improve the efficiency and/or productivity of cross-border connectivity supported in implementation.

Source: ADB.

B. Monitoring

64. **Project performance monitoring.** ADB shall field an **inception mission** within 3 months of the approval of the project. NEA will undertake overall monitoring of the project in terms of progress. ADB, the government and NEA will conduct **semiannual reviews** throughout the implementation of the project. The review will monitor the following:

- (i) project output quality;
- (ii) implementation arrangements;
- (iii) implementation progress; and
- (iv) disbursements.¹⁷

65. Performance will also be monitored based on indicators and targets stipulated in the design and monitoring framework. **Quarterly progress reports** will be submitted to ADB within 30 days from the end of each quarter. These reports will include:

- (i) a narrative description of progress made during the period;
- (ii) changes in the implementation schedule;
- (iii) problems or difficulties encountered;
- (iv) work to be carried out during the next period;
- (v) progress reports and data demonstrating environmental and social compliance;
- (vi) a report on implementation of the EMP and RIPP including any corrective action plan;
- (vii) GESI action plan progress report with disaggregated data and description;
- (viii) compliance with covenants of the individual loan and project agreements; and
- (ix) financial and disbursement report containing variance analysis of physical and financial progress, details of utilization of funds and reconciliation with ADB loan financial information system (LFIS), status of implementation of FM action plan and summary observations from internal and external audit along with implementation status for audit recommendations.

66. The progress reports will include project expenditures during the period and total expenditures to date. These quarterly reports will provide information necessary to update ADB's project performance reporting system.¹⁸ In addition, NEA will conduct regular monthly progress review meetings with contractors, consultants, and other relevant stakeholders to take stock of project progress and expedite project implementation. The minutes of such meeting shall be prepared by NEA and shared to ADB, MOEWRI and other relevant stakeholders highlighting major issues faced by the project and actions agreed/taken to resolve them.

67. A project completion report will be prepared by NEA within 6 months of project completion.

68. **A mid-term review** shall be carried out 2 years after the loan effectiveness for the project focusing on the engineering, resettlement, environmental, GESI and social aspects, and reviewing its financial status. The review will allow for any necessary midcourse corrections to ensure successful project implementation and achievement of project objectives.

69. **Compliance monitoring.** In addition to the standard assurances, compliance with specific assurances will be monitored based on the loan and project agreements as well as procurement

¹⁷ ADB's project performance reporting system is available at <http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>.

¹⁸ ADB's project performance reporting system is available at <http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>.

and disbursement guidelines. The procurement of goods, related services, and works financed by ADB will follow procedures outlined in the ADB's Procurement Guidelines. The ADB financing proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time).

70. **Safeguards monitoring.** During project implementation, NEA is responsible for implementing the EMP and RIPP as prepared in accordance with ADB's Safeguard Policy Statement (2009) and as agreed and/or endorsed by the government. Once the loan has become effective, NEA will submit combined environmental and social monitoring reports to ADB; environmental and social monitoring reports will be submitted semi-annually during construction and operation up until the project is closed, or for a longer period if this is specified in the project completion report. They are due with ADB within 30 days of the period end, i.e., June and December each year. The environmental and social monitoring reports will focus on progress in implementing the EMP and RIPP and describe project implementation progress, any scope or design changes, any updates to safeguard assessments and management plans, compliance against safeguards loan covenants, and detailed progress including evidentiary data on environmental and social safeguards, in accordance with the EMP and RIPP, and the outcomes of ongoing community and other stakeholder consultations. For environment, the monitoring reports will include dedicated discussions on activities within protected areas, occupational and community health and safety management, reporting any occupational or community incident, in particular but not limited to, in the context of the COVID-19 pandemic. In addition to reporting on the project components, the monitoring reports will also report on the same requirements for the associated facilities of the project that are not being funded by other ADB projects. For resettlement activities, monitoring reports will convey qualitative and data demonstrating RIPP mitigation and compensation activities implementation, including the outcomes of verification studies. Monitoring reports will also note all grievances received and will document their progress/resolution.

71. In the event of any breaches of performance standards or other non-compliances recorded by NEA and/or their contractors, the project will provide a time bound and budgeted corrective action plan. Environmental and social safeguards documents, including semi-annual monitoring reports, will be publicly disclosed online and locally by ADB and NEA in accordance with government, NEA, and ADB policies and procedures (see stakeholder communication strategy section of this PAM).

72. During implementation ADB will undertake periodic site visits along with a representative of Ministry of Environment, Water Resources and Irrigation (MoEWRI) and, if required, safeguard supervision missions with detailed review by ADB's safeguard specialists/officers or consultants. To facilitate this NEA and their contractors will need to provide ADB with (i) access to all projects sites; (ii) all environment and social safeguards documentation requested; and (iii) a project site health and safety induction and adequate personal protective equipment (PPE) in accordance to the project's EMP requirements for visitors, IFC EHS Guidelines on Occupational Health and Safety and latest WHO Guidelines in the context of COVID-19 pandemic. The safeguard unit of the PMD shall be responsible for overall monitoring of safeguard compliance of the project and NEA shall provide all required resources such as budget, human resources, logistics supports such as vehicle, office space to discharge its duty.

73. **Gender and social dimensions monitoring.** NEA is responsible for implementation of GESI action plan. The implementation and progress of activities and indicators included in the GESI action plan will be monitored by GESI officer of Safeguard Unit, PMD and GESI consultant of the project. They will prepare quarterly GESI action plan progress reports for submission to ADB. Detailed assessments will be carried out during review missions and mid-term review

meeting and field visits, and the findings are documented in aide memoire. The ADB mission will identify the issues and resolve them through consultation with the project team. In addition, the inclusion and compliance with GESI-related labor standards, health and safety measures in construction sites will be monitored and ensured through review of bidding and contract documents and project progress reports.¹⁹ In latter phase of the project, qualitative information on the results and achievements will be documented by the project to include in the project completion report. The safeguard unit of the PMD shall be responsible for overall monitoring on compliance to project GESI requirement and NEA shall provide all required resources such as budget, human resources, logistics supports such as vehicle, office space to discharge its duty.

C. Evaluation

74. ADB will field regular review missions, in general every 6 months at the minimum, to review status of contract awards, disbursements, physical progress, and implementation of the environmental management plan and resettlement and indigenous peoples plan. Within 6 months of physical completion of the project, NEA will submit the project completion report (PCR) to ADB. Subsequently, ADB will field a mission to finalize the PCR.²⁰

D. Reporting

75. NEA will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system (including safeguards) and semi-annual environmental and social safeguards monitoring reports during detailed design, pre-construction, construction until completion of works; (ii) semi-annual environmental and social safeguards monitoring reports during operation; (iii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; and (iv) a project completion report within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

76. Meaningful consultations with project affected people and other concerned stakeholders have been carried out during project preparation and have informed the project design, yet meaningful consultations will need to continue during project implementation. As detailed in the IEE and RIPP, NEA will need to fill in the gaps in meaningful consultations during detailed design, as part of EMP implementation and Supplemental Socioeconomic Survey as detailed in the Entitlement Matrix of the RP. Meaningful consultations will continue during project implementation.

77. Environment and social safeguards documents, including the IEE, RIPP, and environmental and social monitoring reports, will be locally disclosed in accordance with government, NEA, and ADB's Safeguard Policy Statement (2009) requirements, including but not limited to publication on NEA's website and ensuring that full copies of both the IEE, RIPP, and

¹⁹ ADB's Handbook on Social Analysis: A Working Document, is available at: <http://www.adb.org/Documents/Handbooks/social-analysis/default.asp>, Staff Guide to Consultation and Participation: <http://www.adb.org/participation/toolkit-staff-guide.asp>, and CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations. <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>.
²⁰ Project completion report format is available at <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

environmental and social monitoring reports, will be locally disclosed in accordance with government, NEA, and ADB's Safeguard Policy Statement (2009) requirements, including but not limited to publication on NEA's website and ensuring that full copies of both the IEE and its executive summary, translated into Nepali, and, RIPP and summary, all translated into Nepali, are made available at local NEA offices, project substations, and on request at the project sites, as advertised on notice boards placed at project sites and in local NEA offices and by pamphlets in Nepali distributed in the project areas informing of the availability of the documents. ADB will be responsible for disclosure on the ADB website once the respective final reports have been submitted to and accepted by the ADB safeguards team.

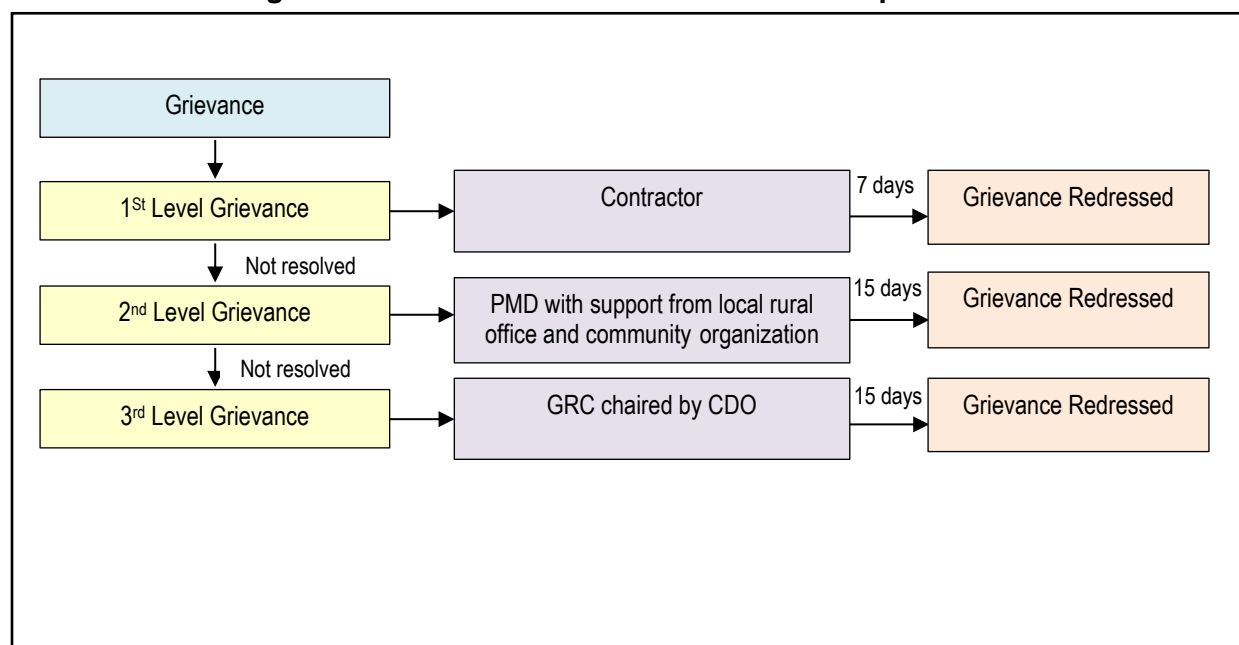
78. NEA will also post relevant project information on its website, including information regarding the bidding process, bidders, contract awards, use of funds disbursed under the project and physical progress.

79. The stakeholder communication strategy is summarized in Table 12.

F. Grievance Redress

80. NEA will use the project-specific GRM established for the original EGMP loan (Figure 3) to receive and manage any grievances (complaints) that may arise from the additional finance component and facilitate prompt resolution of affected persons' issues, concerns, problems, or claims. The project-wide GRM will address both environmental and social safeguard and other related eligible grievances/complaints raised by affected persons, in a timely and culturally appropriate manner. Any concerned person or group of people can file a complaint through the project's GRM, at any time and at no cost. Communities within the project's area of influence will be made aware of this GRM as well as how to access it, including addresses and contact numbers. An exhaustive grievance log must be kept at all times on-site by the contractor's focal. The contractors will define a site-level grievance handling protocol, addressing any urgent matter or minor issue immediately. Minor grievances will be redressed by the contractor's site-level GRM focal at site level and any unsettled case will be referred to the NEA Project Manager supported by PMD's project-wide GRM focal or further escalated to a grievance redress committee (GRC) formed at project level and chaired by the Chief District Officer, District Administration Office, to ensure grievances are addressed properly and in a timely manner. This joint GRM is described in further details in the IEE and RIPP.

81. Recourse to the project's GRM does not impede access to the country's judicial or administrative remedies. Affected peoples can approach the court of law at any time and independently of the project's grievance redress process. Affected peoples may (subject to eligibility criteria) also access ADB's Accountability Mechanism whereby people adversely affected by ADB-financed projects can express their grievances, seek solutions, and report alleged violations of ADB's operational policies and procedures, including environmental and social safeguard policies.

Figure 4: Grievance Redress Mechanism Complaint Flow

CDO= Chief District Officer, GRC = Grievance Redress Committee, PMD = Project Management Department.

Table 12. Stakeholder Communication Strategy

Project Information to be communicated	Means of Communication	Responsibility	Audience	Frequency
Report and Recommendation of the President (RRP) with linked documents	ADB website	ADB	ADB, the government, development partners, civil society, Individuals	Once
Project information while planning/ designing	Discussions and stakeholder consultations	Executing agency	Project beneficiaries/affected persons	Regular intervals during planning and design
Safeguards Documents (i.e., IEE and RIPP) and any update during implementation	ADB and NEA website, notice informing of availability at the project site with hard copy to be made available by NEA at local NEA offices, project substations, and at project sites on request	ADB and executing agency	ADB, the government, development partners, civil society, individuals/affected persons	Once before Implementation and whenever an updated version is produced during implementation (due to change of scope or unanticipated impact)
Status of implementation during construction	Communication boards at site including details of progress and contact details for GRM	Executing agency/Contractors	Project beneficiaries/affected persons	All the time at construction sites

Project Information to be communicated	Means of Communication	Responsibility	Audience	Frequency
Project Performance Reports and Project Information Documents	ADB website	ADB	ADB, the government, development partners, civil society, individuals	Every quarter
Environmental and Social Monitoring Reports	ADB and NEA website, notice informing of availability at the project site with hard copy to be made available by NEA at local NEA offices, project substations, and at project sites on request	ADB and executing agency	ADB, the government, development partners, civil society, individuals/affected persons	Semi-annual during construction and operation
Project Completion Report	ADB website	ADB	ADB, the government, development partners, civil society, individuals	Once

ADB = Asian Development Bank, the government = Government of Nepal, IEE = initial environmental examination, NEA = Nepal Electricity Authority.

X. ANTICORRUPTION POLICY

82. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.²¹ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.²²

83. To support these efforts, relevant provisions are included in the loan agreement, ADB's Ordinary Operations (Concessional) Loan Regulations, dated 1 January 2017 and the bidding documents for the project.

XI. ACCOUNTABILITY MECHANISM

84. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²³

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

85. Draft PAM discussed with NEA and government in April 2021.

²¹ ADB. [Anticorruption Policy](#). Manila.

²² ADB. [Office of Anticorruption and integrity](#). Manila.

²³ ADB. [Accountability Mechanism](#). Manila.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

Electricity Grid Modernization Project- Additional Financing

PROJECT SUPERVISION CONSULTANT

BACKGROUND

1. Electricity is one of the key elements of the infrastructure of a country for acceleration of economic development and is considered as an important input to improve quality of life. About 86 % of the total households of Nepal have access to grid electricity, with an increase of 18% from the year 2016. The total consumers as of July 2020 stand at 42,17,710, with annual growth of 8%. In FY 2019/20, a total of 6420.762 GWh of energy was sold earning gross revenue of Rs. 74,309.877 Million. Industrial and Commercial consumer categories combined together represent only 2.03% of the total number of consumers but shared 43.42% of total sales. Similarly, the domestic consumer category represents 93.24% of total consumers and contributed 44.34% to the total sales. Out of the total consumers, Kathmandu valley which houses the capital of Nepal accounts for approximately 5,00,000 consumers.

2. The Average Annual Growth Rate (AAGR) of peak demand of the country in last 5 years is 10% while the AAGR of energy demand is 12% during the same period. Further, on an average the revenues spiked by 20% annually. Kathmandu Valley and major urban centers have witnessed a rapid growth in huge residential apartments and commercial complexes over the last decade putting heavy burden on NEA to meet the electricity demand. Considering the rapid growth in demand of energy and revenues and to cater to the aspiration of their consumers, NEA needs to strengthen their business processes in line with their vision of “Digital NEA” and “Digital Nepal”. NEA has already started its journey by taking initiatives like Smart Metering, Substation Automation, and expansion of IT infrastructure, Distribution Command and Control Centre. In order to further its journey by bringing improvement in operational efficiency, enterprise robustness and financial soundness, NEA has decided to implement enterprise-wide solutions like Integrated Financial Management System (IFMIS) and Revenue management system (RMS).

3. NEA intends to implement IFMS solution for an integrated data collection, analysis and sharing platform to address the key business challenges and share the data across various functional areas which can make its business processes efficient, more robust and reliable to meet the present and future challenges. Further a unified RMS would migrate all its consumers from decentralized billing systems onto one unified platform in different phases, beginning with 0.5 million consumers covering the Kathmandu Valley. In this backdrop, the Asian Development Bank (ADB) has agreed to provide financing for Integrated Financial Management System (IFMIS) and Revenue Management System (RMS).

4. NEA is the executing agency (EA) for the proposed project. The term “NEA”, “EA” and “the Employer” have the same meaning and may be used interchangeably in this document depending on the context.

5. NEA seeks through this term of reference (TOR) to engage a team of Project Supervision Consultants (PSC) through a firm in accordance with ADB’s Guidelines on the Use of Consultants by Asian Development Bank and Its Borrowers to supervise the implementation of IFMIS and RMS projects.

6. The team of consultants is referred to hereafter as “the PSC” or “the Consultant”. The term “PSC” and “Consultant” may be used interchangeably in this document depending on the context. The services of the PSC are hereafter referred to as “the Services”.

7. This document sets forth TOR for the Services.

OBJECTIVE OF THE ASSIGNMENT

8. The services aim at providing high quality professional services to assist NEA in supervising and implementing the projects and to ensure that the projects will be completed according to the schedule and that the completed projects will deliver the quality, capacity, performance, reliability and economic life as required by the employer’s requirement defined in the turnkey contracts with the contractors.

SCOPE OF THE SERVICES, TASKS (COMPONENTS)

A. Scope of the services

9. The PSC is expected to deliver the Services for:

- (i) Project Monitoring Support
- (ii) Project Implementation Support
- (iii) Facility Management Services (FMS) Service Level Agreement (SLA) management
- (iv) Third party audit (TPA) agency on-boarding support

B. Detailed Tasks

10. The PSC’s detailed tasks are as follows:

- **Project Monitoring Support**

- (i) Review and monitor project scope, objectives and deliverables of the projects; benchmarking the progress of the projects vis-a-vis timelines.
- (ii) Participate in the “Subproject Steering Committee”, to ensure project implementation. Report the gaps as measured against the targets to the steering committee and the top management at NEA.
- (iii) Provide visibility of program and project status and risks.
- (iv) Strict monitoring and actionable suggestions towards contracts management.
- (v) Update mechanism to escalate issues that do not get resolved by the project teams, to the steering committee.
- (vi) Maintain documentation, minutes of meetings, track action points to ensure the mitigation of risks and issues.

- **Project Implementation Support**

- (i) Support in designing/drafting/validating agreements (project agreements, contract agreements, service-level agreements, operating-level agreements, etc.).
- (ii) Review, suggest improvements and recommend for approval to NEA, the

various documents submitted by different SIs (Inception report, Project implementation plan, blue-print document, As-Is/To-Be reports, Functional Requirement Specifications, System Requirement Specifications, Test Plan/test cases, As-Built reports etc.).

- (iii) Guide NEA with assessment of choices made by the System Integrator (SI) for various business processes and suggest better alternatives, where scope for the same exists. Assess the completeness of the identified business requirements.
- (iv) Support NEA in reviewing data migration procedures and methodologies proposed by the SI.
- (v) Provide report on testing of all hardware/software and related equipment done by the SI.
- (vi) Provide User Acceptance Test (UAT)/ System Integration Testing (SIT) Strategy Review Report including suggestions on UAT/SIT Test Scenarios. Review the UAT/SIT Strategy proposed by SIs. Check comprehensiveness of test scenarios and create additional scenarios, if required.
- (vii) Along with NEA, participate in the UAT/SIT. Assist in validation of actual results versus expected results.
- (viii) Analyze change requests put-up by the SI and assess whether such requests are for the activities outside the scope of the work. For activities identified outside the scope of work, evaluate efforts and timelines proposed by SIs.
- (ix) Managing dependencies across multiple projects.
- (x) Support NEA in Load Acceptance Tests.
- (xi) Ascertain whether system security and confidentiality of the information are maintained.
- (xii) Validate user exits / workarounds / customizations from the perspective of efficiency and effectiveness.
- (xiii) Third-party software integration support: Support for reviewing, testing, and validating the third-party components being integrated with the core technology solutions.
- (xiv) Review the final build of technology solution offered by SI as proposed in the final business blueprint document, test the IT enabled business controls, identify weaknesses, and suggest controls as per best practices.
- (xv) Review the Roll Out strategy prepared by the SI and recommend revisions on strategic realignment based on their learnings and experiences of similar projects.
- (xvi) Prepare a Go-Live Checklist that shall govern the success of any site Go Live.
- (xvii) Review the training plan and curriculum prepared by the SI, give recommendations on the contents of the plans.
- (xviii) Assist NEA in identifying the Subject Matter Resources for the Trainings.
- (xix) Provide report on the efficacy of the trainings being provided by the SI and suggest re trainings (if required to be carried out by SI due to unsatisfactory trainings).
- (xx) Prepare an exit management plan and adhere to the same with detailed knowledge transfer session to the authorized NEA officials and nodal officer.
- (xxi) Consultants will hand over the project related documents to respective NEA's nominated officer included updated project plan, tracker, technical support documents, risks and mitigation plans/documents etc.

- **FMS SLA Management**

- (i) SLA management of FMS activities carried out by SI.
- (ii) Prepare reports covering SLA compliance performance of parameters agreed between SI and NEA.
- (iii) Convey to NEA any concerns based on the information generated using the reports.
- (iv) This task would be done on a quarterly basis after the start of the FMS period or until the end of consultant's project duration whichever is earlier.

- **Third Party Audit (TPA) Agency onboarding support**

- (i) SLA management of FMS activities carried out by SI.
- (ii) Prepare reports covering SLA compliance performance of parameters agreed between SI and NEA.
- (iii) Convey to NEA any concerns based on the information generated using the reports.
- (iv) This task would be done on a quarterly basis after the start of the FMS period or until the end of consultant's project duration whichever is earlier.

TEAM COMPOSITION & QUALIFICATION REQUIREMENTS FOR THE KEY EXPERTS

A. Team Composition

11. It is estimated that a total 105 person-months of services are required with total inputs of 84 person-months from international experts and 21 person-months from national experts. Details on expertise and person month requirements are in Table 1. The international expertise should be provided by a consulting firm specializing in Digital consultancy in the field of IFMIS and RMS.

Expertise	No of PM	Total REM	Total REM
		Field	Home
International Consultant			
Team Leader/ Project Management expert	18	6	12
Finance & Accounts expert	6	1	5
Human Resource & Administration expert	6	1	5
Maintenance and Linear asset Management expert	6	1	5
Material, inventory, procurement, and contract management expert	6	1	5
Business Intelligence (BI), Business Warehouse (BW), Document Management System (DMS) and File lifecycle management expert	6	1	5

Expertise	No PM	of	Total REM	Total REM
			Field	Home
Metering, Billing and Collection (MBC), New Connection (NC), Disconnection (DC), Dismantling Expert		18	2	16
Customer Relationship Management (CRM) Expert		8	1	7
Integration Expert - RMS & ERP		4	1	3
ICT Infrastructure expert		4	1	3
Cyber Security expert		2	1	1
National Consultant				
Database Expert - RMS		6	6	
Production Planning Expert		6	7	
Energy Audit Expert		9	9	
Total		105	36	67

B. Qualifications/Experience Requirements for the Experts

12. **Project Manager/Team Leader:** He/She shall have preferably Bachelor's degree in Electrical/Electronics/IT/Computers with Master's in business administration with at least 15 years of operational experience in IT implementation in power sector at leadership level. The expert shall have previous team leader experience in IFMIS and billing systems. The expert shall preferably have the experience of working with NEA.

13. **Finance and Accounts Expert:** He/She shall have preferably master's in business administration/ACCA or related field and at least 10 years of proven experience in ERP consultancies in area of Finance and Accounts. Consultant is required to have excellent writing and communication skills in English.

14. **Human Resource & Administration expert:** He/She shall have preferably Masters in Business Administration or related field and at least 10 years of proven experience in ERP consultancies in area of Human Resource and Administration. Furthermore, all subject-specific Consultant is required to have excellent writing and communication skills in English.

15. **Maintenance and Linear asset Management expert:** He/She shall have preferably Bachelor's Degree in Electrical/Electronics/IT/Computers and at least 10 years of proven experience in ERP consultancies in the relevant area. Consultant is required to have excellent writing and communication skills in English.

16. **Material, Inventory, procurement and contract management expert:** He/She shall have preferably Bachelor's Degree in Electrical/Electronics/IT/Computers with Masters in Business Administration and at least 10 years of proven experience in ERP consultancies in area of Material, Inventory and Procurement. Consultant is required to have excellent writing and communication skills in English

17. **Production Planning Expert:** He/She shall have preferably bachelor's degree in Engineering and at least 10 years of proven experience in ERP consultancies in area of Production Planning. Consultant is required to have excellent writing and communication skills in English.

18. **Business Intelligence, Business Warehouse, Document Management System and File lifecycle management expert:** He/She shall have preferably Bachelor's Degree in Electrical /IT/ Computer Science/or related field and at least 5 years of proven experience in ERP consultancies in relevant area. Consultant is required to have excellent writing and communication skills in English.

19. **Metering Billing and Collection , New Connection, Disconnection, Dismantling Expert:** He/She shall have preferably Bachelor's Degree in Electrical/Electronics/IT/Computers with Masters in Business Administration and at least 10 years of proven experience in consultancies in area of revenue management in power utilities. Consultant is required to have excellent writing and communication skills in English.

20. **Customer Relationship Management Expert:** He/She shall have preferably bachelor's degree in Electrical/Electronics/IT/Computers or related field and at least 10 years of proven experience in consultancies in area of customer relationship management in power utilities. Consultant is required to have excellent writing and communication skills in English.

21. **Energy Audit Expert:** He/She shall have preferably bachelor's degree in Electrical/Electronics/IT/Computers and at least 10 years of proven experience in consultancies in area of energy audit. Consultant is required to have excellent writing and communication skills in English.

22. **Database Expert - RMS & ERP:** He/She shall have preferably bachelor's degree in IT/ Computer Science/or related field and at least 10 years of proven experience in consultancies in area of database administration/consulting. Consultant is required to have excellent writing and communication skills in English.

23. **Integration Expert - RMS & ERP:** He/She shall have preferably bachelor's degree in Electrical/Electronics/IT/Computers/or related field and at least 10 years of proven experience in consultancies in area of integration/enterprise architecture. Consultant is required to have excellent writing and communication skills in English.

24. **ICT Infrastructure expert:** He/She shall have preferably Master's degree in computer science/or related field and at least 10 years of proven experience in areas of ICT Infrastructure in ERP and RMS consultancies. Consultant is required to have excellent writing and communication skills in English.

25. **Cyber Security expert:** He/She shall have preferably bachelor's degree in Electrical /IT/Computer Science/or related field and at least 5 years of proven experience in cyber security consultancies. Consultant is required to have excellent writing and communication skills in

English.

C. Responsibilities of the Experts

26. The main responsibilities of each international experts are highlighted, but not limited to, as follows:

27. The **Project Manager/Team Leader** is responsible for:

- (i) Lead role in management of consulting team.
- (ii) Overall project planning and discussions with senior management of client.
- (iii) Overall review of the tasks and progress of the project.
- (iv) Planning, resourcing and supervision of all IFMIS and RMS initiatives at NEA.
- (v) Delivery of robust IFMIS & RMS solutions for NEA.
- (vi) Regular reporting for project progress against schedule and discrepancies between expected schedule and actual progress.
- (vii) Sets deadlines, assigns responsibilities and monitors progress of pertaining to the Project Management module as per the scope of work defined in ToR.
- (viii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (ix) Monitors FRS and assists in compliance of the same.
- (x) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (xi) Support in bid process management for third party audit.
- (xii) Monitors and reports progress of all infrastructure development, upgradation initiatives.

28. The **Finance & Accounts Expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress of pertaining to the Finance & Accounts module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitors FRS and assists in compliance for the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.

29. The **Human Resource & Administration Expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress of pertaining to their Human Resource & Administration module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitors FRS and assists in compliance of the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (v) Bid process management for third party audit.
- (vi) Monitors and reports progress of all infrastructure development, upgradation initiatives.

30. **Maintenance and Linear asset management expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress of pertaining to the Maintenance and Linear Asset Management module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitoring of FRS and assistance in compliance of the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (v) Bid process management for third party audit.
- (vi) Monitors & reports progress of all infrastructure development, upgradation initiatives.

31. **Material, inventory, procurement and contract management expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress of pertaining to the Material, inventory, procurement and contract management module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitoring of FRS and assistance in compliance of the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (v) Bid process management for third party audit.
- (vi) Monitors and reports progress of all infrastructure development, upgradation initiatives.

32. **Production planning expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress of pertaining to the Production planning module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitors FRS and assists in compliance of the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (v) Bid process Management for Third party audit.
- (vi) Monitors and reports progress of all infrastructure development, upgradation initiatives.

33. **BI BW, DMS and File lifecycle management expert** is responsible for:

- (i) Sets deadlines, assigns responsibilities and monitors progress pertaining to the BI BW, DMS and File lifecycle management module as per the scope of work defined in ToR.
- (ii) Evaluates and recommends changes to current and future IFMIS system requirements to meet organizational needs.
- (iii) Monitors FRS and assists in compliance of the same.
- (iv) Leads the implementation of new organizational processes aligned with IFMIS configuration.
- (v) Bid process management for third party audit.

- (vi) Monitors and reports progress of all infrastructure development, upgradation initiatives.
34. **MBC Expert** is responsible for:
- (i) Identification of Utility Business Requirements, Mapping of Existing Business Process, Alignment of Software Solution with Utility Business needs and Overall implementation / usability of RMS Software Solution Stack.
 - (ii) Interact with NEA users and work towards analysing user related, acceptance related, technical and functional issues of solution stack and work towards closure of them.
 - (iii) Identification of key technical risks associated with the various modules and work with developers/SI Team towards closure.
 - (iv) Assist NEA by coordinating for IT audit activity and closure of gaps and findings.
 - (v) Monitoring and Reporting.
35. **New Connection, Disconnection, Dismantling Expert** is responsible for:
- (i) Identification of Utility Business Requirements, Mapping of Existing Business Process, Alignment of Software Solution with Utility Business needs and Overall implementation/usability of New Connection, Disconnection and Dismantling Solution Stack.
 - (ii) Interact with NEA users and work towards analysing user related, acceptance related, technical and functional issues of solution stack and work towards closure of them.
 - (iii) Identification of key technical risks associated with the various modules and work with developers/SI Team towards closure.
 - (iv) Assist NEA by coordinating for IT audit activity and closure of gaps and findings.
 - (v) Monitoring and Reporting.
36. **(CRM) Expert** is responsible for:
- (i) Identification of Utility Business Requirements, Mapping of Existing Business Process, Alignment of Software Solution with Utility Business needs and Overall implementation / usability of Customer Relationship Management Solution Stack.
 - (ii) Interact with NEA users and work towards analysing user related, acceptance related, technical and functional issues of solution stack and work towards closure of them.
 - (iii) Identification of key technical risks associated with the various modules and work with developers/SI Team towards closure.
 - (iv) Assist NEA by coordinating for IT audit activity and closure of gaps and findings.
 - (v) Monitoring and Reporting.
37. **Energy Audit Expert** is responsible for:
- (i) Identification of Utility Business Requirements, Mapping of Existing Business Process, Alignment of Software Solution with Utility Business needs and Overall implementation / usability of Energy Audit Solution Stack.
 - (ii) Interact with NEA users and work towards analysing user related, acceptance related, technical and functional issues of solution stack and work towards closure of them.
 - (iii) Identification of key technical risks associated with the various modules and work

- with developers/SI Team towards closure.
- (iv) Assist NEA by coordinating for IT audit activity and closure of gaps and findings.
- (v) Monitoring and Reporting.

38. **Database Expert – RMS Expert** is responsible for:

- (i) Monitoring and maintenance of databases, installation of database software patches/upgrades, monitoring of database backups, database replication techniques, standardization, and implementation of databases to improve the management of production and test environments.
- (ii) Support users by resolving problems with applications' databases.
- (iii) Monitor and allocate volumes, analysis of utilization and resources, performance tuning, monitor DB replication, coordination of system upgrades or fixes.

39. **Integration Expert - RMS & ERP** is responsible for:

- (i) Analysing existing and upcoming business, information, application, and technology architecture operating at a tactical level for resolution of utility business problems.
- (ii) Supervise the interface/integration between metering, billing and collection systems with the base ERP system.
- (iii) Shall supervise in developing interface with existing IT applications (DMS, AMI, MDM etc).

40. **ICT Infrastructure expert** is responsible for:

- (i) Analyse the enterprise specific requirements, formulate solution framework, technology selection, overall IT solution development, solution prototype etc.
- (ii) Planning and implementation of IT equipment at identified locations, installation and maintenance of hardware, software and network, development of business continuity plan, evaluation of system performance and tracking of project deliverables and progress etc. with overall project management support.

41. **Cyber Security expert** is responsible for:

- (i) Assist NEA in maintaining system security and will assist by recommending latest cyber security technologies and measures.

REPORTING REQUIREMENTS, TIME SCHEDULE FOR DELIVERABLES AND IMPLEMENTATION ARRANGEMENT

42. The Consultant shall prepare various reports and maintain records documenting decisions made at meetings, progress on project implementation, financial records and changes to the contract plans. All documents and reports would be made available on electronic format to ADB. The reporting shall, in general, comprise of the following:

- Inception report
- Formats for site supervision and site supervision reports.
- At NEA's request, all necessary reports concerning special matters related to the project (supply, installation, work methodology, safety, claims, checklist for equipment and software testing and commissioning etc.).

- Monthly reports concerning physical progress/status of works, expenditures, delivery of materials (hardware and software) etc. in the formats acceptable to NEA and ADB.
- Quarterly progress report giving the progress status, schedules, costs, budgets etc. in the formats acceptable to NEA and ADB.
- Bidding documents and Technical Evaluation Report including for major selection of Third Party Audit agency for ERP and RMS audit.
- Software change control and release management framework as per ITIL.
- Exit management plan – One time.
- Project closure report (PCR) – One time.

CLIENT'S INPUT AND COUNTERPART PERSONNEL

43. **Administrative support for Consultant Team:** If required by local regulations, NEA will provide consultant with necessary support letters for obtaining visas and permits for its experts. The cost and timing of obtaining the above is entirely the responsibility of the consultants.

44. **Office Space, Office Equipment, Transportation and Accommodation:** NEA will provide office space, necessary furniture and office equipment (computers, fax, telephone etc.) in Kathmandu. The consultant shall make his own arrangements for transportation and accommodation for its personnel in Nepal. The consultant shall arrange itself any other equipment and planning software required during execution of works. consultant shall be responsible for international telephone bills, maintenance of office equipment and consumables necessary for its own use.

45. **NEA Project Team:** The subprojects (IFMIS and RMS) shall have its own contract management team comprising of project manager, engineer and other support staff. The subproject team shall assist the consultant in collecting data required for study. The subproject team shall work in close collaboration with the consultant's team and be fully involved in all aspects of the consulting services. Both NEA and consultant's teams shall work together as one single team in all matters related to the project.

46. Further, NEA will facilitate access of the consultant to other government agencies for communications, collecting of relevant information, data documents, etc. and other activities related to the consultant's assignment.