RISK ASSESSMENT AND RISK MANAGEMENT PLAN

1. The assessment documents the major sector and project risks and proposed risk mitigation measures (Table). The risk assessment and risk management plan incorporate the assessments in the country partnership strategy, 2013–2017 of the Asian Development Bank (ADB) for India, where relevant.[1]

A. Governance and Public Finance Management

2. Overall, the national public finance management system is strong due to (i) a well-organized and systematic approach to budget formulation; (ii) high fiscal transparency; (iii) comprehensive recording and management of cash balances, debt, and guarantees; and (iv) timely external audit by the Controller and Auditor General of India. However, a state-related fiduciary risk arises from the weak accounting and reporting systems. An assessment of governance risks for Assam Power Generation Corporation (APGC) and Assam Power Distribution Company (APDC) indicates that the accounting, financial management, and internal audit functions in both companies, especially in APGC, are weak. Overall, financial management risk is assessed as high. The financial management risk mitigation measures include (i) a capacity building component of the multitranche financing facility, specifically targeting the weaknesses of financial management; (ii) time-bound action plans provided by APGC and APDC to address major financial management shortcoming highlighted by statutory auditors; (iii) specific covenants on financial management aspects in the loan agreement; and (iv) use of direct payment method to expedite the process and ease the administrative burden imposed on APDC and APGC.

B. Procurement and Implementation Delays

3. The ability of Assam utilities to carry out efficient and transparent procurement is generally not as strong as at the central level. This is mainly due to lack of dedicated procurement staff and lack of standard procurement procedures. In particular, APGC does not have past experience with ADB procurement procedures and does not have a dedicated procurement cell with trained staff. This shortage of skilled human resources may pose a substantial risk to efficient procurement under the investment program. However ADB's response in terms of training and capacity building are expected to mitigate this risk considerably.

4. A related risk is project implementation delay, which may cause cost overruns and make the tranche 1 project financially nonviable. Engineering due diligence, implementation supervision, and capacity building is provided to reduce this risk. Advance contracting was also undertaken to mitigate this risk. Tranche 1 bids have already been advertised. Exchange rate fluctuations may lead to cost overruns if the rupee appreciates very fast during project implementation. A conservative exchange rate was used to minimize this risk.

C. Geological Risks and Acidic River Water

5. Geological risks in the Lower Kopili area may affect the stability and lifespan of the hydropower project. To understand and design the necessary mitigation measures, a set of geological studies and field testing are being undertaken. Acidic river water may cause damage to turbines reducing the lifespan of the Lower Kopili hydropower project in tranche 3. The design features of the turbines and associated infrastructure, including dam structure, will be modified to ensure longevity of the hydropower plant. The Upper Kopili Hydropower Plant faced the same

[1] ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

risk. Its experience with incorporating additional design features will be utilized in designing the mitigation measures.

D. Delay in Construction of Evacuation Transmission Line

6. Delay in construction of the evacuation transmission line from the proposed Lower Kopili hydropower power plant up to the pooling center may cause capacity underutilization of the plant. To avoid any delay, the transmission line will be included in the hydropower plant as an integral component. Assam Electricity Grid Corporation's assistance will be sought for construction supervision.

E. Lack of Long-term Gas Supply

7. Inadequate gas supply (in the long term), resulting in unused capacity of the new generation plant at Lakwa, may cause the tranche 1 project to be financially nonviable. The proposed plant will be used as a peaking plant. Gas supply shortages may not affect performance of the peaking plant as supply is assured during peak hours. APGC has entered into a medium-term gas purchasing agreement and is working to enter into a long-term gas supply framework with Oil India Limited and Gas Authority of India.

F. Lack of Community Support

8. The recently enacted (Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Bill (2013) may impact land acquisition and resettlement in the project. The bill will become effective from 2014. Lack of community support due to social safeguard issues in the project-affected area may cause delays in project approval and project implementation for tranche 3, Lower Kopili hydropower project. Baseline social studies and extensive consultations will be conducted in the project-affected areas. A social impact assessment and community development plan, including support for livelihood opportunities in the project-affected area, will be prepared and compensation aligned with the requirements of the bill to minimize this risk.

Summary of Risks and Mitigating Measures

Risk Description	Risk Assessment	Mitigation Measures or Risk Management Plan
Weak financial management systems, internal audit procedures, and asset accounting and management; and noncompliance with key financial and auditing requirements	High	The executing agencies have provided time-bound action plans to rectify financing management issues. Specific covenants and undertakings are incorporated to the project documents.
Project implementation delays and cost overruns may cause the tranche 1 project to not be financially viable	Medium	Engineering due diligence and capacity building support are provided in the program and advanced contracting was undertaken to avoid delays. A conservative exchange rate was used to estimate the project costs.
Acidic river water may cause damage to turbines reducing the lifespan of the Lower Kopili hydropower project in tranche 3	Medium	The design features of the turbines, associated infrastructure, including dam structure, will be modified to ensure longevity of the hydropower plant.

Risk Description	Risk Assessment	Mitigation Measures or Risk Management Plan
Delay in construction of evacuation transmission line from Lower Kopili hydropower power plant	Medium	The evacuation transmission line is included as an integral part of the hydropower project. APGC will coordinate with AEGC in constructing the evacuation line.
Lack of long-term gas supply for the new generation plant at Lakwa may cause the tranche 1 project to not be financially viable	Medium	APGC has entered into a medium-term gas purchasing agreement and is working to enter into a long-term gas supply framework with Oil India and Gas Authority of India.
Lack of community support due to social safeguard issues in the project-affected area may cause delays in project approval and implementation for tranche 3	Medium	Baseline social studies and extensive consultations will be conducted in the project-affected areas. Social impact assessment and community development plan, including support for livelihood opportunities in the project-affected area, will be prepared and implemented to minimize this risk.
Overall	**Medium**	

ADB= Asian Development Bank, AEGC = Assam Electricity Grid Corporation, APGC = Assam Power Generation Corporation.
Source: Asian Development Bank.

G. Conclusion

9. While the overall risk rating for the investment program prior to mitigation is medium, it declines to low after suitable mitigation measures are put in place. Several central and state reform efforts are under way to strengthen the financial management processes. The central government is supporting the state in adopting the treasury single account; upgrading financial management information systems, and introducing streamlined reporting arrangements. They will help mitigate the fiduciary risks inherent in the Assam power sector. Overall, integrated benefits and impacts are expected to outweigh the costs of the risk mitigation measures.