



# Methodology for Rating of Power Projects

**Credit Rating Agency of Bangladesh Limited**



# RATING METHODOLOGY FOR POWER PROJECTS

## Introduction

Infrastructure projects mean and include ventures providing various support services required for the industry, encompassing broadly the sub-sectors such as power, telecom, ports and road net-work. While Rating analysis of infrastructure projects will be similar to those of other large projects, it is desirable that the issues which are critical for the success of the project should be evaluated in depth, the risk factors should be identified and measures of mitigating such risks should be examined.

The important parameters for major Power Projects are as under:

- a) **Promoters Assessment:** Promoters / sponsors should generally be established players having satisfactory level of demonstrated track record in the relevant field along with adequate resources and capability to arrange finance, implement and operate large projects like power plants etc.
- b) **Technical Evaluation:** Factors that require evaluation include:
  - Process details including special features, operational advantage of the plant, etc.
  - Balancing of sectional capacities to achieve overall capacity.
  - Background of EPC contractors / consortium of EPC contractors, their financial strength, bankers' evaluation, Rating from Credit Rating Agencies, comments from embassy, if any, details of similar assignments handled in the past, performance certificate from the users, terms of EPC including penalty cost in respect of delay in implementation, under-performance, performance guarantees etc.
  - Source of supply of major plant and machinery, assessment of past performance, performance guarantee, terms of supply etc.
  - Background of Operation & Maintenance (O&M) contractors, details of similar contracts executed by them, performance report on the O&M contractors, the terms of the contract, bonus / penalty clauses etc.
  - Details of Power Purchase Agreement (PPA) covering fixed charges, variable charges, security package, letters of credit, Escrow account, Govt. guarantee,

implementation schedule, force majeure clause etc. entered into with Electricity Board / Govt./ Electricity Authority, etc.

- Arrangements in respect of evacuation of power, terms including deemed generation and other penalty clauses, right to terminate PPA etc.
- Scope of work, schedule of engagement and fees to be paid etc. to owners / lenders engineers etc.
- Railway sidings, existing / proposed transport facilities and other infrastructure facilities.

**(c) Inputs for production:**

- Fuel Supply Agreement (FSA) with the suppliers including liquidated damages for non supply of fuel, fuel transportation agreement, approval for fuel allocation by Govt., terms and conditions for supply, modes for transportation of fuel, cost of fuel etc.
- Tie-up in respect of other utilities like start-up power, water etc.

**(a) Financial Assessment:**

- Detailed analysis of cost of the project, means of financing with specific emphasis on the justification of the project cost and tying up of finances to ensure timely availability of funds for completion of the project.
- Analysis of financial viability of the project based on the tariff structure under PPA and other underlying assumptions including market assessment in terms of present and future demand-supply gaps, etc.

**(b) Socio-economic impact:**

- Measures taken to keep the pollution within the permissible limit and clearance from the Govt. / Competent Authorities.
- Rehabilitation and settlement of displaced families

**(c) Statutory & other clearances:**

- Techno-economic clearance and approval from Electricity Regulatory Authority/Govt. for the project cost, if required.

- Approval for water from the Appropriate Govt. Authority.
- Pollution Board clearance
- Clearances from Environment, Forest and Civil Aviation Department, if required.
- Approval for land acquisition.
- Import licenses
- Power purchase and fuel supply and fuel transportation agreements.
- Approval for fuel linkage from the Appropriate Ministry.
- External Commercial Borrowing clearance
- Permission for foreign investments, if intended
- Permission for import of capital goods
- Approval for handling and storage facilities of fuel.

**(d) Major Risk Areas:**

- Pre-completion risk – Non-compliance of / not obtaining essential statutory and non-statutory clearances, inability to raise adequate resources, failure of EPC contractors to complete the project in time, failure by electricity boards to complete the inter-connection facility with the plant, delay in supply of construction power, failure by fuel supplier to provide start-up fuel, changes in import duty, increase in the cost of project, interest and exchange rate movement risks
- Post completion risk – defects in plant, operator's failure, increase in fuel cost, inexperienced management, interest and exchange rate movement risk, failure to off-take guaranteed power due to low demand and problem in distribution, fuel supply risk, environmental risk and infrastructure bottleneck, legal risk particularly in operation of Escrow account and in regard to violation of the agreements by various agencies.

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