



**Bangladesh Power Development Board**  
**INTEGRATED MANAGEMENT SYSTEM**  
**(BASED ON ISO 9001:2015, ISO 14001:2015 & ISO**  
**45001:2018 STANDARDS)**

**PROCEDURE FOR RISK MANAGEMENT**



# INTEGRATED MANAGEMENT SYSTEM

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Revision No.: 00

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### 1.0 Purpose

The purpose of this document is to set out a framework for establishing the context, identifying, analyzing, evaluating, treating, monitoring and communicating the QHSE Risks and opportunities.

This document ensures a systematic approach to risk and opportunity management. It also ensures that QHSE hazards & risks and opportunities are identified and appropriate control measures are implemented can be assessed and prescribe standard methodologies in which the risk management process shall be conducted and compliance can be assessed.

### 2.0 Scope

This procedure addresses Mapping BPDB's context in terms of external and internal issues and actions to manage the risks and opportunities posed by the same, determination of process risks related to QHSE, identify current controls and planning of further improvement actions.

This procedure also guides the process to determine potential opportunities, assess the feasibility of Implementation, determine improvement actions and responsibility & time frame for the same.

### 3.0 Terms & Definition

#### Definition

**Risk:** A negative effect of uncertainty,

**Opportunity:** A positive effective of uncertainty,

**Risk Assessment:** a systematic investigation and analysis of potential risks, combined with the assignment of severities of probabilities and consequences. These are used to rate risks in order to prioritize the mitigation of high risks.

**Risk Mitigation:** a plan developed with the intend of addressing all known or possible risks and preventing their occurrence.

**FIWEA (Failure Mode Effects Analysis):** A specific risk treatment method which ranks risks by probability and consequence.

**Enterprise risk - Governance –** Risk related to the operation of a business, execution strategy, systemic issues, material issues, etc.

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**Project risk** - Risk related to the planning and delivery of a product or service and not being able to meet project 'triple constraints' scope/quality, schedule, cost including technology is others,

### Process risk - Compliance

Assurance - Risk relating directly to planning and delivery of a product or service and not being able to meet 1. stability, 2, capability, 3, improvement; inability to achieve consistent outcomes.

### Abbreviations

BPDB – Bangladesh Power Development Board  
MR – Management Representative

### 4.0 Roles and Responsibility

Tasks in Reference Clause nos.	Responsibility

### 5.0 Procedure

For Risk Management, Organization shall first identify the internal and external issues in "Risk and Opportunity Register". During this identification, the interested parties' needs and expectations need to be considered which are listed in "Register for Interested Parties". During determining the risks and opportunities, the following factors need to be addressed:

- give assurance that the quality, environment, health & safety issues are identified and the integrated management system can achieve its intended result(s);
- enhance desirable effects;
- prevent, or reduce, undesired effects;
- achieve improvement

### 5.1 General

- Risks are managed with a focus on decreasing their likelihood, and minimizing their impact if they should occur.
- opportunities are managed to increase their likelihood, and to maximize their benefits if they should occur.
- Where risks and opportunities overlap, the best appropriate method for managing them shall be ascertained, given the situation at hand. Elements of such "blended" uncertainties may require methods which both address the negative risk and positive opportunities.

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### 5.2 Management of Risks

- Risks are identified in “Risk and Opportunity Register” and appropriate actions are taken.
- Additional risks may be identified by any employee at any time.
- This document includes the identification and mitigation plans for key risks associated with the defined process. BPDB management reviews these risks and takes action to minimize them.
- Risks identified as part of the Context of the Organization exercise are entered into the Risk and Opportunity Register. This indicates a rough priority, as well as a selected risk treatment method.

### 5.3 Risk identification

- The need for risk identification is determined on the basis of information and trends regarding the performance and effectiveness of the quality management system, in particular:
  - Reject and scrap rates
  - Product and service nonconformities
  - Process problems and nonconformities
  - Supplier quality performance records
  - Field service records
  - On time delivery performance
  - Production equipment maintenance records
  - Customer feedback and complaints
  - Quality management system audit records
  - Data loss/corruption incidents, network outages,
- Risks are identified and evaluated when quality performance data indicates that there are trends of decreasing quality capability and/or effectiveness of the quality management system. For example: increasing incidence of product nonconformity; excessive equipment problems; or increasing number of audit findings against the same quality system process or department.

### 5.4 Opportunities

- An opportunity is a set of circumstances which makes it possible to do positive things for example:
  - Develop new products and services
  - Develop new markets and/or increase market share
  - Improve work environment
  - Improve productivity
  - Improve operational efficiency (reduction of resource use, reduction of waste, etc.)
- Opportunities may be identified as positive I effects of risks is in a risk forcing implementation of a risk reduction measure that is beneficial in a broader context i than just reducing this particular risk For I example, health risks may require measures to improve working environment However these measure also create opportunities to attract : better qualified employees, improve

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morale and job : satisfaction, and reduce turnover, and so be health risk creates opportunities to improve the overall job satisfaction

- Taking or not taking an opportunity presents: different levels of risk. To evaluate these risks taking (or not taking) the opportunity is defined as a risk management project, and the associated risks are evaluated as for any other.
- The methods for risk assessments vary, but should always include a means of identifying the risk under examination, and a description of the result of the risk assessment.

### 5.5 Initiating risk management projects

Risk management projects may be proposed by any organizational unit and any employee in BPDB. Requests for initiating a risk management project are submitted to MR.

Only MR has the authority to initiate, or approve the initiation of risk management projects. This is to prioritize and direct resources where risk control is most urgent.

**5.6 Risk Matrix Analysis:** This is a structured, formal method for assessing risks using a risk matrix.

- It is a top-down approach, using a list of known internal and external issues and consequences and impact related to OHS and environmental issues as input for the risk analysis. The risk matrix method is the most flexible and versatile, as it can be applied to any product, processor system, and does not require detailed knowledge about the system to be analyzed. Other Method: Select this item when some other risk assessment method will be used, for example: Failure Mode Effects Analysis (FMEA), Failure Mode, Effects and Criticality Analysis (FMECA), Fault Tree Analysis (FTA), Hazard Analysis and Critical Control Points (HACCP), Hazard Operability Analysis (HAZOP), Hazard Identification and Risk Assessment (HIRA) etc.
- Risk management projects are periodically reviewed to ensure that they remain relevant and up to date. Review dates are scheduled, and the review are documented.
- Detailed methods may include FMEA (failure mode effects analysis), SWOT (strength, weakness, opportunity and threat) or other tools. No single method is used for all risk assessments; the tool selected should be the best tool applicable to that particular risk analysis. ISO 31010 can be used as guidance on the selection of risk tools.
- Where FMEA style risk treatment is deemed optimal, an entry shall be made in the Risk Register. When using the Risk Register, the following steps are to be followed.
- Each type of actual risk assessment is conducted by:
  - Identifying the issue.
  - Identifying the consequence or impact for which the issue will most likely dominates.

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- Assigning a probability rating to the identified issue; this probability is comprised of two elements: likelihood and previous occurrences. Each element is given a qualitative scope of low, medium and high.
- A Severity rating will be given similarly as low medium and high.
- Calculating a final Risk Factor based on the equation;  
**PROBABILITY RATING X SEVERITY RATING = RISK RATING**
- The final risk rating will be considered from the below matrix:

Risk Matrix			
Severity	Probability		
	Low	Medium	High
Low	Low	Medium	High
Medium	Medium	Medium	High
High	High	High	High

- Assigning a consequence rating if the risk were to be encountered; this consequence is comprised of five elements: eventual loss of contract; negative impact on existing customers; inability to meet contract terms, any violation of statutory regulations or law; impact on (Short Client I Name]'s reputation; and estimated cost of correction. Again, each element is given a qualitative rating as above Risk Matrix. The final Risk Rating is the higher of the two elements.
- Management will decide whether to reject the subject due to the risk, or accept the risks after the development of a risk mitigation/action plan. The action plan must be documented, either in the Risk Register or in another document which must be convenient and effective.
- A High Risk Rating issue must be solved at the earliest and will be considered significant. Actions need to be taken in such a way that after the action the risk will be lowered to a medium risk.
- The Medium Risk Ratings will be also considered to take action and after proper action it should be lowered to a risk rating of Low Risk Rating.
- A Low Risk Rating is acceptable to work and some cases Medium risks will also be acceptable to continue with conditions mentioned either in the Risk and Opportunity Register or in attachment with suitable control measures.
- If a risk includes a potential positive aspect, management may elect to conduct an opportunity pursuit assessment on the positive aspect, as defined below.

### 5.7 Management of Opportunities

- As part of the electricity generation and distribution process, BPDB shall seek out opportunities which could enhance its financial viability and market position. For example;
  - obtaining new contracts

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- obtaining access to new markets
  - identification of new industries which may be served by BPDB
  - development of new offerings that are within the scope of capabilities of BPDB
  - streamlining existing processes to improve efficiency and reduce costs
- Opportunities are also identified as part of the "Context of the Organization Exercise" described in [Procedure for Context of the Organization].
  - Discussing and analyzing opportunities are done by top management. If made part of the management review activities, these shall be recorded in the management review records
  - To help determine which opportunities should be pursued, the Opportunity Register may be used to conduct an "opportunity assessment." This will be included in the "Risk and Opportunity Register.
  - The opportunity pursuit assessment is
  - conducted by:
    - i. Identifying the issues
    - ii. Identifying the opportunity of the issue.
    - iii. Assigning an action plan to achieve the opportunity.
    - iv. For analyzing opportunity and achieving expected result, additional attachment of execution plan and tracking can be made with the register. The document may have the followings:
      - a. Pursue the opportunity
      - b. Explore the opportunity in greater detail before proceeding
      - c. Accept the opportunity, but under limited and controlled conditions
      - d. Decline the opportunity, typically based on a high expected risk or low benefit-
      - e. If an opportunity includes a negative aspect, management may elect to conduct a risk assessment on the negative aspect, as defined above.
- Records of the implemented opportunity will be kept according to a convenient form.

### 5.8 Consultation

Consultation shall take place at every stage of the risk management process. Concerned head of the department, contractors' representatives and other interested parties (who will perform work in BPDB) shall consult with all the staffs regarding the:

- New work processes, equipment or tools
- Identification of hazards/aspects
- Establishing priorities for the assessment of hazardous activities and during the risk assessment process
- Deciding on control measures to manage risk
- Reviewing the effectiveness of the implemented control measures and

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identifying whether further hazards and risks created by the chosen controls

- Deciding the contents of the QHSE procedural documents MR shall assist for the above-mentioned activities.

### 5.9 Risk and Opportunity Treatment Methodology

A basic Risk and Opportunity treatment method will be as following:

- STEP 1:** Identify the hazards/aspect/risk/opportunities for improvement;
- STEP 2:** Identify who can be harmed or what can be damaged or improved and how;
- STEP 3:** Evaluate the risks/impact/opportunities and select additional control measures or improvement actions (If required);
- STEP 4:** Implement the selected control measures(s) and improvement actions;
- STEP 5:** Monitor the control measures and improvement actions.

### 5.10 Implementation & Review

- Procedure for Context of the Organization and its effectiveness will be checked and reviewed during internal audits.
- The audit findings will be placed before Managements Review Committee meeting along with the recommendation for improvement.
- Action is taken on the basis of review meeting decision.

### 6.0 References

- 1) Risk and Opportunity Register
- 2) Risk Project

### 7.0 Appendix

None

### 8.0 Revision History

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