*[Seal: \*Mangistau Power Distribution Company\**

*\*Joint Stock Company\**

*\*Republic of Kazakhstan\**

 *\*Board of Directors\*]*

Approved

Protocol of the Board of Directors of

JSC “Mangistau power distribution сompany”

September 19, 2013, No.38

**Rules for identification and assessment of risks of**

**JSC “Mangistau power distribution сompany”**

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**MPDC RULES 25-05-13**

**Aktau, 2013**

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**RECORD OF REVISIONS AND ADDITIONS**

|  |  |  |  |  |  |
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| **Sr.No.** | **Revision No.** | **Sheet No.** | **Date of revision/addition** | **Verification date** | **Signature of the authorized person** |
| **1** | **2** | **3** | **4** | **5** | **6** |
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**1 Application**

1. The present Rules for identification and assessment of risks of JSC “Mangistau power distribution сompany” (hereinafter – the Rules) have been developed in accordance with the Risk management policy of JSC “Mangistau power distribution сompany” (hereinafter – the Policy) and other internal normative acts governing JSC “Mangistau power distribution сompany” (hereinafter – the Company).

 2. The Rules define the procedure for identification and assessment of risks, as well as the control over current risks and monitoring of risk management methods.

 3. Risk identification is focused on timely determination and registration of possible events, which may adversely affect implementation of the objectives and tasks set forth by the Company and each employee, as well as on determining the direction and necessity for improvement risk management process.

 4. Risk assessment is aimed at highlighting the key risks form the risk register with identification of possible reasons and consequences of such risks, including in quantitative terms using methods of qualitative and quantitative analysis.

5. Quantification of risks is necessary for understanding of the significance of each risk, assessment of the efficiency of costs for risk management, as well as establishing the parameters (conditions) of agreements when transferring risks to third parties.

6. The accuracy level of quantitative assessment is identified by the Company's needs and only gives benchmarks, providing optimal balance between costs of risk transfer and possible consequences.

7. The more detailed approach to risk identification and assessment may be reflected in documents that regulate management of certain risks of the Company in quality management system.

8. Management and analysis of the efficiency of risk identification and assessment processes is performed within the framework of assessment of the risk management system that is carried out by the Internal Audit Service of the Company and/or the external auditor.

9. Compliance with the Rules is mandatory for all structural units and employees of the Company.

10. Basic definitions:

1) **Impact of risk –** is theimpact on operational conditions of the Company and changes to it;

2) **Possibility –** is thelikelihood of the potential event affected by external and/or internal factors, which may have positive impact on achievement of certain goals of the Company;

3) **Risk map –** is a graphical or text description of the limited amount of risks of the Company, arranged in a rectangular chart, where one “axis” shows the risk impact or significance, and the other shows its probability or rate of occurrence;

 4) **Key risk –** is the risk that may lead to adverse negative consequences. In case if the potential impact is beyond the retention capacity of the Company, it becomes the key risk;

 5) **Risk committee –** is the advisory board under Company Management that considers and provides recommendations on risk management;

 6) **Responsible unit -** division of the Company responsible for organization of risk management process;

 7) **Residual risk –** is the risk, remaining after acceptance of risk response measures by the staff;

 8) **Management –** is the Company management;

 9) **Inherent risk –** is the Company’s risk occurring in the event of the lack of measures from the management for its retention or reduction;

 10) **Risk –** is the confirmation of the uncertainty, related to the events or actions, which may have consequences for the achievement of goals and tasks by the Company, as well as accumulation of losses;

 11) **Board of Directors –** is the Board of Directors of the Company;

 12) **Risk owner –** is a person (staff member/division/collective body) responsible for all aspects of management of a certain risk, in particular, for reduction of probability of risk or its impact on the Company;

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13) **Event –** is an incident occurring as the result of external or internal factors, which may affect the achievement of objectives

**3 Identification and assessment of risks**

 11. Each staff member of the Company identifies and assess risks on an ongoing basis, in order to determine their impact on achievement of Company’s objectives, in particular the objectives of each employee.

 Identification of risks is performed the basis of previous experience and future possible evens. In order to identify risks a combination of different measures and instruments is performed, the most essential measures are shown in Appendix 1 to the present Rules.

 In case if the risk is identified for the first time, the Company’s unit organizes the work on risk assessment, determination of its significance, and its inclusion into the Risk register and Risk map.

 12. Risk identification is performed in a mandatory manner with development of plans, analysis of deviation from planned values and accounts, as well as in cases of unplanned losses of the Company.

 13. When making decisions, the Company’s bodies indicate the risks associated with the adoption of such decision in the explanatory materials.

 14. The responsible unit annually performs activities on full scale determination of events and identification of risks, that may affect Company’s actions.

 15. Full scale identification is performed by the responsible unit once a year through questioning and/or interviewing Company’s staff members as well as members of the Management Board and Board of Directors.

 Questioning is carried out by the responsible unit in written or electronic form. The form and estimated list of questions are provided in Appendix No.3 to the present Rules.

 16. In order to specify individual questions during risk identification, the responsible unit may conduct an interview of management members of such units, corporate secretary, administrative secretary, managing directors and members of the board.

 Once identified, the risks are subjected to assessment. The assessment process is performed in order to determine the key risks. The risk assessment includes qualitative and quantitative analysis.

 The impact of potential risks must be assessed individually or in connection with the whole Company.

 17. The risks are assessed from the point of view of their full impact (inherent risks), as well as with consideration for net impact after performing management measures (residual risks).

 18. Initially the qualitative analysis of identified risks is performed.

 Based on the results of the qualitative analysis, the possible reasons (conditions) for risks must be determined, as well as possible consequences of risk realization, expert estimate of probability, impact, and proposed measures for risk management.

 The qualitative analysis of identified risks is performed by way of questioning the Company’s subdivisions (risk owners), in the form in accordance with Appendix No.3 to the present Rules.

 19. In order to provide risk compatibility the assessment is performed based on indicators, such as “risk frequency and probability”, “impact time”, “risk dimension” by way of assigning scores in accordance with the scale form, specified in Appendix No.4 to the present Rules.

 20. Risks, which are effectively managed by the organization, should not be considered as key risks or problematic.

 21. The responsible unit provides availability of the scale form for risk assessment.

 22. Assessment of risk impact is performed in monetary terms on the basis of Company’s retention capacity, defined by internal normative documents.

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 For risks, the impact of which is complicated to assess in financial indicators (for example, personnel risk, reputation risk etc.), the characteristics are added, which show the dimension of a risk in a comparable scale in accordance with the scale form, specified in Appedix No.4 to the present Rules.

 Risks, which cannot be subjected to quantitative analysis or there is no reliable statistical information for their modeling, or the creation of such models is not viable in relation to losses, are assessed only on qualitative basis.

23. The quantitative analysis of risks is performed by the responsible unit along with risk owners within the framework of qualitative analysis. In order to increase the accuracy of qualitative analysis, the responsible unit may involve other parties.

 During qualitative analysis the risks are assessed on the basis of maximum possible loss indicator from each specific risk. Different methods and models can be utilized for qualitative assessment, including, but not limited to methods specified in Appendix No.5 to the present Rules.

 24. Identified and analyzed risks are subject to systematization. Risk systematization is carried out by the responsible unit through formation and maintenance of **Risk register**, in accordance with the present Rules.

 In order to provide a visual image of impact and probability of a risk, the responsible unit creates the **Risk map,** in accordance with the present Rules.

 25. Based on the results of performed actions on identification and assessment of risks, the list of key risks is created, which is then presented to the Board of Directors in accordance with the established procedure.

 26. The responsible unit carries out actualization of the current status of the key risks on the basis of creation of quarterly Risk management report.

**Risk register and risk map**

27. Risks are systematized by the responsible unit if a form of the Risk register according to Appendix No.6 to the present Rules. Form and the level of register detalization may vary depending on expansion of risk management system.

 28. On the basis of the Risk register, the risks are presented in groups by following categories:

 1) **strategic risks –** risk of losses as a consequence of changes or errors (insufficiencies) in identifying and realization of Company’s development strategy, changes in political environment, regional economic situation, industrial fall and other external factor of systematic nature;

 2) **financial risks –** include risks, related to capital structure of the Company, loss of profitability, fluctuation in exchange, credit risks and interest rate fluctuation etc;

 3) **legal risks –** risks of losses as a result of noncompliance with the requirements of applicable legislation, as well as internal rules and procedures;

 4) **operational (production) risks –** risks of losses as the result of insufficiencies or errors during internal processes, made by employees (including staff member risks), during operation of informational systems and technologies (IT-personnel), unscheduled failure of the main production equipment (technological risks), decision making in conditions of lack of sufficient information, as well as due to external events, including natural, technology-related risks, ecological risks (risk of damaging the environment as the result of failure), risks related to personal injury or health (as the result of emergency or noncompliance with health and safety requirements, industrial and fire safety, emergency prevention).

 29. The responsible unit coordinates the created Risk register with all divisions of the Company.

 All questions raised during coordination are discussed at the Risk committee, following which the final decision is made in a form of a protocol.

 30. Risks, in the Risk register, are accrued to specific risk owner, which performs risk management.

 31. On the basis of the received probability and impact score the responsible unit creates the Risk map.

 32. The Risk map allows to assess the relative significance of each risk (in comparison with other risks), as well as determine the key risks that require development of management measures. The creation of the Risk map allows:

 to determine the reduction potential which can be applied to all processes in the Company;

 to develop the list of key risks of the Company and provide specific measures of management;

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determine the priority of risks and develop appropriate distribution of financial resources.

3. The Risk map is split into several areas, highlighted with different colors.

 1) Red zone – shows the risks which are critical for the Company, in relation to high probability of occurring, or to serious potential losses, which may affect financial viability of the Company.

 2) Yellow zone – shows the risks, which have moderate probability of occurring and moderate potential impact on financial viability.

 3) Green zone – shows the risks, which have low probability of occurring and (or) do not affect financial viability.

 Graphical distribution of areas is presented in Appendix No.7.

 34. The Risk map shows number, identifying risks (according to the Risk register) based on frequency (probability) of occurring and dimension (impact) of risk.

 35. The status change is reflected in the Risk map by moving the risk number into specific area of the Risk map.

 36. Following the identification results and assessment on a scale of the whole Company, the Risk register and the Risk map are reviewed and corrected annually.

 37. Each year the risk register and the Risk map are approved by the Board of Directors.

 The risk register may be expanded throughout the year by new identified risks within Risk management record, provided to the Board of Directors.

 The responsible unit provides periodic (quarterly) report to the Board of Directors in the form according to Appendix No.8 and based on the requirements, specified in Risk management policy of the Company.

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 Appendix No.1

to the Rules for identification and assessment of risks of

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**Methods of identification of risks**

1) **Based on the set objectives (cause and effect analysis).** Based on the set objectives, the potential events are determined that may affect their achievement. The events are identified by risk owners and are subject to coordination with the unit, responsible for risk management.

2) **Seminars and discussions (brainstorming).** Organizational discussions (barnstorming, roundtable meeting and etc) of potential events, which may affect organization and achievement of objectives, are conducted with the Company’s employees.

 Such discussions may be conducted within the framework of each structural unit in order to determine the events (risks) that affect the activities of each such department and Company as a whole.

 3) **Questionnaire and interviewing.** The responsible unit conducts a questionnaire to a certain number of employees in paper and electronic form using a list that contains questions on different or specific aspects of activity of the Company, aimed at risk identification and finding ways of solving them.

 The responsible unit conducts specific interviewing of the key employees (experts) of the Company for open discussion of existing and potential risks and ways of solving them.

 4) **Loss data base.** The responsible unit conducts constant monitoring of incurred losses, information on which also allows to identify events that have negative effect on Company’s activities. Additionally, the loss data base can serve as the foundation for qualitative risk analysis. The data base is formed on the basis of accounting by structural units of the Company, and can also include data from external sources.

 5) **Industrial and international comparison.** Identification of events is performed on the basis of comparison of events, specific for organizations, similar to the Company in industrial specialization and functional activities.

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**Risk registration form**

Structural unit:

Event (risk):

Causes (factors):

Possible negative consequences (expected impact, tenge):

Proposed response measures (risk management):

Control measures:

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**QUESTIONNAIRE ON RISKS**

1. What events may affect achievement of objectives and solution of problems?

2. What events can lead to losses?

3. What events can affect current processes?

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**Risk frequency and probablity**

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| **Score** | **Meaning** | **Frequency and probability** |
| **1** | Very rare | Once in 7 or more years (or 5% probability of occurring) |
| **2** | Rare | Once in 5 years (or 25% probability of occurring) |
| **3** | From time to time | Once in 3 years (or 40% probability of occurring) |
| **4** | Frequent | Once per year (or 80% probability of occurring) |
| **5** | Very frequent | Once in half a year or more often (or 95% probability of occurring) |

**Period of risk impact**

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| --- | --- |
| **Score** | **Period of impact** |
| **1** | Sufficient time for corrective action  |
| **2** | Risk impact with lag periods |
| **3** | Risk occurs with an immediate effect |

**Risk dimension**

|  |  |  |
| --- | --- | --- |
| **Score** | **Meaning** | **Potential loss** |
| **1** | Insignificant | within active retention capability |
| **2** | Noticeable | within retention capability |
| **3** | Major | minimum: within 25% of liquidity loss or 50% revenue loss |
| **4** | Critical | minimum: within full revenue loss or 25% net worth loss |
| **5** | Catastrophic | starting from minimum: full revenue loss or 25% net worth loss |

**Nonfinancial indicators of risk impact**

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| --- | --- | --- |
| **Score** | **Degree of impact** | **Potential loss** |
| **1** | Insignificant | No consequences whatsoever from risk realization |
| **2** | Low | Insignificant consequences from risk realization |
| **3** | Moderate | Insignificant consequences that may be fully corrected |
| **4** | Significant | Very significant consequences, which may be corrected up to a certain degree |
| **5** | Catastrophic | In event of risk realization the company will not be able to recover from consequences |

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**Methods of qualitative risk analysis**

1. **On the basis of property value,** which can be damaged as the result of risk. Within the framework of such analysis the financial damage is determined and corrective cost of property that may be damaged and is subject to repair or replacement. It is usually used for qualitative assessment of operational risks (material damage to the property as the result of industrial disasters, fires etc.).

2. **Based on calculation of lost income.** The lost income or constant daily expenses, which company may incur during downtime, are calculated. Then the received value is multiplied by a number of downtime days as the result of risk. Such estimation is usually used for production interruption risk and delivery fail.

 3. **On the basis of comparative analysis/establishment of standards.** Such assessment utilizes the decisional statistics or standards established within legislation on possible amount of losses, which must be covered. For quantitative analysis, scenarios of their occurrence and the parties that may be involved (suffer damage), as well as the general impact of such risk are usually evaluated, and the maximum possible damage is determined on the basis of existing information (statistics or established standard) on the cost of damage.

 4. **On the basis of statistical models.** Used for risks, which have specific monetary terms and depend on certain external factors, and are based on formation of statistical dependencies. Such analysis allows to identify with certainty the cost of possible damage from risk and in which conditions such risk can be critical for the company. Along with that such method is recommended for use if there are well-defined links between events and to a certain extent, a reliable probability of an event occurring.

 5. **On the basis of stochastic (probable) models.** These methods are used when the correlation dependence on external factors is difficult to establish because the risk has a clearly expressed probabilistic nature. Also, these methods are recommended for the analysis of risks that can be expressed in monetary form.

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**Risk register of JSC “Mangistau power distribution сompany”**

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| --- | --- | --- | --- | --- | --- | --- |
| No. | Risk code | Risk name | Key performance indicator (KPI)name | Acceptable level of deviation from KPI(Tolerance level to the risk) | Inherent risk assessment | Risk factors(reasons) |
| Planned level | Factual level | Probability score (classifier) | Damage extent score (classifier) | Impact time score(classifier) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk minimization plan** | **Residual risk assessment** | Consequences of risk realization | Risk owner |
| Action | Estimated cost of an action, mln. tenge (specify, if possible) | Time frame for action | Person/division responsible for an action | Goal of an action (reduction of probability; reduction of impact; reduction of probability and impact; risk retention at the fixed level | Probability score (classifier) | Damage extent score (classifier) | Impact time score(classifier) |
| 11 | 12 | 13 | 14 | 15 |  |  |  | 16 | 17 |

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**Distribution of zones on Risk map**



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**Risk management report structure**

1. General information

2. Realization of action plan for key risk management

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| --- | --- | --- | --- | --- | --- | --- |
| No. | Name of the risk | Curator/risk owner | Action | Performance period | Goal of an action | Execution |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. Information on realized risks. Negatives effects from risk realization.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Name of the risk | Realized events, incidents | Factors (reasons) | Negative effects from risk realization |
|  |  |  |  |  |

4. Changes in key risk map of JSC “Mangistau power distribution сompany”

5. Retention capacity estimate

6. Financial risks (in accordance with management rules for specific risks).

7. Key risk indicators

8. Information on nonobservance of risk limits (if happened);

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| --- | --- | --- | --- | --- |
| No. | Limit name | Established limit | Factual level | Reasons for deviation and measures for correction of nonconformities |
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9. Insurance information in accordance with the requirements of the Policy on organization of insurance protection in JSC “Samruk-Kazyna” and national development institutes, national companies.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Name of the subsidiary fund | Name of the subsidiary company | Risk register | Is the risk covered by insurance? (Yes/No) | Other measures of risk mitigation or arguments on possibilities of accepting the risk | In case of insurance coverage | Filled in in the event of property loss risk |
| Beginning of the insurance coverage | End of insurance coverage | Covered amount | Maximum limit per one event | Franchise | Insurance premium | Beginning of the insurance coverage | Property insurance basis | Availability of production downtime insurance as the result of property loss risk |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

10. Information on significant deviations from established processes of risk management (if occurred);

11. Other.