

**STRATEGIC GOAL**

Under conditions of limited capability of the TPP construction market in the Russian Federation, the target priorities of the ASE – NIAEP United Company till 2030 are as follows:

- retention of segment share in the structure of the Company's proceeds at the level of 2013 (18 %);
- entrance of the Company to the international thermal power markets.

**PRIORITY DIRECTIONS**

Priority regions are the countries, where the Company performs its activity within the main core of business: Bangladesh, India, China, Vietnam, Turkey, etc.

**MID-TERM PLANS**

Generation of portfolio of projects and reference experience of project implementation in Russia and abroad, including PMC projects.

**RISKS**

High uncertainty of market volumes till 2020 (see details in [Section 1.4.3.2. Strategy Implementation Risks](#)).

**1.3.2.5. PROJECT MANAGEMENT CONSULTING MARKET (PMC SERVICES)**

In recent years the project management consulting market (PMC market) has been actively developed due to growing complexity of project solutions and increase in duration and budgets of capital construction projects (see Fig. 14).

Portfolios of all large international engineering companies/EPC contractors, such as Bechtel, URS, Jacobs, Parsons, et al., contain a considerable share of PMC services. On the average, the share of PMC services in the project cost amounts to approximately 5 % of an EPC contract.

To render consulting services in the field of project management, the United Company applies its strong competencies based on the projects of construction of complex engineering facilities (nuclear and thermal power plants, RW and SF handling facilities) and advanced project management technology for construction of NPPs – Multi-D. In addition, the Company has references of PMC services rendered within the projects of construction of Tianwan NPP (China) and Kudankulam NPP (India).

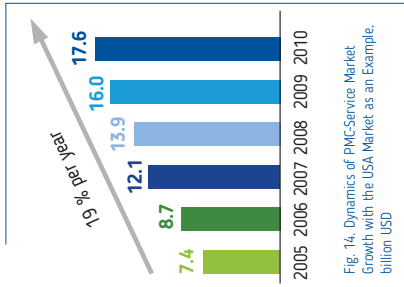


Fig. 14. Dynamics of PMC-Service Market Growth with the USA Market as an Example, billion USD

**STRATEGIC GOAL**

Creation of references in the segment through implementation of PMC projects. The United Company may act as a PMC contractor for certain types of work and in this role it may be one of the partners in projects.

The Company's activity in the segment of PMC services is a task of strategic importance not only within this segment, but also in other segments. Implementation of PMC projects within the projects of construction of complex engineering facilities (TPP, RW and SF handling facilities, etc.) will allow the Company to form a basis for development of EPC activity in these segments.

**RESULTS OF 2014**

- Schemes of partnership for promotion of PMC services in the Russian market were elaborated.
- Standard commercial proposal for PMC on the basis of Multi-D was prepared.
- List of PMC services to be promoted in the Russian market was created.
- Four consulting workshops were held on promotion of PMC in priority regions: Brazil, Argentina, China and Russia.



**In February, 2014 the ASE – NIAEP United Company took part in the 4<sup>th</sup> Russia & CIS Oil & Gas Summit.**



- Within elaboration of a draft EPC contract on construction of the Paks NPP Units 5 and 6, a requirement management system was applied which enabled efficient organization of work with the customer on negotiation of over 13 thousand requirements for the nuclear power plant, design and construction technologies, and project management in whole (see details on the system in [Section 2.3.2.4. Information Technologies](#)).

**PRIORITY MID-TERM TASKS**

- assurance of Company's recognition by industrial customers;
- winning a pilot project in the capacity of a PMC consultant in the course of construction of oil and gas facilities;
- preparation of a standard PMC proposal for complex engineering facilities in various fields;
- elaboration of standard schemes of partnership, standard agreements, and proposals;
- generation of portfolio of projects and reference experience of project implementation in Russia and abroad (development of competencies and brand in the capacity of a consultant);

- carrying out regular workshops in Russia and abroad;
- winning one PMC project a year (starting from 2016).

**RISKS**

High competence in the international market (see details in [Section 1.4.3.2. Strategy Implementation Risks](#)).

# 1.4. OPPORTUNITIES AND RISKS

## 1.4.1. Political Context of Operation

The first half of the year 2014 was characterized by an upsurge in tension in the global markets. The events in the Middle East and Ukraine led to an even higher escalation. Influence of political factors on the global economy is rapidly growing, so, socio-political and regulatory risks connected with possible limitations of activity of the ASE – NIAEP United Company in the international market have increased.

## 1.4.2. Macroeconomic Context of Operation

In 2014, the inflation rate in Russia hit 11.4 % (compare to 6.5 % in 2013 and 6.6 % in 2012). Last time, double digit inflation at year-end in the Russian Federation was registered in 2008 (at that time it amounted to 13.3 %). The average annual US dollar exchange rate against ruble increased by 21 % in 2014 compared to 2013. On January 30, 2015, Standard & Poor's Ratings problems with employment of funds required for Services lowered the short-term and long-term ratings of JSC Atomenergoprom (member of the State Corporation Rosatom) from BBB-/A3 to BB+/B, forecast is negative. A downgrade of JSC Atomenergoprom places the ASE – NIAEP United Company at risk of limitation of access to foreign funding sources (foreign credits and investment flows), what may cause cost increase and problems with employment of funds required for implementation of international projects.

Devaluation had a significant impact on the financial state of the ASE – NIAEP United Company, since the Company's proceeds are mainly formed through the international projects. However, we must upscale efforts to assure financing in the extent required for implementation of projects in the international market.

Table 2. External Challenges: Opportunities and Risks, PEST-Analysis

| Factors   | Influence   |
|---|---|
| Political pressure on the part of the USA and the EU caused by a crisis in Ukraine, including introduction of sanctions   | <p><b>Political Factors</b></p> <ul style="list-style-type: none"> <li>• Limitation of access to funding sources</li> <li>• Limited opportunities for participation in projects in the international markets financed by EBRD</li> <li>• Risks of limitation of access to international equipment and technologies</li> </ul>   |
| Introducing retaliatory sanctions on the part of Russia   | <ul style="list-style-type: none"> <li>• Possibility of limitation of access to international equipment and technologies</li> <li>• Suspension of current projects in the territory of Ukraine (Khimelnytsky NPP)</li> <li>• Limited opportunities for participation in new projects (decommissioning of facilities at Chernobyl NPP)</li> </ul>  |
| Complicated political situation in Ukraine  | <ul style="list-style-type: none"> <li>• Creation of conditions for winning new projects in the territory of SEA countries, including outside the NPP construction segment</li> </ul>   |
| Development of cooperation with the countries of Southeast Asia, first of all, China  | <ul style="list-style-type: none"> <li>• Creation of additional factors increasing the Company's competitive strength in the global market</li> </ul>   |
| Support of the State Corporation Rosatom projects in the international markets by the Government of the Russian Federation, including readiness to provide public loans to countries building NPPs on the basis of the Russian design | <ul style="list-style-type: none"> <li>• Opportunity to win new contracts in the international markets</li> <li>• High risks of project implementation in countries with lack of infrastructure and qualified personnel</li> </ul>  |
| Enhancement of interest of developing countries in development of their own nuclear energy  | <ul style="list-style-type: none"> <li>• Improvement of competition in target markets, first of all, of developing countries</li> </ul>   |
| Support of promotion of nuclear technologies in the international markets by the Government of China and Korea  | <ul style="list-style-type: none"> <li>• Growth of the market of RW and SF handling facilities and NPPF decommissioning which is potentially accessible for the Company (with consideration of Nukem asset in Europe)</li> </ul>  |
| Decision on nuclear power phase-out by a number of European countries   | <p><b>Economic Factors</b></p> <ul style="list-style-type: none"> <li>• Appreciation of equipment and services purchased from foreign partners and subsequent risks of cost increase and profitability decrease.</li> <li>• Considering that the Company's proceeds are to a large extent formed through contracts in the international markets and denominated in foreign currency, there is an opportunity for growth of key performance indicators.</li> <li>• Appreciation of credit financing</li> </ul> |
| Depreciation of the ruble   |   |
| Limitation of access to financial markets of Europe and the USA   |   |

10. The analysis is carried out on the basis of statistical data of the Central Bank of the Russian Federation.

Table 2. External Challenges: Opportunities and Risks, PEST-Analysis (cont)

| Factors  | Influence  |
|--|--|
| Credit rating downgrade of the country in whole and of JSC Atomenergoprom  | Appreciation of credit financing<br>Appreciation of equipment and services purchased in the country - risks of profitability decrease<br>Generation of additional incentives for implementation of initiatives on efficiency improvement of the main processes in the Company<br>Mid-term risks of correction of investment programs on construction of power engineering facilities worldwide, including NPP, towards decrease as a result of contraction of electric energy demand.<br>Limited financial resources of prospective customers of power engineering facilities and subsequent strengthening of competitive positions of companies which may provide credit financing by the project<br>Risks of reduction of state funding for nuclear energy development programs  |
| Growth of inflation rate in the country  |  |
| Development of global economic crisis  |  |
| Fall in oil prices   |  |
| Fall in gas prices as a result of shale gas expansion  |  |
| Development of technologies of low- and mid-power reactors   |  |
| Limited access to equipment and technologies as a result of sanctions  |  |
| Toughening of requirements for NPP safety increase in process complexity of project solutions, time, and budgets of capital projects |  |
| Competitive pressure caused by technologies of competitors from Korea and China  |  |
| Lack of qualified workers and engineers in the Russian Federation  |  |
| Lack/absence of nuclear energy specialists for NPP construction in developing countries  |  |
| Growth of level of public confidence in nuclear energy   |  |
| Negative attitude of the EU and the USA towards Russia and Russian technologies against the background of crisis in Ukraine          |  |
|  | <p><b>Technology Factors</b></p> <ul style="list-style-type: none"> <li>Decrease in competitive strength of NPP compared to gas energy facilities, necessity to introduce technologies providing for project cost reduction</li> <li>Demand for own technology of low- and mid-power reactors</li> <li>Necessity to search for partners ready to provide replacement technologies</li> <li>Opportunities for development of activity conditioned by the world's leading position of the Russian NPPs in terms of safety</li> <li>Significant opportunities for application of Multi-D technology for promotion in the PMC market in sectors new for the Company</li> <li>Necessity to implement programs aimed at competitive growth of parameters of NPP built by the Russian technology, and subsequent reduction of cost, time and actual volumes</li> </ul> <p><b>Social Factors</b></p> <ul style="list-style-type: none"> <li>Demand for programs of cooperation with higher education institutions</li> <li>Implementation of programs on performance improvement</li> <li>Implementation of own training and coaching programs</li> <li>Capability to train specialists from countries, where NPP construction is planned, forms an additional competitive advantage of the Company</li> <li>Favorable conditions for development of nuclear energy and implementation of the Company's growth plans</li> <li>Risks of the EU market foreclosure for the Company's projects</li> </ul> |

### 1.4.3. Risk Management

#### 1.4.3.1. RISK MANAGEMENT SYSTEM

One of the main factors providing achievement of the Company's strategic goals is risk management. Responsibility for detection, analysis, minimization, and monitoring of certain risks shall be distributed among functional subdivisions of the Company. A special Risk Focus Group shall be appointed for adoption of risk management procedures and coordination of activities of functional subdivisions. Performing its activity, the Group shall be guided by regulatory and procedural

#### RESULTS OF 2014

documents of the State Corporation Rosatom:

- Risk Management Policy of the State Corporation Rosatom;
- Standard field-specific methodological recommendations on management of risks arising in the course of investment projects of construction of nuclear energy, industry, atomic engineering, and instrument engineering facilities;
- and common risk management practice applicable to construction of complex engineering facilities.

In order to improve the risk management system, the following activities were carried out in 2014:

- elaboration of the Regulations for Subprocesses of Risk Management in Construction of Power Engineering Facilities;
- appointment of owners of key common and project risks and owners of compliance risks of JSC NIAEP and JSC ASE;
- issue of order on application of the Uniform Industrial Procedural Guidelines for Risk Analysis in Budgeting and Control of Imple-

mentation of Budgets and Mid-Term Plans of the State Corporation Rosatom and its Organizations in JSC NIAEP;

- elaboration of the Action Plan on Risk Management in Akkuyu NPP Construction Project including Construction and Installation Work (CIW) Stage.

The following measures were carried out within the risk management activities:

- assessment of unforeseen costs and risks influencing on construction rescheduling of the Bushehr NPP Units 2 and 3;

#### 1.4.3.2. STRATEGY IMPLEMENTATION RISKS

Due to the current political and economic situation, the risk map and strategy implementation risk management policy of the ASE - NIAEP United Company elaborated in 2013 were updated as of the end of 2014 (see Fig. 15, Table 3).

In the reporting year, execution of contracts concluded with suppliers of equipment manu-

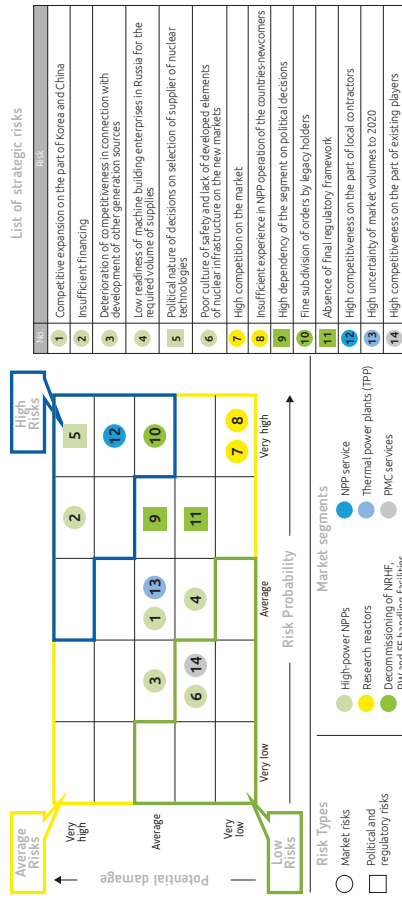


Fig. 15. Risk Map of the ASE - NIAEP United Company

Table 3. Management of the Strategy Implementation Risks

| Risk  | Risk Factors   | Extent of Risk | Risk Management Activities  | Change |
|---|--|----------------|---|--------|
| Competitive expansion on the part of Korea and China  | Active promotion of the Korean APR-1400 technology in the international market, in particular, successful experience of winning a tender in UAE<br>Large-scale transfer of technologies by China (in particular, within the contracts with Westinghouse) and endeavors to enter the international market (Argentina, RSA). | Average risks  | Implementation of Program on NPP Construction Cost and Time Reduction (see Section 2.2.1.1. Production Capital Management).<br>More active position of the Company in cooperation with existing foreign customers in future projects. | ↑      |
| Due to a large-scale transfer of technologies by China, slight shift of geographical priorities is observed, what did not influence the level of risk in whole. |  |                |   |        |

Table 3. Management of the Strategy Implementation Risks (continued)




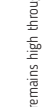







| Risk   | Risk Factors   | Extent of Risk | Risk Management Activities   | Change   |
|--|--|----------------|--|--|
| Insufficient financing   | No financing sources of several countries where the Company has promising projects on NPPs construction.<br>Limited investment resource of the Russian Federation for project financing<br>Limited access to international financing sources<br>Appreciation of available international credit financing | High risks     | Activities on alternative financing sources – commercial lending, involvement of partners and investors in alternative markets, including through regular involvement of the Private institution of Atomic Energy Power Corporation "Rosatom International Network" in carrying out of the specified activities on alternative financing sources.                | <br>Average risk at the end of 2013. The macroeconomic situation conditioned limitation and rise in the cost of access to international financing.  |
| Deterioration of competitiveness in connection with development of other generation sources        | Interest of countries in renewable energy sources<br>Nuclear power phase-out programs of some countries (Germany)<br>Reduction of cost of non-renewable sources (oil and gas)  | Average risks  | Implementation of Program on NPP Construction Cost and Time Reduction (LCOE reduction) (see Section 2.2.1. Manufactured Capital Management).<br>Presentation of advantages of nuclear generation over renewable sources to countries – potential customers.  | <br>The risk remained average throughout 2014, since decrease in competitive strength due to reduction of cost of non-renewable resources is offset by reduction of nuclear power cost (LCOE reduction). At the same time, the growing interest of developing countries (RSA, Argentina) in the nuclear power generation industry compensates for the nuclear power phase-out programs of some countries. |
| Low readiness of machine building enterprises in Russia for the required volume of supplies        | Limited production of Atomenergomash – not more than 4 assembly sets in one production cycle   | Average risks  | Allocation of machine industry supplies in the countries-customers (see Procurement Management Section).<br>Enhancement of efficiency of procurement procedures in the industry.<br>Enhanced support of projects through political channels  | <br>Implementation of import phase-out program with regard to equipment and technologies.<br>Enhanced support of projects through political channels, involvement of Atomic Energy Power Corporation "Rosatom International Network" with regard to GR.   |
| Political nature of decisions on selection of supplier of nuclear technologies                     | High dependency of vendor selection on political influence of countries-competitors (for instance, the USA and the EU)<br>Risks of limitation of access to international equipment and technologies (due to sanctions)   | High risks     | Enhanced support of projects through political channels, involvement of Atomic Energy Power Corporation "Rosatom International Network" with regard to GR.<br>Cooperation with countries – potential customers on elaboration of plan of infrastructure development to achieve the level which is sufficient for further management of NPP construction project. | <br>This risk remains high throughout 2014 and at the same time it has a tendency towards growth due to a complicated political situation in the world.  |
| Poor culture of safety and lack of developed elements of nuclear infrastructure on the new markets | Low readiness of potentially interested countries to implement NPP construction projects, in particular, due to poor legislation, industrial base, low environmental protection requirements, etc.   | Low risks      | Increase in quality of elaboration of tender offers.<br>More active monitoring of the market and participation in negotiations.<br>Development of own process engineering solutions  |   |



Table 3. Management of the Strategy Implementation Risks (end)

| Risk   | Risk Factors   | Extent of Risk | Risk Management Activities  | Change  |
|--|--|----------------|---|---|
| No experience in NPP operation of the countries-newcomers                | Lack of qualified personnel, understanding of production processes, and regulatory framework for operation of research reactors  | Average risks  | Suggestion of programs on personnel training of countries-newcomers   |    |
| <b>"Back-End" Segment</b>  |  |                |   |   |
| High dependency on political decisions                                   | Dependency of the total volume of orders on care of the Government for the heritage issues   | Average risks  | Promotion of projects at national level.  |    |
| Fine division of orders by owners of the heritage in the domestic market | Common practice of implementation of decommissioning projects by Rosenergatom Concern and JSC TVEL stipulating for distribution of small amounts of work between a number of contractors   | High risks     | Conduct of negotiations with KREA and TVEL in respect of participation in projects in the capacity of general contractor  |    |
| Incomplete regulatory framework in the domestic market                   | Indefinite boundaries of state responsibility for decommissioning of heritage facilities<br>Missing procedure for implementation of the Decrees of the Government of the Russian Federation concerning designation of facilities as major radiation hazards<br>Need for correction of the Regulations on Procedure for Decommissioning Arrangement and Field-Specific Concept of Decommissioning of Equipment for Nuclear Facilities | Average risks  | Participation in activity of the State Corporation on elaboration of suggestions for finalization of regulatory framework.  |    |
| <b>"NPP Service" Segment</b>   |  |                |   |   |
| High competitiveness on the part of local contractors                    | Significant share of maintenance and repair operations implemented using own resources or by local service organizations   | High risks     | Elaboration and market promotion of proposal concerning optimized maintenance service package in cooperation with JSC Rusatom Service<br>Maximization of ASE – NIAEP participation in the projects of Rusatom Service   |    |
| <b>"Thermal Power Plants" Segment</b>                                    |  |                |   |   |
| High uncertainty of markets volumes till 2020                            | CDA conclusion<br>Missing mechanism of support of investments for commissioning of capacities till 2020 not under CDA  | Average risks  | Extension of geography through entrance to foreign markets, including implementation of PMC projects in the segment   |  |
| <b>"PMC Services" Segment</b>  |  |                |   |   |
| High competition in the international market                             | Insufficient awareness/poor development of the Company's brand in the PMC services market  | Low risks      | Winning one reference PMC project<br>Creation of register of PMC services for international customers<br>Elaboration of standard schemes of partnership with international partners<br>Extension of business geography through entrance to foreign markets, including support from the Private institution of Atomic Energy Power Corporation "Rosatom International Network" and implementation of PMC projects in the segment | <b>NEW</b>  |