

## NATIONAL ATOMIC COMPANY KAZATOMPROM JOINT STOCK COMPANY

## INTEGRATED ANNUAL REPORT FOR 2016

### **TABLE OF CONTENTS**

MESS	AGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS	3
COMP	PANY IN 2016	4
COMF	PANY IN FIGURES	6
KFY F	VENTS OF 2016	8
	ESULTS	
MESS	AGE FROM THE CHAIRMAN OF THE MANAGEMENT BOARD	12
1. AB(	OUT THE REPORT	14
	Principles for defining of the report content and aspects limits	
	Material aspects and procedure for their determination	
	Standards and guidelines	
	External verification	
2. AB0	OUT THE COMPANY	20
2.1	Company's activity profile	22
2.2	Company's background	23
2.3	Company's asset profile	25
2.4	Geography and target markets	26
2.5	Membership in association and compliance	
	with international rules	29
3. STF	RATEGY AND BUSINESS MODEL	30
3.1	Corporate strategy	31
3.2	Business transformation	34
3.3	Business model	37
4. COI	RPORATE GOVERNANCE AND ETHICS	40
4.1	Corporate governance structure	43
4.2	Sole shareholder	43
4.3	Board of directors	43
4.4	Management board	53
4.5	Organizational structure of the company's headquarters	61
4.6	Corporate ethics	61



	4.7	Risk management and internal control	62
5.	FINA	ANCE	66
		Financial performance	
6.	<ul><li>6.1</li><li>6.2</li><li>6.3</li></ul>	RATING ACTIVITIES  Raw materal base  Energy production  Nuclear fuel cycle  Auxilliary production	73 77 78
7.	7.1 7.2 7.3	TAINABLE DEVELOPMENT  Sustainable economic development  Environmental responsibility  Social responsibility  Interaction with stakeholders	83 87 92
1A	NE	(ES	107
	with Inde	nmary consolidated financial statements opinion of independent auditors ependent auditor's opinion on certification of the report ustainable development of NAC Kazatomprom JSC for 2016	
		tents index of general standard elements tatements of GRI G4 in the report <b>G4-32</b>	119
		tents index of specific standard elements tatements of GRI G4 in the report <b>G4-32</b>	121
		plied volumes of products services (work) <b>G4-9</b> , <b>EN 3</b>	124
Gl	.0SS	SARY	125
C	NT/	ACT INFORMATION	128

## MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

#### **Askar Mamin**

Chairman of the Board of Directors

NAC Kazatomprom JSC

#### **Dear Colleagues and Partners,**

I am glad to present you 2016 Integrated Annual Report of NAC Kazatomprom JSC, which includes the main results of the Company's activity and describes prospects of the Company's development.



The past year was a tough one for the world energy industry. Negative macroeconomic factors have led to a decrease in prices for energy resources, including natural uranium, and have impacted negatively the market development in general. Despite of difficult external economic circumstances, the Company has managed to mobilize, transform and achieve positive production and financial results by increasing its net profit by more than 3 times as compared to 2015.

During the reporting period, NAC Kazatomprom JSC confirmed its status of the largest uranium mining company that accounts for about 20% of the world market. The Company continued to strengthen its position as the world leader in natural



NAC Kazatomprom JSC confirmed its status of the largest uranium mining company that accounts for about 20% of the world market. The Company continued to strengthen its position as the world leader in natural uranium mining, as well as to expand its presence in other stages of the Nuclear Fuel Cycle.



uranium mining, as well as to expand its presence in other stages of the Nuclear Fuel Cycle. NAC Kazatomprom JSC and its Chinese partner started the construction of a fuel assembly producing plant for Chinese NPPs. Implementation of this innovative project aimed at establishing a vertically integrated company will allow producing high added value uranium products.

As a part of the Company's Transformation Program, business processes have been reviewed, a new organizational structure has been approved, production diversification and automation processes have been activated, privatization of non-core assets has been started, and cooperation with business partners has been enhanced.

For the purpose of sustainable development, the Company complies with high standards of corporate governance in accordance with the best international practices.

The Company has a huge potential and resources required for future growth and maintenance of leading positions in the world nuclear energy industry. I have no doubt that implementation of the chosen strategy will allow for sustainable growth, enhancement of investment attractiveness and increase in the Company's value.

In conclusion, I would like to express a sincere gratitude to all our employees for their invaluable work and contribution into development and prosperity of the Company. **G4-1** 

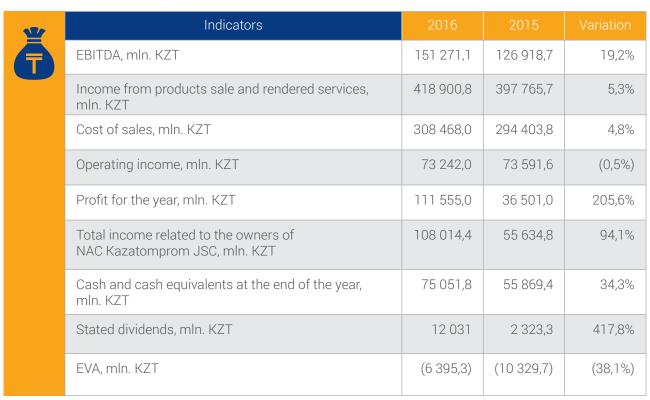
## 2016

#### **COMPANY IN FIGURES**

#### Table 1 - Production<sup>1</sup> - KAP2

<b>80</b> .	Indicators	2016	2015	Variation
Ini.	Place of NAC Kazatomprom JSC in the world for the uranium mining volume	I	I	_
	Share of NAC Kazatomprom JSC in the global market of natural uranium mining in terms of participation in all subsidiaries and affiliates, %		19,9%	21,6%
	Uranium mining volume of NAC Kazatomprom JSC in terms of participation in all subsidiaries and affiliates, tons	13 187,0	12 851,0	2,6%
	Production volume of enriched uranium product in terms of participation in UEC JSC, thous. SWU	2 500,0	2 500,0	0,0%
	Production volume of niobium products, tons Nb	46,8	96,9	(51,7%)
	Production volume of beryllium products, tons Be	1747,3	1 687,0	3,6%
	Production volume of tantalum products, tons Ta	121,8	141,0	(13,6%)
	Production volume of electrical power, mln. kWh	5 032,4	5 154,0	(2,4%)

#### Table 2 - Finance - EC1, G4-9



<sup>&</sup>lt;sup>1</sup>The Total Turnover of NAC Kazatomprom JSC for 2015-2016 is indicated in Appendix 1.



Table 3 – Staff and Social Sphere – <u>G4-10</u>, EC7

	Indicators	2016	2015	Variation		
"Mallan,	Staff					
	Number of employees, pers.	25 819	26 764	(3,5%)		
	Staff turnover, %		13,0%	(38,5%)		
	Average annual training hours per one employee, manhour		33,4	(6,6%)		
	Social sphere					
	Social tax and social contributions, mln. KZT	5 739,2	5 376,0	6,8%		
	Sponsorship and charity, mln. KZT	0,0	104,1	(100,0%)		

#### Table 4 - HSE

Indicators	2016	2015	Variation		
Occupational Safety					
Injury frequency rate (number of injures per 1,000 employees)	0,34	0,34	0%		
Number of persons who received an annual effective radiation dose of more than 5 mSv, person	194	155	25,2%		
Environmental protection					
Total weight of recycled and disposed waste, thous. tons	22,60	27,98	(19,2%)		
Reused water volume, thous. m³	19 783,6	29 559,8	(33,1%)		



# KEY EVENTS OF 16



The Committee on Strategic Planning and Investments was established to elaborate recommendations on defining corporate strategy, strategic aims, innovative and investment strategy and implementing investments, as well as to submit them to the Board of Directors.

#### **FEBRUARY**



NAC Kazatomprom JSC and American company ConverDyn signed the Cooperation Agreement. That document stipulates partnership aimed at formation, for the global market, of a joint proposal for uranium in the form of uranium hexafluoride UF6, which is a raw material for enrichment in the nuclear fuel cycle.

#### **APRIL**



NAC Kazatomprom JSC and Canadian corporation Cameco signed the Agreement on the Restructuring Joint-Venture "Inkai". That document defines future development of joint projects for the next 30 years and provides for extension of the effective period of the Subsurface Use Contract, as well as an increase in the share of NAC Kazatomprom JSC in Joint-Venture "Inkai" LLP from 40% to 60%.

#### MAY



On 4 May 2016, the resolution of the Board of Directors approved the roadmap for the Transformation Program of NAC Kazatomprom JSC for 2016

#### JUNE



The Committee on Industrial Environmental and Radiation Safety, Labor Protection and Sustainable Development of the Board of Directors of NAC Kazatomprom JSC was established. The main area of the Committee's activity is development of the Company's Integrated Policy for Occupational Heath, Environmental Protection and Radiation Safety.

#### **JULY**



For the first time NAC Kazatomprom JSC and Energoatom have concluded the contract for supply of enriched uranium products for Ukrainian NPPs in January 2017.

#### \*\*\*\*\*

New contracts for supply of uranium concentrate were concluded with American companies Ameren Corporation and Luminant.

#### **AUGUST**



During the working visit of Mr. N. Nazarbayev to the PRC, Ulba Metallurgical Plant JSC (subsidiary of NAC Kazatomprom JSC) and CGNPC-URC (subsidiary of CGNPC) signed documents for supply of fuel pellets from Kazakhstan to Chinese companies. The Parties agreed on terms, volumes and procedures for supply of 180 tons of products in 2016-2018, as well as they agreed upon plans and volumes of sales of Kazakh fuel pellets up to 2024. These arrangements will allow loading on the existing production facilities of Ulba Metallurgical Plant JSC in the medium term.

On 29 September 2016, the Company's Board of Directors decided to conclude a Memorandum of Understanding and Expanding of Strategic Cooperation in the NFC field between the Ministry of Energy of the Republic of Kazakhstan, Rosatom State Corporation and NAC Kazatomprom JSC. The Parties agreed to focus on further partnership development using the existing infrastructure of joint ventures, including in





KAZATOMPROM

**SEPTEMBER** 

Trading House Kazakatom AG was established in Zug, Switzerland. Creation of a trading company in the center of Europe will allow for prompt response on market changes and thereby improving marketing efficiency and expanding the Company's presence in the market.

uranium production, conversion, enrichment, fabrication of fuel and NFC final stage.



The representatives offices of NAC Kazatomprom JSC in China, the USA and Russia were liquidated by way of consolidation of the functions of foreign Representative Offices of NAC Kazatomprom JSC in China and the Russian Federation and the Representative Offices of Fund Samruk-Kazyna.

On 26 October 2016, Askar Mamin was appointed as the Chairman of the Board of

Directors of NAC Kazatomprom JSC.







**OCTOBER** 

French energy company Électricité de France (EDFperformed audit of Environmental Safety and Sustainable Development at NAC Kazatomprom JSC and PE Ortalyk LLP.



**NOVEMBER** 

A new Marketing Policy of NAC Kazatomprom JSC aimed at transition to a new sales pattern was approved.



NAC Kazatomprom JSC and EDF concluded the long-term contract for supply of uranium concentrate





On 8 December 2016, the road map for the Transformation Program of NAC Kazatomprom JSC for 2016-2017 was approved approved by the Decision of the Board of Directors. The economic impact of the Transformation Program implementation up to 2025 is expected to be 136 bln. KZT.

**DECEMBER** 

#### **Key Results of the Company**

2016

Number of personnel
25 819
employees

Social stability rating is **81%** 

increase by 9% compared to 2015

83,2%

Corporate governance rating, increase by 5.2% compared to 2015

**17** 

non-core subsidiaries and affiliates were withdrawn from the Group as a result of the Transformation Program

> 19% Poct EBITDA

Growth of EVA
KZT
bln





1st place in the world for uranium mining volume



Uranium mining volume

13187
tons



121,8 tons

# MESSAGE FROM THE CHAIRMAN OF THE MANAGEMENT BOARD

#### **Askar Zhumagaliyev**

Chairman of the Management Board NAC Kazatomprom JSC

## Dear Investors, Partners and Colleagues,

For the purpose of further Company's development and enhancement of efficiency, transparency and accountability of its operations, we continue to take active measures for improvement of corporate governance system. The success achieved never being enough; the Company will go on to move confidently towards the set goals.



I am glad to present you the Integrated Annual Report of NAC Kazatomprom JSC, which discloses our key result areas.

The year of 2016 saw many events and the successful results. During that year, we managed to fulfill all the shaped plans and implement some large-scale projects. Despite of the adverse conjuncture of the uranium mining market, the Company not only strengthened its leading positions in the world but also retained its sustainability, thus, by the end of the year the Company achieved high financial results and a record level in its history. In particular, the Company's net profit has increased by more than 3 times, that is more than 110 bln. KZT, as compared to the previous year.

2016 was the first year of transformations of the Company within the Transformation Program. Having maintained the momentum, we continued to implement strategic initiatives on business diversification, enhancement of the Company's efficiency and ensuring its competitiveness in the global market.

The past year was rich in business meetings, which resulted in a series of cooperation agreements and



arrangements with the world's leading nuclear energy companies.

By the order of the Head of State, the Company together with CGNPC (China) has started to implement a breakthrough high-technology project in the nuclear industry, i.e. construction of a fuel assembly producing plant. The new plant will annually produce 200 tons of nuclear fuel for Chinese NPPs. In addition, the most important thing, the plant will have a guaranteed sale market for the next 20 years. We concluded the Agreement on supply of fuel pellets from Kazakhstan to Chinese companies with our Chinese partners for a period up to 2024.

In 2016, the Company continued to play an active role in bilateral cooperation issues. The Company and CAMECO have agreed on the restructuring Joint-Venture "Inkai" LLP and increasing the Company's share in the joint venture from 40% to 60% in 2018. Rosatom State Corporation, the Ministry of Energy of the Republic of Kazakhstan and NAC Kazatomprom JSC signed the Memorandum of Understanding and Expanding of Strategic Cooperation in the NFC field.

Moreover, the Company completed the registration process for Trading House Kazakatom AG. Closeness to the customers, sales flexibility in defining terms of transaction, as well as prompt response on market changes will allow the Company to enhance significantly its marketing functions.

For the purpose of diversification of the product line and potential target markets, the National Atomic Company concluded the Cooperation Agreement with ConverDyn in 2016. Partnership between the Company and the world's leading conversion service provider will provide the international nuclear industry with a competitive and reliable integrated UF6 source.

On the instructions of the Head of State and within the frameworks of Business Transformation and Cost Optimization, NAC Kazatomprom JSC carries out activities on the restructuring non-core assets and facilities by way of their sale, liquidation or reorganization. According to the results of 2016, the Company withdrawn 17 non-core enterprises. The taken measures allow focusing on key activities, optimizing

corporate structure and increasing the value of the Company.

Due to the transformations made, we have succeeded in significant increase in our efficiency. In 2016, the economic impact of implementation of the Transformation Program equaled to more than 16 bln. KZT. This was achieved due to transformation of activities of mining and service enterprises, production automation and upgrading, optimization of procurement and warehousing, as well as reduction in the number of foreign representative offices of the Company.

As a largest socially responsible company, we pay special attention to implementation of the social policy, improvement of labor conditions, enhancement of our employees' well-being and population's well-being in uranium mining regions, occupational health and safety at our production facilities and environmental protection. The Company's efforts resulted in increasing in the rating of social stability from 72% in 2015 to 81% in 2016.

In 2016, the Company allocated more than 7.3 bln. KZT for HSE activities. No fatal occupational accidents were recorded at the Company's enterprises. Remarkable results have been achieved in minimization of negative impact on the environment and ensuring ecological safety: gross emissions of pollutants have been reduced for 9% as compared to 2015.

The Company regularly invests into development of the regions of presence and implements measures aimed at increasing the part of local content in purchases.

For the purpose of further Company's development and enhancement of efficiency, transparency and accountability of its operations, we continue to take active measures for improvement of corporate governance system. The success achieved never being enough; the Company will go on to move confidently towards the set goals.

In this respect, I would like to express sincere gratitude to the Company's employees whose efforts have allowed the Company to hold the first place in uranium mining for many years. I wish you reaching new heights! **G4-1** 



## 1. ABOUT THE REPORT

1.1	Principles for defining the Report Content and Aspects Limits	12
1.2	Material aspects and procedure for their determination	13
1.3	Standards and Guidelines	17
1 4	External verification	18



Sixth Integrated Annual Report of NAC Kazatomprom JSC since 2011

Includes data for the period between January 1, 2016 and December 31, 2016 inclusive, as well as previous periods and forecasts in order to reflect a dynamics of variation in indicators G4-28



Discloses basic data in accordance with the requirements of the laws of the Republic of Kazakhstan, internal regulations and requirements of the Company and international practices of corporate governance

It is prepared in accordance with the "basic" application of the Sustainability Reporting Guidelines **G4** (GRI)

 $<sup>^{\</sup>rm 1}$  2015 Integrated Report of NAC Kazatomprom JSC was published in July 2016.  ${\bf G4\text{-}29}$ 

### 1.1 PRINCIPLES FOR DEFINING OF THE REPORT CONTENT AND ASPECTS LIMITS

When drawing up this Report, the Company has been guided by the following principles for defining the Report's content, as recommended by the GRI:

#### Stakeholder Inclusiveness

Opinions of stakeholders served as a basis to define material aspects subject to disclosure in the Report. Detailed information is provided below in this section.

#### Sustainability context

This Report discloses the Company's activities in a broad context of development and impact on the Company. Issues of economic, environmental and social responsibility of the Company are considered in detail. The Report corresponds to the "basic" application of the Sustainability Reporting Guidelines G4 (GRI).

#### Materiality

In this Report, the Company discloses information on aspects that have a significant influence on stakeholders and significantly impact economics, environment and society. The list of material aspects and procedure for their definition are provided below in this section.

#### Completeness

The Company have made its efforts to completely disclose information on the results of its activity, to reflect

clearly the limits of the Report and separate aspects (where applicable) and indicated the reporting period. The Report includes financial and non-financial data on all subsidiaries and affiliates of the Company (hereinafter referred to as the SA). **G4-17**, **G4-18** 

Financial indicators have been expressed in the national currency of the Republic of Kazakhstan, KZT (tenge), and correspond to the audited consolidated financial statements (in accordance with IFRS standards), a brief version of which is provided in Appendix hereunder. The full version of the financial statements is provided on the website of NAC Kazatomprom JSC.

The Report reflects financial and non-financial activities of NAC Kazatomprom JSC, which connect with projects both in the country of residence, i.e. the Republic of Kazakhstan, and abroad.

Non-financial indicators are mainly disclosed with respect to the subsidiaries and affiliates in which the Company's interest is 50 percent and more.

In this Report, the Company has not significantly modified the scope and aspects limits. **G4-23** 

No paraphrases or other wordings different to the wordings used in previous reports are present in this Report. **G4-22** 

### 1.2 MATERIAL ASPECTS AND PROCEDURE FOR THEIR DETERMINATION

The Company has analyzed all the aspects proposed by the Sustainability Reporting Guidelines G4 (GRI) and their sector recommendations (Sector Disclosure Guidelines for Mining and Metals Sectors GRI). Opinions of stakeholders have been analyzed; expert appraisals of the Company's aspect impact on economics, environment and social sphere were taken into consideration.

Materiality assessment was defined based on aspect

influence on stakeholders and the Company's impact on economics, environment or social sphere within this aspect. **G4-18** 

In addition to the aspects proposed by the Sustainability Reporting Guidelines G4 (GRI), the Company has included its own additional aspects that were mandatorily disclosed, regardless of stakeholders' opinions. Such aspects and indicators are indicated as KAP1, KAP2, KAP3 and KAP4 in the Report.



The full list of the aspects to be considered, as well as the selected material aspects are given in the following list.

#### EC - Category "Economic"

- **Economic Performance** 1.
- 2. Market Presence
- 3. **Indirect Economic Impacts**
- **Procurement practices** 4.

#### EN - Category "Environmental"

- 5. Materials
- Power 6.
- 7. Water
- 8. Biodiversity
- **Emissions** 9.
- 10. **Effluents and Waste**
- 11. Products and Services
- 12. Compliance
- 13. Transport
- General 14.
- 15. Supplier Environmental Assessment
- 16. Environmental Grievance Mechanisms

#### LA - Category "Social"/"Labor Practices and Decent Work"

- 17.
- **Employment** 18. **Labor/Management Relations**
- 19. Occupational Health and Safety
- 20. **Training and Education**
- 21. **Diversity and Equal Opportunities**
- 22. Equal Remuneration for Women and Men
- 23. Supplier Assessment for Labor Practices
- 24. Labor Practices Grievance Mechanisms

#### HR - Category "Social"/"Human Rights"

- 25. Investments
- 26. Non-discrimination
- 27. Freedom of Association and Collective Bargaining
- 28. Child Labor
- 29 Forced or Compulsory Labor
- 30. Security Practices

- 31. Indigenous Rights
- 32. Assessment
- 33. Assessment of Human Rights by Suppliers
- 34. Human Rights Grievance Mechanisms

#### SO - Category "Social"/"Society"

- Local Communities 35.
- 36. Anti-corruption
- Public Policy 37.
- 38. Anti-competitive Behavior
- 39 Compliance
- Assessment of Suppliers' Impact on Society 40.
- 41. Grievance Mechanisms for Impacts on Society

#### SO/MM\* - Category "Social"/"Society"/"Sector Disclosures for Mining and Metals Sectors"

- **Emergency Preparedness** 42.
- 43. Artisanal and Small-scale mining
- 44. Resettlement
- 45. Closure Planning

#### PR - Category "Social"/"Product Responsibility"

- 46. Customer Health and Safety
- 47 Product and Service Labeling
- 48. Marketing Communications
- 49. **Customer Privacy**
- 50. Compliance

#### PR/MM\* - Category "Social"/"Product Responsibility"/"Sector Disclosures for Mining and Metals Sectors"

51. Material Management

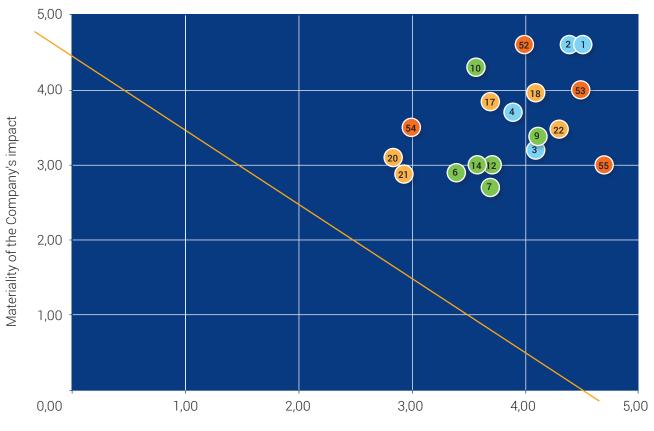
#### KAP\*\* - Aspects/Indicators disclosed by the Company additionally

- 52. Place in the Nuclear Fuel Cycle (NFC)
- Global uranium markets 53.
- 54. **Business transformation**
- 55. Development of raw material base

<sup>\*</sup> MM (Mining and Metals) – "Sector Disclosures for Mining and Metals

<sup>\*\*</sup> KAP – Aspects/Indicators disclosed by the Company additionally Results related to definition of the materiality of aspects are presented in the diagram below. G4-19

Diagram 1. Material aspects of the Company



Impact on the persons concerned

- KAP Aspects/Indicators disclosed additionally by the Company
- EN Category «Environmental»
- LA Category «Social»/«Labor Practices and Decent Work»
- EC Category «Economic»

#### List of material aspects

#### EC - Category "Economic" LA - Category "Social"/"Labor Practices and Decent Work" 1. Economic performance 17. Employment 2. Market presence 18. Labor/Management Relations 3. Indirect Economic Impacts 20. Training and Education 4. Procurement Practices 21. Diversity and Equal Opportunities 22. Equal Remuneration for Women and Men KAP - Aspects/Indicators disclosed additionally EN - Category "Environmental" by the Company 6. Energy 52. Place in the Nuclear Fuel Cycle (NFC) 7. Water 53. Global uranium markets 9. Emissions 54. Business transformation 10. Effluents and Waste 55. Development of raw material base 12. Compliance 14. Overall



All the defined material aspects are important both for the Company (within the organization) and for the stakeholders (outside the organization). **G4-20**, **G4-21** 

The list of stakeholders and methods of interaction with them are indicated in a separate section of this Report.

#### 1.3 STANDARDS AND GUIDELINES

This Report discloses basic data in accordance with the laws of the Republic of Kazakhstan, internal documents and regulations of the Company and international practices of corporate governance. When drawing up the Report we considered the following documents:

- Law of the Republic of Kazakhstan No.415-II of May 13, 2003 On Joint Stock Companies;
- Rules for publication of a depositary of financial statements, stock market, information on corporate events, financial statements and audit reports, lists of affiliated persons of joint stock companies, as well as information on the total amount of remuneration of the members of executive bodies at the year end on Internet resources, as approved by the Decree of the Management of the National

Bank of the Republic of Kazakhstan No.26 of January 28, 2016;

- Sustainability Reporting Guidelines G4 (GRI):
- a. Reporting preparation principles and standard elements;
- b. Implementation manual.
- Rules for Disclosure of Information concerning National Atomic Company Kazatomprom Joint Stock Company in Mass Media, as approved by the Board's resolution No.155 of May 26, 2016;

Corporate Governance Code of Sovereign Wealth Fund Samruk-Kazyna Joint Stock Company, as approved by the Resolution of the Government of the Republic of Kazakhstan No.1403 of November 5, 2012, as amended by the Decree of the Government of the Republic of Kazakhstan No.239 of April 15, 2015

#### 1.4 EXTERNAL VERIFICATION

NAC Kazatomprom JSC has involved a third party on a competitive basis in order to confirm the compliance of information presented in this Report with the GRI standards. The Company cooperates with the organization that verify the Report on a contractual basis. The independent auditor's

opinion on compliance of the information on sustainable development with the requirements of GRI-G4 Guidance is presented in the Annex of this Report. Prior to publication, the Report is to be approved by the Board of Directors of NAC Kazatomprom JSC. **G4-33** 





## 2. ABOUT THE COMPANY

2.1	Company's activity profile	21
	Areas of activity:	21
	Main characteristics of the products	.21
2.2	Company's background	. 22
2.3	Company's assets profile	. 24
2.4	Geography and target markets	26
	Natural Uranium Market	. 27
	Rare-Earth Metal (REM) Market	28
	Photovoltaics Market	. 29
2.5	Membership in associations and compliance	
	with international principles	30



#### **COMPANY'S MISSION**

Keep a leading position in the global uranium mining. Become a world leader in natural uranium sales. Become a supplier of nuclear fuel and its components in the Asian region.



#### Today, NAC Kazatomprom JSC is:

- No.1 Company in the global uranium mining;
- National operator of the Republic of Kazakhstan for export and import of uranium, rare metals, nuclear fuel for nuclear power plants, special equipment, technologies and dual-use materials, with its headquarters located in Astana;
- · About 25.8 thousand employees;
- Company with the Sole Shareholder Sovereign Wealth Fund Samruk-Kazyna JSC;
- Group of companies consists of 59 enterprises, including associated companies and joint ventures operating in six regions of Kazakhstan (South Kazakhstan, East Kazakhstan, Kyzylorda, Mangistau, Akmola and Almaty regions), and abroad: in the USA, China, Russia, the Great Britain, Ukraine, Germany, and Switzerland;
- Presence in the main stages of the Nuclear Fuel Cycle:
  - · Mining and enrichment of natural uranium;
  - Production of uranium products: natural uranium concentrate, ceramic grade uranium dioxide powders, and fuel pellets.

G4-3, G4-4, G4-6

#### 2.1 COMPANY'S ACTIVITY PROFILE

#### **AREAS OF ACTIVITY:**

- · Geological exploration;
- · Natural uranium mining;
- Uranium products: natural uranium concentrate, ceramic grade uranium dioxide powders, and fuel pellets;
- Quartz, metallurgical silicon, PV cells and plates;
- Renewable energy sources: PV modules;

- Bulk concentrate of rare-earth metals;
- Beryllium, tantalum, niobium products;
- · Generation of electrical and heating power;
- · Science, social security and personnel training
- · Communication services;
- Production of distillate, hot, technical and drinking water. G4-4

#### MAIN CHARACTERISTICS OF THE PRODUCTS

Uranium products	uranium mining, reprocessing and sale of uranium products;
Beryllium products	production and sale of beryllium items, as well as research and development
Tantalum products	production and sale of tantalum items, as well as research and development
Energy resources	production and sale of power energy, heating power and water;
Alternative energy sources	production and sale of equipment for alternative energy sources;
Other	production and sale of other products, as well as rendering services connected with the main production. G4-4





#### 2.2 COMPANY'S BACKGROUND

National Atomic Company Kazatomprom JSC was established according to the Decree of the President of the Republic of Kazakhstan No.3593 of July 14, 1997 On Establishment of National Atomic Company Kazatomprom Joint Stock Company in the Form of a Closed Joint Stock Company with 100% Participation Interest of the State in the Charter Capital.

Initially, the Company consisted of Volkovgeology Exploration Company, three mine groups (Stepnoye, Central, Shestoye (Sixth)) and Ulba Metallurgical Plant (further – UMP).

1999 In 1999, Kazakhstan won an antidumping suit in the USA, and by 2000 the Company achieved a complete lifting of deadlines on the sale of Kazakh uranium to the US and European markets. As a result, the geography of natural uranium export was expanded greatly. In 2000, UMP became official certified supplier of ceramic grade uranium dioxide powders for General Electric (USA).

2003 Company held the second place in the world for beryllium products, with 29% control of the total production and the fourth place in tantalum industry.

2008 The Company, China National Nuclear Corp (CNNC) and China Guangdong Nuclear Power Co (CGNPC) signed the Strategic Partnership Agreement. On December 23, 2008, the Company became the winner of Corporate Social Responsibility "Paryz" Competition in the nomination "Best Social Project of the Year" (category: large business entities). For the Company it was the first official recognition of its achievements in the field of sustainable development.

2009 Kazakhstan became number 1 company in the world's uranium mining, and since 2010 NAC Kazatomprom JSC has been holding the world's leading position in uranium mining by volume of uranium mining.

**2014** First batch of bulk concentrate of REM produced at the plant of JV SARECO LLP in Stepnogorsk was shipped to the end user in the Russian Federation. NAC Kazatomprom JSC and China General Nuclear Power Corporation (CGNPC) signed the Agreement on extending and deepening the mutually beneficial cooperation in the field of nuclear energy. According to that Agreement, it is planned to establish a joint venture on production of fuel assemblies in Kazakhstan for the needs of Chinese NPPs.

2015 On January 19, 2015, NAC Kazatomprom JSC and international banks concluded the Facility Agreement for the amount USD 450 mln. in London. On May 20, 2015, NAC Kazatomprom JSC repayed Eurobonds in the amount of USD 500 mln., which were underwritten in May 2010 for the term of 5 years. In November 2015, NAC Kazatomprom JSC and Électricité de France (EDF) concluded the contract for supply of natural uranium from Kazakhstan. By Resolution of the Board of Directors No. 15/15 of November 20, 2015, the Assets Restructuring Plan of NAC Kazatomprom JSC (withdrawal of non-core and auxiliary organizations) was approved for the period of 2015-2017.

NAC Kazatomprom JSC and NK Astana EXPO-2017 JSC concluded the Memorandum of Mutually Beneficial Cooperation, according to that Memorandum NAC Kazatomprom JSC became a Partner of the international exhibition.

Nuclear industry actually originated in Kazakhstan during the period of development of nuclear energy in the USSR.

Kazakhstan was assigned a special role in the development of nuclear technologies. The country that was traditionally a mineral depository of the USSR became a leading supplier of raw materials to enterprises of the nuclear and power production complex of the Soviet Union. In those years, the Volkov **Geological Expedition** (now Volkovaeologiya JSC) and unique Ulba **Metallurgical Plant** (UMP JSC) for the production of nuclear fuel components were created.

On December 16, 1991, the Republic of Kazakhstan declared its independence and became a politically independent state. All enterprises of the Soviet Nuclear Industry in the territory of Kazakhstan were put at the disposal of the Government of the Republic. After the collapse of the Soviet Union. Kazakhstan became a nuclear country that has the world's fourth nuclear power potential, but after the People's Referendum, Kazakhstan announced the nuclear disarmament.

Table 5 -Assets Profile of NAC Kazatomprom JSC G4-9





#### 2.3 COMPANY'S ASSET PROFILE

NAC Kazatomprom JSC is a large holding company with participation interests in about 59 industry enterprises both in the territory of the Republic of Kazakhstan and abroad. Subsidiaries and affiliates of NAC Kazatomprom JSC Group are present in different sectors of nuclear industry and at different levels of the Nuclear Fuel Cycle. In 2016, under Assets Restructuring Plan (elimination of non-core and auxiliary organizations) of NAC Kazatomprom JSC for 2015-2017 No.15/15, as approved by the Board of Directors on November 20, 2015, as well as under Comprehensive Privatization Plan for 2016-2020 No. 1141 of December 30, 2016, as approved by the Resolution of the Government of the Republic of Kazakhstan, 17 noncore and auxiliary assets were withdrawn from the Company's group, namely: 7 enterprises were sold, 5

enterprises were reorganized, and 5 enterprises were liquidated, which in total resulted in the following:

- 17 SAs were withdrawn;
- management levels were reduced from 4 to 3;
- non-core asset losses were reduced for 38 bln. KZT;
- EVA growth for 4 bln. KZT was ensured. **G4-13**

Moreover, one enterprise was sold in 2016 (reregistration in 2017) and it was decided to reorganize and liquidate 6 more enterprises in 2017. Two new enterprises were registered: JV Budenovskoye LLP and TH Kazakatom AG. The Company also acquired 100% of shares of Kazakhstan Nuclear Power Plants JSC.



#### 2.4 GEOGRAPHY AND TARGET MARKETS

Constant expansion of the resource base and improvement of production processes allow the Company to maintain its leading position in the global uranium market and increase its revenue performance every year.

The Company is present in markets of Europe, Central and South-Eastern Asia, Northern America. Main sectors of operation are power industry, nuclear and electronics industry, metallurgy, telecommunications and researches. Main consumers of the Company's products are the largest global companies of nuclear, rare earth and rare metal industries. **G4-8** 

The Company is actively playing in the global uranium and related markets by different ways of cooperation:

- Joint projects in the field of uranium mining and processing;
- · Joint projects in the Nuclear Fuel Cycle;

- · Direct uranium supplies;
- · Joint researches;
- · Renewable energy;
- Joint projects in the field of RM and REM (including beryllium, tantalum and niobium).

Presence of the Company in regions of Kazakhstan is basically defined by location of deposits of uranium ore, location of processing facilities, as well as location of the corporate center, research and social facilities of the Company. **G4-6** 

The Company is widely present in the market of natural uranium, as well as in the rare-earth metals (REM) market.

The Company is also present in the photovoltaics market by implementing, together with French companies, the project for production of photovoltaic modules based on Kazakhstani silicon KazPV at the factory of Astana Solar LLP.

Joint uranium mining and processing:	Supply of uranium:	Joint projects in the Nuclear Fuel Cycle:	Researches:	Renewable energy:	Joint projects in the field of RM and REM:	Trading activity
Russia	China	Russia	Russia	Japan	Japan	Switzerland
<b>◆</b> Canada	USA	Canada	France	France	Russia	
France	South Korea	France	Germany	Germany	Germany	
China	EU countries		South Korea		China	
Japan	India				France	
	Ukraine					
	* Canada					

Figure 1. cooperation geography nac kazatomprom jsc G4-8





#### **NATURAL URANIUM MARKET**

According to the data published on IAEA official website, the needs of operating reactors in 2016 were equal to 63.8 thsd. tons U. Compared to 2015, the reactor needs have decreased almost by 3.5 thsd. tons U (2015 – 66.9 thsd. tons U), and the global uranium extraction in 2016 has increased for 1.9 thsd. tons U, as compared to 2015, and equals to 62.9 thsd. tons U (2015 - 61 thsd. tons). Oversupply with account of secondary sources is now about 15 thsd. tons, which keeps the prices in the global nuclear fuel market at a relatively low level. The spot price for uranium has decreased by 48% since the beginning of 2016. A significant decrease in market prices has caused reduction of production volumes because the mining cost of the majority of suppliers exceeds the current level of market prices. The Company's profitability is maintained due to previously concluded long-term contracts. Leading suppliers of natural uranium to the world market are still NAC Kazatomprom JSC, Cameco, AREVA, Rosatom; these companies meet more than 60% of global needs for nuclear power. KAP2

Herewith three nuclear industry giants – AREVA, Rosatom, and CNNC, offer a fully integrated chain of uranium production.

2016 saw significant fluctuations in prices of natural uranium: Ux Consulting and TradeTech indexes of uranium spot price equaled \$35.25 and \$35.50 per lb.U $_3$ O $_8$  respectively at the beginning of the year. The following price fluctuations has been marked within the year: the highest value was observed in the middle of January when the spot index reached \$34.75 per lb.U $_3$ O $_8$ , and the lowest value, \$17.75 per lb.U $_3$ O $_8$  was registered in the beginning of December. At the end of the year, the indexes (Ux Consulting and TradeTech) of the uranium sport price were \$20.25 per lb.U $_3$ O $_8$ . An average monthly index of the spot price in 2016 was \$26.13 per lb.U $_3$ O $_8$ . **KAP2** 

Forecast for development of the uranium market is positive in the long-term aspect, as the world keeps paces of nuclear power development due to intensive construction of reactors in China, Russia, and India. KAP2

NAC Kazatomprom JSC exports 100% of uranium products. The export volume under the contracts of the Company's group (including contracts of jointly controlled enterprises) in 2016 amounted to 23.6 thsd. tons of uranium in concentrate, which is 0.1 thsd. tons less than the export volume in 2015 (23.7 thsd. tons).

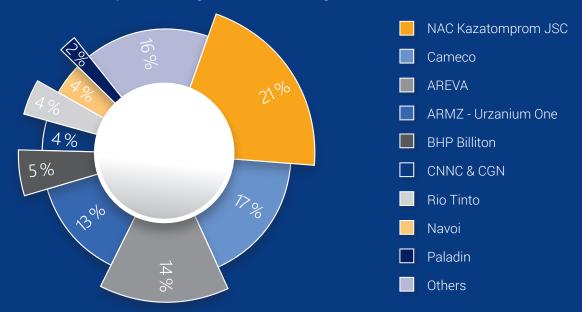
Table 6 - Weekly indicators of U<sub>3</sub>O<sub>8</sub> spot prices

Weekly indicators of $\rm U_3O_8$ spot price	End of 2016	Beginning of 2016	Variation
UxC	\$20.3 per lb. U <sub>3</sub> O <sub>8</sub>	\$34.5 per lb. U <sub>3</sub> O <sub>8</sub>	(41,2%)
TradeTech	\$20.3 per lb. U <sub>3</sub> O <sub>8</sub>	\$34.3 per lb. U <sub>3</sub> O <sub>8</sub>	(40,6%)

Table 7 – Weekly indicators of U<sub>3</sub>O<sub>8</sub> long-term price

Weekly indicators of U <sub>3</sub> O <sub>8</sub> long-term price	End of 2016	Beginning of 2016	Variation
UxC	\$30,0 per lb. U <sub>3</sub> O <sub>8</sub>	\$44,0 per lb. U <sub>3</sub> O <sub>8</sub>	(31,8%)
TradeTech	\$34,0 per lb. U <sub>3</sub> O <sub>8</sub>	\$44,0 per lb. U <sub>3</sub> O <sub>8</sub>	(22,7%)

Diagram 2. Share of companies in the global uranium mining for 2016



#### **RARE-EARTH METAL (REM) MARKET**

According to the data by Argus\*, the world REM reserves are estimated at 130 mln. tons of TREO (REM oxides total). About 48% of the world REM reserves are concentrated in China. At that, China's share in the world's REM mining was 83.2% in 2016. Relatively large deposits are located in Brazil and contain about 20% of the world REM reserves. Australia, India and the USA possess 1-2% of the world REM reserves.

REM and their compounds have properties that ensure their wide use in such industries as petroleum chemistry, electronics, glass industry, ceramics industry and metallurgy.

Currently, permanent magnets account for more than 60% of the REM market; during their production highly demanded deficient REMs are used: neodymium, praseodymium and dysprosium.

The global market of rare-earth metals grows rapidly. Its size increased more than 25 times for the last 50 years.

The light REM group accounts for about 93% of all world's proven REM reserves, whereas the medium and heavy REM groups constitute about 7% only.

Key REM elements for the Company are tantalum and beryllium. Tantalum-niobium and beryllium production is developed at UMP JSC and is one of the largest in the world. **KAP2** 

The tantalum market demonstrates the ability to change promptly from deficit to oversupply.

According to experts, this uncertainty is caused by periodicity of final consumption spheres (electronics, aircraft industry), deficiency and speculative character of the raw material market, closeness of sales channels.

Total number of enterprises producing tantalum in the world has not changed in comparison with 2015 – only five enterprises with full tantalum production cycle operate on the world market:

- 1. Ningxia Non-ferrous Metals Smelter (plant in China)
- 2. DuoLuoShan (China)

- 3. UMP JSC (Kazakhstan)
- 4. H.C.Starck (plants in Germany, the USA, Thailand and Japan)
- 5. GAM Technology (plants in the USA and Japan)

Highly specialized beryllium market is characterized by a high concentration and closeness. There are some producers on the market; furthermore, the major consumer of this strategic metal is the defense industry. Unique inherent characteristics of beryllium are also applied in aircraft, nuclear, and metallurgical industries.

There are no prices for beryllium in free sources; the metal is not listed on the stock exchange. The global beryllium market is still represented by three large producers with complete beryllium production cycle from ore to alloys – Materion Corp. (USA), UMP JSC (Kazakhstan) and SKS (China). KAP2

#### **PHOTOVOLTAICS MARKET**

Solar power is becoming more and more competitive in certain projects as compared to coil and gas.

According to the message of Climate Scope, renewable energy sources in their commercial scale exceeded fossil fuels in 2016 for the first time, and new solar projects are also becoming cheaper than new wind power projects.

The growth of the photovoltaic solar power industry on a global basis (including Europe) reached 50% or 76.1 GW, when the growth in 2015 was 51.2 GW.

#### **KazPV Project**

- NAC Kazatomprom JSC implements a project for production of photovoltaic modules based on Kazakhstani silicon (KAZ PV project).
- The PV module production cluster includes three domestic enterprises: MC "Kaz Silicon" LLP (quartz mining and production of high quality silicon), Kazakhstan Solar Silicon LLP (production of 60 MW photovoltaic plates and cells) and Astana Solar LLP (production of 50 MW photovoltaic modules).

<sup>\*</sup> Argus is international information agency



## 2.5 MEMBERSHIP IN ASSOCIATION AND COMPLIANCE WITH INTERNATIONAL RULES

The Company is actively involved in the professional community of nuclear power.

Today, the Company is a member of the following professional industrial organizations: **G4-16** 

World Nuclear Association,	K The World Nuclear Fuel Market,
London, United Kingdom	Norcross, Georgia, USA
Website: http://www.world-nuclear.org	Website: http://www.wnfm.com
member since 1993	member since 2002
Nuclear Society of Kazakhstan Association,	Tantalum-Niobium International Study Center,
Astana, Republic of Kazakhstan	Brussels, Belgium
Website: http://www.nuclear.kz	Website: http://www.tanb.org
member since 2002	member since 1999

In its operations, the Company is governed by key documents in the sphere of peaceful use of nuclear energy, which the Republic of Kazakhstan has joined to: **G4-15** 

Name of the document	Place and date of signing	Information on effectiveness
Treaty on Non-Proliferation of Nuclear Weapons (NPT) (Washington, London, Moscow, July 01, 1968) Geneva, July 01, 1968	December 13, 1993	Decree of the Supreme Council of the Republic of Kazakhstan No.2593-XI of December 13, 1993 On Joining Effective from the date of signing
Safeguards Memorandum in connection with joining to the Treaty on Non-Proliferation of Nuclear Weapons	December 05, 1994	Effective from the date of signing
Comprehensive Nuclear-Test-Ban Treaty	New York, September 30, 1996	Law of the Republic of Kazakhstan No.270 of December 14, 2001 On Ratification
International Convention for the Suppression of Acts of Nuclear Terrorism (UN GA, April 13, 2005)	New York, September 14, 2005	Law of the Republic of Kazakhstan No. 33-IV of May 14, 2008 On Ratification
Agreement on the Privileges and Immunities of the IAEA	Vienna, July 01, 1959	Law of the Republic of Kazakhstan No. 178-I of October 30, 1997 On Ratification
Convention on the Physical Protection of Nuclear Material	Vienna, March 03, 1980	Law of the Republic of Kazakhstan No.17 of December 22, 2004 On joining Law of the Republic of Kazakhstan No. 416-IV of 19 March 2011 On Ratification of Amendment to the Convention
Convention on Early Notification of a Nuclear Accident	Vienna, September 26, 1986	Law of the Republic of Kazakhstan No. 243-IV of February 03, 2010 On Ratification Effective since April 09, 2010
Convention on Assistance in the case of Nuclear Accident or Radiological Emergency	Vienna, September 26, 1986	Law of the Republic of Kazakhstan No. 244-IVof February 03, 2010 On Ratification. Effective since April 09, 2010
Agreement on Basic Principles of Cooperation in Peaceful Uses of Atomic Energy (of CIS member-states	Minsk, June 26, 1992	Effective from the date of signing
Convention on Nuclear Safety	Vienna, June 17, 1994	Law of the Republic of Kazakhstan No. 245-IV of February 03, 2010 On Ratification Effective since June 08, 2010
Agreement between Kazakhstan and the IAEA for application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons	1995	Decree of the President of the Republic of Kazakhstan No. 2344 of June 19, 1995
Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management	Vienna, September 05, 1997	Law of the Republic of Kazakhstan No. 246-IV of February 03, 2010 On Ratification. Effective since June 08, 2010
Central Asian Nuclear-Weapon-Free Zone Treaty	Semipalatinsk 2006	Approved by the Decree of the President of the Republic of Kazakhstan No. 176 of September 07, 2006 Law of the Republic of Kazakhstan No. 270 of December 14, 2001 On Ratification
Additional Minutes to the Agreement between Kazakhstan and the IAEA for application of safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons	2007	Law of the Republic of Kazakhstan No. 229 of February 19, 2007
Vienna Convention on Civil Liability for Nuclear Damage 1997 (Consolidated text of Vienna Convention on Civil Liability for Nuclear Damage of May 21, 1963, as amended by the Minutes as of September 12, 1997)	February 2011	Law of the Republic of Kazakhstan No. 405-IV of February 10, 2011 On Ratification Effective since June 29, 2011



## 3. STRATEGY AND BUSINESS MODEL

3.1	Corporate Strategy	33
3.2	Business Transformation	36
3.3	Rusiness Model	42



#### 3.1 CORPORATE STRATEGY

#### STRATEGIC GOALS OF THE COMPANY

- Threefold increase of NAC Kazatomprom JSC's value and increase of EVA from minus 25 bln. KZT in 2014 to plus 60 bln. KZT by 2025;
- Maintaining leading positions of NAC Kazatomprom JSC in production of natural uranium and achieving a leadership in uranium sales;
- Diversification into all stages of the front end Nuclear Fuel Cycle for the purpose of increasing the value added and producing high tech Kazakhstani uranium products;
- Attraction, development and preservation of the best human resources in Kazakhstan;
- Implementation of the Government resolution on entering the NFC reactor stage – construction of a NPP in the Republic of Kazakhstan.

#### **VISION OF THE COMPANY FOR 2025**

In 2025, Kazatomprom will be a company focused on nuclear power business and diversified into all stages of the front end Nuclear Fuel Cycle as a leading global supplier of natural uranium and a regional supplier of nuclear fuel and its components to NPPs.



Table 8 - Implementation of tasks to achieve the strategic goals

	1	2
Strategic goals	Threefold increase of NAC Kazatomprom JSC's value and increase of EVA from minus 25 bln. KZT in 2014 to plus 60 bln. KZT by 2025.*	Maintaining leading positions of NAC Kazatomprom JSC in production of natural uranium and achieving a leadership in uranium sales.
Strategic tasks	<ul> <li>Restructuring the assets of Kazatomprom, including withdrawal of non-core assets and optimization of corporate asset management;</li> <li>Becoming a company influencing on pricing in the natural uranium market;</li> <li>Creating an optimal corporate structure free of non-core assets;</li> <li>Improving the corporate governance system;</li> </ul>	<ul> <li>Maintaining the volume of natural uranium produced by Kazatomprom at 12-14 thsd. tons per year with account of natural uranium market situation;</li> <li>Diversification of the portfolio of contracts for natural uranium sale;</li> </ul>
Results of 2016	<ul> <li>NAC Kazatomprom JSC established the unified Situation Center</li> <li>As of 2016 the Company withdrawn 17 non-core assets and by the end of the year included 59 organizations;</li> <li>A road map for the Transformation Program of NAC Kazatomprom JSC for 2016-2017 was approved.</li> </ul>	<ul> <li>Leading positions in the global uranium market were reserved;</li> <li>TH Kazakatom was established in Switzerland;</li> <li>A pilot operation of the Digital Mine Information System was started at Kazatomprom Sauran LLP (it is planned to be introduced at Ortalyk, Ru-6 until 2018)</li> </ul>
Plans for 2017	<ul> <li>Further assets restructuring;</li> <li>Optimization of the uranium production volumes with account of natural uranium market situation;</li> <li>Concept development and creation of the Uranium Fund;</li> </ul>	<ul> <li>Keeping the leading positions on the global uranium market;</li> <li>Further filling of reserves;</li> <li>Improvement of uranium mining and processing efficiency up to finished products;</li> <li>Expansion of the Company's presence in uncovered markets;</li> <li>Expansion of market presence via own trading company TH Kazakatom AG;</li> </ul>

<sup>\*</sup>The update of the financial indicators of the Company's Strategy for 2015-2025 is expected taking into account the updated macro parameters and Methodological recommendations on the calculation of the key strategic key indicators of Samruk-Kazyna JSC.



3	4	5
Diversification into all stages of the front end Nuclear Fuel Cycle for the purpose of increasing the value added and producing high tech Kazakhstani uranium products.	Attraction, development and preservation of the best human resources in Kazakhstan.	Implementation of the Government resolution on entering the NFC reactor stage – construction of a NPP in the Republic of Kazakhstan.
<ul> <li>Becoming a participant of the natural uranium hexafluoride and conversion services market;</li> <li>Becoming an enrichment service provider in the volume of at least 2.5 mln. SWU per year;</li> <li>Becoming a provider of services for fabrication of nuclear fuel and its components in the volume of at least 200 tons of uranium in fuel assemblies per year;</li> </ul>	Improvement of qualification level of the personnel and its motivation to upgrade work at phased automation of human resources management processes;	Organization of the NPP construction project in the Republic of Kazakhstan.
<ul> <li>Preliminary assessment of construction of a refinery in the Republic of Kazakhstan was performed;</li> <li>NAC Kazatomprom JSC concluded the agreement on transferring the uranium refining technology with Cameco;</li> <li>Cameco transferred the uranium refining technology;</li> <li>NAC Kazatomprom JSC prepared the Feasibility Study for construction of a fuel assembly producing plant in the Republic of Kazakhstan;</li> <li>Kazakhstan and Russia developed the pricing mechanism by for sale of enriched uranium products, which belong to NAC Kazatomprom JSC's option, by UEC JSC to NAC Kazatomprom JSC determined the target markets for delivery of such products.</li> </ul>	<ul> <li>A remuneration system was implemented based on the results of personal contribution of each employee, which includes more than 1,500 process and target indicators.</li> <li>286 students majoring in specific fields are studying under grants issued by the Company.</li> <li>A graded payment system was approved and will be introduced by transition to a new organizational structure.</li> </ul>	By Resolution of the Prime Minister of the Republic of Kazakhstan No. 110-p of November 02, 2016, NAC Kazatomprom JSC was designated as an responsible company for development of the Feasibility Study for construction of NPP in the Republic of Kazakhstan.
<ul> <li>Obtaining the license for importing nuclear technologies and equipment;</li> <li>Holding an exhibition "Nuclear Energy World" in the Company's cluster within EXPO-2017</li> </ul>	<ul> <li>Further personnel training, further training and development;</li> <li>Personnel training for new areas of activity (NPP, fuel assemblies, and NFC stages);</li> <li>Introduction of competitive personnel selection and recruitment in subsidiaries and affiliates;</li> <li>Development and implementation of a target organizational structure in subsidiaries and affiliates;</li> </ul>	Organization of the NPP construction project in the Republic of Kazakhstan.

#### 3.2 BUSINESS TRANSFORMATION

Official transformation of Samruk-Kazyna JSC was launched in October 2014. NAC Kazatomprom JSC joined the program in early 2015.

The Business Transformation Program is a program of large-scale reformation of activities, which helps to achieve the strategic goals of the Company, to increase competitiveness and to make more profit at the same level of invested capital.

The main key indicator of the transformation process is an economic value added – EVA. A positive EVA value characterizes the efficient use of capital and indicates an increase in the Company's value.

#### **Transformation Program goals::**

Standardization and optimization of business processes;

- Development of basic principles of creation of a single vertically integrated information space of the Company;
- Creation of a corporate culture of continuous improvement, mobility, flexibility and innovation;
- Provision of tactical and operational management of program projects;
- Methodological support and coordination of actions of the subsidiaries and affiliates of NAC Kazatomprom JSC under the Transformation Program.

All project work within the Transformation Program of the Company are performed in accordance with the unified transformation methodology, as approved by the Chief Director for Business Transformation of Samruk-Kazyna JSC.

The perimeter of transformation includes the central office and 12 subsidiaries and affiliates in which the share of NAC Kazatomprom JSC is more than 50%. The Transformation Program includes 4 stages. By the end of 2016, the Company have completed the first 3 stages and the last stage, including introduction of the

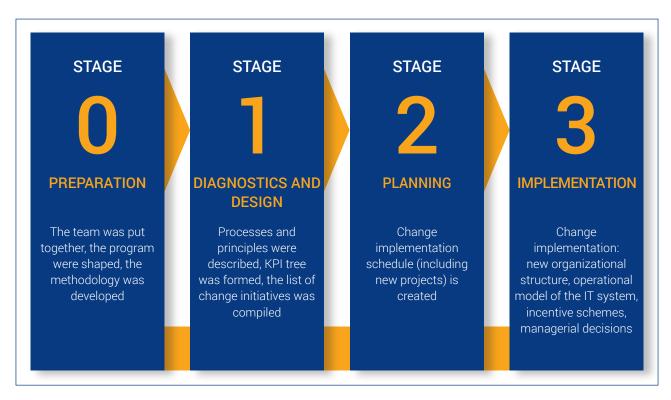
The following goals were achieved and activities were performed in 2016 under the Transformation Program:

#### 1. Modeling of the Process Map of levels 1-2.

planned activities, is under implementation.

The Process Map of levels 1-2 has been prepared using the ARIS software. It demonstrates a model of the Company's activity by highlighting main business processes within strategic and operational activities and corporate governance. The model visualizes key processes of activity (level 1) and includes a detail description of each process (level 2);

- Business processes are described with a breakdown into 14 main areas of the Company's activity based on the reference models provided by Samruk-Kazyna JSC.
  - The description implemented by the ARIS software represents the third level of process modeling.
     This work was performed with active participation of Ernst&Young consultants who consulted the Company in due account of the best practices in this field. Later, the described processes were used to develop the Company's target organizational structure, ti define a process automation level of the Company and to select IT systems.





#### 3. The document NAC Kazatomprom JSC Key Performance Indicators (KPI) Tree Structure was developed.

The above document diagrammatically decomposes the main strategic performance indicator of the Company - EVA (Economic Value Added) that expresses the Company's economic value added. Each indicator of the Tree or value driver corresponds to the key requirements: measurability, including measurability in time; comparability, including comparability with budget, strategy or another source, transparency and objectiveness. The KPIs are distributed among particular managers, roles and responsible positions. As a result of determination of the KPI Tree structure, respective management accounting will be developed to allow for correct KPI accounting and monitoring.

In October 2016, a meeting of the Council for Kazatomprom Business Improvement and Transformation was held. At the meeting, the Company approved the Transformation Project Portfolio. During the meeting, the Chairman of the Management Board of Samruk-Kazyna JSC and the Chairman of the Management Board of NAC Kazatomprom JSC signed the Road Map for 2016-2017 and the Common Gain and Investment Forecast under the Transformation Program. The economic impact of the Transformation Program implementation up to 2025 is expected to be 136 bln. KZT.

In accordance with the Road Map of the Company for 2016-2017, 74 control points were determined, and, when each of them is achieved, the planned and actual results are compared. According to the results of 2016, 44 of 44 planned control points were passed successfully.

The Transformation Program Project Portfolio consists of 26 components. Among them, there are the following:

- Introduction of the category purchasing management;
- Transition to a service model for provision with SAP licenses;
- · Digital Mine;

Plans were developed.

- · Implementation of automated processes;
- Integrated planning system;
- Implementation of a target model for the marketing and sale function;
- · Unified project management system;
- Transfer of IT services to an Infrastructure provider;
- · Implementation of the Lean Management principles;
- · Introduction of target processes.

For all projects, Project Managers and Sponsors were assigned, kick-off meetings were held, Management Committees were established, and project initiation documents were developed and approved. The projects are implemented in accordance with the approved plans. With respect to target process implementation projects, variance analysis of actual and target business processes was carried out and the Variance Elimination Activity

According to the results of 2016, the total effect of implementation of the Transformation Program was 16.1 bln. KZT (the target value was 3.8 bln. KZT)\*. The main part of the effect was achieved by implementation of the following approved projects/initiatives of the Company:

- Optimization of procurement activities (9.8 bln. KZT);
- Transformation of activities of mining enterprises (4.3 bln. KZT);
- Transformation of activities of service enterprises (1.7 bln. KZT):
- Optimization of foreign representative offices of the Company (162 mln. KZT);
- Release of the remainders of reserves after the projects (93 mln. KZT);
- Transition to a service model for provision with SAP licenses (8 mln. KZT).

#### **Activities under the Transformation Program**

Upon completion of the Design and Planning stages, the Company held a reporting meeting prior to the beginning of the Implementation stage — Information Day for the employees of the Company and of Samruk-Kazyna JSC, as well as for general public.

The Information Day was held on December 08, 2016 in the presence of the managerial staff of Samruk-Kazyna JSC and NAC Kazatomprom JSC, chief executive officers of subsidiaries and affiliates. of the Company, representatives of the media of the Republic, and employees of the corporate center and of subsidiaries and affiliates of NAC Kazatomprom JSC. The meeting was broadcast live via online video translation on the corporate website to demonstrate maximum transparency of the transformations being implemented in the Company. During the meeting, the participants received information on the work that was carried out and the results achieved in implementation of the Transformation Program of NAC Kazatomprom JSC, and the certain program tasks were set for the Implementation stage.

#### Relocation of the production enterprises and teams

The relocation of administrative offices started in 2015 and completed in 2016. Uranenergo LLP and JV SMCC LLP were relocated in Shymkent. Twelve enterprises in total were relocated to the South Kazakhstan and Kyzylorda regions.

The objectives of relocation were as follows:

- Optimization of administrative expenses of the enterprises;
- Improvement of interaction with local executive bodies;
- Operative solution of production problems;
- · Creation of new workplaces.

<sup>\*</sup> Within the framework of the Transformation Program approved by Samruk-Kazyna JSC, the effect amounted to 10.1 bln. KZT.

The relocation of enterprises of NAC Kazatomprom JSC resulted in creation of new workplaces and additional local budget revenue. The actual number of the staff who relocated together with the enterprises is 500 persons.

#### Introduction of information systems in 2017

According to the recommendations of the Sole Shareholder, the Company chose the information system SAP based on which the program package ERP will be introduced in 2017-2018 at the following enterprises: NAC Kazatomprom JSC, RU-6 LLP, Ortalyk LLP, Kazatomprom-SaUran LLP, TTK LLP, and UMP JSC.

An integrated planning system aimed at production and financial modeling and setting and tracking short- and long-term targets will be introduced in 2017-2018.

The second stage of implementation of the Digital Mine information system will be completed in 2018 to optimize the cost of production activities at uranium mining enterprises.

Implementation of the above mentioned information systems allows for significant increase in production process efficiency, in efficiency of the Company's enterprise group management system and in labor efficiency, which in total will lead to growth of the economic value of NAC Kazatomprom JSC.

#### Implementation of projects in 2017

The following projects will be implemented at enterprises of NAC Kazatomprom JSC as a part of transition to the target management model in order to improve operating efficiency:

- "Creation of the unified project management system" to implement strategic plans and achieve the set goals by way of transparent, controlled and efficient project activity;
- "Introduction of the category purchasing management" to improve procurement efficiency for the purpose of reducing the total cost of ownership of products, work and services to be purchased and the expenses of NAC Kazatomprom JSC;

- "Transfer of IT services to an Infrastructure provider" to provide the Company with infrastructure facilities and facilitate the infrastructure optimization in accordance of the Policy of the IT Fund;
- "Implementation of a target IT management model" to efficiently manage the IT facilities;
- "Implementation of a target Information Security (IS) model" to efficiently manage the IS and minimize the risks associated with it:
- "Implementation of a target Procurement model" to improve the quality of management and to reduce expenses within this area of operation;
- "Implementation of a target Risk Management model" and "Implementation of a target model of Integrated Safety and Security Management" to improve the risk management system, to increase the system sensitivity and to response to events occurred, and to minimize losses caused by the risk events occurred;
- "Implementation of a target Strategic Planning and Efficiency Management model" to harmonize the Sole Shareholder's expectations and the Company's operation, to enhance the control of strategy implementation process by determining and further monitoring of the Key Performance Indicators;
- "Implementation of a target Human Resources model" to increase labor efficiency and involvement of the Company's employees;
- "Implementation of the Lean Management principles" to reduce expenses of NAC Kazatomprom JSC enterprises and take some steps aimed at improving the operational and process efficiency at Kazatomprom assets level;
- "Implementation of a Target Model for the Marketing and Sale Function" to increase sale marginality and the share of natural uranium market, as well as to ensure effective sales of uranium products of higher process stages, RMs and REMs.



### 3.3 BUSINESS MODEL

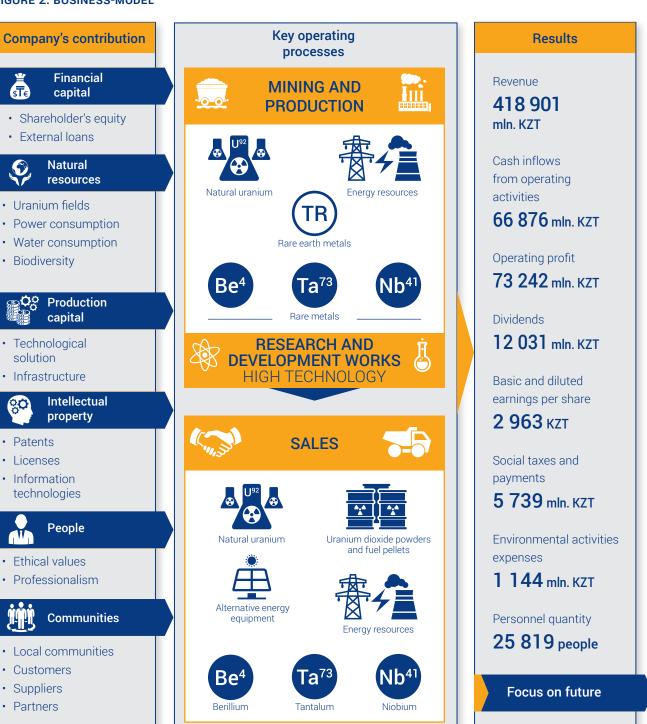
Business model of the Company is based on a longterm strategy aimed at strengthening its position in the market, successful competition, improving operational efficiency and, consequently, increase

of the value of existing business. The value chain is mainly formed on the basis of the processes associated with the extraction and processing of uranium. KAP1

#### FIGURE 2. BUSINESS-MODEL

\$T€

Patents



### **4 LEVERS OF VALUE CREATION**

1

### Improving operational efficiency of existing business



- · Optimization of operational expenses;
- Internal control and risk management at all process levels;
- · Analysis, optimization and automation of processes;
- Management accounting/process cost accounting;
- Improving energy efficiency of production.

### Study of existing growth opportunities



- · Higher added value within the value chain of existing projects;
- Sales growth and expansion of the Company's presence in regions;
- Development of new productions (business diversification based on market conditions).

2



### Efficient financing of existing business and its management



- Optimization of financial flows;Definition of attractive funding opportunities.

### Creation of an optimal structure of assets portfolio



- · Increase in the ownership share in existing core assets, opening of new joint ventures, acquisition of new assets;
- Reduction of the number of levels of ownership of subsidiaries and affiliates to 3 levels maximum;
- · Sale of non-core assets.



# 4. CORPORATE GOVERNANCE AND ETHICS

4.1	Corporate Governance Structure	47
4.2	Sole Shareholder	49
4.3	Board of Directors	50
	Composition of the Board of Directors	50
	Changes in the composition of the Board of Directors in 2016	52
	Activity of the Board of Directorы	53
	Assessment of the Activity of the Board of Directors	53
	Remuneration of Members of the Board of Directors	53
	Engagement of Independent Directors	54
	Committees of the Board oa Directors	54
4.4	Management Board	59
	Composition of the Management Board of NAC Kazatomprom JSC	59
	Activity of the Management Board in 2016	65
	Committees of the Management Board	66
4.5	Organizational Structure of the Company's Headquarters	68
4.6	Code of Corporate Ethics	69
	Ombudsman	70
4.7	Risk management and internal control	71
	Risk Management	71
	Major risks and measures of their optimization	72
	Internal Control System	74
	Quality Management System	75



### **Corporate Governance Rating**

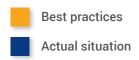
According to the results of independent diagnostics of the Corporate Governance System, the Company's Corporate Governance rating was 83.2% in 2016 (78% in 2015)\*.

The systematic work is performed in the Company to bring the Corporate Governance System in line with the world's best practices. The Corporate Governance rating is assessed on an annual basis according to the methods developed by independent consultants and approved by the Sole Shareholder of the Company. At present, the

work on improving the Corporate Governance System of the Company is conducted according to the Activity Plan approved by the Board of Directors of the Company in five aspects::

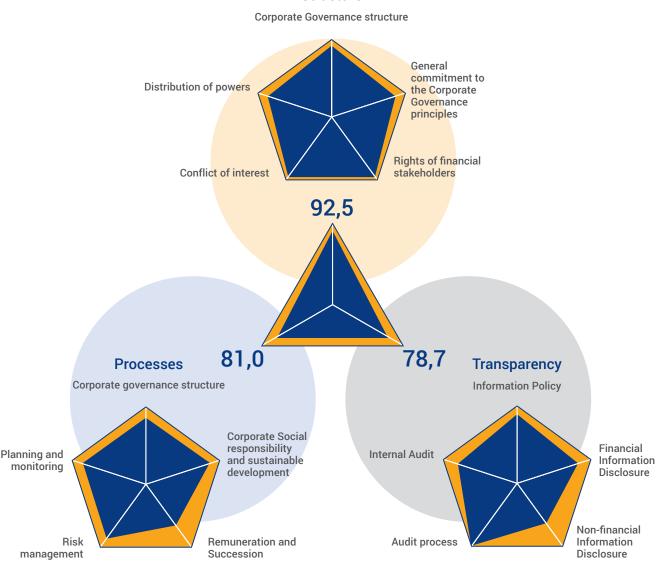
- Sustainable development;
- · Shareholders' rights;
- Efficiency of the Board of Director and the Executive Body;
- · Risk management, internal control and audit;
- · Transparency.

Figure 3 - Compliance with the best global practices in the Corporate Governance



Compliance with the best global practices in the Corporate Governance, 83.2%

#### Structure



<sup>\*</sup> In the diagnostics of the Corporate Governance System, the methodology was used, which was in force in 2016. Since 2017, calculations will be made using a new methodology.

### **Corporate Governance Code**

The Corporate Governance Code for legal entities, more than 50% of shares (equity interest) of which are owned by the Fund, was approved as a compulsory corporate standard by the resolution of the Management Board of Sovereign Wealth Fund Samruk-Kazyna JSC in 2015.

The Code objectives include improvement of corporate governance in the Fund and organizations, ensuring management transparency, confirmation of commitment of the Fund and organizations to the standards of proper corporate governance.

The Code was drafted in compliance with the laws of the Republic of Kazakhstan, internal documents of the Fund, with account of corporate governance practice being developed in Kazakhstan and in the world, as well as according to the Fund Transformation Program.

The Code establishes the principles to be the basis of the Company's Corporate Governance System.

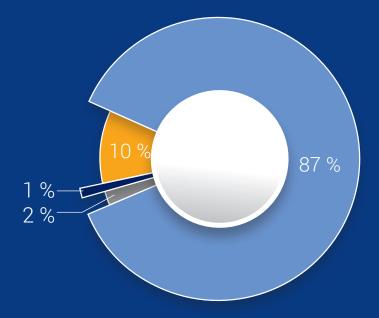
Corporate Governance is a complex multilayer system of relations, which constantly develops both due to internal factors and under the influence of external environment. In the first case, the Company's operations on application of high standards of corporate governance are determined by the objectives of improving investment attractiveness and partner confidence. External factors, e.g. changes in the macroeconomic sphere, pose challenges to corporate governance overcoming of which influence further development of the Company. In this

respect, it is necessary to constantly monitor external and internal changes, to analyze development tendencies both global and national processes, which may have an impact on standards of corporate governance.

Compliance with the highest standards of corporate governance and transparency are the most important factors of improvement of investment attractiveness and economic efficiency of the Company's operation, which contribute to enhancement of confidence of potential investors, reduction of risks associated with inefficient use of the Company's resources, increase in the Company's value and prosperity. The Company can ascertain the compliance of the Corporate Governance System with key listing rules of the largest stock exchange markets, main principles of corporate governance accepted by the world economic community (e.g. corporate governance principles of the Organization for Economic Cooperation and Development).

According to the Corporate Governance Code, the Corporate Secretary Service analyzed the compliance of the Company with the principles and provisions of the Corporate Governance Code. Based on the analysis results, 87% of the provisions of the Code are practically observed in the Company, about 2% of the provisions of the Code are partially observed, 1% of the provisions is not presently observed, and 10% of the provisions of the Code are not applicable to the Company..

Diagram 3 and Table 9 – Compliance with the principles and provisions of the Corporate Governance Code of Samruk-Kazyna JSC in the Company in 2016.



	Company's Grade %	Number
Comply	87 %	407
Partially comply	2 %	9
He Does not comply	1 %	4
Not applicable	10 %	47
General number of t	467	



### 4.1 CORPORATE GOVERNANCE STRUCTURE

The Corporate Governance System of the Company is aimed at improving the business transparency, creating and maintening reliable and effective relationships with the Sole Shareholder and all stakeholders, and it is based on the following principles:

- Protection of rights and interests of the Sole Shareholder;
- Effective management of the Company/effective functioning of the Board of Directors and the Management Board;
- Transparency and objectivity of NAC Kazatomprom JSC's activity;
- · Legitimacy and ethics;
- · Effective dividends policy;
- · Effective human resources policy;

- Occupational health and safety;
- Environmental protection;
- Settlement of corporate disputes and conflicts of interest;
- · Responsibility.

The Company's corporate governance body system includes:

- Supreme body the Sole Shareholder
- Management body the Board of Directors
- Executive body the Management Board
- The body that monitors financial and economic activities of the Company, evaluates internal control, manages the risks and consults in order to improve the Company's operations — Internal Audit Service.
   G4-34

### 4.2 SOLE SHAREHOLDER

Sovereign Wealth Fund Samruk-Kazyna JSC is the Sole Shareholder of the Company and performs its activities under competency stipulated by the Company's Articles of Association.

Key decisions to be taken by Sovereign Wealth Fund Samruk-Kazyna JSC include the following:

- Election and early termination of powers of any member of the Board of Directors of NAC Kazatomprom JSC;
- Selection of auditor to perform the audit of consolidated and individual financial statements of NAC

Kazatomprom JSC and determination of the amount of remuneration for audit services;

- Approval of annual financial statements of NAC Kazatomprom JSC;
- Approval of the Net Income distribution procedure and determination of the size of dividends per one ordinary share:
- Approval of the Articles of Association and the Regulations on the Board of Directors of NAC Kazatomprom JSC and amendments thereto.

### 4.3 BOARD OF DIRECTORS

The Board of Directors of the Company operates in accordance with the principles specified in the Articles of Association, the Corporate Governance Code and the Regulations on the Board of Directors. These documents contain information about the role of the Board of Directors, as well as rights, duties and responsibilities of its members.

Key areas of activities of the Board of Directors are as follows:

- Approval of the Company's Development Strategy and Development Plan, as well as their further implementation;
- Making decisions on placement and sale of the Company' shares, as well as acquisition of shares of other companies;
- Defining conditions for issuance of bonds and derivatives:
- Making decisions on conclusion of major transactions and related party transactions;
- Approval of the total number of the Company's employees;

 Making decision on participation in incorporation of other subsidiaries and affiliates.

The Board of Directors operates in accordance with the annual work plan and meeting schedule based on the principle of rationality and effectiveness, but at least six times a year. If required, the Board of Directors may consider issues not included into the work plan.

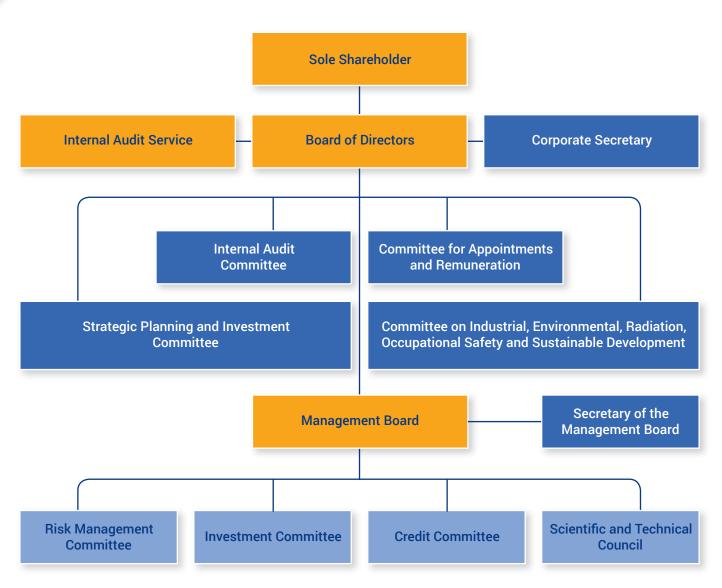
### COMPOSITION OF THE BOARD OF DIRECTORS

The Board of Directors is composed of six Directors including two Independent Directors. Description of the criteria of compliance with the standards of independence of members of the Board of Directors is specified in the Articles of Association and the Regulations on the Board of Directors posted on the Company's website.

Members of the Board of Directors of NAC Kazatomprom JSC do not have shares in the Company, in the Company's affiliates, suppliers and competitors.



Figure 4. Corporate Governance Structure NAC KAZATOMPROM JSC <u>G4-34</u>





### STRUCTURE OF THE BOARD OF DIRECTORS

He is a citizen of the Republic of Kazakhstan. Born in 1965.

Mr. Mamin graduated from the Tselinograd Engineering and Construction Institute, the Plekhanov Russian University of Economics, majoring in Civil Engineering, Economics.

He began his career as an assembler at Tselintyazhstroy trust. Then, he worked as the Deputy CEO of the Union of Innovative Enterprises of Kazakhstan.

From 1996 to 2008 he worked as the First Deputy Akim of Astana, Vice Minister of Transport and Communications of the Republic of Kazakhstan, First Vice Minister of Industry and Trade of the Republic of Kazakhstan, Minister of Transport and Communications of the Republic of Kazakhstan, Akim of Astana.

In April 2008 he became the President of National Company Kazakhstan Temir Zholy JSC, on 17 April 2008 he was elected as a member of the Board of Directors of NC Kazakhstan Temir Zholy JSC (extract from Minutes of the Management Board No. 04/08 KHGUA Samruk-Kazyna).

In September 2016, he was appointed as the First Deputy Prime Minister of the Republic of Kazakhstan.

By decision of the Management Board of Samruk-Kazyna JSC of October 26, 2016 he was appointed the Chairman of the Board of Directors of NAC Kazatomprom JSC.

Mr. Mamin awarded medal "Eren Enbegi ushin" in 1998, "Kurmet» Order in 2006, "Barys" Order of the Second Degree in 2011, the Order of the Honourable Legion of the French Republic in 2013, and the Order of the First Degree "For Civil Merits" of the Kingdom of Spain in 2014. He is an honourable citizen of Astana since 2011, a Honourable Railroadman since 2012, and a Honourable Builder of Kazakhstan since 2013.

She is a citizen of the Republic of Kazakhstan. She was born in 1960.

Mrs. Arslanova graduated with honors from the Kazakh Kirov State University, majoring in Economics, in 1983. She has PhD degree in Economics.

Since 1992, she has been the Founder and the President of the University of International Business (UIB).

Since May 2012, Zarina Arslanova has been an Independent Director of the Board of Directors of NAC Kazatomprom JSC, the Chairwoman of the Internal Audit Committee.

Since August 2012, she has been an Independent Director of the Board of Directors of National Mining Company Tau-Ken Samruk JSC, the Chairwoman of the Internal Audit Committee.

Since 2013, Mrs. Arslanova is an Independent Director of International University of Information Technology JSC.

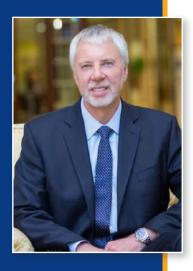
From 2015 till present, she is a consultant, a member of the Management Committee of Dala Mining LLP.



ASKAR UZAKPAYEVICH MAMIN, Chairman of the Board of Directors (Representative of the Sole Shareholder)



ZARINA FUATOVNA ARSLANOVA, Independent Director



JON DUDAS

Independent Director

He is a citizen of the United Kingdom of Great Britain and Northern Ireland. Born in 1959.

In 1984, he graduated from the University of the Witwatersrand (the Republic of South Africa) with a bachelor degree in mining and metallurgy and a master degree in mining economics. He has a MBA degree of Heriot-Watt University (United Kingdom).

He began his working career in 1984 in Rand Mines Ltd as a graduated engineer, and in 1988 he was appointed as the Manager of underground works. In 1989-1990, he worked as the Gold Project Director in the Head office. From 1991 to 1996, he worked in Winkelhaak Gold Mines Ltd where he finally hold the position of General Manager. In 1996-1999, he worked as the Project and Business Development Director (mineral sandstones) in Gencor Ltd.

From 1999 to 2006, he worked as the Marketing Director (Power department), Transport Manager and Chief Commercial Director (Carbon department) in BHP Billiton. During this period, BHP Billiton entered the world uranium market, and Mr. Dudas was responsible for uranium business development and uranium market study.

In 2006-2007, he hold the position of Director of Corporate Planning Project Group, as well as the IT Director in BHP Billiton. In 2008-2012, he hold the position of the Chief Executive Officer of Aluminium Division at BHP Billiton.

Since 2012, he has been working as the Corporate Adviser in different transnational mining and servicing companies.

He is also a member of the Board of Directors in Guinea Alumina Corporation S.A.



MAZHIT ABDYKALIKOVICH TURMAGAMBETOV a member of the Board

(Representative of the Sole Shareholder)

of Directors

He is a citizen of the Republic of Kazakhstan. Born in 1961.

In 1984, Mr. Turmagambetov graduated with honors from the Bauman Moscow Higher Technical School, majoring in Mechanical Engineering.

In 1997, he was at the public service. In different years, he worked as the Head of departments and committees of the Ministry of Economy and Trade, the Ministry of Public Revenue of the Republic of Kazakhstan, as the Vice Minister of Natural Resources and Environmental Protection of the Republic of Kazakhstan, Vice Minister of the Ministry of Environmental Protection of the Republic of Kazakhstan.

Since January 2012, he has been a member of the Board of Directors of Tau-Ken Samruk JSC.

Since May 8, 2012, he has been a member of the Board of Directors of NAC Kazatomprom JSC.

### Годовой отчет 2016



He is a citizen of the Republic of Kazakhstan. Born in 1970.

In 1993, he graduated from the Al-Farabi Kazakh State University, majoring in Physics, and the Kazakh National Academy of Management, majoring in Electrical Engineering.

Since January 31, 2012, he has been the Managing Director of the Sovereign Wealth Fund Samruk-Kazyna JSC.

Mr. Bektemirov has been a member of the Board of Directors of NAC Kazatomprom JSC since January 31, 2012, and a member of the Remuneration and Appointments Committee of the Board of Directors of NAC Kazatomprom JSC.

Since January 2012, he has been a member of the Board of Directors of National Mining Company Tau-Ken Samruk JSC, the Chairman of the Board of Directors of KEGOC JSC and the Chairman of the Board of Directors of Samruk-Energy JSC.

Since July 8, 2016, he has been a representative of Samruk-Kazyna JSC in the Boards of Directors of subsidiaries and affiliates.



KUANYSH ABDUGALIYEVICH BEKTEMIROV

a member of the Board of Directors

(Representative of the Sole Shareholder)

He is a citizen of the Republic of Kazakhstan. Born in 1972.

He graduated from the Sverdlovsk Suvorov Military School in 1989, the Kharkov Higher Military Command Engineering School of Missile Forces in 1996 and the Almaty Institute of Power Engineering, majoring in Radio Engineering.

He started his career in the commercial sector. In 2001, he was at the public service in the Ministry of Transport and Communications of the Republic of Kazakhstan. He started as the Head of department and was advanced to the Deputy Chairman of the Committee.

Today, he has a great experience as a senior manager. He worked as the Chairman of the Agency for Informatization and Communication of the Republic of Kazakhstan, the President of Kazakhtelecom JSC, the Minister of Communications and Information of the Republic of Kazakhstan, the Minister of Transport and Communications of the Republic of Kazakhstan, the Chairman of the Agency for Communications and Information of the Republic of Kazakhstan.

On May 6, 2015 he was appointed as the Chairman of the Management Board of NAC Kazatomprom JSC.

He was awarded commemorative medals «10 years of the Constitution of the Republic of Kazakhstan», «20 years of Independence of the Republic of Kazakhstan», medal named after Yu.A. Gagarin and the Order of Kurmet. In 2009, he was awarded the Kurmetti bailanysshy title.



ASKAR KUANYSHEVICH ZHUMAGALIYEV,

a member of the Board of Directors,

the Chairman of the Management Board Members of the Board of Directors of NAC Kazatomprom JSC have no shares (participation interest) of the Company, affiliates, as well as have no shares of the Company's contractors and competitors

### CHANGES IN THE COMPOSITION OF THE BOARD OF DIRECTORS IN 2016

- In July 2016, members of the Board of Directors were elected. The Board of Directors includes Bakytzhan Abdirovich Sagintayev, the Chairman of the Board of Directors; Kuanysh Abdugaliyevich Bektemirov, Mazhit Abdykalikovich Turmagambetov, Zarina Fuatovna Arslanova, Jon Dudas and Askar Kuanyshevich Zhumagaliyev, members of the Board of Directors.
- On October 26, 2016, the powers of Bakytzhan Abdirovich Sagintayev, the Chairman of the Board of Directors, were early terminated, and Askar Uzakpayevich Mamin was elected as the Chairman of the Board of Directors.

### ACTIVITY OF THE BOARD OF DIRECTORS

In 2016, the Board of Directors of the Company held 6 meetings in presentia and 3 meetings in absentia at which 93 issues were considered. It approved 9 internal and planned documents of the Company, decided to conclude 10 interested-party transactions. In 2016, the Board of Directors of the Company adopted important decisions aimed at improving the corporate governance, human resources policy, risk management, and internal control and audit systems.

The following issues were considered in the reporting year, among the others:

- Preliminary consideration of annual financial statements;
- Appointment of the heads of executive bodies of subsidiaries and affiliates:
- Conclusion of an Agreement on Fuel Project Implementation Principles between NAC Kazatomprom JSC, Ulba Metallurgical Plant JSC, CGNPC Uranium Resources Co., Ltd. and Ulba-TVS LLP;
- Approval of the Activity Plan for improving the Corporate Governance System of NAC Kazatomprom JSC for 2016-2017;
- Other reports, work plans, key indicators of the Company, Development Programs, etc.

Attendance of meetings in presentia by the members of the Board of Directors in 2016 was high and averaged to 96%. The following table provides with information on individual attendance of meetings in presentia by the members of the Board of Directors.

### ASSESSMENT OF THE ACTIVITY OF THE BOARD OF DIRECTORS

The last independent assessment of the activity of the Company's Board of Directors was conducted in 2014. Pursuant to the best practices of corporate governance, an independent assessment shall be performed at least once every three years, so the independent assessment of the activity of

Table 10 - Attendance of meetings in presentia by the members of the Board of Directors in 2016

	Attendance of meetings in presentia by the members of the Board of Directors in 2016										
Members of the Board of Directors/Committee	18.02.2016	30.03.2016	04.05.2016	19.05.2016	15.06.2016	25.07.2016	29.09.2016	02.12.2016	08.12.2016	%	
B.A.Sagintayev (powers of the BD member were terminated on October 26, 2016)	+	+	+	+	+	+	-			86	
A.U. Mamin (appointed as the BD Chairman on October 26, 2016)								+	+	100	
M.A.Turmagambetov.	+	+	+	+	+	+	+	+	+	100	
K.A.Bektemirov	+	+	+	+	+	+	+	+	+	100	
Z.F.Arslanova	+	+	+	+	+	+	+	+	+	100	
J. Dudas	+	+	+	+	+	-	+	+	+	89	
A.K.Zhumagaliyev	+	+	+	+	+	+	+	+	+	100	



the Board of Directors was not conducted in the reporting period.

### REMUNERATION OF MEMBERS OF THE BOARD OF DIRECTORS

In accordance with the Law of the Republic of Kazakhstan On Joint Stock Companies, by the decision of the Company's Sole Shareholder, independent members of the Company's Board of Directors shall be paid remuneration and reimbursement of costs related to the execution of their functions. The amount of such remuneration and reimbursement shall be established by the decision of the Sole Shareholder of the Company. In accordance with the established procedure of the Company, remuneration for execution of duties of a member of the Board of Directors is provided only to the independent members of the Board of Directors and includes only:

- Fixed annual payment;
- Additional payment for participation in each Committee meeting in presentia;
- Compensation of expenses for traveling to the venue of meetings of the Board of Directors and its Committees.

If any Independent Director participated in less than a half of all meetings in presentia and absentia, except for absence on sick leave, vacation or a business trip, a fixed payment shall not be paid.

Members of the Board of Directors shall not receive any benefits or other remuneration. There are no limits for remuneration of the Members of the Board of Directors in NAC Kazatomprom JSC, as well as no remuneration in the form of shares of the Company.

### ENGAGEMENT OF INDEPENDENT DIRECTORS

The Company is guided by the requirements of the Law of the Republic of Kazakhstan On Joint Stock Companies, the Company's Articles of Association, and the Regulations of Selecting Independent Directors of Samruk-Kazyna JSC, which define the procedure for recruitment and selection of candidates on a competitive basis to the position of independent directors, and also the rules for carrying out a preliminary qualification assessment of candidates by the Remuneration and Appointments Committee.

### COMMITTEES OF THE BOARD OF DIRECTORS

In order to create a platform for active discussion and detailed analysis of issues related to the management of the Company, four committees, such as the Internal Audit Committee, the Committee on Strategic Planning



and Investments, the Remuneration and Appointments Committee and the Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development, operate under the Board of Directors of the Company. **G4-34** 

The Committees' activity is regulated by the respective Regulations.

#### Internal Audit Committee

The Internal Audit Committee operates for the benefit of Shareholder(s) of the Company and its work is to assist the Board of Directors by means of providing recommendations on:

- Establishment of the efficient control system over financial and economic activities of the Company (including completeness and authenticity of financial statements);
- Monitoring the reliability and efficiency of internal control and risk management, as well as the execution of corporate governance documents:
- Control over independence of internal and external audit, as well as procedure for compliance with the Law of the Republic of Kazakhstan;
- Other issues in accordance with the requirements of the Regulations on Internal Audit Committee.
- In 2016, the Internal Audit Committee held 13 meetings in presentia at which key issues of the Company's business were considered:
- Consideration of interim and annual financial statements;
- Reports on risk management, work plans, key indicators of the Internal Audit Service of the Company and other issues;
- Preliminary approval of the Annual Audit Plan of the Internal Audit Service of NAC Kazatomprom JSC;
- Preliminary approval of the risk register and the risk map of the Company and other issues.

Composition and data on attendance of the Internal Audit Committee are presented in the table below.

Table 11 - Composition and attendance of the Internal Audit Committee in 2016

	Atten	Attendance of meetings in presentia by the members of the Internal Audit Committee of the Board of Direstors in 2016												
Committee members	29.01.2016	05.02.2016	26.02.2016	06.04.2016	25.04.2016	04.05.2016	01.06.2016	29.06.2016	06.09.2016	20.09.2016	03.11.2016	24.11.2016	07.12.2016	%
Z.F. Arslanova (Chairwoman of the Committee)	+	+	+	+	+	+	+	+	+	+	+	+	+	100
K.A. Bektemirov	+	+	+	+	+	+	+	+	+	+	+	+	+	100
J. Dudas (elected a member of the Committee on February 18, 2016			+	+	+	+	+	+	+	+	+	+	+	100

### **Committee on Strategic Planning and Investments**

The Committee on Strategic Planning and Investments was established for the purpose of development and submission of recommendations to the Board of Directors on the following issues:

- Determination of the development strategy of NAC Kazatomprom JSC and monitoring of its implementation;
- Consideration and approval of long-term strategic development targets and tasks of NAC Kazatomprom JSC;
- Definition of the innovative and investment strategy of NAC Kazatomprom JSC;
- · Making investments;
- Preliminarily approval of decision concerning investment projects.

In 2016, the Committee on Strategic Planning and Investments held 7 meetings in presentia at which key issues of the Company's business were considered:

- Preliminary consideration of documents to be proposed to the Board of Directors of NAC Kazatomprom JSC, which contain information on implementation of the Development Strategy, achievement of target values of strategic Key Performance Indicators;
- Preliminary consideration and approval of the Action Program and Activity Plans for implementation of the Development Strategy of the Company and elaboration of recommendations on achieving the set goals;
- Preliminary approval of the Project Feasibility Study of Ulba-TVS LLP;
- Reports on implementation of the Development Strategy of NAC Kazatomprom JSC for 2015-2025 and issues related to achievement of the strategic KPIs.

Composition and data on attendance of the Committee on Strategic Planning and Investments are presented in the table below.

Table 12 - Composition and attendance of the Committee on Strategic Planning and Investments in 2016

	Посещаемость членами Комитета по стратегическому планированию и инвестициям Совета директоров очных заседаний в 2016 году									
Committee members	01.04.2016	18.04.2016	25.05.2016	13.06.2016	04.08.2016	03.11.2016	07.12.2016	%		
J. Dudas (Chairman of the Committee, elected on February 18, 2016)	+	+	+	+	+	+	+	100		
Z.F.Arslanova (elected a member of the Committee on February 18, 2016)	+	+	+	+	+	+	+	100		
T.B. Yerzhanov (elected a member of the Committee on February 18, 2016)	+	+	+	+	-	+	+	86		





### Remuneration and Appointments Committee

The Remuneration and Appointments Committee was established for the purpose of development and submission of recommendations to the Board of Directors on the following issues:

- Engagement of qualified personnel to work as members of the Board of Directors, members of the Management Board, a Corporate Secretary and other employees, appointment or coordination of the appointment of which is performed by the Board of Directors in accordance with the list approved by the Board of Directors;
- Formation of proposals for the Board of Directors on determining the remuneration of independent directors, the Management Board members, and the Corporate Secretary;
- Provision of recommendations on human resources policy of the Company, order of appointment of members of the Board of Directors and the Management Board, the Policy

of assessment of the members of the Board of Directors and the Management Board, the Corporate Secretary, professional improvement of members of the Board of Directors, as well as on other issues determined by the Board of Directors.

In 2016, the Remuneration and Appointments Committee held 11 meetings in presentia at which key issues of the Company's business were considered, including:

- Consideration of Key Performance Indicators of executive officers of NAC Kazatomprom JSC;
- Election of members of the Management Board of NAC Kazatomprom JSC;
- Approval of appointment of chief executive officers of some subsidiaries and affiliates;
- Planning the succession of executive officers of NAC Kazatomprom JSC;

Composition and data on attendance of the Remuneration and Appointments Committee are presented in the table below.

Table 13 - Composition and attendance of the Remuneration and Appointments Committee in 2016

	Attendance of meetings in presentia by the members of the Remuneration and Appointments Committee of the Board of Directors in 2016											
Committee members	12.02.2016	01.04.2016	18.04.2016	25.04.2016	25.05.2016	29.06.2016	06.09.2016	29.09.2016	06.10.2016	03.11.2016	07.12.2016	
Z.F.Arslanova (Chairwoman of the Committee)	+	+	+	+	+	+	+	+	+	+	+	100
K.A. Bektemirov	+	+	+	+	+	+	+	+	+	+	+	100
J. Dudas (elected a member of the Committee on February 18, 2016		+	+	+	+	+	+	-	+	+	+	90

### Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development

The Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development was established for the purpose of development and submission of suggestions and recommendations to the Board of Directors on the following issues:

- Improvement of the Corporate Governance System in the field of industrial, environmental and radiation safety;
- Effective cooperation with subsidiaries and affiliates and coordination of NAC Kazatomprom JSC's activity on implementation of the Policy of Labor and Environmental Protection and Radiation Safety;
- Adoption of HSE program documents of NAC Kazatomprom JSC;
- Other issues falling within the competence of the Committee according to orders of the Board of Directors of NAC Kazatomprom JSC and/

- or provisions of internal documents of NAC Kazatomprom JSC.
- In 2016, the Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development held 3 meetings in presentia at which key issues of the Company's business were considered:
- Report on activities on corporate social responsibility and sustainable development of NAC Kazatomprom JSC;
- Report on implementation of the Plan of Provision of Social and Working Conditions of the Production Personnel of NAC Kazatomprom JSC;
- Reports on work carried out to prevent industrial accidents at NAC Kazatomprom JSC.

Composition and data on attendance of the Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development are presented in the table below.

Table 14 - Composition and data on attendance of the Committee on Industrial, Environmental and Radiation Safety, Labor Protection and Sustainable Development in 2016

	Attendance of meetir Environmental and Radiation	ngs in presentia by the memb on Safety, Labor Protection a of Directors in 20	nd Sustainable Development	lustrial, t of the Board
Committee members	06.09.2016	03.11.2016	24.11.2016	%
J. Dudas (Chairman of the Committee, elected on June 15, 2016)	+	+	+	100
Z.F.Arslanova (elected a member of the Committee on June 15, 2016	+	+	+	100
T.B. Yerzhanov (elected a member of the Committee on June 15, 2016)	+	+	+	100



### 4.4 MANAGEMENT BOARD

Activity of the Management Board of NAC Kazatomprom JSC is determined by the principles described in the Articles of Association, the Code of Corporate Governance and the Regulations on the Management Board. These documents contain information on the role and accountability of the Management Board, rights, duties and responsibility of members of the Management

Board. The Management Board is a collective executive body of NAC Kazatomprom JSC. The key task of the Management Board as an executive body is to manage day-to-day operations of NAC Kazatomprom JSC. The Management Board makes decisions in accordance with its authority stipulated by the Articles of Association of NAC Kazatomrpom JSC.

#### COMPOSITION OF THE MANAGEMENT BOARD OF NAC KAZATOMPROM JSC

By the resolution of the Board of Directors of NAC Kazatomrpom JSC dated May 06, 2015, the composition of the Management Board is determined to the number of five persons with thr term of their powers:

### **Chairman of the Management Board of NAC Kazatomprom JSC:**

#### ASKAR KUANYSHEVICH ZHUMAGALIYEV

(appointed by the decision of the Board of Directors of NAC Kazatomprom JSC of August 27, 2015 (Minutes of the meeting in presentia No. 12/15);

### **Members of the Management Board:**

### BAURZHAN MUKHTARKHANOVICH IBRAYEV,

#### Chief Officer for Production and NFC of NAC Kazatomprom JSC

(appointed by the decision of the Board of Directors of NAC Kazatomprom JSC of August 27, 2015 (Minutes of the meeting in presentia No. 12/15);

### MEIRZHAN BAKHITOVICH YUSSUPOV,

#### Chief Economic and Financial Officer of NAC Kazatomprom JSC

(appointed by the decision of the Board of Directors of NAC Kazatomprom JSC of November 20, 2015 (Minutes of the meeting in presentia No. 15/15);

### KAYRAT BEKTAYEVICH ABSATTAROV,

### Chief Administrative Officer of NAC Kazatomprom JSC

(appointed by the decision of the Board of Directors of NAC Kazatomprom JSC of August 27, 2015 (Minutes of the meeting in presentia No. 12/15);

#### RUSLAN SATBEKOVICH YENSEBAYEV,

### Chief Officer of Transformation and HR Policy of NAC Kazatomprom JSC

(appointed by the decision of the Board of Directors of NAC Kazatomprom JSC of May 04, 2016 (Minutes of the meeting in presentia No. 3/16).



ASKAR KUANYSHEVICH ZHUMAGALIYEV

CHAIRMAN OF THE MANAGEMENT BOARD NAC KAZATOMPROM JSC

Date of birth (day, month, year)	August 02, 1972
Place of birth	Akbulak village, Orenburg region, RSFSR
Nationality	Kazakh
Education	higher
Graduation year and name of the educational organization	Satpayev Kazakh National Technical University, 1996 Kazakh State Law Academy, 2002 Swiss Federal Institute of Technology in Lausanne, 2002
Majoring in	Radio Communication, Radio Broadcasting, Radio and Television Law
Competence in foreign languages and languages of CIS	Russian - fluent, Kazakh - fluent, English - fluent,
Academic degree, academic title	Master's Degree in Electronic Control at Swiss Federal Institute of Technology in Lausanne
State awards, honorary titles	Commemorative medals «10 years of Constitution of the Republic of Kazakhstan», «20 years of Independence of the Republic of Kazakhstan», Title «Honorary Communications Officer», 2005 Medal named after Yu.A. Gagarin Kurmet order, 2009
Diplomatic rank	no
Military or special rank, class ranking	Senior sergeant
Information on disciplinary penalties for corruption	no
Date and results of certification	not applicable
	<del></del>

### PROFESSIONAL EXPERIENCE

Date of		position, place of work, location of the organization
Hiring	leaving	
Feb. 1996	Feb. 1998	Director of Zharyk LLP
Feb. 1998	Feb. 1999	Sector Manager of the Radio Spectrum Planning and Use Division of the Posts and Telecommunication Department of the Ministry of Transport and Communications of the Republic of Kazakhstan.
May 1999	April 2000	Chief Specialist to the Head of the Transport Control Committee of the Ministry of Transport and Communications of the Republic of Kazakhstan.
May 2000	Oct. 2000	Head of the Procurement Department of Republican State Enterprise «Republic Center of Telecommunication Traffic Billing»
July 2003	May 2006	Deputy Chairman, Chairman of the Agency for Informatization and Communication of the Republic of Kazakhstan
Oct. 2006	Mar. 2010	Chairman of the Management Board of Kazakhtelecom JSC
Mar. 2010	Jan. 2012	Minister of Communications and Information of the Republic of Kazakhstan
Jan. 2012	Mar. 2014	Minister of Transport and Communications of the Republic of Kazakhstan
Mar. 2014	July 2014	Chairman of the Communications and Information Agency of the Republic of Kazakhstan
July 2014	May 2015	Vice Minister of Investments and Development of the Republic of Kazakhstan
May 2015	till present	Chairman of the Management Board of National Atomic Company Kazatomprom JSC

### Годовой отчет 2016



Date of birth (day, month, year)	January 01, 1958
Place of birth	Eastern Kazakhstan region
Nationality	Kazakh
Education	higher
Graduation year and name of the educational organization	Kazakh Kirov State University, 1978-1983 Physics
Competence in foreign languages and languages of CIS	Kazakh - fluent, English - fluent, Russian - fluent
Academic degree, academic title	Academic degree Doctor of Physical and Mathematical Sciences, Academician of the National Academy of Natural Sciences of RoK
State awards, honorary titles	Medal «10 years of Constitution of the Republic of Kazakhstan», medal «Honoured Worker of the Nuclear Industry of the Republic of Kazakhstan», medal «Eren enbegi ushin»
Diplomatic rank	
Military or special rank, class ranking	Senior Lieutenant
Information on disciplinary penalties for corruption	
Date and results of certification	not applicable

### PROFESSIONAL EXPERIENCE

Date of		position, place of work, location of the organization
hiring	leaving	
1983	1994	Institute of Nuclear Physics of the Academy of Science of the KazSSR, Radioactive Radiation Laboratory, Engineer, Junior Research Associate, Research Associate Experiments on the WWR-K reactor
1984	1991	Lebedev Institute of Physics of the Academy of Science of the USSR (FIAN of the USSR), Neutron Physics Laboratory, scientific experiments on the IRT-2000 reactor, MIFI
1994	2000	Al-Farabi Kazakh State University, Physics Department, Senior Lecturer, Associate Professor, Head of Department of Optics and Plasma Physics, Deputy Director
1996		IAEA internship at Berlin Center for Neutron Research (BENC), research work on the BER-2 reactor
1999	2000	Director of the Research and Development Institute of Experimental Theoretical Physics (NII ETF), Kazakh State University named after Al-Farabi
Jan. 2001	June 2003	Director of the branch of NAC Kazatomprom Mining Group No. 6, natural uranium mining in the Northern and Southern Karamurun mines, Kyzylorda region
June 2003	June 2005	General Director of MAEC-Kazatomprom Production of electric power, drinking water, heating and steam. Decommissioning of the BEN-350 reactor, Mangistau region
July 2005	Mar. 2006	General Director of Ken Dala.kz, JSC
Mar. 2006	Feb. 2011	General Director of Ken Dala.kz, JSC
Feb. 2011	Aug 2015	General Director of Production Enterprise «ORTALYK» LLP of NAC Kazatomprom JSC
Sept. 2015	till present	Chief Officer for Production and NFC of NAC Kazatomprom JSC



BAURZHAN MUKHTARKHANOVICH IBRAYEV

CHIEF OFFICER FOR PRODUCTION AND NFC NAC KAZATOMPROM JSC



MEIRZHAN BAKHITOVICH YUSSUPOV

CHIEF ECONOMIC AND FINANCIAL OFFICER

NAC KAZATOMPROM JSC

Date of birth (day	, month, year)	October 04, 1979				
Place of birth		Southern Kazakhstan region				
Nationality		Kazakh				
Education		higher				
Graduation year educational orga		MIDDLE EAST TECHNICAL UNIVERSITY, 2001 Economics and Management London School of Economics, 2007 Economic Development Management Harvard University, John F. Kennedy School of Government, 2015 Public Administration				
Majoring in		Bachelor, Master's degree				
Competence in fi languages of CIS	oreign languages and	Kazakh – fluent, English – fluent, Russian – fluent				
Academic degree	e, academic title	Master's degree				
State awards, ho	norary titles	In Honor Of The 15th Anniversary of NAC Kazatomprom JSC				
Diplomatic rank						
Military or specia	ıl rank, class ranking	Lieutenant				
Information on d corruption	isciplinary penalties for	-				
Results of specia	al inspection	-				
	PROF	ESSIONAL EXPERIENCE				
	Date of	position, place of work, location of the organization				
hiring	leaving					
Oct. 2001	Feb. 2003	Deputy Director of the Marketing Department, Internal Auditor of Turkuaz Group of Companies JSC.				
Mar. 2003	Sept. 2006	Deputy Director of the Corporate Relations Department of Demir Kazakhstan Bank JSC.				

	PROFESSIONAL EXPERIENCE				
	Date of	position, place of work, location of the organization			
hiring	leaving				
Oct. 2001	Feb. 2003	Deputy Director of the Marketing Department, Internal Auditor of Turkuaz Group of Companies JSC.			
Mar. 2003	Sept. 2006	Deputy Director of the Corporate Relations Department of Demir Kazakhstan Bank JSC.			
Sept. 2007	Aug 2009	Chief Manager of the Corporate Finance Department of Samruk-Kazyna JSC.			
Sept. 2009	Mar. 2010	Deputy Director of the Investment Policy Department of the Ministry of Economics and Budget Planning of the Republic of Kazakhstan			
April 2009	Aug 2010	Chief Manager of the Corporate Finance Department of Samruk-Kazyna JSC.			
Sept. 2010	Nov. 2015	Director of the Corporate Finance and Treasury Department of NAC Kazatomprom JSC.			
Nov. 2015	till present	Chief Economic and Financial Officer of NAC Kazatomprom JSC			

### Годовой отчет 2016



	·
Date of birth (day, month, year)	June 21, 1966
Place of birth	Zhezkazgan
Nationality	Kazakh
Education	higher
Graduation year and name of the educational organization	Karaganda Polytechnic Institute: majoring in Mechanical Engineering, 1990     Baikonurov Zhezkazgan University, majoring in Economics and Production Management, 1998
Majoring in	Mechanical Engineering
Competence in foreign languages and languages of CIS	Kazakh - fluent, English - fluent, Russian - fluent
State awards, honorary titles	He was awarded medals: «Kazakhstan's Constitution - 10 years», «10 years of Independence of Kazakhstan», «Kazakhstan's Constitution - 20 years», «20 years of Independence of the Republic of Kazakhstan» the Order «Kurmet»
Diplomatic rank	
Military or special rank, class ranking	Senior sergeant
Information on disciplinary penalties for corruption	-
Date and results of certification	not applicable

### PROFESSIONAL EXPERIENCE

Date of		position, place of work, location of the organization
hiring	leaving	
Aug 1990	Sept. 1992	Job Foreman of the motor transport enterprise of the Zhezkazgan Production Association of Motor Transport.
Oct. 1992	April 1996	Foreman, Deputy Technical and Production Manager of the Zhezkazgan Regional Enterprise «Avtomotoservis i Torgovlya».
April 1996	July 1997	Consultant of the Akim's Office of the Zhezkazgan region.
Jan. 1998	Sept. 1998	Chief Specialist of the Strategic Planning Department of the Strategic Planning and Reforming Agency of the Republic of Kazakhstan, Astana.
Sept. 1998	Oct. 2001	09.1998 - 10.2001 - Division Head of the Strategic Planning and Control Department of the Strategic Planning and Reforming Agency of the Republic of Kazakhstan, Astana.
Oct. 2001	Sept. 2002	Chief Expert of the Secretariat of the Security Council of the Republic of Kazakhstan, Astana.
Sept. 2002	Nov. 2003	Chief Expert of the Internal Policy Department of the Administration of the President of the Republic of Kazakhstan, Astana.
Nov. 2003	Feb. 2004	Head of the State Supervision and Licensing Department of the Agency for Informatization and Communication of the Republic of Kazakhstan, Astana.
May 2006	Oct. 2006	Head of the Financial and Economic Analysis and Administrative Department of the Agency for Informatization and Communication of the Republic of Kazakhstan, Astana.
Oct. 2006	Sept. 2007	Chief Executive Officer, Head of the Office of the President of Kazakhtelecom JSC, Astana.
Sept. 2007	Mar. 2010	Chief Administrative Officer of Kazakhtelecom JSC, Astana.
Mar. 2010	Feb. 2012	Executive Secretary of the Ministry of Communications and Information of the Republic of Kazakhstan, Astana.
Feb. 2012	Mar. 2013	Vice Minister of Transport and Communications of the Republic of Kazakhstan, Astana.
Mar. 2013	Oct. 2013	Chairman of the Transport Control Committee of the Ministry of Transport and Communications of the Republic of Kazakhstan, Astana.
Oct. 2013	June 2014	Vice Minister of Labor and Social Security of the Republic of Kazakhstan.
June 2014	Sept. 2015	Head of the Regional Development Department of the Prime Minister's Office of the Republic of Kazakhstan.
18 Sept. 2015	till present	Chief Administrative Officer NAC Kazatomprom JSC



KAYRAT BEKTAYEVICH ABSATTAROV

CHIEF ADMINISTRATIVE OFFICER

NAC KAZATOMPROM JSC



RUSLAN SATBEKOVICH ENSEBAYEV

CHIEF OFFICER OF TRANSFORMATION AND HR POLICY

NAC KAZATOMPROM JSC

Date of birth (day, month, year)	October 03, 1981
Place of birth	Stepnyak, Akmola region
Nationality	Kazakh
Education	higher
Graduation year and name of the educational organization	Institute of Management, Astana, 2001-2005 Economics and Management Satpayev Kazakh National Technical University, Almaty, 2013, Computer Engineering and Software International Information Technology University, Almaty, 2014-2016 Project Management
Majoring in	Economics and Management
Competence in foreign languages and languages of CIS	Kazakh - fluent, English - fluent, Russian - fluent
Academic degree, academic title	Master's degree in Economics
State awards, honorary titles	Awarded medal «20 years of Independence of the Republic of Kazakhstan».     Awarded a Certificate of Honor of the Republic of Kazakhstan for state and public activities and a significant contribution into social, economic and cultural development of the country, strengthening of friendship and cooperation between the peoples.     Awarded honorary medal «For Efficient Labor».
Diplomatic rank	
Information on disciplinary penalties for corruption	
Date and results of certification	

### PROFESSIONAL EXPERIENCE

Date of		position, place of work, location of the organization		
hiring	leaving			
Jan. 2001	April 2002	System Engineer, Category 2, Department of Republican State Enterprise «Center of Finance System Informatization», Astana		
April 2002	Aug 2002	Lead Engineer of the Technical Policy and Information Support Department of Kazakhstan Temir Zholy JSC, Astana.		
Sept. 2002	Nov. 2003	Lead System Engineer of the Information Security Sector, Republican State Enterprise «Center of Finance System Informatization», Astana		
Nov. 2003	April 2008	Project Manager for the Development of Electronic Government Web Portal and Gateway of the Integrated Solution Department of National Information Technologies JSC, Astana, Head of the Electronic Government Web Portal Division of the Electronic Government Technology Development Department of National Information Technologies JSC, Astana, Head of the Electronic Government Division of the Methodology and Information Resource Monitoring Department of National Information Technologies JSC, Astana, Head of the Authentication Center of the Methodology and Information Resource Monitoring Department of National Information Technologies JSC.		
April 2008	June 2010	Chief Specialist of Electronic Services of the Information System Management of the branch of Kazakhtelecom JSC, Astana		
April 2010	July 2011	Chairman of the Management Board of National Information Technologies JSC, Astana.		
July 2011	April 2014	Chairman of the Management Board of National Information Technologies JSC, Astana.		
April 2014	July 2014	Deputy Chairman of the Management Board of Zerde National Infocommunication Holding, Astana		
Aug 2014	Mar. 2016	Chairman of the Management Board of National Information Technologies JSC, Astana.		
Mar. 2016	till present	Chief Officer of Transformation and HR Policy of NAC Kazatomprom JSC, Astana		



Table 15 – Attendance of meetings in presentia by the members of the Management Board of NAC Kazatomprom JSC in 2016

Members of the Management Board	Attendance of meetings	%	Period of membership in the Management Board within the reporting period
A.K. Zhumagaliyev.	21	100%	01.01.2016 - 31.12.2016
K.B. Absattarov	17	80%	01.01.2016 - 31.12.2016
R.S. Ensebayev Hired on May 04, 2016	11	91%	04.05.2016 - 31.12.2016
B.M. Ibrayev	17	80%	01.01.2016 - 31.12.2016
M.B. Yussupov	17	80%	01.01.2016 - 31.12.2016
S.I. Poltoratski, member of the Board till May 4, 2016	7	77%	01.01.2016 - 04.05.2016

According to the Regulations on the Management Board of NAC Kazatomprom JSC, the Management Board may make decisions by one of the following ways:

- Voting in person (meeting in presentia);
- Absentee voting (meeting is not held);
- · Combined voting.

#### **ACTIVITY OF THE MANAGEMENT BOARD IN 2016**

For the reporting period, the Management Board held 21 meetings in presentia where 111 issues were considered. Positive decisions were made and signed by voting in presentia or in absentia concerning all issues of the agenda of meetings in presentia of the Management Board of the Company, as well as 656 decisions were made by the Management Board in 2016. (Table 15 – Attendance of meetings in presentia by the members of the Management Board of NAC Kazatomprom JSC in 2016)

The following issues were the most urgent among those that were considered by the Management Board in 2016:

- Approval of the corrected Development Plan and the Alternative Development Plan for 2016-2020;
- · Amendments to Subsurface Use Contracts;
- Approval of organizational structure of the Company's Headquarters and the total staff number;
- Amendments to the Regulations on the Business Transformation Program;

- Provision of the employees with compensations for the purchase of housing in Astana;
- Approval of the Pilot Procurement Category Strategies «Electric Energy» and «POL»;
- Development of the Action Plan for rehabilitation of Kazakhstan Solar Silicon LLP and MC «Kaz Silicon» LLP for September to December 2016;
- Fulfillment of the obligations under the Cooperation Memoranda concerning social and economic development made between NAC Kazatomprom JSC and the Akimats of the Southern Kazakhstan and Kyzylorda regions.

The total remuneration of the Management Board members of NAC Kazatomprom JSC following the results of work for 2016 amounted to 213,980,171 KZT

Table 16 - Number of issues considered by the Management Board of the Company in 2015-2016

Indicator	2016	2015	Variation
Number of meetings in presentia	21	24	(12,5%)
Number of issues considered at meetings in presentia (including issues not in the agenda)	135	133	1,5%
Number of issues considered at meetings in absentia	521	539	(3,3%)

### COMMITTEES OF THE MANAGEMENT BOARD

The following are Committees of the Management Board assisting in enhancement of effectiveness of the resolutions made by the Management Board:

#### **Risk Management Committee**

The Risk Management Committee of the Company is a main working body that considers and makes suggestions on risk management of the Company.

### The main functions of the Risk Management Committee are as follows:

- 1. Consideration and preliminary approval of drafts of internal (including Policy and Rules of Risk Management) and other documents of the Company on risk management;
- 2. Coordination of interaction of structural subdivisions of the Company during risk management;
- 3. Consideration and approval of the risk appetite, level of tolerance with respect to the key risks;
- 4. Review and approval of limits for banks and the list of second-tier banks which deposits could be used for temporary placement of free funds (if necessary);
- 5. Consideration and approval of a risk register, including consolidated action plans for risks minimization, and a risk map thereto;
- 6. Consideration and approval of key risk indicators;
- 7. Consideration and approval of risk matrices and controls:
- 8. Preparation of proposals on organization and maintenance of the effective risk management system;
- 9. Consideration and approval of risk owners on the basis of risk register. **G4-34**

#### **Investment Committee**

The main purpose of the Investment Committee is to make recommendations (suggestions) on improving efficiency of investment activity of the Company.

### The main functions of the Investment Committee are the following:

1. Approval of internal regulatory documents of the Company for investment activity;

- 2. Consideration, implementation and making recommendations in accordance with the established procedure:
- •• On Investment and/or Strategic Projects of the Company;
- •• On acquisition or sale by the Company or its subsidiaries and affiliates of stock of shares (participation interest) of other legal entities, merger of subsidiaries and affiliates with third-party legal entities and creation of new legal entities for the purpose of implementation of the Investment and/or Strategic Projects;
- •• On increase in size of the Charter Capital of subsidiaries and affiliates;
- •• On creation of working groups within the implementation of Investment and/or Strategic Projects;
- •• And on other issues according to internal documents of the Company.
- 3. Issuance of expert reports on Investment Projects of the Company to be submitted to the Fund. **G4-34**

#### **Credit Committee**

The main purpose of the Credit Committee is to implement the Company's Credit Policy in accordance with the requirements of Samruk-Kazyna JSC and to ensure timely and qualitative adoption of resolutions on issues associated with granting loans by the Company.

### The main functions of the Credit Committee are the following:

- 1. Consideration and preparation of recommendations to make decisions on loan applications including an analysis of expert estimate of actual and planned financial indicators based on which the loan is granted, and verification of mortgage security;
- 2. Determination of terms of loan granting such as amount, term, purpose, interest rate, security, repayment schedule of principal and interests etc.;
- 3. Consideration and making decisions on performed scheduled and unscheduled monitoring of credit activities:
- 4. Consideration and preparation of recommendations on making decisions on loan restructuring and problem loans. **G4-34**

### Annual report 2016



#### Specialized Scientific and Technical Council

The Specialized Scientific and Technical Council (SSTC) is a main working body to implement the strategic approach to scientific, technical and innovative development of the Company.

### The main functions of the SSTC are the following:

1. Formation, updating and implementation of the strategic approach to scientific, technical and innovative development of NAC Kazatomprom JSC;

- 2. Application of scientific achievements and new technologies for the benefit of NAC Kazatomprom JSC and its subsidiaries and affiliates:
- 3. Consideration and agreement of strategic plans of research and development and innovative work at NAC Kazatomprom JSC, R&D plans at its subsidiaries and affiliates:
- 4. Updating and monitoring of the research, development and design work performed for NAC Kazatomprom JSC. **G4-34**

## 4.5 ORGANIZATIONAL STRUCTURE OF THE COMPANY'S HEADQUARTERS

The Company represents a Corporate Center with a clear functional structure. Due to the adopted Transformation Program, the Company plans to

apply a process approach to management of the main activities in the future.

KAP3

### 4.6 CORPORATE ETHICS

The Company recognizes that honest business, including combating corruption, is a necessary factor in dealing with stakeholders and building trustful internal corporate relationships. Thus, the social and economic environment in which the Company operates is improved by increasing the reliability and integrity of transactions, preventing corruption and providing reliable information for decision-making by stakeholders.

All employees of the Company get familiar with the Code of Corporate Ethics as a part of the hiring process, as well as when the Code is amended. To confirm the familiarization of the Code, a form of familiarization (Appendix no. 1 of the Code) is signed by every employee. **G4-56** 

A periodic testing of personnel is carried out in order to check the understanding of the provisions of the Code of Corporate Ethics.

The company is committed to high standards of corporate ethics and adheres to:

- Use and improve policies and practices that help to prevent bribery, extortion, facilitation remuneration and other corruption practices;
- Counteract the legalization of illegally gained income;
- Ensure the compliance with the requirements of legislation, the Charter, the terms of international treaties and establish sanctions for their violation;
- Raise the awareness of personnel about the importance of the compliance with the requirements of the law, encourage employees

- to report incidents of violation of the Company's policies, rules and procedures;
- Demonstrate that the level of remuneration of the employees of the Company corresponds to the work performed and the level of qualification;
- Timely fulfil obligations under contracts, including payment of taxes and other payments to the state budget;
- Observe the principles of fair competition and use the criteria of ethical equality in the implementation of procurement policies and the conclusion of contracts;
- Ensure transparency, openness and objectivity of decisions. G4-56

There is a current Company's Regulations on the settlement of corporate conflicts and conflicts of interest of NAC Kazatomprom JSC, as approved by the decision of the Board of Directors, which determines the causes of corporate conflicts, conflicts of interest, procedures for their prevention, and regulates the activities of the Company's bodies within the framework of conflict resolution activities.

A number of documents, the main of which is the Rules on the procedure for consideration of applications to NAC Kazatomprom JSC (hereinafter referred to as the Rules), regulates the Company's actions aimed at preventing and terminating of violations of the laws of the Republic of Kazakhstan ("RK") or internal regulatory documents of the Company.

These Rules are a set of measures that allow all employees of the Company's subsidiaries and

affiliates to anonymously report the facts of the offences. A hotline and an e-mail address serve as the main channels to for submitting messages and information to the Company.

By the decision of the Board of Directors of NAC Kazatomprom JSC no. 7/15 of April 30, 2015 an amended Policy of NAC Kazatomprom JSC on combating corruption and fraud was approved, which defines the main directions of the Company's activities and general rules of conduct for officials and employees in combating corruption and fraud. The provisions of this policy are included in the Code of Corporate Ethics. Each employee signs an obligation to comply with anti-corruption legislation. **G4-56** 

In the event of labour disputes and conflicts, certain issues of the dispute are resolved in accordance with the labour legislation. A mediative method of resolving a labour dispute is also used, through which it is possible to resolve the differences that have arisen.

#### **OMBUDSMAN INSTITUTION**

The Code of Corporate Ethics stipulates the creation of the institution of the Ombudsman in the Company. Since 2011, the Board of Directors appoints the Company's Ombudsman. In accordance with the Code of Corporate Ethics, the basic functions of the Ombudsman include:

- Collection of information on non-compliance with the provisions of the Code of Corporate Ethics,
- Consultations of officials and employees on the provisions of the Code of Corporate Ethics,
- Initiation of consideration of disputes on violation of the provisions of the Code of Corporate Ethics and participation in their settlement.

One of the duties of the Ombudsman is to submit to the Board of Directors a report on compliance with the requirements of the Code of Corporate Ethics, including information on appeals on non-compliance with the provisions of the Code of Corporate Ethics. **G4-56** 

In 2016, no complaints on violations were received from employees.

### 4.7 RISK MANAGEMENT AND INTERNAL CONTROL

In 2010, the Company introduced a risk management system (RMS), which was built taking into account the best world practices of risk management and requirements of Samruk-Kazyna JSC. **G4-14** 

The company is guided by the following international standards and practices in the field of risk management and internal control:

 COSO "Internal Control – integrated model" (2013)

A revised version of 1992 document. COSO2013 insists that internal control is a process that depends on people at all levels of the organization (not just



management, directors, etc.), and should be aimed at achieving the Company's business goals.

• COSO "Enterprise Risk Management – integrated model" (2004, is currently being revised and updated) (Includes "Integrated model" and "Applied Methods")

Conceptual model that focuses on various aspects of risk management. It considers internal control as an essential component of risk management in an enterprise.

 Standard ISO 31000:2009 "Risk Management – Principles and guidelines" (2009-2010)

A guide that defines the principles and approaches to the risk management process. The standard establishes the fundamental principles and processes of risk management that apply to any type of organization in the private or public sector.

• Standard ISO 9001:2008 and ISO 9001:2015
"Quality Management System"
Standards that define approaches to quality
management, including a process approach to

managing risks that affect product quality.

 Regulatory documents on risk management and internal control of Samruk-Kazyna JSC.



### **RISK MANAGEMENT**

The Company's activities are associated with various risks, and therefore, an effective risk management system is a fundamental element of the Company's business and its Development Strategy. Accurate and timely identification, assessment, monitoring and response to risks allow effective decision-making process at all levels of management and ensure achievement of strategic goals and key performance indicators of the Company.

The structural division responsible for risk management in the Company is the Risk Management Department. Key issues on risk management are preliminary reviewed, approved or agreed by the Risk Management Department under the Company's Management Board. Separate structural units responsible for the organization of risk management have been formed, or risk managers have been appointed in the Company's subsidiaries and affiliates.

Detailed information on the structure, participants and authorities of members of the risk management

system is provided in the Risk Management Policy posted on the Company's website.

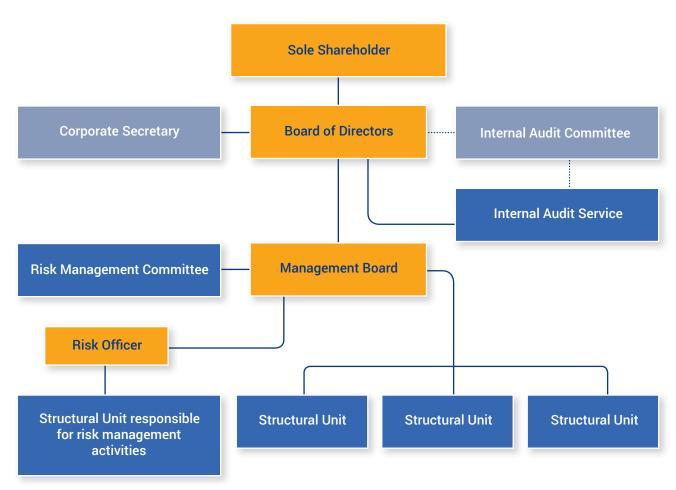
The risk culture in the Company is created through the involvement of all key departments and stakeholders, as well as the effective exchange of information in the risk management process between the Board of Directors, the Management Board and the Company's divisions.

For heads of departments and other employees who own risks, corporate training in risk management and internal control is organized, an annual round-table discussion with employees responsible for enterprise risk management is organized.

As part of the transformation of NAC Kazatomprom JSC, measures are being taken to bring the current risk management system to the target risk management model.

To further improve the RMS, measures are taken to automate the main processes of risk management,





taking into account the involvement of all members of the SRA of the Company and its enterprises.

The evaluation of the effectiveness of the risk management system conducted by the Internal Audit Service on the basis of the methodology for assessing the effectiveness of RMS of subsidiaries and affiliates of Samruk-Kazyna JSC in 2016 amounted to 84.2%.

### MAIN RISKS AND OPTIMIZATION MEASURES

All identified risks of the Company are divided into five main categories in accordance with the methodology of COSO "Enterprise Risk Management - Integrated Model": strategic, financial, operational, investment and legal.

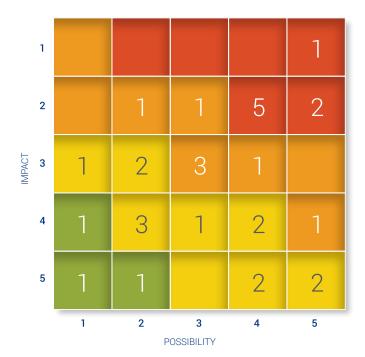
Risk registers and maps of subsidiaries and affiliates are approved on an annual basis in the Company. The risk map of NAC Kazatomprom JSC is divided into zones of influence and likelihood.

The risk map approved by the Board of Directors of the Company at the end of 2016 is indicated below.

According to the Company's risk register, 31 risks were projected for 2016, of which eight (red zone) were critical risks.

During the year, there were deviations in the following risks:

Figure 6. Risk map indicating a number of risks per each area as of December 31, 2016



- The decrease of the sale price of uranium lower than planned for 2016 in the Development Plan of the Company's corporate group;
- · Non-fulfilment of the uranium sales plan;
- · Industrial injuries;
- Economic damage to the Company's corporate group by unlawful actions of third parties.
- Legal consequences in relation to different interpretations of legislation;
- Growth of the loss due to failure to achieve the planned results for the implementation of the project SP SARECO LLP;
- Risks related to the failure to achieve the planned indicators for the KAZ PV project;
- Negative impact from deviations in investment activities.

The Company successfully conducts activities aimed at preventing risks and reducing the consequences from risks. Reports on the implementation of preventive measures within the register of risks are formed on a regular basis.

Key risk indicators for weekly monitoring of key risks are identified. In this context, the information system "Situation Center", implemented in the Company, plays a significant role, which allows demonstrating to the management of the Company the status of all production, financial, administrative and operational indicators.

The practice of limiting risks is implemented: on an annual basis, the level of risk appetite of the Company is determined in order to control the process of prevention of possible negative financial consequences and possible reduction of the Company's value, tolerance levels are defined for all risks, limits on second-tier banks are established.

The practice of analysing and assessing risks in investment projects, as well as other issues brought by the Company's enterprises to its management bodies, has been implemented.

On a quarterly basis, the Risk Management Department forms reports on risk management for the Company's Management Board and the Board of Directors with disclosure of information on the risks realized, on the undertaken preventive and reactive measures to minimize risks, on the projected risks and on the state of financial risks.



#### **INTERNAL CONTROL SYSTEM**

Organization of the internal control system in the Company includes development of the management system able to promptly react on process risks, control the main and supplementing processes and everyday operations.

The internal control in the Company is aimed at prevention of risks in three key spheres of activities, including preparation of financial and managerial statements, compliance with requirements of legislation and internal regulatory documents, as well as improvement of effectiveness of processes within operating activity.

The system of internal control in NAC Kazatomprom JSC is designed in accordance with the model COSO "Internal control - Integrated model" and consists of five independent components:

- · Control environment;
- · Risks assessment;
- · Control procedures;
- · Information and its transfer;
- · Monitoring.

The guidelines for the internal control system in NAC Kazatomprom JSC are posted on the Company's website.

The evaluation of the efficiency of the Company's internal control system for 2016, conducted by the Internal Audit Service on the basis of Samruk-Kazyna JSC methodology, amounted to 92.5% (in 2015 - 86.12%).

Within the framework of the internal control system, the Company carries out the following activities on a regular basis:

- Conducting operational efficiency testing of control procedures for business processes of the Company's structural divisions;
- Diagnostics of the development of the internal control system in subsidiaries and affiliates through self-assessment by subsidiaries and affiliates, as well as with visits to subsidiaries and affiliates.

### **QUALITY MANAGEMENT SYSTEM**

To improve efficiency of production, competitiveness and export potential, as well as the quality of products and services, NAK Kazatomprom JSC carries out regulation of activities of subsidiaries and affiliates related to standardization, metrology and quality compliance (management of testing laboratories). Quality control of finished products is carried out by testing laboratories certified in accordance with ST RK ISO/IEK 17025. The quality management of the products is based on the normative and technical support for the production of each enterprise. In the subsidiaries and affiliates of NAC Kazatomprom JSC, the quality management systems have been introduced in accordance with the international standards of ISO 9000 series

NAK Kazatomprom JSC applies the Corporate Standardization System. Currently, there are 40 developed and approved corporate standards, which include subsystems and sets of business standards.





# 5. FINANCE

5.1 Financial Performance	86
5.2 Financial Stability	90



### 5.1 FINANCIAL PERFORMANCE

The figures in this section correspond to the audited consolidated financial statements. Full disclosure of the Company's audited consolidated financial statements is available on the Company's corporate website <a href="http://www.kazatomprom.kz/ru/content/investoram/investoram/otchety/finansovaya-otchetnost">http://www.kazatomprom.kz/ru/content/investoram/investoram/otchety/finansovaya-otchetnost</a>.

In 2016, the price of natural uranium in the world market has undergone a significant decrease (by 40%), which

entailed certain difficulties with maintaining profitability. However, despite negative external economic factors, the consolidated net profit of the Company in 2016 increased by 206% compared to the previous year and amounted to 111.555 mln. KZT.

Table no. 17 shows the changes in the balance sheet items and demonstrates the overall positive dynamics of the Company's financial position.

Table 17 - Changes in the balance sheet items of the statement of the Company's financial position, mln. KZT

Balance sheet item	2016	2015	Change	Change,%
Assets	820 031	793 276	26 755	3%
Capital	567 830	469 405	98 425	21%
Long-term liabilities	106 493	150 239	(43 746)	(29%)
Short-term liabilities	143 742	173 632	(29 890)	(17%)

Significant changes have taken place in the structure of the main items of the Company's consolidated balance sheet. The total value of the Company's assets showed a slight increase in 2016 compared to 2015 (3% growth). At the same time, the share of the Company's capital in the structure of the balance

sheet increased by almost 10% and amounted to 69% of the total value of the Company's liabilities. While the share of liabilities decreased from 41% in 2015 to 31% in 2016 of the total value of liabilities, which indicates an increase in the use of own funds to finance operating activities.

### **Company Assets**

The main factor in increasing the Company's assets is the increase in the Company's current assets by 43,185 mln. KZT, which is mainly due to the growth of short-term deposits by 47,456 mln KZT compared to the previous year. In order to manage the currency risk, the Company places money on deposits in large banks of Kazakhstan in US dollars, the currency of the main income.

Long-term assets decreased by 19,730 mln KZT in 2016 due to the withdrawal of non-core and auxiliary assets from the Group within the framework of the approved transformation program, as a result of which 7 enterprises were sold during 2016, 5 enterprises were reorganized and 5 enterprises were liquidated.

Table 18 - Structure of the Company assets, mln KZT

Наименование позиции	2016	2015	Change	Change, %
Long-term assets	456 554	476 283	(19 729)	(4%)
Current assets	360 014	316 829	43 185	14%
Assets held for sale	3 463	164	3 299	2012%
Total assets	820 031	793 276	26 755	3%

### **Capital**

The growth of the capital of the Company in 2016 compared to 2015 by 98 bln. KZT was due to the receipt of net profit in 2016 in the amount of 112 bln. KZT, which is 75 bln. KZT more, compared to 2015.

The main factor in increasing the Company's net profit in 2016 is the devaluation of the national currency that occurred at the end of 2015. The devaluation of the tenge directly influenced the growth of revenues in the national currency from the core business, as well as income from equity participation in the joint ventures of the Company in 2016, as 70% of the Company's consolidated revenue comes in US dollars. Income from equity participation in joint ventures increased by 161% compared to the previous year and amounted to 36,739 mln. KZT (14,080 mln. KZT in 2015).

At the same time, this devaluation led to a decrease in net income in 2015 due to a negative foreign

exchange gain on the Company's liabilities in foreign currency of 53,446 mln. KZT, which amounted to about 51% of the gross profit of 2015. In turn, in 2016 the Company received a foreign exchange gain in the amount of 3,614 mln. KZT due to the relative stability of the US dollar exchange rate during 2016.

As of December 31, 2016, the number of authorised and outstanding (paid) common shares of the Company is 36,784,961 shares (2015: 36,692,361). **G4-13** 

All the Company's shares are owned by Samruk-Kazyna JSC, which is the sole and ultimate party in making decisions on the distribution of dividends. Each common share entitles to one vote.

In 2016, dividends for the year of 2015 were declared and paid in the amount of 12,031 mln. KZT, which is 418% higher than dividends for 2014 paid in 2015 (2,323 mln. KZT). Dividends per share amounted to 328 tenge (63 tenge in 2015)

Table 19 - Structure of the Company capital, mln tenge

	2016	2015	Change	Change, %
Registered capital	36 785	36 692	93	0%
Retained profit	495 732	398 991	96 741	24%
Other components of capital	22 846	23 604	(758)	(3%)
Non-controlling interest	12 467	10 118	2 349	23%
Total capital	567 830	469 405	98 425	21%

### **Company Liabilities**

Long-term and short-term liabilities decreased by 73.6 bln. KZT in 2016 compared to the previous year, which indicates an increase of the Company's financial stability.

Reduction of long-term obligations is primarily related to the repayment of the current part of the obligations (according to the schedule).

Table 20 - Structure of the Company's long-term liabilities, mln tenge

	2016	2015	Change	Change, %
Debt	77 184	119 776	(42 592)	(36%)
Long-term trade and other accounts payable	581	585	(4)	(1%)
Long-term reserves	17 320	17 183	137	1%
Deferred tax liabilities	4 743	4 509	234	5%
Other long-term liabilities	6 665	8 186	(1 521)	(19%)
Total long-term liabilities	106 493	150 239	(43 746)	(29%)



Reduction of short-term liabilities by 30 bln. KZT in 2016 was caused by a decrease in short-term trade accounts payable by 27 bln. KZT compared to the previous year. Reduction of short-

term trade account payable indicates that the Company has sufficient liquid funds for operating activities and timely repayment of accounts payable to suppliers.

Table 21 - Structure of the Company's short-term liabilities, mln tenge

	2016	2015	Change	Change, %
Debt	50 581	52 845	(2 264)	(4%)
Short-term trade and other accounts payable	74 654	101 622	(26 968)	(27%)
Short-term reserves	98	101	(3)	(3%)
Liabilities for other taxes and mandatory payments	6 198	5 027	1 171	23%
Current income tax liabilities	134	1 036	(902)	(87%)
Other short-term liabilities	12 077	13 001	(924)	(7%)
Total short-term liabilities	143 742	173 632	(29 890)	(17%)

### **Performance Indicators for the Use of Assets**

Table 22 - Performance Indicators for the Use of Assets

Consolidated indicators	2016	2015	Change
Inventory turnover ratio (Revenue / Average annual inventory value)	3,8	4,7	(0,9)
Capital productivity ratio (Revenue / Average annual cost of fixed assets (less construction in progress))	3,9	3,6	0,3

The decrease in the inventory turnover ratio by 0.9 in 2016 was caused by the growth of stock balances at the end of 2016 by 20,403 mln. KZT compared to the end of 2015. A decrease in this ratio indicates an inefficient use of the Company's current assets. In order to increase the efficiency of the use of current assets, including reserves, the Company plans to reduce the volume of uranium production in 2017.

The increase in the return on assets in 2016 by 0.2 demonstrates an increase in the efficiency of the use of the Company's fixed assets. With an insignificant decrease in the average annual cost of fixed assets by 1,202 mln KZT (108,779 mln. KZT in 2016, 109,991 mln. KZT in 2015), the Company increased revenue by 21,135 mln. KZT (from 397,766 mln. KZT in 2015 to 418,901 mln. KZT in 2016). The decrease in the cost of fixed assets was caused by the withdrawal of non-core assets of the Company, while the increase in the Company's revenue is related to

the positive impact of the devaluation of the tenge in 2015, as mentioned earlier.

#### **EVA**

The main strategic indicator of the Company's activity is EVA (Economic Value Added), reflecting the added economic value of the Company to the operational level before the real levers of management. At the end of the year, the growth in EVA (excluding equity participation) amounted to 4 bln. KZT from minus 10.3 KZT in 2015 to minus 6.4 bln. KZT in 2016. The growth was achieved due to the transformation program, the total effect of which in 2016 amounted to 16.2 bln KZT due to lower costs and introduction of category purchases.

All target development indicators of NAC Kazatomprom JSC are in accordance with the Company's Strategy.

### 5.2 FINANCIAL STABILITY

### **Financial Liabilities**

Financial liabilities (loans and guarantees) of the Company as of December 31, 2016 amount to 149,578 mln KZT (2015: 240,100 mln KZT).

The consolidated amount of debt on the Company's loans as of December 31, 2016 amounted to 127,929 mln KZT, including bank (99%) and non-bank loans (1%).

In 2016, the total debt on loans decreased by 44,692 mln KZT due to partial repayment of current debt on loans (according to the schedule of payments).

The amount of the Company's guarantees for loans to associates of the Company as of December 31, 2016

amounted to 21,649 mln KZT. During 2016, the amount of guarantees decreased by 45,830 mln KZT, also due to the repayment of current debt.

In managing financial risks, the Company is guided by the Debt and Financial Stability Management Policy approved by the Shareholder ("Policy"). The purpose of the Policy is to manage the financial stability and risks of Samruk-Kazyna's group of companies that result from the debt collection.

The main indicators of financial stability, as defined by creditors and the policy of debt management and financial stability, are the financial ratios presented in the table:

Table 23 - Financial Ratios

Consolidated indicators	Normative criteria	2016	2015
The ratio of financial debt to equity	Less than 1	0,26	0,51
Earnings before Interest, Taxation, Depreciation & Amortisation	Less than 3.5	0,99	1,89

During 2016, the Company complied with all external requirements to the level of capital, including covenants.

### Liquidity

At the end of 2016, the Company has temporary spare money and undisbursed loans for 176,242 mln KZT (USD 528.8 mln).

Table 24 – Temporary spare money and undisbursed loans

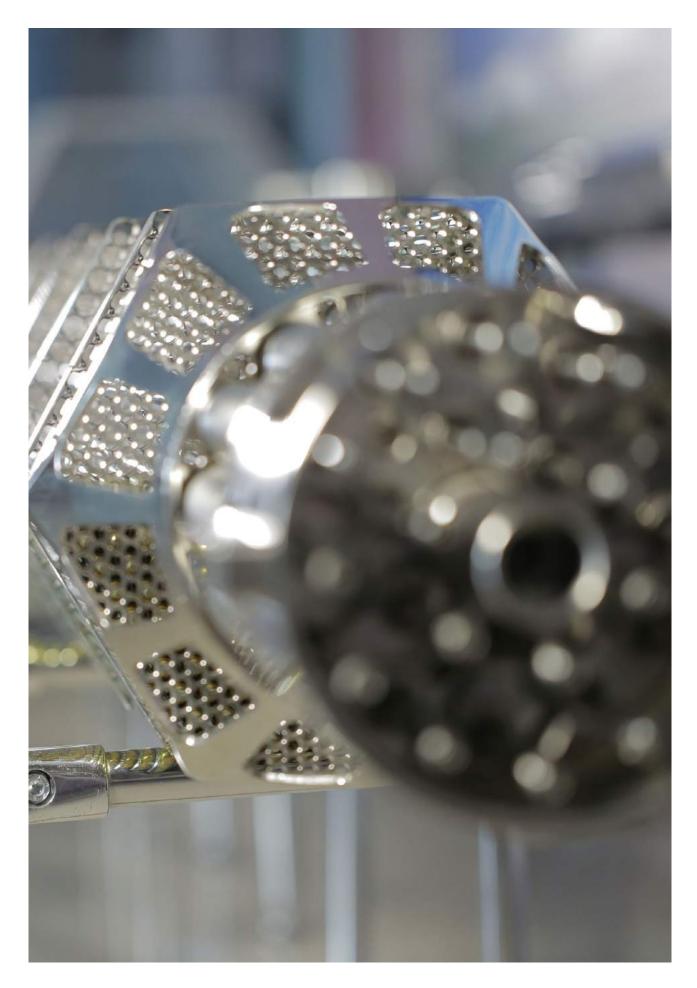
In millions of Kazakhstan tenge	2016	2015
Short-term deposit balance	69 161	11 590
Account balance	62 323	53 246
Undisbursed loan amount	44 758	54 807
Total	176 242	119 643

The approach to liquidity management is to ensure the continued availability of liquid funds sufficient to pay off the obligations on time, both in normal and tense conditions, preventing the occurrence of unacceptable losses and without compromising reputation.

The Company invests in diversified portfolios of liquid

assets and uses corporate credit lines in order to be able to react quickly and appropriately to unforeseen liquidity requirements.

In general, the Company manages the financial stability and ensures solvency by generating sufficient cash and a balanced use of debt and equity.





# 6. OPERATING ACTIVITIES

6.1	Raw Material Base	83
	Raw Material Base State	83
	Uranium mining and production	84
	Rare and rare-earth metals	85
	SARECO joint project with Japan	85
6.2	Energy Production	87
6.3	Nuclear Fuel Cycle	89
6.4	Auxiliary Production	93



# **6.1 RAW MATERAL BASE**

#### **RAW MATERIAL BASE STATE**

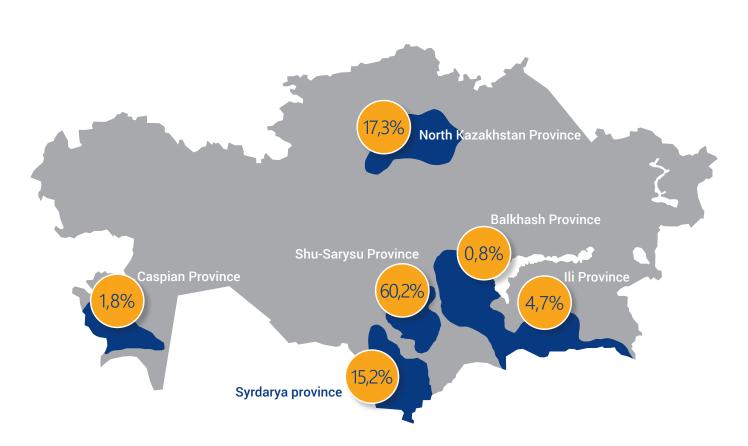
The scale of uranium deposits in the Republic of Kazakhstan is the main competitive advantage of NAC Kazatomprom JSC. **KAP4** 

Kazakhstan has 67% of the world's proven uranium reserves, suitable for development by the method of drillhole in situ leaching (ISL). Thus, the Company owns a unique raw material base, which includes the world's largest explored and prospective uranium reserves. KAP4

In Kazakhstan, out of 55 explored deposits with balance uranium reserves, 13 are being developed, the remaining 42 deposits are in reserve.

Annual investments by NAC Kazatomprom JSC in the state geological study of subsurface resources, aimed at finding new uranium deposits, amount to about 1.2 bln KZT. KAP4

Figure 7. Uranium provinces of the Republic of Kazakhstan



Shu-Sarysu Province – 60,2 % North Kazakhstan Province – 17,3 %

Syrdarya province – 15,2 %

Ili Province – 4,7 %

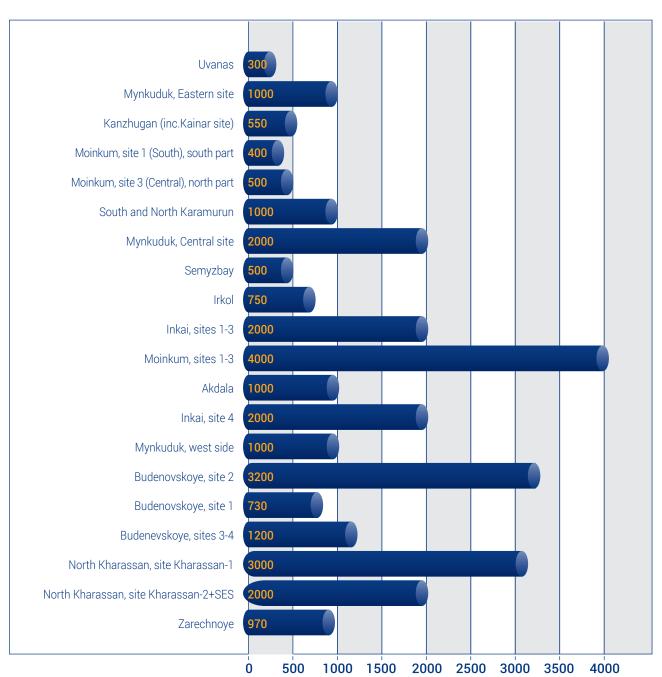
Caspian Province - 1,8 %

Balkhash Province - 0,8 %

Table 25 - The amount of explored uranium reserves as of January 1, 2017, tons

The amount of explored uranium reserves	Total	Reserves (C1+C2)	Resources (P1+P2)
Kazakhstan	1 373 478,0	878 405,0	495 073,0
Of which contracted	870 069,7	668 177,7	201 892,0
NAC Kazatomprom JSC	442 941,2	341 443,7	101 497,5

Diagram 3 – Projected capacity of fields processed by enterprises of NAC Kazatomprom JSC, tons of uranium per year





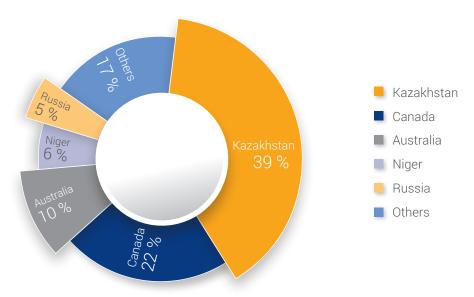
#### **URANIUM MINING AND PRODUCTION**

Currently, NAC Kazatomprom JSC includes 13 uranium mining enterprises, including 3 enterprises that provide uranium mining and processing services, with 22 operating mines in the South Kazakhstan, Kyzylorda and Akmola regions. **KAP4** 

The volume of production by organizations of NAC Kazatomprom JSC for 2016 amounted to 24,689.2 tons

of uranium, including experimental production of 318.7 tons. The Republic of Kazakhstan has maintained its leadership in the world uranium mining industry, providing about 39% of the world uranium production, which according to Uranium Market Outlook Ux Consulting amounted to 62,937 tons of uranium. KAP4

Diagram 4 - Share of Kazakhstan in the global uranium market, 2016, %3

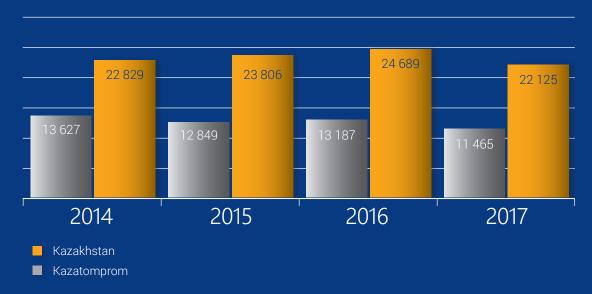


<sup>&</sup>lt;sup>3</sup> The volume of production by NAC Kazatomprom JSC, taking into account the shares in subsidiaries and affiliates

The volume of production by NAC Kazatomprom JSC by share of participation in subsidiaries and affiliates, increased from 12.8 thousand tons of uranium in 2015

to 13.2 thousand tons of uranium in 2016. The company retained its leadership in the global natural uranium market, providing 20.9% of the global production.

Diagram 5 - Dynamics of uranium mining, tons U in 2014-2017



The growth in uranium production for the period from 2014 to 2016 was in accordance with the approved production program and the mining plan. Due to the long period of price recovery for natural uranium and the future oversupply in the uranium market, the planned uranium production in the Republic of Kazakhstan for 2017 is reduced and amounts to 11.5 thousand tons.

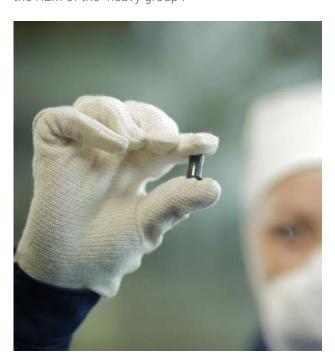
#### Rare and rare-earth metals

The extraction of rare and rare-earth metals (hereinafter "RM" and "REM") and the production of products based on them are also a priority activity of NAC Kazatomprom JSC. In 2016, the Company continued to implement its development strategy in this area, as well as active cooperation with foreign partners. KAP4

# **SARECO Joint Project with Japan**

SP SARECO LLP (NAC Kazatomprom JSC - 51% and Sumitomo Corporation - 49%) in 2016 continued work on the preparation for the operation of the plant to create high-tech production of rare earth products.

The SARECO plant in Stepnogorsk is a unique complex of thermal and hydrometallurgical processing of various types of raw materials. The SARECO plant is designed to produce 1.5 thousand tonnes of TREO (the sum of REM oxides) per year with an increase in production capacity to 3 thousand tonnes of TREO in 2016 and up to 5-6 thousand tonnes of TREO per year by 2018-2019. A considerable part of the produced products will be the REM of the "heavy group".



According to the project "Development of experimental production of collective carbonates and individual compounds of rare earth metals" (SP SARECO LLP) during 2016:

- The Company signed an agreement with IRZK LLP on intentions to supply rare-earth products.
   The effect of the business model of deliveries of intermediate concentrates (diluted carbonate REM) in IRZK LLP will be an exception to the scheme of duplicating operations, reducing the cost of SARECO products and increasing profitability of production;
- Within the framework of potential cooperation in the field of rare earth metals, on March 4, 2016, a contract was signed with the Norwegian company REEtec to supply a sample of the collective concentrate of the SARECO REM to study the possibility of dividing the collective concentrate into individual compounds of rare earth metals using technology and equipment REEtec.
- In June-August, test trials of SARECO products were conducted at the experimental plant REEtec, following which the Norwegian company reported successful separation results, as well as readiness to consider the possibility of concluding a contract for the supply of SARECO REM concentrate in a larger volume.
- In August, a meeting was held with a delegation of investors from Saudi Arabia, Metals Corners Holding Co. (hereinafter - MCH), regarding the possibility of potential cooperation in the sphere of the REM. The Chairman of the MCH Board expressed interest in participating in the development of REM production in Kazakhstan; while the interest of MCH is not limited to the production of collective REM concentrates existing in SARECO, but extends to the creation of deep technological redistribution of products with high added value and the expansion of the raw material base for the long-term perspective. Preliminary arrangements for the purchase of a 49% stake in SARECO, investments in additional equipment are reflected in the Memorandum of Understanding.
- In November, a road map for launching the production of rare-earth metal concentrates SP SARECO LLP was developed and approved for implementation.
- Within the framework of measures aimed at buying out the second party's share, the property complex was assessed and a service for assessing the share of participation of the second party was purchased.
- In December, measures were taken to improve the financial health of the project and a new first leader was appointed. KAP4





# 6.2 ENERGY PRODUCTION

The main producer of electricity and heat in the Mangistau region is MAEK-Kazatomprom LLP.

The enterprise is a unified energy and water-producing complex, which has no analogues in Kazakhstan and the CIS countries. The use of desalinated water makes MAEC-Kazatomprom's electricity and heat production technology unique. The complex of the enterprise includes thermal power stations and multi-shell distillation desalination plants. KAP4

In 2016, enterprises of NAC Kazatomprom JSC produced 5,032.4 million kW \* h of electricity, incl. MAEK-Kazatomprom LLP - 4,916.9 million kW\*h.

In addition, in 2016, MAEK-Kazatomprom LLP produced 3,603.10 thousand Gcal of thermal energy, 1,274.57 million m3 of water, incl. 11.91 million m3 of drinking water.

These indicators cover the region's need for energy and water.

# **Renewable Energy Resources**

Currently, NAC Kazatomprom JSC is implementing a number of high-tech innovative projects on renewable energy.

Within the framework of the project "Development of production of photovoltaic modules based on Kazakhstani silicon" (KAZ PV project), three

subsidiaries and affiliates operate: Astana Solar LLP, Kazakhstan Solar Silicon LLP and MC KazSilicon LLP

In 2016, the Company produced no metallurgical silicon and photovoltaic cells.

Astana Solar LLP in 2016 produced 152.1 kW of photovoltaic modules, of which 104.74 kW was sold. Contracts were concluded for the supply of 51.3 kilowatts of finished products with Kazakhstani enterprises.

On October 5, 2016, a set of measures for the rehabilitation of Kazakhstan Solar Silicon LLP and MC KazSilicon LLP for the period September-December 2016 was developed and approved.

Within the framework of the KazPV project rehabilitation, an interdepartmental working group was established in the Ministry of Energy of the RK with the participation of interested state bodies, the NAC Kazatomprom group and KPMG to amend the resolution of the Government of the RK to increase the state quota from 37 to 287 MW.

Within the framework of the events held in 2016 for the KazPV project, the savings for NAC Kazatomprom JSC amounted to 1.2 bln. KZT.

In 2017, NAC Kazatomprom JSC plans to sell its shares in Kazakhstan Solar Silicon LLP and MC KazSilicon LLP within the framework of the Asset Restructuring Plan of NAC Kazatomprom JSC in 2015-2017. KAP4

# **6.3 NUCLEAR FUEL CYCLE**

The Nuclear Fuel Cycle (NFC) is a set of activities performed within a network of enterprises linked by the movement of nuclear material from uranium mines through uranium ore processing plants, uranium conversion, enrichment and manufacturing of fuel to ensure the functioning of nuclear reactors, followed by movement to storage facilities of spent fuel, spent fuel reprocessing plants and associated interim storage

facilities and storage facilities for radioactive waste disposal. In order to implement the diversification strategy, the Company seeks to cover all stages of the nuclear fuel cycle, excluding the reprocessing of spent fuel. KAP1

NAC Kazatomprom JSC, as a national operator, is focused on increasing the Company's technical potential and ensuring financial sustainability. **KAP1** 





#### PROCESSING OF URANIUM PRODUCTS

The most large-scale production of uranium products in the territory of Kazakhstan is carried out at Ulba Metallurgical Plant JSC (UMP JSC), which includes:

- Oxides of natural uranium, suitable for direct fluorination in conversion plants;
- Powders of uranium dioxide of low enrichment of a ceramic grade of nuclear purity;
- Fuel pellets of uranium dioxide for reactors of nuclear power plants;
- Services for processing of raw and enriched uranium, scrap and non-technological production waste in the production of nuclear fuel and scientific research enterprises of the uranium industry, including those containing burn-out neutron absorbers and pore-forming additives.
- In 2016, 71.9 tons of uranium products were produced in the form of nuclear fuel components, including 24 tons of uranium fuel pellets and 47.9 tons of uranium powders.

#### **CONSTRUCTION OF NFC**

#### Conversion

The interest of NAC Kazatomprom JSC to enter the conversion market is caused by the intention to provide one of the forms of guaranteed sale of extracted uranium by selling it in the form of uranium hexafluoride (UF<sub>6</sub>).

The implementation of the strategic task is planed to have two stages.

At the first stage (until 2020), it is planned to build refining (purification of uranium) conversion of the conversion production (Refinery project) with the capacity of 6,000 tons of uranium in the form of uranium trioxide (UO $_3$ ) on the basis of UMP JSC. It is assumed that the technology and know-how of the Canadian company Cameco will be applied in the construction of the refining process, which at this stage are the most environmentally friendly of those used in the world. Kazakhstani UO $_3$  is planned to be supplied to Canada to a conversion plant of Cameco, where uranium hexafluoride (UF $_6$ ) will be produced from Kazakhstani material for subsequent delivery to customers (conversion project).

This option will enable NAC Kazatomprom JSC to gradually enter the market of conversion services, using the experience and "brand" of Cameco at the first stage, and acquire the competencies of the seller of natural UF6. In addition, this project will save the uranium production of UMP JSC.

The start of construction and assembly works is planned for early 2019, and the refining plant is scheduled to be put into operation in mid-2020.

The parties agreed on the main economic parameters of the financial and economic model (FEM) of the Refining project. Based on the results of the feasibility study, the Parties should decide by the end of 2017 on investing in the construction of the plant. The preliminary estimated cost of the project is about 113 million US dollars.

The issue of ensuring the sale of products of NAC Kazatomprom JSC in the form of uranium hexafluoride (UF<sub>c</sub>) is under consideration with Cameco.

At the second stage, after the situation on the uranium products market improves and the evaluation is carried out, it is planned to choose the option for further implementation of the Conversion Project: either the creation in Kazakhstan of a full cycle of conversion production with the capacity of 6,000 tons of uranium per year, in the form of uranium hexafluoride (UF $_6$ ) by completing the refining process with fluoride redistribution, or buying a stake in the existing conversion plant abroad. The cost of the second stage of the project will be determined according to the results of the feasibility study.

#### **Enrichment**

In order to diversify the Company's business by participating in a higher division of the NFC, in 2013 NAC Kazatomprom JSC obtained access to uranium enrichment services through the acquisition of the Uranium Enrichment Centre JSC (NAC Kazatomprom JSC - 50%, TVEL JSC - 50% of the shares) 25% plus one share of UEHK JSC (Russia).

In 2016, shipment of finished products under the brand of UEC JSC was carried out in the planned volume.

NAC Kazatomprom JSC entered the market for the first time as a provider of uranium enrichment services, by signing a contract for the delivery of enriched uranium products to the National Nuclear Energy Generating Company Energoatom (Ukraine), which was completed in full.

The performance indicators for the uranium enrichment of UEC JSC in dynamics since 2013 are reflected in the section "Strategy and management: Current state and forecasts":

2013 - 0.3 million SWU\*;

2014 - 5.0 million SWU\*;

2015 - 5.0 million SWU\*;

2016 - 5.0 million SWU\* (Ref. UEC JSC no. 525 KG of December 26, 2016)

(\*- share of NAC Kazatomprom JSC 50%)

#### Reconversion

Reconversion of enriched uranium hexafluoride (UF $_6$ ) to uranium dioxide (UO $_2$ ) is carried out at the existing technological capacities of Ulba Metallurgical Plant JSC. The uranium dioxide powder obtained as a result of the reconversion is used in the production of fuel pellets.

#### **Fuel Assemblies**

In December 2015, NAC Kazatomprom JSC, Ulba Metallurgical Plant JSC, China General Nuclear Power Corporation, Uranium Resources Ltd. at China Guangdong Nuclear Power Corporation and CGN Mining Company Limited concluded the agreement on commercial conditions for the design and construction of a plant for the production of fuel assemblies in Kazakhstan and for the joint development of uranium deposits in Kazakhstan.

Under this agreement, Ulba-TVS LLP was created in December 2015 (shareholders are UMP JSC - 51% and CGNPC-URC - 49%) for the production of fuel assemblies for the needs of Chinese nuclear power plants.

At the first stage, the volume of production of fuel assemblies will be 200 tons in terms of enriched uranium with the possibility of further expansion of production for the market of China and third countries. The agreement provides CGNPC with guarantees for the sale of 200 tons of fuel assemblies per year. The agreement also provides for the establishment of a joint venture to develop a uranium deposit in Kazakhstan with reserves of 40,000 tons.

In 2016, AREVA NP was selected as the preferred technology supplier for the Kazakh-Chinese Fuel Assemblies project, as a result of which the following documents were signed:

- A contract for a license and technology, a contract for equipment;
- The main terms of contracts for the certification of the production line, for the supply of fuel elements with gadolinium, for the supply of components and for training;

In December 2016, a ceremony of laying the capsule in the foundation of the construction of the fuel assembly plant was held during the teleconference with the participation of the head of the state of the RK, and an agreement was signed on the principles for the implementation of the Fuel Project. Currently, the work is being conducted to develop design estimates for the construction of a fuel assembly plant. Commissioning of the fuel assembly plant, production and supply of fuel assemblies to Chinese nuclear power plants are planned for 2019.

#### **Nuclear Power Plants**

On November 18, 2015, the Prime Minister of the RK instructed the Ministry of Energy of the RK to consider the construction of a nuclear power plant in the territory of Kazakhstan, taking into account the perspective balance of electricity and capacity at a meeting of the interdepartmental commission for the development of the oil and gas and energy industries (hereinafter – the IDC).

In 2016, NAC Kazatomprom JSC and Kazakhstan Atomic Power Plants JSC (KAES JSC) were appointed responsible for the development of the feasibility study, in accordance with the amendments to Order of the Prime Minister of the Republic of Kazakhstan no. 60-R of November 2, 2016.

The development of pre-project documentation for the construction of nuclear power plants in the districts of the city of Kurchatov in the East Kazakhstan region and the Ulken village of the Zhambyl district of the Almaty region was determined in accordance with the Plan of Priority Measures for the Construction of Nuclear Power Plants in the Republic of Kazakhstan, as approved by the Prime Minister's decree 60-r of May 4, 2014.





# 6.4 AUXILLIARY PRODUCTION

Today, NAC Kazatomprom JSC includes, first, enterprises that are engaged in the extraction and production of uranium-containing products. At the same time, an important element of the main activity is auxiliary and service enterprises. **KAP4** 

Each enterprise needs a good modern communication system, a well-functioning transport economy, an uninterrupted supply of reagents and electricity. Since the nuclear industry has a strategic nature, the approaches to the information security and physical protection of production facilities should also comply with all state and international standards.

Thus, the following auxiliary enterprises are included in the structure of NAC Kazatomprom JSC:

- Kaustic JSC, a chemical industry enterprise;
- Volkovgeologiya JSC, a geological exploration company;
- Trade and Transport Company LLP, a company that provides transportation services;
- SKZ-U LLP, a vitriol plant;
- · Baylanys-NAK LLP, a telecommunication enterprise;
- Korgan-Kazatomprom LLP, a specialized security division;
- Uralenergo LLP, energy company KAP4;
- TH Kazakatom AG, trading company.





# 7. SUSTAINABLE DEVELOPMENT

7.1	Sustainable Economic Development	96
	Direct Economic Value Generated and Distributed	96
	Science and Innovations	96
	Economic Effect in the Regions of Presence	98
7.2	Environmental Responsibility	102
	Waste Management	103
	Water Resources	105
	Energy Efficiency	107
7.3	Social Responsibility	108
	Company Personnel	108
	Social Policy	112
	Social Stability	114
	Occupational Health and Safety	114
7.4	Interaction with Stakeholders	120



Main objectives of the Company's Program of Sustainable Development are a follows:

- ensuring of worthy conditions and wages for the Company's employees;
- observance of labour and social rights of the employees of the Company;
- increase of level and quality of life of the Company's employees, members of their families, population of regions of presence;
- reduction of environmental impact;
- assistance in sustainable development of regions of presence;
- creation of a favourable business climate in the Company and in the regions of its presence;

In 2016, the Company used the Program of Sustainable Development of NAC "Kazatomprom" JSC in the field of corporate and social responsibility, as approved on February 18, 2016. **G4-14** 



• effective interaction between the Company, the government, and the population. **G4-14** 

# 7.1 SUSTAINABLE ECONOMIC DEVELOPMENT

#### **Direct Economic Value Generated and Distributed**

Economic effectiveness of the Company allows it to play a key social and economic role in the society, providing sustainable development of both the Company and many groups of parties concerned.

The high economic effectiveness of the Company is based on a thorough planning of income and expenditures of the Company. Samruk-Kazyna JSC Corporate Standard for Strategic and Business Planning regulates the development planning and

budgeting procedures. The development plan is elaborated in a consolidated form, i.e. including SA plans, for a period of 5 years. There are annual budgets approved for the purpose of the development plan implementation. The Board of Directors of the Company and Samruk-Kazyna Fund monitor the development plan implementation.

The Company's financial and economic results of activity in 2016 are stated below.

Table 26 - Direct Economic Value Generated and Distributed in accordance with the GRI disclosure requirements, mln. tenge\* G4-EC1\*\*

No.	ltem	2016	2015	Variation		
	Direct economic value generated					
1	Income	514 386	474 093	8,5%		
	Economic value distributed, including:					
2	Cost of production***	(287 933)	(266 351)	8,1%		
3	Salaries and wages	(47 338)	(44 601)	6,1%		
4	Interest and dividend costs	(11 017)	(8 676)	27,0%		
5	Taxes, income tax exclusive	(10 388)	(13 223)	(21,4%)		
6	Corporate Income Tax	(17 988)	(13 044)	37,9%		
7	Donations and charity	-	(1 448)	(100,0%)		
8	Miscellaneous expenditures	(28 167)	(91 697)	(69,3%)		
10	Economic value retained	111 555	36 501	205,6%		

<sup>\*</sup> Ukraine, USA, Great Britain and Kazakhstan are the patricipants of the Extractive Industries Transparency Initiative (G4 mining and metals sector disclosures G4)

<sup>\*\*</sup>The information has been received from the audited consolidated financial statement of the Company for 2016, excluding the Article "Donates and charity".

\*\*\*Operating costs include the following items: cost of sales (except for wage and taxes), distribution costs, general and administrative costs (except for wage and taxes).

#### Science and innovations

NAC Kazatomprom JSC pays great attention to scientific and technical, and innovative development and constantly increases financing of scientific and technical works in such directions as geology, geotechnology, processing of prodctive solutions, the NFC, rare and rare-earth metals production, water technologies of new generation.

Innovative activity of NAC Kazatomprom JSC is carried out according to internal documents of the Company: Innovative-Technological Policy, Strategy of Innovative-Technological Development, Academic and Technological Activity Management Policy.

The innovative scientific and technical subdivisions are established and operated in the Company structure: Institute of High Technologies LLP, the scientific and applied research subdivisions: central research laboratories, central research methodical expedition, factory laboratories, which principal activity is research, analytical and development work.

According to the approved Academic and Technological Activity Management Policy of NAC Kazatomprom JSC, the research work is concentrated at four facilities for the following promising directions:

- Geology, geotechnology and mining and development;
- Extraction and processing of product solutions, concurrent REM extraction;
- High technologies of the NFC, RM production and processing;
- Knowledge management, commercialization of intellectual property.

Issues of planning and acceptance of the results of research and development are considered at the sessions of the Scientific-Technical and Specialized Scientific and Technical Boards. Researches and scientific technological works in NAC Kazatomprom JSC are carried out at the expense of internal financial funds.

The following activities were held during 2016:

- Five sessions of the Research and Development Board of NAC Kazatomprom JSC have been held for consideration of the Research and Development Plans and Reports;
- The consolidated plan of research and development for 2016 for NAC Kazatomprom JSC and subsidiary and affiliates is made;
- According to newly approved Strategy of Development of the Company for 2015-2025, the following internal documents are developed, updated and approved:

- Academic and Technological Activity
  Management Policy of NAC Kazatomprom JSC;
- Regulation On Rationalisation Activity of NAC Kazatomprom JSC;
- Regulation On Competition for the Best Innovation Proposal/Cost Reduction Invention;
- Regulation On Research and Development Board and Special Research and Development Board of NAC Kazatomprom JSC;
- Order on development of scientific and technological activities of the Company, on approval of compositions of the Research and Development Board and the Special Research and Development Board;
- Agreement on Scientific and Technological Cooperation with the National Nuclear Center of the RK;
- NAC Kazatomprom JSC made 6 patent applications for the inventions, 7 invention titles of protection were received in 2016;
- The mobile processing complex intended for industrial extraction of uranium on individual sites, small-size deposits has been brought into service, and it has no analogues in the world on the technical characteristics. The complex is developed, designed and manufactured by the subsidiaries and affiliates of NAC Kazatomprom JSC, and covered by two invention titles of protection;
- The following draft internal standard documents on protection of intellectual property and scientific and technical activity of the Company as a whole are developed, updated and being approved:
  - Rules for Patenting of Intellectual Property and Use of Subjects of Industrial Property of NAC Kazatomprom JSC;
  - Guidelines for Estimation and Commercialisation of Intellectual Property Items of NAC Kazatomprom JSC;
  - Regulations on Procedure for Registration and Use of Copyright Items (scientific work, database, application software) developed in NAC Kazatomprom JSC;
  - NAC Kazatomprom JSC Standard: Rules for Conducting Process Audit of NAC Kazatomprom JSC Enterprises.



# **Economic effect in the regions of presence**

The Company exercises favourable influence on social and economic situation in all main regions of presence. The Company operates in six regions of Kazakhstan. Such presence is defined both by the location of the resource base of the Company, as well as by location of auxiliary production, social and scientific and research

facilities. The major factors of indirect economic

influence on the regions of presence are the following:

 Maintenance and support of the social infrastructure facilities, including in part of social and economic cooperation agreements and memoranda made with regional and district public authorities on a mutually beneficial basis and under contracts for subsurface use;

- Direct social support, charitable and sponsor's assistance;
- · Practice of purchases at local suppliers;
- · Other factors.

NAC Kazatomprom JSC positions itself as a socially responsible company. Thus, development of the social sphere and implementation of social projects are among priority activities of the Company.

In 2016, the Company's costs for implementation of social projects in the South Kazakhstan, Kyzylorda and Zhambyl regions amounted to 649.1 mln. KZT: **EC7** 

Table 27 - Costs for implementation of social projects in the South Kazakhstan and Zhambyl regions

No.	Name	Activity description	Amount, mln. KZT
1	Taikonur settlement, SKR	Construction of sewage treatment facilities with storage pond and external sewage networks	195,0
2	Taikonur settlement, SKR	Field camp construction at the drill site of Production Enterprise Ortalyk LLP	225,8
3	Taukent settlement, SKR	Construction of administrative and living quarters at the Liquid Additive Warehouse	61,1
4	Sholakkorgan settlement, SKR	Repairs of the roof of residential building for the low-income family	1,9
5	Shiyeli settlement, Kyzylorda region	Running repairs of Karamuryn A&LQ	81,4
6	Zhanatas, Zhambyl region	Construction and administrative and living quarters at the site of Zhanatas railway junction	83,9

In discharge of obligations under the Memoranda made with Akimats of the South Kazakhstan and Kyzylorda regions, 3,121.8 mln. KZT were transferred to the budgets of these regions in 2016. **EC7** 

Table 28 - Amounts transferred to the regional budgets

Transfers under the Memoranda	Amount transferred, thsd. KZT
For maintenance of 12 social facilities transferred to the communal ownership of the South Kazakhstan region	1 000 000
For financing of the construction of a social facility in the South Kazakhstan region	800 000
For maintenance of 7 social facilities transferred to the communal ownership of the Kyzylorda region	521 796
For social and economic development of the Kyzylorda region	800 000
Total	3 121 796

In addition, in 2016, for the purpose of contracts for subsurface use, NAC Kazatomprom JSC group transferred 1,162 mln. KZT for social and economic development of the region and its infrastructure, including 752 mln. KZT for the South Kazakhstan region, 225 mln. KZT for the Kyzylorda region, and 185 mln. KZT for other regions. **EC7** 

The expected annual assignments for the regional budgets in part of fulfillment of the Company's obligations under the existing memoranda and contracts for subsurface use, for the period of 2017-2019, amount to 1 bln. KZT and USD 3.54 mln., respectively. **EC7** 

The funds in the amount of more than 54,668.6 thsd. KZT have been assigned for maintenance of the social facilities in 2016 for creation of comfortable conditions

of residing of the population of main uranium mining settlements, harmonious development of children and youth, increase of cultural level of the citizens, and with a view of organization of leisure of the employees of the group of subsidiaries and affiliates of NAC Kazatomprom JSC in the South Kazakhstan, Kyzylorda, East Kazakhstan and Mangistau region, including: **EC7** 

- More than 568.6 thsd KZT have been assigned for the public health facilities, in particular, for the polyclinic of MAEC-Kazatomprom LLP in Aktau.
- The funds in the amount of more than 54 mln. KZT have been assigned in 2016 for maintenance of the culture, sports and leisure facilities which are in the books of the enterprises of MAEC-Kazatomprom LLP and UMP JSC. EC7

Table 29 - Educational facilities costs

No.	Name	2016, thsd. KZT	2015, thsd. KZT	Variation
1	Medical unit in Kyzemshek settlement, SKR	-	211 955	(100%)
2	Medical unit in Taukent settlement, SKR	-	260 846	(100%)
3	Medical unit in Shiyeli settlement, the Kyzylorda region	-	198 797	(100%)
4	Polyclinic of MAEC-Kazatomprom LLP	569	74 855	(99%)
	TOTAL:	569	746 453	(100%)

Table 30 - Culture, sports and leisure facilities costs

No.	Name	2016, thsd. KZT	2015, thsd. KZT	Variation
1	Culture and sports complex in Taukent settlement, SKR	-	39 322	(100%)
2	Culture and sports complex in Kyzemshek settlement, SKR	-	36 294	(100%)
3	Culture and sports complex in Shiyeli settlement, Kyzylorda region	-	58 669	(100%)
4	Ivushka Recreation Centre in Aktau	1 346	4 502	(70%)
5	Orbita Sports Facilities in Aktau	-	1 125	(100%)
6	Social Facilities of UMP JSC	52 754	57 593	(8%)
	TOTAL:	54 100	197 505	(73%)

#### **Charity and sponsorship**

By its decision no. 126 of January 28, 2016 the Board of Directors of Samruk-Kazyna JSC ("Fund") approved the Fund's Charity Policy and the Fund's Charity Program. According to the new the Fund's Charity Policy, subsidiaries and affiliates of the Fund cannot offer any sponsorship or charitable assistance.

At present, all charitable activity of the Fund group is done by "Samruk-Kazyna Trust" Social Development

Foundation which implements projects of social importance by selection on a competitive basis.

#### **Purchases**

Since 2016 the Company implements the project of a new model of purchases ("New Model"), which integrates seven purchasing standards: 1) preliminary qualification of potential suppliers, 2) planning of purchases, 3) purchase categories management, 4)

# Annual report 2016



stock management, 5) purchasing, 6) management of contracts and supplies, 7) control and monitoring of purchasing activities, as approved by the Management Board of Samruk-Kazyna JSC on May 30, 2016 and on September 26, 2016 under nos. 35/16 and 19/16 ("Fund's Standard").

The New Model integration in the Fund's Rules of Purchase as in force at the end of 2016 included procedures for preliminary qualification of potential suppliers and regulations on application of pilot categorical strategies to become effective from March 2017. **G4-13** 

One of the principles of the preliminary qualification is to give equal opportunities for potential suppliers to take part in the qualification procedure and to increase supplier's responsibility for documents and information it submits for the qualification purpose.

The New Model integration will contribute to reduction in purchase prices, improvement of the quality of purchased goods, works and services, support and development of local producers, reduction in stock balances and transportation expenses.

In accordance with the applicable the Fund's Rules of Purchase, the total number of suppliers which the organization may engage, estimated monetary value of payments made to suppliers shall be determined following the purchases by means of tendering and



budget inquiries. An estimated monetary value of payments made to suppliers following the purchases by means of tendering, budget inquiries and from the same source shall not exceed the amount specified in the purchase plans. G4-12

The local content in the purchased by the Company goods, work and services has made 77% (82% in 2015). **EC9** 

The Company plans to render assistance in negotiation of contracts for purchase of goods, work and services between its affiliates (subsidiaries and affiliates of the Company) and local suppliers in the regions of presence with the local content level of 73% to support domestic suppliers in the regions of presence.

# 7.2 ENVIRONMENTAL RESPONSIBILITY

Environment protection activity of subsidiaries and affiliates of NAC Kazatomprom JSC is based on the commitment that better environmental values contribute to better quality of the environment and higher competitive ability of the Company.

The Company minimizes negative impact on the environment and ensures stability of ecosystems by means of:

- Improvement of the regulatory technical base, development and assistance in adoption of technical regulations and standards;
- Introduction of the environmental management system in accordance with ISO 14000 international standard for the purpose of continuous improvement in the area of environmental protection;
- Creation of a system of conditions and mechanisms to account environmental aspects and mitigate environmental risks at all stages of production activities;

- Prevention of pollution and reduction of the environmental impact through integration of stateof-the-art technologies;
- Environmental and occupational safety compliance of the Company's staff and suppliers in charge of work at facilities.

The Company's 26 enterprises use "Environmental Management System. Environmental Policy" which is revised in case of changes in the market conditions, production upgrade or new relevant environmental tasks.

In December 2016, Semizbai-U LLP won "For the Environmental Contirbution" silver medal in the PARYZ competition.

In 2016, the total costs for the environment protection measures in the nuclear industry remained at the level of 2015 and amounted to 1,143.6 mln. KZT. **EN31** 

1,158.9 mln KZT were allocated by the Company's subsidiaries and affiliates on measures to minimize the negative impact on the environment in 2016, including



217.8 mln. KZT allocated to improve processes, particularly, to reduce fugitive emissions, 25.8 mln. KZT allocated to improve existing dust and gas collectors and water treatment facilities, and 170.6 mln. KZT allocated for the scientific and design work in the area of environmental protection. **EN31** 

In general, in the reporting year the Company managed to decrease the main effect indicators (gross emissions, size of industrial waste disposal). Aggregate gross emissions for 2016 constituted 4,109.7 tons, which is 411.8 tons less than in 2015. Such decrease in the volume of emissions is compartable with the last year's decrease in production performance and with installation of additional plants for treatment of gaseous substances at the emission sources and increase in the performance of the existing gas treatment equipment at facilities.

Emissions of harmful chemical substances decreased by 208.7 tons only because of the increase in the efficiency of the industrial environmental monitoring at the facilities of natural uranium production and processing sector.

The total volume of pollutants discharge in the reporting period of 2016 increased by 41.1%, as compared to 2015, and constituted 4,147.3 tons. MAEC-Kazatomprom LLP share the highest increase of waste water (69.5%) or 1.207.6 tons of waste water for the reporting period, as compared to 2015, which is attributed to the increased suspended materials concentration in original water taken because of often sea storms in the sea. Punitive and economic penalties on the part of public authorities decreased by 2.4%, as compared to 2015. However, a number of enterprises of the Company fail to comply with the environmental requirements and environment quality standards, so that punitive and economic penalties on the part of public authorities remain high. For the year 2016, such penalties amounted to 208.9 mln. KZT of which Ulba Metallurgical Plant shares the most part (60%) and the natural uranium extraction

sector shares 40%, which include 86.9% of penalties imposed on SP Katko LLP. **EN29** 

#### Waste management

In the course of the production activity of the Company, a large number of different types of wastes are generated, among them:

- solid and liquid radioactive waste;
- overburden rocks generated during mining the fluorite copper-molybdenum ores;
- drilling mud generated during drilling of the wells at the ISL field testing site;
- fluoric gypsum generated during production of hydrofluoric acid;
- ashes and slag waste generated during production of thermal energy;
- · municipal waste;
- waste oil products;
- · car tyres.

The Company's subsidiaries and affiliates manage industrial and radioactive waste subject to corporate standards developed in the Company, namely the Rules of Production and Consumption Waste Management at Enterprises of NAC Kazatomprom JSC and the Practical Guidelines for Management of Radioactive Waste before its Landfill.

In the reporting period, the Company's subsidiaries and affiliates performed an industrial environmental monitoring (IEM) in accordance with the environmental legislation. The IEM is carried out every quarter with involvement of contractors (laboratories) that have an accreditation certificate subject to the IEM Roadmap. The environmental impact of NAC Kazatomprom JSC in 2016 did not exceed the established environment quality standards with the total waste disposal volume constituting 31.6%.

The Company takes, during the reporting period, ongoing comprehensive efforts on accounting, inventory of the sources of generation and storage and landfill sites, disposal and recycling of wastes, production wastes transfer to third parties for use, utilization, and recycling, disposal on specially allotted sites.

In 2016, 560.6 thousand tons of wastes have been generated at the sites of the environmentally hazardous facilities of the Company, of which 3.2 thousand tons have been utilized, 0.4 thousand tons have been neutralised, 0.7 thousand tons have been recycled and 19.4 thousand tons have been buried. The most part of the generated waste was delivered to special organizations on a contractual basis. **EN23** 

The detailed breakdown of the Company's waste by type is given in the table below:

Table 31 - Total weight of wastes of the Company with breakage by kinds, tons

Waste kind	2016	2015	Variation
Production	443,6	515,6	(14,0%)
Municipal	3,0	3,7	(18,9%)
Solid radioactive	2,9	2,5	16%
Liquid radioactive	111,1	147,2	(24,5%)
Total	560,6	669,0	(16,2%)

The activity of the Company's subsidiaries and affiliates had the following shortages and omissions in the reporting period:

- the production and consumption waste accumulation uptrend persists while there is work carried out not fully at the enterprises to utilize and recycle waste prior to disposal, the waste management system needs improvement;
- a regulatory document governing the hazard level detection and coding of drilled cuttings is unavailable, which consequently results in breaches of both the environmental and tax laws.

There were such technical standards as the Rules of Production and Consumption Waste Management in the Nuclear Industry and the Guidelines for the Hazard Level, Detection and Coding of Drilled Cuttings Generated at Construction of Process Wells at Uranium Deposits ("the Guidelines") developed in the reporting period within the implementation of the Plan of Activities on Integrated Approach to Development of NAC Kazatomprom JSC Waste Management System for 2016-2020, as approved by the management of the Company in August 2015. The Guidelines define the procedure for the hazard level detection and classification of drilled cuttings at enterprises of the Company, which will allow for resolving the problems concerning non-compliance with the environmental and tax laws.

According to the 2016 purchase plan, the projects of Kanzhugan uranium deposit remediation and PV-19 elimination at the East Mynkuduk deposit have been completed. In 2016, the Company established the permanent Commission for Waste Management and Land Remediation under the Management Board of the Company and approved the special Regulation concerning it.

# **Direct greenhouse gas emissions**

The overall actual greenhouse gas emissions by the Company in 2016 increased by 2.5% from the comparable period, which is associated with an increased demand of the population for electric and thermal energy. MAEC Kazatomprom LLP shares the most part of greenhouse gas emissions (over 95%) among all enterprises of the Company. **EN15** 

Carbon dioxide shares over 97% of the overall greenhouse gas volume. It is a regulated type of emissions. Accordingly, every year prior to April 1 of the year following the reporting period enterprises of the Company submit to the Ministry of Energy of the RK a greenhouse gas emission inventory report. The national plan of distribution of quotas for greenhouse gas emissions defines (limits) CO<sub>2</sub> emissions.

Table 32 – Overall greenhouse gas emissions in terms of the equivalent amount of CO2 (carbon dioxide), tons EN15

Indicator	2016	2015	Variation
Direct greenhouse gas emissions (coverage area 1)	3 766 631,6	3 676 262,6	2,5 %



#### Water resources

A number of subsidiaries and affiliates of the Company carry out extraction and discharge of water that has an impact on sensitive water bodies, the largest of which is the Caspian Sea.

In some regions, NAC Kazatomprom JSC supplies water to local population and industry.

Water use is carried out in accordance with permits, which are issued by an authorized body for protection of water resources. Enterprises maintain strict control of withdrawn and recycled water. Monitoring of wastewater quality is carried out by specialized accredited laboratories.

In its operating activities, the Company actively uses water. The use of water is important both in primary production and in operation of desalination plants, where desalinated water is the end product.

In 2016, the Company used more than 1 million m³ of water. Total water withdrawal is given in the following table. **EN8** 

NAC Kazatomprom JSC has a number of features related to water consumption. The Company uses sea and artesian water in the process of manufacture of products of MAEC Kazatomprom LLP in the form of domestic water, distillate, and hot water of heating system.

NAC Kazatomprom JSC seeks to reduce the amount of water abstracted for production. In this regard, a number of enterprises use closed water cycles.

To cool the thermal power equipment, the Company uses a significant amount of water. Most of this water is discharged into environment without pollutants, which allows referring the effluent to "regulatory clean industrial wastewater".

Table 33 - Total water withdrawal by source, thousand m<sup>3</sup>

Source	2016	2015	Variation
Surface waters	1 249 916,3	1 190 243,2	5,0%
Ground waters	12 303,7	12 867,5	(4,4%)
Municipal and other water supply systems	2 547,5	10 714,9	(76,2%)
Total water withdrawal, thousand m <sup>3</sup>	1 264 767,5	1 213 825,6	4,2%

Table 34 - Share and total volume of reusable water, thousand m<sup>3</sup>

Indicator	2016	2015	Variation
Total volume of reusable water, thousand m <sup>3</sup>	19 783,6	29 559,8	(33,1%)

Table 35 - Total water discharge volume, by source, thousand m<sup>3</sup>

Waste water receiver, thousand m <sup>3</sup>	2016	2015	Variation
Caspian sea	1 202 440,2	1 142 050,0	5,3%
Ulba river	1 460,6	1 623,1	(10,0%)
Containment pond	1 226,6	697,0	76,0%
Evaporation field	499,6	590,7	(15,4%)
Total	1 205 627,0	1 144 960,8	5,3%

Total volume of the water disposal in 2016 has increased by 5%, as compared to 2015, due to increase in production.



# **Energy efficiency**

Specifics of production processes of the Company require large power consumption. Energy consumption has become one of the most important articles of production costs. In addition, energy consumption and energy efficiency directly affect the environmental indicators.

The Company performs vigorous activities on increase of energy efficiency, including three key areas:

- Modernization of production process,
- · Readjustment of equipment,
- · Stimulating changes in staff behavior.

Electrical energy, saved as a result of measures on reduction of energy consumption and improvement

of energy efficiency in 2016, increased by 1.3 mln GJ, as compared to 2015.

The Company complies with the Law of the Republic of Kazakhstan On Electric Power Industry and On Energy Saving and Efficiency Improvement for which reason the Company conducts energy audits to assess the possibility and potential of energy saving. Following such energy audits, the Company develops the Plan of Energy Saving and Energy Efficiency Improvement.

The Company has also prepared the Plan of Activities for 2017-2020 aimed at improvement of energy efficiency within NAC Kazatomprom JSC Development Strategy 2015-2025. Every month the Company submits reports on consumption of fuel and power resources to NWF Samruk-Kazyna JSC. At present, enterprises of the Company have integrated ISO 50001 compliant energy management system.

Table 36 - Energy consumption, mln GJ EN3

Energy	2016	2015	Variation
Thermal energy	11,43	11,18	2,20%
Electrical energy	6,04	6,02	0,33%
Total energy consumption	17,47	17,2	1,60%

Table 37 - Use of primary energy sources, tons EN3

Source type	2016	2015	Variation	
Non-renew	Non-renewable:			
Coal	595	607	(2,00%)	
Natural gas	2 126 067	2 065 140	2,95%	
Fuel (benzine, masut, diesel)	45 687	45 576	0,20%	
Renewable:				
Hydrogen	112	30	273,3%	



# 7.3 SOCIAL RESPONSIBILITY

#### **Company personnel**

The Company's employees are the main asset, the foundation of the Company's success in achieving leading position in global uranium market, as well as the key to its sustainable development in the future. Ruling document of the Company in the field of HR management is the HR Policy of NAC Kazatomprom JSC.

HR Policy aim is efficient personnel management for timely and quality achievement of strategic goals and objectives of the Company.

HR Policy objectives are the following:

- the Company's human resource capacity building and development;
- development and implementation of the incentive system that would contribute to a higher efficiency and quality of labour;
- conditioning of the maximum effective development of staff, their skills and qualification level:
- · human resource planning efficiency improvement;
- · dual educational system introduction;
- effective regulation of social and labour relations. Every year the HR Management Department of the Company performs monitoring of compliance with the HR Policy based on the following performance indicators:
  - increase of the personnel involvement;
  - personnel movement stabilization and personnel turnover growth prevention, except for activities related to optimization of the management structure of the Company;
  - increase of the share of employees who passed advanced professional training and qualification;
  - · recruiting on a competitive basis;
  - social performance rating;
  - · human resource planning efficiency;
  - · dual educational system introduction efficiency.

In addition, the Transformation Program "Introduction of the Targeted HR Management Model" provides

for introduction of a systematic analysis of the level of compliance with the HR Policy, the HR function performance through the HR-metric system, particularly for determining factors that had a negative or positive impact on the achievement of goals of the HR function.

Apart from the HR Policy, standard and ideological principles of the Company's business culture structure and development are governed by the following documents:

- · Code of corporate conduct;
- · Regulation on corporate rewards;
- · Collective agreement.

The Company strictly complies with interests and rights of workers, and helps to prevent all forms of discrimination and forced labor. Particular attention is paid to ensuring safety in workplace, improving social conditions of workers and equal opportunities for professional and personal growth.

Since 2012, the Company has been implementing the management succession program developed in order to:

- ensure succession of the top management of the Company out of candidates available for key management and administrative positions;
- identify and develop employees who have a significant potential in the Company to fill management and administrative positions;
- encourage the Company's staff to professionally advance for development and career opportunities.

A base of candidates is formed by selecting the managers who have the highest potential and who are objectively capable of working at a superior position after the appropriate training and practice.

Total headcount of NAC Kazatomprom JSC, including joint ventures and affiliates, by the end of 2016 amounted to 25,819 persons, which was decreased by 3.5% compared to the same period of the last year (26,764 persons in 2015). This reduction in headcount is due to reorganization and restructuring of assets of NAC Kazatomprom JSC. **G4-9** 



Table 38 - Total headcount of employees. <u>G4-10</u>

Indicator	Number (persons)	Including	
		Men	Women
Total headcount	26 218	20 906	5 312
Headcount at the end of reporting period (staff)	25 819	20 635	5 184
2. Supervised workers (under services agreement)	399	271	128

The employees under paid services agreement share 1.5% of the total headcount of the Company. In future, in order to enhance the efforts to maximize the focuses of the Company's SAs on development

of the main production activity, it is expected to enroll more staff under paid services agreement by outsourcing individual auxiliary and non-core work (services).

Table 39 - Total headcount by services agreement and gender. G4-10

Indicator	Number (persons)	Including	
		Men	Women
Total headcount (headcount at the end of reporting period)	25 819	20 635	5 184
Permanent employees	24 846	19 979	4 867
Temporary employees	973	656	317

The main part of the work force (about 58%) is engaged in the SKR because of the location of the main uranium mines and facilities of the Company.

Table 40 - Total headcount by region and gender. G4-10

Indicator	Number (persons)	Including	
		Men	Women
Total headcount by regions, including:			
Almaty	841	498	343
Astana	831	505	326
West Kazakhstan Region	3 748	2 663	1 085
North Kazakhstan Region	1 224	949	275
South Kazakhstan Region	15 332	13 381	1 951
Central Region	26	19	7
East Kazakhstan Region	4 182	2 864	1 318
PRC	10	5	5
Other	24	22	2
Total	26 218	20 906	5 312

Average age of employees by group of subsidiaries and affiliates of NAC Kazatomprom JSC for 2016

is 39 years, which every year remains almost at the same level.

Table 41 – Personnel structure by the share of the management personnel and employees in the total headcount by age groups, % LA12

Age groups	Employees	Management personnel
Up to 30 years old	21,24%	0,01%
From 30 to 50 years old	53,56%	0,30%
Over 50 years old	24,67%	0,22%

The composition of management bodies and main staff categories of the organization by gender, age, minority group affiliation and other distinctive features reflects the efficiency of the management's approach in this aspect. The results and behavior of the indicator are analyzed by means of an annual sustainable development report.

From among the total number of employees in the system of NAC Kazatomprom JSC, share of men was 80% in 2016, share of women – 20%, which values, in comparison with previous period, practically remained unchanged. This gender ratio is due to specific production activities of the nuclear industry.

Table 42 - Personnel structure by the share of the management personnel and employees in the total headcount by gender, % LA12

Gender	Employees	Management personnel
Men	79,39%	0,49%
Women	20,08%	0,04%

Share of workers covered by collective agreements of the Company in 2016 did not change significantly and constituted 96% (97% in 2015).

Table 43 - Share of workers covered by collective agreements in 2016. G4-11

Indicator	Value
Headcount of employees at the end of the year, persons	25 819,0
Total number of employees covered by collective agreements, persons	24 878,0
Share of total number of employees covered by collective agreements, %	96,0

In 2016, the number of employees who left the Company decreased by 21.6% in 2016 compared to 2015, which speaks for a higher level of social stability.

Table 44 - Staff turnover by gender <u>G4-10</u>

Indicator	2016	2015	Variation
Staff turnover, persons (women)	1 046,0	1 751,0	(40,3%)
Staff turnover, persons (men)	3 109,0	3 547,0	(12,3%)
Total	4 155,0	5 298,0	(21,6%)



# **Development and training of staff**

One of the important areas of human resources policy of group of enterprises of NAC Kazatomprom JSC is development and training of its staff.

Processes of preparation, retraining and further training of employees are systematized in group of enterprises. Employees take various training courses in personal efficiency management, efficient communication, successful presentation, effective negotiation, analytical thinking, time management, efficient reporting, etc. Programs are implemented in on-work hours, as well as in off-work hours, and there is a certificate of competence issued. There are also occupational advancement programs for managers and specialists, and higher position reserve trainings. LA10

As part of preparation of personnel, the Company's enterprises cooperate with 25 universities and 11 colleges of the Republic of Kazakhstan and neighboring countries. There are cooperation agreements signed with the top universities of the RK, including Serikbayev East Kazakhstan State Technical University, Satpayev Kazakh National Research Technical University, and

an agreement currently being negotiated with Auyezov South Kazakhstan State University. In early 2016, there was a cooperation agreement signed with World Nuclear University.

Today, at the expense of the Company, 320 students are enrolled by profile profession of industry and region, which, by the end of educational institutions, will be employed in nuclear industry enterprises. Students enrolled in core professions for the enterprises are allowed for internships in workplace and each student is assigned a mentor from among experienced workers of enterprises. LA10

For 2016, 301 persons were given training at universities and colleges totaling 1221 million tenge. 46 students, studying in various educational institutions, are paid their scholarships, accommodation and meals for the sum of 7.8 million tenge. 17,997 employees of manufacturing company passed retraining and further training for the amount of 1,313,418 thousand tenge.

Training costs for 2016 are presented in the following table:

Table 45 - The costs of employee training

Number of persons	Costs for training, thsd. KZT	Costs of training on average per 1 worker, thsd. KZT
17 997	1 313 417,9	73,0

Table 46 - Average annual number of training hours per employee, man-hours

Name of staff category	2016	2015	Variation
Total	31,2	33,4	(6,6%)
including: top management	61,4	36,3	69,1%
middle management	43,3	39,7	9,1%
administrative personnel	49,5	84,5	(41,4%)
production personnel	28,9	28,7	0,7%

In addition, the Company presently implements the annual system to assess the personnel performance. In 2016, 25% of all the Company's staff passed the official performance assessment. The performance is assessed based on the evaluation of the immediate manager, at the trained employee's workplace, and based on the KPI achieved by the employee.

#### **SOCIAL POLICY**

# **Collective agreement and labor unions**

NAC Kazatomprom JSC concludes a collective agreement with a labor union. Within the frameworks of protecting the rights of workers, collective agreement includes provisions on minimum period of prior notification of employees and their elected representatives about implementation of organizational changes in the Company's activities, which may affect their working conditions. The minimum notification period is at least four weeks in most of cases and at least two weeks in individual cases. LA4

Collective agreement contains provisions that regulate the following aspects:

- · form and system of payment;
- issues on change of wages at rising inflation;
- payment of compensation to workers in marriage, retirement, birth of children and death of family members, etc.;
- · working time and rest periods of employees;
- quarantees and social protection of employees.

According to the Collective Agreement, at least 2.5% of annual salary fund of the Company is allocated for social support on annual basis. In 2016, 160 mln. KZT were allocated for these purposes, and 200 mln. KZT will be allocated in 2017.

# Social policy, payments and benefits

An integral part of the staff remuneration system is social payments and benefits for employees of the Company. The obligation to provide them is secured in the Collective Agreement for all employees regardless of the type of their employment pattern LA2. In addition, the document provides social protection of workers, as well as support for veterans and pensioners.

Financial assistance provided to employees is aimed at their rehabilitation and treatment, payments for child birth, at retirement of employees, to families with disabled children under age of 18 years, and to large families, as well as in connection with anniversaries of employees.

Moreover, more than 779 mln. KZT was allocated for medical insurance of employees of group of companies of NAC Kazatomprom JSC in 2016.

Some enterprises of the Company provide benefits in excess of the norms guaranteed by the laws of the Republic of Kazakhstan.

In addition, the Company provides financial assistance to its retired employees (age pension), renders charitable assistance to the Company's retirees commemorating professional holidays, anniversaries, in the event of a retiree' death and for medical purposes. LA10

Besides, the following measures are taken in support of employees dismissed in case of SA liquidation:

- the liquidated SA personnel becomes available for outsourcing;
- · various requalification programs are implemented;
- · compensations.

#### Wage system

The wage system of the Company is focused on motivation of employees to quality and efficient work. Thus, the Company increases wages of the production personnel annually. In particular, in 2016, the wages of this category of workers increased by 10.9% compared to 2015, and it was amounted to 214,973 KZT. For comparison, the average monthly salary in the Republic of Kazakhstan was amounted to 143,045 KZT in 2016.

Table 47 - Average salary of production personnel, tenge

Name	2016	2015	Variation
Average salary of production personnel, tenge	214 973	193 854	10,9%



Table 48 - Total amount of accrued wages, mln. tenge

Name	2016	2015	Variation
Wages fund, total	53 806,0	56 972,1	(5,6%)

The Company does not discriminate its employees based on gender and adheres to equal treatment to labor payment of men and women. Ratio of minimum wage of start level for all enterprises

of NAC Kazatomprom JSC and the established minimum wage in the Republic of Kazakhstan was amounted to average of 3.3 in favor of the Company. **EC5**. LA13

Table 49 - Ratio of basic salary of men to women by category of employees, % LA13

Personnel category	Basic salary of women	Basic salary of men	Ratio
Top management (board of directors, steering committee or similar body)	798	852	93,7%
Middle management	336	341	98,5%
Administrative personnel	143	152	94,1%
Production personnel	89	84	106,0%

Table 50 - Ratio of standard entry level worker wage to established minimum wages, tenge EC5

Indicator	2016	2015	Variation
Minimum wage in the Republic of Kazakhstan, tenge	22 859,0	21 364,0	7,0%
Wage of entry-level employee in the Company on average, tenge	75 345,0	74 886,0	0,6%

In accordance with the unified wage system and bonuses in force at NAC Kazatomprom JSC, its subsidiaries and affiliates, the administrative workers are paid quarterly premium in the amount of one monthly salary, bonuses to production workers of the Company's subsidiaries and affiliates are paid monthly on average at a rate of 20-35% of the monthly salary, and the management personnel of the Company's subsidiaries and affiliates — once a year in the amount of four monthly salaries.

As part of the incentive scheme, a policy of awarding employees for innovative ideas, exemplary performance of important tasks, long and trouble-free operation, and other achievements is also implemented.

Additional payments are made when combining the posts, personal allowances and allowances for mentoring, which are established by head of the Company and enterprises.

# **Social stability**

NAC Kazatomprom JSC pays much attention to ensure the social stability and favourable staff morale among the personnel on the basis of a well-balanced social and HR policy and systematic activities aimed at controlling the social and labour conditions.

On an ongoing basis, work on improvement of social stability among employees, creating a favorable psychological atmoshpere and conditions to provide trust to the management of production staff, on staff involvement, support of initiatives and providing of feedback, etc. is carried out at enterprises of NAC Kazatomprom JSC.

For the purposes of systematic approach to the issue of raising corporate social responsibility to employees, enterprises of the Company has developed plans to enhance social and labour conditions, including such measures of improvement as creating a favourable psychological climate, improving labour conditions and safety in the workplace, organizing and improving catering, financial encouragement of employees, professional development, arrangement of mass cultural events, transportation of employees, construction and maintenance of the field camp, etc. Moreover, the responsibility for proper performance of these activities lies with managers of subsidiaries and affiliates.

The work in the area of corporate social responsibility resulted in significantly increase in the social stability rating over 2016 from 72% to 81%. In addition, during the period from August to September 2016, "Social Partnership Center" Corporate Fund made researches on the rating of social stability in 18 enterprises of NAC Kazatomprom JSC.

# **Occupational health and safety**

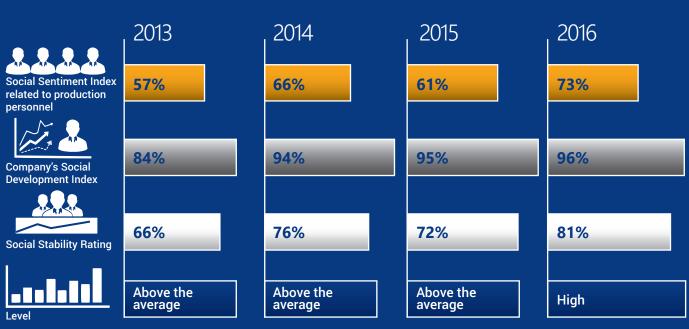
In 2016, the activities of enterprises on the provision of industrial, ecological, radiation and nuclear safety were conducted in accordance with the provisions declared in Policy No. 1/12 of February 20, 2012 adopted by NAC Kazatomprom JSC.

The activity of NAC Kazatomprom JSC in the field of occupational health and safety is regulated by the following basic documents:

- Regulations on the system of individual responsibility of staff for violating operational safety requirements;
- Requirements in the field of occupational health and environment to the contractors involved in various types of work;
- Corporate standard ST NAC 12.2-2012 "Standard quality assurance program for radiation safety in the operation of enterprises on the extraction of uranium by the ISL method. Requirements to the structure and content";
- Organizational system to ensure the safe operation of motor vehicles at NAC Kazatomprom JSC. ST NAC 12.3 – 2013;
- Instruction "Requirements to the content of the report on the state of labor protection and occupational safety in subsidiaries, affiliates and jointly controlled organizations and explanatory note";
- Roadmap for improving the production safety;
- Program "2016 is the Year of Safety in Transport".

During 2016, the Company continued improving the regulatory technical base in the field of health safety and environment, radiation and nuclear safety and in-process

Figure 9. Social responsibility level



# Annual report 2016



monitoring optimization in these fields. As a result, in 2016 the Company:

- developed and approved Regulations on Integrated Survey Work at the Company's Enterprises, Regulation on the Central Commission for Appraisal of SA Performance in the Field of Health Safety and Environment, Radiation and Industrial Safety, such standards as the Requirements for Personal Protection Equipment Provision to Workforce, Monitoring of Occupational Radiation Exposure of Staff, Procedure for Organizing and Conducting Gamma Radiation Safety Audit of Premises and Roadmap for Massive Improvement of Occupational Safety;
- conducted a training workshop in part of the "2016 is the Year of Safety in Transport" program, summary alignment meetings of the largest enterprises of NAC Kazatomprom JSC, corporate meeting On Measures for Improvement of Work in the Field of Health Safety and Environment, Radiation and Nuclear Safety in Subsidiaries and Affiliates of NAC Kazatomprom JSC, a meeting with representatives of National Company "KazMunayGas" JSC in part of exchanging experience in the field of health safety and environment, radiation and nuclear safety, an annual competition The Best Enterprise of the Year in the Field of Health Safety and Environment, Radiation and Nuclear Safety;
- conducted the first scheduled inspections of subsidiaries and affiliates of NAC Kazatomprom JSC for compliance with the law of the Republic of Kazakhstan in the field of health safety and environment, radiation and nuclear safety;
- prepared and distributed quarterly informational letters on accidents in the reporting period to be used in briefings in subsidiaries and affiliates of NAC Kazatomprom JSC;
- tested internal controls in processes of occupational safety assurance at enterprises of NAC Kazatomprom JSC in order to prevent the risk of injuries;
- the Company's management decided to consider issues of serious and lethal occupational injuries at the level of the corporate center and at meetings of the Supervisory Boards of enterprises, and increased the responsibility of the top managers of subsidiaries and affiliates;
- established the Board of Directors' Committee of the Company for industrial, environmental, nuclear and occupational safety and sustainable development.

According to the Regulation on the Committee for industrial, environmental, nuclear and occupational safety and sustainable development, the main activity of the Committee is development of an integrated policy of the Company concerning occupational, environmental and nuclear safety (as an integral element of a sustainable development) and aimed at minimizing the chemical and radiation exposure, environment and personnel protection, improving the occupational safety and automation of processes, and preparation of proposals and recommendations for the Board of Directors of the Company as to:

- improvement of the corporate management system in the field of industrial, environmental and nuclear safety;
- effective cooperation with subsidiaries and affiliates and coordination of the Company's activity in implementation of the policy concerning occupational, environmental and nuclear safety;
- adoption of policy documents of the Company in the field of occupational and environmental safety.

In 2016, in part of the Transformation Program, the Company launched the Implementation of Target Processes of Integrated Safety and Security project. The project provides for implementation of industrial safety management processes in NAC Kazatomprom JSC and its SAs on the basis of the Reference Model of Industrial Safety Management for Portfolio Companies, as approved by Samruk-Kazyna JSC.

The main goals of the project are to:

- decrease the level and severity of injuries and accidence at enterprises of the Company;
- mitigate risks by substituting the hazardous with the safe or less hazardous:
- formalize and standardize business processes across enterprises of the Company;
- reduce costs associated with injuries, accidence and non-compliance;
- improve the image of the Company among its clients, current and potential workers.

A complete integration of the developed safety management processes at enterprises of the Company in accordance with the project will enable to significantly improve the production safety.

The work on prevention of accidents at enterprises of the Company in 2016 was carried out in accordance with the approved plans of SA activities and NAC Kazatomprom JSC roadmap for improving the production safety.

One of the areas for improvement of operational safety of subsidiaries and affiliates of NAC Kazatomprom JSC is a regular status monitoring of environment and radiation hazardous sites and working procedures there in force for conformance with the applicable safety standards and regulations with subsequent development the remedial actions and compliance monitoring. This is confirmed by inspections conducted in 2016 by the Department of Occupational and Environmental Safety at 7 enterprises of the Company to check the compliance with standards and regulations in the field of occupational, environmental and radiation safety.

All enterprises have and use occupational safety management systems (OSMS) subject to which a work is organized to ensure compliance with regulatory documents and establish a safe production environment. Enterprises review and update the applicable standards and internal documents and develop new ones in order to ensure full compliance therewith by these enterprises' staff, other persons who stay at these enterprises' sites, as well as by contractors' staff. In addition, enterprises implement measures to protect their employees' life and health and to ensure the occupational safety, in particular:

- testing of equipment to ensure employees' safety in operation thereof and in fulfillment of processes, and testing of raw and other materials used in production;
- · special assessment of labour conditions;
- ensuring conformance of buildings, structures, premises, construction and industrial sites with the applicable laws of the Republic of Kazakhstan.
   G4-14

Today, 28 enterprises have integrated ISO-14001 environmental management system and OHSAS 18001 occupational health and safety assessment system.

There is a regular pre-shift and post-shift medical examination of empoloyees. In order to ensure employees' understanding of job hazards, there are lists of possible hazards compiled for each workplace and process operation and included in occupational safety regulations at revision to be read by employees concerned.

Subject to activity plans of the Company, there is a systematic intra-departmental monitoring of occupational safety at sites of affiliates. Complex organizational,

technical, and sanitary and health activities are carried out to ensure occupational safety at facilities.

All employees have all necessary personal protection equipment and safety gear in accordance with the applicable regulations. **G4-14** 

The main activities of NAC Kazatomprom JSC subsidiaries, affiliates and jointly controlled organizations in the field of occupational and production safety are as follows:

- compliance with the applicable laws of the Republic of Kazakhstan in the field of occupational and production safety;
- prevention of occupational accidents and occupational diseases;
- improvement of labour conditions and safety;
- training, advanced qualification of employees in the field of occupational safety;
- monitoring of compliance with the occupational safety requirements;
- informing employees about labour conditions, occupational accidents and professional diseases, benefits and compensations in view of labour conditions:
- involvement of all employees in development and implementation of enterprises' activities aimed at improving labour conditions, preventing occupational accidents;
- financing of activities aimed at improving labour conditions and safety at relevant facilities.

The occupational and production safety management work carried out by enterprises of NAC Kazatomprom JSC reflects tasks and objectives aimed at preventing injuries, accidents and emergencies and protecting health of the Company's staff.

The Company keeps a record of all accidents and conducts investigation and analysis of their reasons, and, according to the results of the investigation, the preventive measures are being developed. During 2016, 9 accidents happened in subsidiaries and affiliates of NAC Kazatomprom JSC in which 11 employees were harmed and 10 road accidents.

Table 51 – Number of accidents related to production and the rate of occurrence at enterprises of NAC Kazatomprom JSC

Headcount	Year	Group	Serious	Lethal	Moderate	Total	rate of occurrence
26 591	2016	-	5	-	4	9	0,34



# **Nuclear safety**

To ensure the implementation of nonproliferation of nuclear weapons in subsidiaries and affiliates of NAC Kazatomprom JSC carrying out activities with nuclear materials and natural uranium, the measures for nuclear security are performed.

In the frameworks of implementation of international commitments of the Republic of Kazakhstan and in accordance with the laws of the Republic of Kazakhstan, NAC Kazatomprom JSC has developed and operates the system of accounting for and control of nuclear materials, consistent with state regulatory authorities and which is a single system intended for the prevention of unauthorized access to nuclear materials, with the purpose of theft or damage of nuclear and radiation safety. Currently, UMP JSC and MAEC Kazatomprom LLP have nuclear materials.

Uranium mining and uranium processing enterprises of the Company, in accordance with the Methodical recommendations on conducting accounting and control of natural uranium and nuclear materials at the enterprises of NAC Kazatomprom JSC, as well as in the frameworks of the Additional Protocol to the Security Agreement concluded between the Republic of Kazakhstan and the IAEA, keep records of natural uranium at all stages of its technological turnover, that allows providing continuous monitoring of the quantity and location of material at all the stages – from production to realization.

# **Radiological safety**

In 2016, the corporate standards – ST NAC 12.6-2016 "Guidelines for the management of radioactive waste prior to their disposal" and the ST NAC 19-2016 "Procedure for provision of radiation safety of enterprises for the extraction of uranium by ISL method" were developed, approved and activated in all subsidiaries and affiliates. **G4-14** 

The Company strictly complies with all the requirements of the legislation in the field of radiation safety; in addition, regular training and mandatory



instruction of staff are carried out within the provision of radiation safety.

During the year, all the planned activities for the improvement of the radiological situation have been implemented. The focus was made on the replacement of obsolete equipment, repairs, modernization and reconstruction of ventilation systems.

The average professional dose of radiation of personnel in 2016 was 0.81 mSv/year. For comparison, typical doses of radiation of population from natural background radiation are 1-3 mSv/year.

In the past year, the maximum annual effective doses of group A personnel in the Company's enterprises was 9.6 mSv or 19% of the basic limit of 50 mSv/year established by hygienic standards.

In 2016, no radiation accidents at the enterprises of the Company were registered.

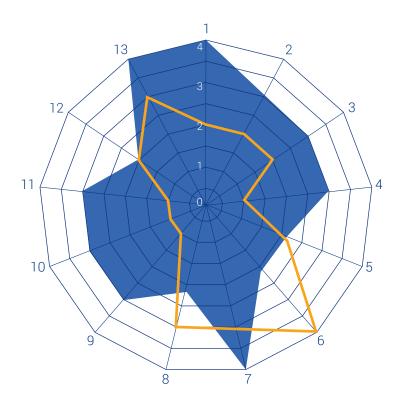
# 7.4 INTERACTION WITH STAKEHOLDERS

A prerequisite for the successful implementation of any project is to build a constructive system of relationships with the concerned parties. Stakeholders are defined according to the degree of exposure to or opportunity to be exposed to direct or indirect positive or negative impact resulting from the implementation of the Company's activities and which potentially may influence the production processes, corporate governance or loyalty of the

brand. The key stakeholders of the Company are staff and trade unions, sole shareholder, suppliers and consumers, state and local government bodies, mass media and local communities.

In order to organize the effective, targeted interaction with the concerned parties, community groups were divided into 4 categories depending on the impact they have on the Company's operations, as well as on the impact of the Company on them. **G4-25** 

Diagram 6 - Stakeholders Chart



1	Sole shareholder of the Company — Samruk- Kazyna JSC (hereinafter — the Fund)
2	Partners and shareholders/participants of subsidiaries and affiliates (SA) of the Company
3	External auditors and consultants
4	Lenders
5	Suppliers and consumers
6	Company's subsidiaries and affiliates
7	Management and Personnel
8	Labor unions
9	State authorities of the Republic of Kazakhstan
10	Local executive authorities
11	Mass media
12	International (IAEA, WNA), social organizations, including environmental organizations
13	Public organizations; local population



Table 52 – Lists of groups of stakeholders. <u>G4-24</u>, <u>G4-26</u>

Stakeholder in respect of the Company	Stakeholder's interest in respect of the Company	Form of a dialogue between the stakeholder and the Company	Degree of the stake- holder's impact on the Compa- ny, 1 to 4	Degree of the Compa- ny's impact on the stakehold- er, 1 to 4
1. Sole shareholder of the Company- Samruk-Kazyna JSC AO ("Fund")	1. Increase of the long-term value of the Company. 2. Implementation of the Company's development strategy within the frameworks of the general strategy of the Fund. 3. Receiving dividends 4. Implementation of social programs. 5. Medium-term development plan completion	1. Resolutions of the Sole shareholder of the Company (resolutions of the Board of Directors and the Management Board of the Fund, orders of the Chairman of the Management Board of the Fund).  2. Resolutions of the Board of Directors of the Company.  3. Joint working groups;  4. Meetings, conferences, etc.	4	2
2. Partners and shareholders/ participants of subsidiaries and affiliates of the Company (SA)	Increase of the long-term value of joint ventures.     Receiving revenues (dividends) from joint management.     Implementation of production and investment programs;     Implementation of social programs.     Medium-term development plan completion.	1. Articles of incorporation. 2. Decisions of GMP (GMS). 3. Decisions of SB (BD). 4. Decisions of joint advisory and consultative bodies. 5. Joint working teams. 6. Joint inspections. 7. Meetings, negotiations. 8. Correspondence regarding SA activity.	3	2
3. External auditors and advisors	Compliance with the IFRS.     Reliability of financial statements of the Company.     Compliance with external auditor's recommendations.     Timely payment in accordance with agreements.	1. Agreements, reports and letters to the Management.	3	2
4. Lenders of the Company	Timely repayment of the primary loan in full and timely payment of remuneration.     Financial stability of the Company.	Business correspondence.     Regular analytical meetings, negotiations.     Publication of information about the Company in mass media.	3	1
5. Suppliers and consumers	1. Stability and reliability of mutually beneficial cooperation. 2. Guaranteed execution of mutual obligations under contracts/agreements. 3. Guaranteed high quality, stability, reliability, safety and continuity of supplies of products/services. 4. Regular update and improvement of marketing activity of the Company.	1. Customer response system. 2. Holding of meetings, negotiations. 3. Signing of contracts, memoranda, and agreements on strategic cooperation.	2	2

Stakeholder in respect of the Company	Stakeholder's interest in respect of the Company	Form of a dialogue between the stakeholder and the Company	Degree of the stake- holder's impact on the Company, 1 to 4	Degree of the Com- pany's impact on the stake- holder, 1 to 4
6. Subsidiaries and affiliates of the Company	Fulfillment of investment and social plans/obligations.     Supporting the sustainable development.     Compliance with the laws and regulations of the Republic of Kazakhstan.     Compliance with the Corporate Governance Code	1. Decisions of the Company as a participant/shareholder of SAs. 2. Hearing of the management of SAs of the Company. 3. Information/reports of fulfillment of production, investment and social plans/obligations sent to the Company.	2	4
7. Management and personnel	1. Results, achievements and development prospects of the Company. 2. HR and social policy of the Company. 3. Involvement and prospective development of personnel. 4. Financial and non-financial incentives. 5. Collective agreement terms and conditions. 6. Compliance with the labour legislation and regulations of the Republic of Kazakhstan. 7. Creation of favourable conditions (incentives) for keeping and attracting highly skilled workers.	1. Resolutions of the Management Board of the Company. 2. Orders and instructions. 3. Operational meetings, industry, daily briefings and other meetings. 4. Reports of daily operations. 5. Incoming and outcoming correspondence. 6. Verbal negotiations. 7. Briefings in industrial and occupational safety. 8. Channels of internal communications. 9. Surveys. 10. Quizzes.	4	3
8. Trade unions	Employer's compliance with the established obligations with respect to employees.     Protection of employees' rights and interests.	Negotiation and approval of collective agreement.     Meetings of the trade union members with the Company management.	2	3
9. Public authorities of the Republic of Kazakhstan	1. Compliance with the laws and regulations of the Republic of Kazakhstan by the Company and SAs. 2. Obtaining timely and reliable information. 3. Competition development. 4. Giving opinions regarding further activity in a particular goods market. 5. Fulfillment of tax liabilities in full and within the established time limits. 6. Fulfillment of international commitments of the Republic of Kazakhstan. 7. Granting mineral rights. 8. Licensing of individual activities. 9. Fulfillment of license agreement obligations of SAs of the Company. 10. Development of nuclear power engineering and industry in the Republic of Kazakhstan.	3. Providing information upon request from public authorities regarding various activities of the Company.  4. Elaboration of proposals for amending the legislation and regulations of the Republic of Kazakhstan.  5. Approval of contract for subsurface use, deed of state registration of license.  6. Monitoring of compliance with license agreement obligations of the Company's SAs.  7. Reports of compliance with license agreement obligations of the Company's SAs.	3	1

# Annual report 2016



Stakeholder in respect of the Company	Stakeholder's interest in respect of the Company	Form of a dialogue between the stakeholder and the Company	Degree of the stake- holder's impact on the Company, 1 to 4	Degree of the Com- pany's impact on the stake- holder, 1 to 4
10. Local executive authorities	1. Growth of tax receipts to local budgets. 2. Fulfillment of contractual obligations in part of expenditures on social sphere. 2. Timely and good implementation of social projects. 3. Increase (keeping) of workplaces. 4. Compliance with the laws of the Republic of Kazakhstan in the field of industrial, radiation and nuclear safety.	1. Memoranda of cooperation between local executive authorities and the Company for the purpose of supporting and development of regional social sphere.  2. Master agreements between local executive authorities and the Company for financing of regional social sphere.	3	1
11. Mass media	Obtaining timely and reliable information on the Company's activity, in particular: - on production safety on quality of released products on financial performance on implementation of joint projects on the industry development prospects.	Services agreements for publication (articles, spots) of information about the Company's activity.     Participation in press conferences, briefings, presentations, media tours to production facilities, distribution of press-releases, rendering photo and video recording services.     Mass media monitoring	3	1
12. International organizations (IAEA, WNA), public organizations , including environmental organization	1. Compliance with Kazakhstan and international (ratified in the Republic of Kazakhstan) standards/regulations on industrial, radiation and nuclear safety.  2. Publicity and transparency of activity.  3. Involvement in preparation/review of draft normative legal documents.	Involvement in joint projects.     Correspondence regarding matters of concern.     Responses to inquiries of public organizations, articles in mass media.     Preparation of expert's opinions, proposals and comments concerning draft normative legal documents.	2	2
13. Public organizations, local communities	Financing of individual social programs.     Charitable assistance and sponsorship.     Public hearings.	Holding of public hearings.     Informing about SAs daily operations.     Letters (appeals) to the Company.	4	3

The Company builds dialogue with the stakeholders on various aspects of its activities. In particular, with the purpose of obtaining information about the concerns and claims, the Company developed the mechanism for the submission and consideration of appeals and complaints through the feedback system on the Company's external website, a written request or phone call on "hot line" (link to the website of the Company is specified in the printed materials distributed among the concerned parties). Enterprises of the Company monitor and review appeals and complaints and submit reports every quarter to the central office of NAC Kazatomprom JSC. After appropriate checks, each

application is followed up to rectify nonconformities or to give appropriate advice. **G4-26** 

For groups in the regions that do not have the skills to use the Internet (primarily for local community in remote areas) Doors Open Days are carried out and the hours for reception on personal matters are dedicated for subsidiaries and affiliates of NAC Kazatomprom JSC. A schedule of meetings is published in the local mass media. **G4-26** 

In 2016, complaints from employees of the following enterprises of NAC Kazatomprom JSC were received. **G4-27** 

Table 53 - Number of complaints in 2016. <u>G4-24</u>, <u>G4-26</u>

Nº	SA name	Q1	Q2	Q3	Q4	Total
1	Uranenergo LLP		3			3
2	MAEC Kazatomprom LLP	1		1		2
3	JV Inkai LLP			3	5	8
4	JV Akbastau JSC					
5	Karatau LLP		2			2
6	Kazakhstan SolarSilicon LLP					
7	PE Ortalyk LLP		2	2		4
8	Geotehnoservis LLP					
9	APPAK LLP					
10	JV SARECO LLP		4			4
11	Kazatomprom-SaUran LLP					
12	Semizbai-U LLP				1	1
13	UMP JSC				1	1
14	Kazatomprom-Damu LLP		2			2
	Total					27

The examined complaints deal with a manager's action, in particular, situations, dismissal of employees, compensations, arrears in wages, transfer to another job, etc.

All written complaints are examined within the period established by the applicable laws of the Republic of Kazakhstan.

All complainants are given advice and explanations in matters of concern.

The following activities are held every year for employees to avoid repeated complaints and appeals and to improve labour conditions:

- staff meetings with management of enterprises are held annually in order to improve social tranquility and to establish business and trusted mutual relationship;
- a forum on the internal website is available to discuss problematic questions;

- visiting hours for reception of citizens by managers of subsidiaries of NAC Kazatomprom JSC are approved and published in mass media;
- Hot line phone numbers of the State Secrecy and Security Department of NAC Kazatomprom JSC are made available at production site and shops;
- · all incoming appeals are timely reviewed;
- corporate newspapers are issued, which contain materials concerning life of every enterprise and team;
- managers monthly accept employees regarding personal matters;
- boxes for complaints and proposals are installed in public places (such as entrance office, mess, dormitories). G4-27



# **ANNEXES**

INDEPENDENT AUDITOR'S OPINION ON CERTIFICATION OF THE REPORT OF SUSTAINABLE DEVELOPMENT OF NAC KAZATOMPROM JSC FOR 2016

SUMMARY CONSOLIDATED FINANCIAL STATEMENTS WITH OPINION OF INDEPENDENT AUDITORS

# NURTEAM AUDIT Assurance & Advisory

NURTEAM AUDIT LLP office 326, Gagarina Avenue, 236 B, 050000 Almaty Tel: +7 (727) 352-81-55

E-mail: office@nurteamaudit.com Web: www.nurteamaudit.com

# INDEPENDENT AUDITOR'S OPINION ON CERTIFICATION OF THE REPORT OF SUSTAINABLE DEVELOPMENT OF NAC KAZATOMPROM JSC FOR 2016

To the management and stakeholders of NAC Kazatomprom JSC

#### **Audit Subject Definition and Description**

On behalf of NAC Kazatomprom JSC ("the Company") we have audited qualitative and quantitative information in the field of sustainable development included in 2016 NAC Kazatomprom JSC Annual Report ("the Report") as part of a limited assurance engagement.

#### **Audit Criteria**

A criterion of our audit was Sustainability Reporting Guidelines of the Global Reporting Initiative G4 ("GRI G4 Guidelines").

#### Responsibility of the Company's Management

The Company's Management is responsible for the implementation of policies and procedures related to the sustainable development and for the preparation of the Report, as well as for information contained therein. This responsibility includes development, implementation and maintenance of such internal control as the management determines necessary to enable the preparation of the Report free from material misstatement, whether due to fraud or error. The management is responsible for the choice and application of appropriate principles of reporting and use of appropriate measurement and assessment methods.

#### Our Responsibility

Our responsibility is to give an independent opinion on the subject of our audit.

#### Main audit procedures performed

We have performed the audit in accordance with the International Standard on Assurance Engagements 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information (ISAE3000), released by IFAC, which included the following procedures:

- sending information enquiries to the Management in order to obtain an understanding of the processes of defining topics and issues substantially significant to key groups of the Company's stakeholders;
- interviewing managers and key specialists of the Company responsible for the preparation of information in the field of sustainable development, implementation of the Company's policies and procedures in the field of sustainable development, as well as the relevant activities and results;
- · comparing the information with data from other sources in order to verify it for completeness and consistency;
- assessing the completeness of qualitative and quantitative information in the field of sustainable development in terms of compliance with GRI G4 Guidelines;
- considering and reviewing information in the field of sustainable development, which is included in the Company's Report 2016, in order to make sure that it is in line with our general understanding and knowledge of the Company's activity in the field of sustainable development;
- recalculating quantitative indicators and studying supporting documents.



## INDEPENDENT AUDITOR'S OPINION ON CERTIFICATION OF THE REPORT OF SUSTAINABLE DEVELOPMENT OF NAC KAZATOMPROM JSC FOR 2016 (CONTINUED)

### Management's Statement

Management states that information in the field of sustainable development included in the Company's Report 2016 was prepared, in all material respects, in accordance with GRI G4 Guidelines.

### Opinion

Based on our work described in this opinion, nothing has come to our attention that causes us to believe that the Management's statement that information in the field of sustainable development included in the Company's Report 2016 was prepared, in all material respects, in accordance with GRI G4 Guidelines, is not fairly stated.

Almaty, Kazakhstan June 30, 2017

Timur Bildebayev CEO

NURTEAMAUDIT LL



## Independent Auditor's Report

To the Shareholder and the Board of Directors of National Atomic Company Kazatomprom JSC

### Our opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of National Atomic Company Kazatomprom JSC (the "Company") and its subsidiaries (together – the "Group") as at 31 December 2016, and their consolidated financial performance and their consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards.

### What we have audited

The Group's consolidated financial statements comprise:

- the consolidated statement of financial position as at 31 December 2016;
- the consolidated statement of profit or loss and other comprehensive income for the year then
  ended;
- · the consolidated statement of changes in equity for the year ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes to the consolidated financial statements, which include significant accounting policies and other explanatory information.

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Independence

We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code). We have fulfilled our other ethical responsibilities in accordance with the IESBA Code.

#### Other information

Management is responsible for the other information. The other information comprises the annual report, which we expect to receive after the date of this auditor's report (but does not include the consolidated financial statements and our auditor's report thereon).

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.





In connection with our audit of the consolidated financial statements, our responsibility is to read the other information when it is provided to us and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed on the other information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

## Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements,
  whether due to fraud or error, design and perform audit procedures responsive to those risks, and
  obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk
  of not detecting a material misstatement resulting from fraud is higher than for one resulting from
  error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the
  override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit
  procedures that are appropriate in the circumstances, but not for the purpose of expressing an
  opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.



- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Pricewaterhouse Coopers LLP

Almaty, Kazakhstan

27 February 2017

Approved:

Dana Inkarbekova **Managing Director** 

PricewaterhouseCoopers LLP

(General State Licence from the Ministry of Finance

of the Republic of Kazakhstan

Nº0000005 of 21 October 1999)

Signed:

Azamat Konratbaev

**Audit Partner** 

(The Association of Charted Certified Accountants

Certificate Nº00770863 of 8 May 2003)

Signed:

Svetlana Belokurova Auditor in charge

(Qualified Auditor's Certificate №0000357

dated 21 February 1998)



## JSC National Atomic Company Kazatomprom Consolidated Statement of Profit or Loss and Other Comprehensive Income

In millions of Kazakhstani Tenge	Note	2016	2015
Revenue	8	418,901	397.766
Cost of sales	9	(308,468)	(294,404
Gross profit		110,433	103,362
Distribution expenses	10	(6,314)	(4,116
General and administrative expenses	11	(30,877)	(25,655
Reversal of impairment of assets	12	184	86
Impairment losses	12	(22,007)	(30,716
Gain on disposal of subsidiary	12	290	(50,710
Net foreign exchange gain / (loss)	14	3,614	(53,446
Other income	13	775	1,352
Other expenses	14	(2(2/2/1)	
Finance income	16	(6,160)	(7,535
Finance costs		15,825	21,986
	16	(11,017)	(8,676
Share of results of associates	24	38,058	38,823
Share of results of joint ventures	25	36,739	14,080
Profit before tax		129,543	49,545
Income tax expense	17	(17,988)	(13,044)
PROFIT FOR THE YEAR		111,555	36,501
Exchange differences arising on translation of foreign operations Share in other comprehensive income of equity method investments Items that will not be reclassified to profit or loss:		(97) (658)	17,271 159
Remeasurements of post-employment benefit obligations Share in other comprehensive income of equity method investments		194 (216)	(241
Other comprehensive (loss) / income for the year	- TO 1	(777)	17,189
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		110,778	53,690
Profit for the year attributable to:			
- Owners of the Company		108,795	38,442
- Non-controlling interest		2,760	(1,941
Profit for the year		111,555	36,501
Total comprehensive income attributable to:	E-11		
- Owners of the Company		108,014	55,635
- Non-controlling interest		2,764	(1,945
Total comprehensive income for the year		110,778	53,690
Earnings per share from continuing operations, basic and diluted (rounded to Tenge)	18	2,963	1,048

These consolidated financial statements were approved by management on 27 February 2017:

A.K. Zhumagaliyev Chairman of the Management Board

Z.G. Kaliyeva Chief Accountant

## JSC National Atomic Company Kazatomprom Consolidated Statement of Financial Position

ASSETS  Non-current assets Intangible assets Property, plant and equipment Mine development assets Mineral rights Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	19 20 21 22 23	7,117 117,335 41,682	7,17
Non-current assets Intangible assets Property, plant and equipment Mine development assets Mineral rights Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	20 21 22 23	117,335	
Property, plant and equipment Mine development assets Mineral rights Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	20 21 22 23	117,335	
Mine development assets Mineral rights Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	21 22 23		
Mineral rights Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	22 23	41 697	130,41
Exploration and evaluation assets Investments in associates Investments in joint ventures Other investments Accounts receivable	23		38,57
Investments in associates Investments in joint ventures Other investments Accounts receivable		2,291 3,471	2,06 8,53
Other investments Accounts receivable	24	107,773	121,93
Accounts receivable	25	66,862	43,51
	26	67,041	67,04
Deferred tax assets	27 17	4,299	1,82
Term deposits	30	15	3,18
Loans to related parties	31	19,151	32,34
Other non-current assets	28	19,517	19,62
		456,554	476,28
Current assets		27.004	
Accounts receivable Prepaid income tax	27	67,921	107,51
Value-added tax		7,391 22,235	2,42 28,52
Inventories	29	120,095	99,69
Term deposits	30	56,476	9,02
Loans to related parties	31	13	1,22
Cash and cash equivalents Other current assets	32 28	75,052 10,831	55,86 12,55
Onto Continue associa	. 20		
Assets of disposal groups classified as held for sale		360,014 3,463	316,82 16
		363,477	316,99
TOTAL ASSETS		820,031	793,27
FOURTY		177.09	100
EQUITY			140 50 140
Share capital	33	36,785	36,69
Additional paid-in capital Foreign currency translation reserve		4,785 18,061	4,78 18,81
Retained earnings		495,732	398,99
Equity attributable to shareholders of the Company		555,363	459,28
Non-controlling interest	39	12,467	10,11
TOTAL EQUITY		567,830	469,40
LIABILITIES			
Non-current liabilities		77.404	440.77
Loans and borrowings Finance lease liabilities	34	77,184 120	119,77
Accounts payable	36	581	58
Provisions	35	17,320	17,18
Deferred tax liabilities	17	4,743	4,50
Employee benefits	27	1,346	2,04
Other non-current liabilities	37	5,199	6,14
Current liabilities		106,493	150,23
Loans and borrowings	34	50,581	52,84
Finance lease liabilities		44	
Provisions	35	98	10
Accounts payable	36	74,654	101,62
Other tax and compulsory payments liabilities Employee benefits		6,198 244	5,02
Income tax liabilities		134	1,03
Other current liabilities	37	11,789	12,78
CALLETTING CO.		143,742	173,63
Liabilities of disposal groups classified as held for sale and Kanada Andrews Communication and Commun		1,966	
TOTAL LIABILITIES		252,201	323,87
TOTAL EQUITY AND LIABILITIES		820,031	793,27

The accompanying notes are an integral part of these consolidated financial statements.



## JSC National Atomic Company Kazatomprom Consolidated Statement of Cash Flows

In millions of Kazakhstani Tenge	2016	2015
OPERATING ACTIVITIES		
Cash receipts from customers	485,829	395,725
VAT refund	29.638	24,895
Interest received	6,830	1,416
Payments to suppliers	(379,103)	The second secon
Payments to suppliers		(320,921
r dynama to employees	(42,638)	(40,191
Cash flows from operating activities	100,556	60,924
Income tax paid	(28,216)	(5,662
Interest paid	(5,464)	(6,127
Cash flows from operating activities	66,876	49,135
out none non operating activities	00,070	49,130
INVESTING ACTIVITIES		
Acquisition of property, plant and equipment	(8,975)	(12,153
Proceeds from disposal of property, plant and equipment	190	491
Advance paid for property, plant and equipment	(5,361)	(616
Acquisition of intangible assets	(477)	(414
Acquisition of mine development assets	(11,494)	(9,930
Acquisition of exploration and evaluation assets	(3,264)	(1,618
Proceeds from sale of investments in associates and joint ventures		(1,010
	82	
Proceeds from disposal of subsidiary	175	
Placement of term deposits and restricted cash	(54,124)	(14,370
Redemption of term deposits and restricted cash	9,054	5,798
Repayment of loans to related parties	12,787	1,211
Acquisition of investments in associates and joint ventures	(4,647)	(2,046
Dividends received from associates, joint ventures and other investments	78,805	42,867
Other	(96)	(94
Cash flows from investing activities	12,655	9,126
FINANCING ACTIVITIES		The Maria
Proceeds from loans and borrowings	10.070	100 054
	10,072	163,851
Repayment of loans and borrowings	(53,430)	(215,676
Dividends paid to the shareholder (Note 33)	(12,031)	(2,323
Dividends paid to non-controlling interest	(134)	(47
Other	(673)	103
Cash flows used in financing activities	(56,196)	(54,092
Net increase in cash and cash equivalent	23,335	4,169
Cash and cash equivalents at the beginning of the year	55,869	29,432
Effect of exchange rate fluctuations on cash and cash equivalents	(4,152)	22,268
Constitution of Kanada		
Cash and cash equivalents at the end of the year (Note 32)	75,052	55,869

These consolidated financial statements were application oved by management on 27 February 2017:

A.K. Zhumagaliyev Chairman of the Management Board

Chief Accountant

	Attr		shareholder	of the Compa	ny		
In millions of Kazakhstani Tenge	Share capital	Foreign currency translation reserve	Retained earnings	Additional paid-in capital	Total	Non- controlling interest	Total equity
Balance at 1 January 2015	36,692	1,558	363,590	4,785	406,625	12,128	418,753
Profit for the year Foreign currency translation			38,442		38,442	(1,941)	36,501
difference	-	17,261			17,261	10	17,271
Remeasurements of post- employment benefit obligations Share of other comprehensive	•		(227)	-	(227)	(14)	(241
income in equity method investments			159	-	159		159
Total comprehensive income for the year		17,261	38,374		55,635	(1,945)	53,690
Dividends declared Other	:	:	(2,323) (650)	:	(2,323) (650)	(65)	(2,388 (650
Balance at 31 December 2015	36,692	18,819	398,991	4,785	459,287	10,118	469,405
Profit for the year Foreign currency translation	-	-	108,795		108,795	2,760	111,555
difference		(100)	-	*	(100)	3	(97)
Remeasurements of post- employment benefit obligations Share of other comprehensive loss	-	(managed)	193	-	193	1	194
in equity method investments		(658)	(216)	-	(874)	•	(874)
Total comprehensive income for the year		(758)	108,772		108,014	2,764	110,778
Dividends declared Contribution to share capital	93	:	(12,031)	:	(12,031) 93	(415)	(12,446) 93
Balance at 31 December 2016	36,785	18,061	495,732	4,785	555,363	12,467	567,830

These consolidated financial statements were approved by management on 27 February 2017:

A.K. Zhumagaliyev Chairman of the Management Board

Z.G. Kaliyeva Chief Accountant





## CONTENTS INDEX OF GENERAL STANDARD ELEMENTS OF STATEMENTS OF GRI G4 IN THE REPORT <u>G4-32</u>

GRI index	Aspect	Report sections/comments	Report page	External comments		
STRATEGY	STRATEGY AND ANALYSIS					
G4-1	Statement of the Top decision-maker of the Company	Message from the Chairman of the Board of Directors, Message from the Chairman of the Management Board	4 5 12 13			
ORGANIZAT	ION PROFILE					
G4-3	Company's Name	About the Company	21			
G4-4	Main brand names, products and/or services	About the Company: Review	21 22			
G4-5	Location of the Company's headquarters	Contact information	128			
G4-6	Number of countries where the Company operates	Geography and markets of presence	21 26			
G4-7	Ownership and legal form	History of the Company	23			
G4-8	Markets where the company operates	Geography and markets of presence	26			
G4-9	The size of the Company	Asset profile of the Company	6 24 92 124			
G4-10	Personnel	Company in figures Social responsibility	7 93 94			
G4-11	Percentage of employees covered by the collective employment agreements	Social responsibility	94			
G4-12	Supply chain	Nuclear Fuel Cycle	87			
G4-13	Significant changes in the scope, structure or ownership	Asset profile of the Company	25 68 87			
G4-14	Precautionary principle	Risk management, internal control	62 83 100 101			
G4-15	Economic, environmental and social charters, principles or other initiatives to which the Company joined to or which it supports	Participation in associations and adherence to international principles	29			
G4-16	Membership in associations	Participation in associations and adherence to international principles	29			
IDENTIFIED	MATERIAL ASPECTS AND LIMITS					
G4-17	Legal entities, the statement of which was included into the consolidated statement	Principles of determining the content of Report and Aspect Limits	16			
G4-18	Methodology of report content definition and aspects limits	Principles of determining the content of Report and Aspect Limits	16			
G4-19	The list of all material aspects	Significant aspects and order of their definition	18			
G4-20	Aspect limits inside the Company	Significant aspects and order of their definition	19			
G4-21	Aspect limits outside the Company	Significant aspects and order of their definition	19			

GRI index	Aspect	Report sections/comments	Report page	External comments
G4-22	The effect of any restatements of information provided in previous reports, and the reasons for such restatements  This report contains no restatements or wordings other than in the previous statements		16	
G4-23	Changes in scope and limits of aspects in comparison with the previous reports	No significant changes or limits of aspects were applied by the Company in this report.	16	
INTERACTION	ON WITH THE STAKEHOLDERS			
G4-24	The list of stakeholders	Interaction with stakeholders	103 106	
G4-25	Principles of identification and selection of stakeholders for interaction	Interaction with stakeholders	102	
G4-26	Approach to interaction with stakeholders including the frequency of interaction	Interaction with stakeholders	103 105 106	
G4-27	Key themes and concerns that were raised by stakeholders in the framework of cooperation with organization and how the organization responded to those key themes and concerns	Interaction with stakeholders	105 106	
GENERAL IN	NFORMATION ABOUT THE REPORT			
G4-28	Reporting Period	About the Report	15	
G4-29	Date of Publication of the Last Preceding Report	About the Report	15	
G4-30	Reporting Cycle	About the Report	15	
G4-31	Contacts for Questions	Contact information	128	
G4-32	Variant of report preparation "in accordance" GRI guidance	About the Report	119	
G4-33	The Company's policy and current practice with regard to seeking external assurance for the report	External assurance	19	
CORPORAT	E GOVERNANCE			
G4-34	Structure of corporate governance	Corporate management and ethics Structure of corporate governance	43 44 49 60 61	
ETHICS ANI	D FAIR PRACTICE			
G4-56	Values, principles, standards and standards of behavior in the Company, such as code of conduct and ethics codes	Corporate management and ethics Corporate ethics	61 62	



## CONTENTS INDEX OF SPECIFIC STANDARD ELEMENTS OF STATEMENTS OF GRI G4 IN THE REPORT $\underline{\mathsf{G4-32}}$

GRI index	Aspect	Report sections/comments	Report page	External assurance
Economical	category			
ECONOMIC	PERFORMANCE			
G4-DMA	Information on approaches in Management	Sustainable economic development	83	
G4-EC1	Created and distributed direct economic value	Sustainable economic development	83	
Industry- specific additions to the general standard element of reporting	Please, specify the countries which are actual or potential members of Extractive Industries Transparency Initiative (EITI), in which the Company operates	Sustainable economic development	83	
MARKET PR	RESENCE		1	
G4-DMA	Information on approaches in Management	Social responsibility Company personnel	97	
G4-EC5	Ratio of standard wage of entry level of workers of different gender to established minimum wage at significant regions of organization operation	Social policy Remuneration system	97	
INDIRECT E	CONOMIC IMPACTS			
G4-DMA	Information on approaches in Management	Economic impact in presence regions	85 86	
G4-EC7	Development and impact of infrastructure investments and gratuitous services	Implemented social projects	7 85	
PROCUREM	ENT PRACTICES			
G4-DMA	Information on approaches in Management	Economic impact in presence regions	87	
G4-EC9	Share of costs of local suppliers at significant areas of presence regions	Procedures for controlling procurement practices within the sustainable development	87	
"ECOLOGICA	aL" CATEGORY ENERGY			
G4-DMA	Information on approaches in Management	Use of resources and energy efficiency	91	
Guidelines for G4- DMA-b specific to the Aspects	Please, specify if the organization is bound by any national, regional or industry-specific standards, regulations or rules related to energy. Give examples of such rules and regulations.	Energy efficiency	91	
G4-EN3	Energy consumption within organization	Use of resources and energy efficiency	91	
WATER				
G4-DMA	Information on approaches in Management	Water resources	90	
G4-EN8	Total water withdrawal by source	Water resources	90	
EMISSIONS				
G4-DMA	Information on approaches in the Management	Environmental responsibility	89	
G4-EN15	Direct greenhouse gas emissions (coverage area 1)	Environmental responsibility	89	
EMISSIONS	AND WASTE			
G4-DMA	Information on approaches in the Management	Monitoring and utilization of waste	88	
G4-EN23	Total weight of waste by type and treatment methods	Monitoring and utilization of waste	88	

GRI index	Aspect	Report sections/comments	Report page	External comments
MM3	Total quantity of overburden rocks uranium residue and drilled cuttings, as well as related risks.	No information available, a question concerning possible introduction of a reporting on this criterion will be considered in 2017		
COMPLIAN	CE WITH THE REQUIREMENTS			
G4-DMA	Information on approaches in the Management	Costs for environment protection purposes	87 88	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	Costs for environment protection purposes	88	
GENERAL II	NFORMATION			
G4-DMA	Information on approaches in the Management	Environmental responsibility	88	
G4-EN31	Total expenditures and investments in environmental protection, by type	Environmental responsibility	87 88	-
"SOCIAL" CA	TEGORY			
G4-DMA	Information on approaches in the Management	Social responsibility	96	
G4-LA2	Benefits provided to employees working full-time, which are not available to employees working on temporary or part-time terms, by significant regions of organization operation	Social responsibility Social policy, payments and benefits	96	
RELATIONS	HIPS BETWEEN PERSONNEL AND MANAGEMENT			
G4- DMA	Information on approaches in the Management	Social responsibility	96	
G4-LA4	Minimum notification period with respect to significant changes in the organization activities, and whether the collective agreement defines it.	Social responsibility Social policy Collective agreement and trade unions	96	
MM4	Number of strikes and downtimes lasting over a week, by countries.	No strikes or protests of the Company's staff or other conflict situations were observed in 2016.		
TRAINING A	ND EDUCATION			
G4-DMA	Information on approaches in the Management	Social responsibility Company staff	92	
G4-LA10	Lifelong development and learning programs aimed at maintaining the staff's employment abilities and supporting them after retirement	Social responsibility Company staff	95 96	
DIVERSITY	AND EQUAL OPPORTUNITIES			
G4-DMA	Information on approaches in the Management	Social responsibility Company staff	94	
G4-LA12	Composition of governing bodies and main categories of personnel, by gender, age groups, belonging to minority groups and other characteristics of diversity	Social responsibility Company staff	94	
EQUAL REM	IUNERATION FOR WOMEN AND MEN			
G4-DMA	Information on approaches in the Management	Social responsibility Wage system	96 97	
G4-LA13	Ratio of basic salary of men and women by category of workers and by significant regions of activities	Social responsibility Wage system	97	
INDICATOR	S OF NAC KAZATOMPROM JSC			
KAP1	Place in the Nuclear Fuel Cycle	Nuclear Fuel Cycle	16 37 78	



GRI index	Aspect	Report sections/comments	Report page	External comments
KAP2	Global uranium markets	Geography and presence markets	6 16 27 28 78	
КАР3	Business transformation	Business transformation	16 61	
KAP4	Development of raw material base	Raw material base Condition of raw material base	16 73 75 76 77 81 93	

## **SUPPLIED VOLUMES OF PRODUCTS AND SERVICES (WORK) (G4-9, EN 3)**

Indicators	2016	2015	Variation
Sold products			
Sales volume of natural triuranium octoxide (TUO) (own and from SA) (tons)	4,226	5,338	-,20.8%
Sales volume of TUO purchased prom joint ventures (tonnes)	6,668	6,451	3.4%
Sales volume of UO2 powders (tonnes)	20	29	-31.0%
Sales volume of fuel pellets (tonnes)	24	-	100%
Sales volume of dioxide from metal scrap and furnace residues	28	28	0%
Sales volume of rare-earth metal products (tonnes)	11	23	-52.2%
Sales volume of tantalium products (tonnes)	123,	146	-15.8%
Sales volume of beryllium products (tonnes)	1,766	1,740	1.5%
Sales volume of niobium products (tonnes)	52	122	-57.4%
Sales volume of sulphuric acid (thous. tonnes)	537	133	303.8%
Sales volume of photovoltaic modules (MW)	0.11	5	-97.8%
Sales volume of electric energy (thous. kW*h)	4,125,177	4,113,367	0.3%
Sales volume of thermal energy (Gcal)	823,025	857,612	-4.0%
Sales volume of water (thous. cub. m)	211,690	161,444	31.1%
Sales volume of hydrofluoric acid (tonnes)	1,177	3,188	-63.1%
Sales volume of fluorspar FK-65, 95, fluorspar ore (tonnes)	10,741	10,984	-2.2%
Sales volume of metallurgical silicon (tonnes)	38	1,258	-97.0%
Sales volume of refined metallurgical silicon (tonnes)	-	7	-100%
Miscellaneous (thsd. KZT)	14,475,893	8,014,652	80.6%
Sold servicers and work			
Meterage drilled (thsd. rm)	1,734	3,107	-44.2%
Volume of geological exploration works performed (thsd. KZT)	1,372,509	2,232,319	-38.5%
Miscellaneous (thsd. KZT)	5,733,285	3,219,352	78.1%



# GLOSSARY

## **GLOSSARY**

Term	Definition
CAPEX	Capital expenditures, financial investment, appraisal and exploration work
CO2	Carbon dioxide
COSO	Internal control – integrated model
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortization
EBITDA margin	Ratio, expressed as a percentage, of the earnings before interest, taxes, depreciation and amortization to the sales proceeds, based on NAC Kazatomprom JSC methods
EDF	Électricité de France
SWU	Separative work unit
ERP	Enterpr
ise resource planning	
EVA	Economic Value Added is an estimate of an enterprise's economic profit after all taxes and payment of the entire capital invested in the enterprise
GRI	Global Reporting Initiative
ISO	International Organization for Standardization
ISO 14001	International standard Environmental management systems – Requirements with guidance for use
MM	Ore mining and metallurgic sector
OHSAS 18001	International standard Occupational Health and Safety Management Systems
TRE0	Total Rare Earth Oxide
U308	Triuranium Octoxide
UF6	Uranium hexafluoride
U02	Uranium dioxide
U03	Uranium trioxide
NPP	Nuclear Power Plant
BWRT	Bolotov's wind rotor turbine
RD	Railway district
SA	Subsidiaries and affiliates
DOSEP	Department for Occupational Safety and Environment Protection
PE	Producing enterprise
ДРГ-1МК	Radiation-measuring alarm annunciator
HRD	Human Resources Department
CJSC	Closed Joint Stock Company
TUO	Triuranium Octoxide
IS	Information security
IRESCO	Irtysh Rare Earths Company
IT	Information technologies
ST RK ISO/IEC 17025	State Standard of the Republic of Kazakhstan General Requirements for the Competence of Testing and Calibration Laboratories



KazNTU	Satpayev Kazakh National University
KazNU	Al-Farabi Kazakh National University
Effy	Coefficient of efficiency
IAEA	International Atomic Energy Agency
MAEC	Mangistau Atomic Energy Combinate
Local content	Percentage of the cost of labour of citizens of the Republic of Kazakhstan engaged in fulfillment of a purchase contract in the total payroll budget of the contract, and/or percentage of the cost of a share (shares) of local origin determined in a product (products) in accordance with the substantial transformation or finished production criteria by residents of the Republic of Kazakhstan in the total cost of the product (products) under the relevant purchase contract.
MID RK	Ministry of Investments and Development of the Republic of Kazakhstan
MC	Metallurgical Combinate
MERK	Ministry of Energy of the Republic of Kazakhstan
STC	Scientific and Technical Council
SB (BD)	Supervisory Boards (Boards of Directors).
LLC	Limited Liability Company
GMP (GMS)	General Meetings of Participants (General Meetings of Shareholders)
OHS	Occupational health and industrial safety
GWP	Global warming potential
ISL	In-situ leaching
RK	Republic of Kazakhstan
RF	Russian Federation
RM&REM	Rare and rare-earth metals
JV	Joint venture
OSMS	Occupational safety management system
RMS	Risk management system
FA	Fuel assemblies
HPI	Heat pump installations
LLP	Limited liability partnership
GWS	Goods, Works, Services
TTC	Trade and transport company
UMP	Ulba Metallurgical Plant
CRL	Central research laboratory
CRME	Central research methodical expedition
UEC	Uranium Enrichment Centre
SMCC	South Mining Chemical Company
SKR	South Kazakhstan Region
NFC	Nuclear Fuel Cycle

## **CONTACT INFORMATION**

National Atomic Company Kazatomprom Joint Stock Company - G4-5

10, Kunayev Str., Astana 010000, Republic of Kazakhstan Tel: +7 (7172) 55-13-98 Fax: +7 (7172) 55-13-99 E-mail: nac@kazatomprom.kz Web: www.kazatomprom.kz

In case of any questions, comments and proposals concerning this Report, and if you would like to get a printed version hereof, you may apply to the following employees of NAC Kazatomprom JSC: **G4-31** 

## Oksana Zaitseva,

Chief Manager

Department of Economics and Planning 10, Kunayev Str., Astana 010000, Republic of Kazakhstan Tel: +7 (7172) 55-12-56

Ozaitseva@kazatomprom.kz