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# Message from Company management



# Message from the Chairman of the Board of Directors of OJSC Atomenergomash

#### Yekaterina V. Lyakhova

Chairman of the Board of Directors of OJSC Atomenergomash, Director of Investment Management and Operational Efficiency at Rosatom State Corporation

#### Dear Colleagues,

In summing up the results of 2012, I would like to point out that the past year was truly a breakthrough year for OJSC Atomenergomash, the power engineering division of the Rosatom State Nuclear Energy Corporation. Over its history, this young and ambitious company has taken major leaps forward in its development to become one of the key players on the Russian power engineering market. The main purpose of establishing OJSC Atomenergomash was to de-monopolize the market and to develop globally competitive technology solutions for the power industry. As competition has evolved, prices for nuclear equipment have declined in recent years, which enabled Rosatom State Corporation to save more than 22 billion rubles in 2007-2011.

From this standpoint, 2012 was a turning point: from the time the Volgodonsk branch of CJSC AEM Technologies was established, Atomenergomash became an integrated supplier of key equipment for both nuclear and turbine islands as it set up a complete production chain to manufacture equipment for nuclear power plants.

The Company is capable of finding solutions to the main challenges facing Rosatom: providing programs to develop nuclear energy in Russia, increasing the volume of nuclear power plants built abroad using the Russian design, providing programs to develop nuclear energy on foreign markets and improving the safety of nuclear power plants.

It is equally important that the power engineering holding is not focusing solely on nuclear orders, but also seeking to diversify its activities. The Company takes into account global market trends, particularly the risk of a decline in demand for nuclear engineering products in several key regions following the events at Fukushima. The Company's strategy calls for an increase in the proportion of related segments, in particular expanding its presence on the heating market and developing its wind energy business. In 2012, OJSC Atomenergomash and OJSC Turboatom signed an agreement on cooperation to implement projects involving the construction and modernization of thermal power plants. The Company is actively developing cooperation with NEM, a leading global company that handles the engineering of boiler equipment. The program to modernize one of the Holding's key assets, OJSC ZiO-Podolsk, is primarily focused on the heating sector. There will also be major developments in the Company's ability to manufacture products for the gas and petrochemical industry.

The Company intensified work last year to comply with global standards for sustainable development: effective personnel development and occupational safety and environmental protection have been successfully implemented.

The Board of Directors of OJSC Atomenergomash highly values the results achieved by Company management in 2012. The results of this work not only made it possible to ensure impressive production results but also strengthened the Company's reputation as a reliable and responsible supplier.



# Message from the CEO of OJSC Atomenergomash

#### Andrey V. Nikipelov

CEO of OJSC Atomenergomash

#### Dear Colleagues, Partners and Shareholders,

The year 2012 proved to be a successful one for the Atomenergomash Holding.

This was the year that we became a company with a full technology cycle capable of manufacturing any power engineering equipment for the power industry from design to delivery to the customer on a turnkey basis. We also became one of the few nuclear power engineering companies in the world that is able to offer the integrated supply of both nuclear power plant islands: reactor and turbine.

This was largely possible due to the resumption of the production of Russian equipment for nuclear power plants at one of the country's best production facilities in the city of Volgodonsk. Production began in 2012 at the newly opened branch of CJSC AEM Technologies in Volgodonsk on the first ready-assembled reactor for the Baltic Nuclear Power Plant, and the same facility is to resume production of the entire range of reactor compartment equipment over the next two years.

The decision we adopted together with our partner Alstom to set up turbine equipment production in Volgodonsk will enable us to produce the first turbine using Arabelle lowspeed technology by 2016. The establishment of the branch in Volgodonsk is intended to ensure growth in the Company's production capacity both in the nuclear segment as well as the gas and petrochemical industry. More than half a billion rubles are to be invested in the branch's development in 2013 alone.

We met all our obligations for equipment supplies to our customers on time in 2012 and are already ahead of schedule for several projects in 2013. This was mainly possible due to the integration program implemented by the Holding in 2012, which included measures to improve cooperation among enterprises, reduce excessive administration and forge team-building.

The Atomenergomash Group of Companies had consolidated revenue of approximately 52 billion rubles in 2012. The Company's order portfolio was up to 100 billion rubles at the end of the year. Winning a tender to supply turbine plant equipment for two power units of the Baltic Nuclear Power Plant brought us a major contribution to the growth in the order portfolio (over 30 billion rubles).

A seven-year program to modernize OJSC Energomashspetsstal was completed in the reporting year and resulted in this enterprise becoming one of the world's leading suppliers of castings and forgings for various engineering sectors.

The first stage of the modernization of CJSC Petrozavodskmash was completed with the establishment of steam generator shell production for nuclear power plants. Taking into account the plans to develop the Volgodonsk branch, the enterprise will continue to specialize in the production of the usual range of equipment for the nuclear power industry as well as equipment for the petrochemical sector.

In 2012, the management of the companies ZiO-Podolsk and ZIOMAR was consolidated within the Holding and a five-year program was launched to modernize the Podolsk facility. In the coming years this major enterprise should considerably strengthen its positions on the market for thermal power equipment.

Some of our other enterprises such as TsKBM, ARAKO and Ganz continue to undergo modernization, which enables them not only to ensure the development of a unique engineering and production base, but also to substantially expand the product line for our customers, including in the segment of pump equipment for nuclear power plants, thermal power plants and hydropower plants.

In 2013, we plan to develop new types of products such as reactor plant equipment for a nuclear-powered icebreaker. We also intend to strengthen our presence in such related sectors as the thermal energy sector as well as the gas and petrochemical industry. The share of the nuclear segment remains high in the structure of our products at around 65%. Over the next five years, the Company plans to balance out its portfolio and increase the proportion of related segments in revenue. We will fully enter the market for gas and petrochemical industry equipment taking into account the capabilities of our enterprises Energomashspetsstal, Petrozavodskmash and the Volgodonsk branch of AEM Technologies.

Aspiring to be a leader, we strive to be an innovative company: the supply of equipment and components for the world's first FN-800 reactor was completed in 2012 and now Atomenergomash is the only company in the world that has fast-neutron reactor technology. We are working on building the promising FN-1200 reactor and our enterprise OJSC Afrikantov OKBM has been designated as the responsibility center for this project.

The reporting year was also successful for us in terms of international activities. In addition to highly important agreements on turbine equipment production with Alstom, we signed and began implementing an agreement on cooperation with Turboatom, enabling us to jointly take part in projects to modernize thermal power plants in Ukraine, Russia and other countries. We also adopted a fundamental decision to extend cooperation with NEM Energy in the supply of high-capacity heat recovery steam generators using the most advanced technologies.

Improved efficiency is a priority for our Company's activities. In 2012, we achieved positive results in the introduction at Atomenergomash enterprises of the Rosatom Production System (RPS), a key tool to improving competitiveness. The RPS is now being introduced at 14 of the Holding's enterprises and this number is set to increase. With the support of Rosatom State Corporation, we have also developed and are implementing a comprehensive efficiency improvement program in the period of 2013-2018 that is designed to boost the Holding's competitiveness in the long term.

I would like to thank the Company's management and staff for the good work they performed that enabled us to achieve these results in the reporting year. The implementation of the strategic goals for the development of nuclear power engineering faced by Rosatom State Corporation, as well as the continued prosperity of our Company, are dependent on your attentive approach to our partners and clients, as well as ongoing work to improve the quality of our products.



# 1. General information about the Company

# Data on 2012 revenue with a breakdown by operating segments, mln RUB

2012



# 1.3. Key products

Equipment for the thermal

ranging from 50 to 800 MW.

Auxiliary boiler equipment,

including LPH and HPH.

Steam and water heaters

from spiral-finned tubes.

ranging from 6 to 45 MW.

operating under pressure.

Large welded structures.

Capacitive equipment

Pump equipment.

Radial and axial fans.

Hot water heat recovery steam

Hot water boilers.

Air heaters.

Filters.

Power valves.

Deaerators.

Cooling towers.

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• Power boilers for units with capacity

Heat recovery steam generators for units

with capacity ranging from 2.5 to 450 MW.

generators for gas turbines with capacity

Water-water and steam-water heaters.

Piping components and assembly units.

Distillation and desalination units.

power industry

# Equipment for the nuclear power industry

- Reactor compartment equipment: - reactors for NPPs (VVER, FN, etc.);
  - for NPPS (VVER, FN, etc.);
     marine nuclear reactors
  - and units (RITM, etc.);
    - and units (RITM, etc.);
       steam generators;
  - stearn generators;
     main circulation pumps
  - main circulation pumps
  - and pump equipment;main circulation piping;
  - pressurizer systems;
  - emergency core cooling system and passive core flooding system (ECCS and PCFS);
    - reactor cavity equipment
      - and transport gateways;
    - core melt localization device;
- passive heat removal system (PHRS);
  - piping and valves.
  - Turbine plant equipment:
  - turbine and generator equipment;
    - steam heater separators;
    - low and high pressure heaters
      - (LPH and HPH);
      - piping and valves;
      - pump equipment.
  - Auxiliary NPP equipment:
     transport and process equipment;
     refueling machines;
     diesel generator units;
     cooling towers.

# 1.1. General information

2011

The Atomenergomash Group of Companies (presently known as the power engineering division of Rosatom State Nuclear Energy Corporation) was established in 2006 as a part of the Federal Atomic Energy Agency and is one of the leading power engineering holdings in Russia. The Holding's core specialization is the design, manufacturing, supply, installation and subsequent maintenance of equipment for nuclear and thermal power plants as well as for enterprises in the gas and petrochemicals industry.

# **1.2. Holding structure**

The structure of the Atomenergomash Group of Companies includes research and design organizations, manufacturing and construction companies as well as engineering, trade and sales companies, with more than 50 companies in Russia, Ukraine, the Czech Republic and Hungary. The equipment produced at these companies is used in more than 20 countries.

# Equipment for the gas and petrochemicals industries

• Air coolers of all modifications.

• Tower, capacitive and heat exchange vessels.

- Tubular, vertical and horizontal regenerative air heaters.
  - Direct heat tube furnaces and product coils.
    - Separator filters.
    - Reactor equipment.

• Boilers and steam generators for thermal influence on oil reservoirs.

- Dust collector units of the CPU.
- Piping connection components.

Valves.

- Flare units of all types.
  - Auxiliary equipment.

#### Control and measurement equipment and automation

- Reactor plant monitoring and control systems (RU MCS) for VVER designs.
- Control systems for the process units of the reactor compartment and auxiliary NPP equipment.
- Special reactor compartment systems.
- Nuclear and radiation safety systems and hardware for the nuclear power industry.
- Control and measurement equipment and automation (CMEA): sensors for pressure, temperature, flow, strain, etc.

• CMEA valves.

- Entire range of radiation monitoring devices.
- Broad range of solutions for the radiation treatment of products (convenience foods, polymers, etc.).
  - Diesel generator control systems.
  - Control systems and hardware for the automation of thermal power, gas and petrochemical facilities.

 Control and metering systems for energy efficiency objectives.

### Segments, geography of business and Holding structure

#### Main power equipment, design and engineering unit Steel, castings, forgings Design and engineering unit, R&D Energomashspetsstal (Kramatorsk, Ukraine) TsNIITMASh (Moscow) GIDROPRESS (Podolsk) Reactor equipment, **GSPI** (Moscow) shell equipment VNIIAM (Moscow) Branch of AEM Technologies — Atommash (Volgodonsk) **ZIOMAR** (Podolsk) Petrozavodskmash (Petrozavodsk) Afrikantov OKBM (Nizhny Novgorod) **ZiO-Podolsk** (Podolsk) **AEM Technologies** (St.Petersburg) **Turbine equipment** TsKBM ALSTOM-Atomenergomash (St.Petersburg) (St.Petersburg) Auxiliary power equipment Valves and pipes Ventilation equipment Stalenergoproekt (Elektrostal) Venta (Nizhnyaya Tura, ATM (Moscow) Sverdlovsk Region) **ARAKO** (Opava, Czech Republic) Equipment for nuclear fuel cycle Pump, transport and process equipment SverdNIIkhimmash **TsKBM** (St. Petersburg) (Yekaterinburg) GANZ EEM (Budapest, Hungary) Equipment from special materials Instrumentation engineering OKTB IS (Moscow) **SNIIP** (Moscow) OZTMITS (Moscow) IFTP (Dubna) **Construction and installation work Organization of integrated supplies** Neftegazspetsstroy Energomashkompleks (Moscow) Chladici veze Praha (EMKO, Moscow) (Prague, Czech Republic)

# 1.4. Holding business model



The basic requirements for the business model are set forth in the Company's strategy adopted in 2011 and include the following:

Client/Product focus	<ul> <li>First-tier supplier</li> <li>Offers technology for a backbone product</li> <li>Offers integrated solutions on the basis of the backbone product (basis for revenue growth)</li> </ul>	
Competitive basis	<ul> <li>Technological leader for the backbone product</li> <li>Well-developed supply management chain</li> </ul>	
Manufacturability	y Technological leader in the industry	
Globalization	Export exceeds domestic market revenue, competes on the global market	
Investments	Substantial (in R&D and maintaining technological leadership)	

# 2. Overview of key achievements in 2012

# Order book structure by market segments in 2012, bln RUB



Petrochemical equipment: 0.2

TPP equipment: 2.6

#### Contracts

 OJSC Atomenergomash fulfilled its obligations to deliver equipment for nuclear power plants under construction, in particular supplies of key equipment for the nuclear island of the Novovoronezh, Leningrad, Rostov, Beloyarsk and Baltic NPPs.

 A contract was concluded for the supply of a turbine plant (turbines and auxiliary equipment for more than RUB 30 billion) for two units of the Baltic NPP in the Kaliningrad Region.

#### Production

- The first stage of production modernization was completed at CJSC Petrozavodskmash with the launch of the manufacturing of steam generator shells and valves for NPPs. CJSC Petrozavodskmash is a unique example of how new key production equipment may be built for the nuclear industry in Russia in a very short time span.
- OJSC Energomashspetsstal completed a seven-year plant modernization program (for USD 300 million) and established modern energy efficient production. The company is capable of manufacturing the entire range of key castings and forgings for NPPs, including shells turbine plant equipment using Arabelle technology. For the first time in its history, of unique ingots weighing up to 415 tons, which opens the door for the development of new types of products for the nuclear, steel, petrochemical and other industries. Today Energomashspetsstal is a certified supplier of a broad range of products for major global companies, including Alstom, Rolls-Royce, Toshiba, BHEL and General Electric.

- A branch of AEM Technologies was established in Volgodonsk at facilities leased by the Atommash plant in order to expand the Company's ability to manufacture basic technological equipment for NPPs in addition to the gas and petrochemicals industry. Reactor production was quickly restored at the Volgodonsk site last year for the first time in a quarter of a century. OJSC Atomenergomash also produced and delivered in record time the first molten core catcher for the Baltic NPP, which was manufactured in Volgodonsk.
- In late 2012, the Company decided to set up turbine plant production in Volgodonsk using Arabelle technology jointly with Alstom Power. This decision will enable the Company to become a leading player on the high-capacity turbine equipment market. The production of turbine plant equipment for the first unit of the Baltic NPP is slated to begin in 2013.

#### **Diversification**

- Among the key supplies for TPP in 2012, OJSC Atomenergomash fully completed a project to modernize the boiler at the oldest active TPP in Russia – Mosenergo HPP-1 and also delivered boiler equipment for the Nizhnevartovsk TPP (also known in Soviet times as state district power plants, or SDPP), Nazarovo TPP, South Urals TPP-1 and Luhansk CHP in Ukraine.
- Among new businesses, the Company formed a wind energy business on the core of the recently established company VetroOGK. Cooperation that began in 2012 between OJSC Atomenergomash and the Republic of Adygea calls for conducting wind monitoring in the region for the construction of the first wind farm with total capacity of 30 MW. In addition, OJSC Atomenergomash launched the client wind power systems (CWPS) project under which potential clients in regions experiencing energy shortages will be given the opportunity to set up a wind farm or wind turbines.

### Globalization

- In November 2012, OJSC Atomenergomash and OJSC Turboatom (Ukraine) concluded an agreement on cooperation in equipment supplies for TPPs. This agreement will enable the two companies to make package proposals for participation in projects to build and modernize TPPs in Russia, Ukraine and third countries.
- The order book of Ganz EEM grew sevenfold thanks to orders in Russia (highcapacity pumps for NPPs).
- The Holding's Eastern European companies concluded contracts for the supply of more than EUR 40 million in equipment in October 2012 during the Atomex-Europe international exhibition in the Czech Republic.

### Efficiency

- In late 2012, OJSC Atomenergomash prepared and approved the main focuses of the Comprehensive Efficiency Improvement Program of OJSC Atomenergomash Enterprises for the Period of 2013-2018 with the support of Rosatom State Corporation. The program includes three modules that will result in the development of an organizational model for the Holding, the specialization of key production facilities, the identification of performance targets for the Holding's enterprises and measures to achieve these results.
- The effect from measures to implement the Rosatom Production System totaled RUB 368 million in 2012.

# 3. The Company's position in the Russian power engineering industry



# 3.1. TPP equipment

Rosatom State Corporation currently ranks as number one in the world in terms of the number of NPPs in the construction stage or in preparation for construction. The Atomenergomash Holding is the sole producer of numerous equipment items for NPPs built using the Russian design:

Sole Russian producer of steam generators for Russian types of NPPs
Sole Russian producer of main circulation pumps for Russian types of NPPs
Has the ability to manufacture more than 70% of the entire range of valves for NPPs
One of the largest producers of high-pressure pipes in Russia
Chief designer and single-source supplier of fast neutron reactor plants (supervised company OJSC Afrikantov OKBM)

### 3.2. TPP equipment

The core competence of the Atomenergomash Group of Companies in this area is the packaged supply of boiler islands consisting of a boiler and different types of auxiliary equipment:



The Holding's key products in the thermal power segment include boiler units and heat recovery steam generators (under the license of the Dutch engineering company NEM Energy) for TPP power units with capacities ranging from 50 to 800 MW. In 2011-2012, OJSC Atomenergomash had an 8-9% share of the market for heat recovery steam generators (in terms of contracted capacity). The goal over the next five years is to increase the share in this segment to at least 30%



### 3.3. Petrochemical equipment

OJSC Atomenergomash takes part in joint projects with major national companies in the oil and gas sector (OJSC Gazprom, OJSC Lukoil, OJSC Rosneft OC and others) to build and modernize their production facilities.

With the opening of the branch of CJSC AEM Technologies in Volgodonsk in 2012, it should be noted that its traditional product range includes large-capacity reactor and tower equipment for the oil refining, gas and petrochemical industries. While the share of the Holding's companies in this segment (in terms of contracted tonnage) does not currently exceed 4-5%, taking into account the projected volume of new capacity for secondary generation and petrochemical production, it is promising and has the potential to boost the Holding's market share to at least 10% in the medium-term.

### 3.4. Castings and forgings made from special steel

In 2010, the production profile of OJSC Atomenergomash expanded with the acquisition of the Ukrainian company OJSC Energomashspetsstal. The company is able to manufacture the entire range of key castings and forgings for NPPs, including shells for the WER and WER-TOI reactors, the MCP shell and turbine plant equipment. In terms of its combined features, in particular its production scale, OJSC Energomashspetsstal is among the five to six largest global producers with a market share of 4-5%.

The acquisition and inclusion of OJSC Energomashspetsstal in the Holding enabled the OJSC Atomenergomash Group of Companies not only to establish a nuclear island supplier within the structure of Rosatom State Corporation that is capable of meeting the industry's needs in the required volume but also to become a key link in the global chain of castings and forgings supplies for the world's leading power engineering companies, including Alstom, Rolls-Royce, Toshiba, BHEL and General Electric.

# Key projects of OJSC Atomenergomash in 2012

Nuclear energy		
Plant name	Equipment manufactured/supplied	
Rostov NPP, unit 3	Set of PGV-1000M steam generators, SHS and HPH, high-pressure pipes	
Novovoronezh NPP-2, unit 1	Set of SHS and HPH, main circulating pump unit	
Novovoronezh NPP-2, unit 2	Set of PGV-1000MKP steam generators, SHS and HPH, MCP components	
Leningrad NPP-2, unit 1	Set of SHS and HPH, main circulating pump unit, MCP components	
Belene NPP	Set of PGV-1000MKP steam generators (6 units)	
Beloyarsk NPP	Equipment for Fast Neutron Reactor Plant-600 and 800 and turbine plant	
Baltic NPP, unit 1	Core melt localization device	
Thermal energy		
Plant name	Equipment manufactured/supplied	
Nizhnevartovsk TPP (SDPP)	Heat recovery steam generator	
Novomoskovsk TPP (SDPP)	Heat recovery steam generator	
Yuzhnouralsk TPP (SDPP), unit 1	Heat recovery steam generator	
Mosenergo GES-1	Boiler unit	
	Petrochemical industry	
Date	Project description	
April 2012	Strategic partnership agreement concluded between Rosatom SC and OJSC Lukoil	
May 2012	Completion of equipment supplies for major capital construction projects of OJSC Gazprom	
June 2012	Signing of a cooperation agreement with LLC TNK-Uvat (TNK-BP) for the implementation of investment projects	
July 2012	Conclusion of agreement with LLC Gazkomplektservis – an operator of OJSC Gazprom – for the manufacturing and supply of equipment	
August 2012	Accreditation as an oil refinery equipment supplier to OJSC Rosneft OC	
September 2012	Orders received for the supply of 48 sets of CPU-11.8 dust collectors for the construction of compressor stations on the Bovanenkovo-Ukhta gas transmission network by CJSC Yamalgazinvest	
Casting	is and forgings from special steel	
Casting Date	is and forgings from special steel Project description	
Casting Date April 2012	is and forgings from special steel Project description Casting of a unique ingot weighing 415 tons	
Casting Date April 2012 May 2012	Project description Casting of a unique ingot weighing 415 tons Turbine wheel shell work pieces built for Dnieper HPP using new technology	
Casting Date April 2012 May 2012 November 2012	ps and forgings from special steel Project description Casting of a unique ingot weighing 415 tons Turbine wheel shell work pieces built for Dnieper HPP using new technology Contract signed with OJSC Tyazmash for the supply of castings and forgings	









# 4. Core activities

# Effect from the introduction of the Rosatom Production System (RPS)



# 4.1. Economic activities

### Financial result

Indicator	2011	2012
Combined revenue of the Atomenergomash Group of Companies, '000 RUB	50,188,231	51,827,135
Combined revenue structure by sector, '000 RUB, including:		
- Equipment for the nuclear power industry	27,022,152	25,673,820
- Equipment for the thermal power industry	2,307,429	4,914,139
- Equipment for the gas and petrochemical industries	2,022,852	1,712,227
- Other products, work and services	18,835,797	19,526,949
Including design work	9,273,057	11,198,724
Labor productivity, '000 RUB/person	2,397	2,417
EBITDA , '000 RUB	4,546,423	4,674,723
Gross profit , '000 RUB	9,448,640	8,650,015
Net profit , '000 RUB	1,763,111	979,010
Gross profit margin, %	19	17
EBITDA margin, %	9	9

# Data on the revenue of the Atomenergomash Group of Companies for 2012 in terms of geographical segments

Name of geographical segment	Combined revenue of segment, '000 RUB
Export, including	7,244,546
CIS	2,861,875
non CIS	4,382,671
Domestic market	44,582,589
Total:	51,827,135

### 4.2. Commercial activities

As of the end of 2012, the consolidated order book of the Atomenergomash Group of Companies had increased 8% over the year and stood at approximately RUB 99.1 billion. Most of the orders were for NPP equipment whose share grew from 73% to 87% in the overall order book. In the nuclear power segment, the bulk of orders were for heat exchange equipment with orders at roughly the same level as in 2011 – approximately RUB 29 billion. At the same time, a significant increase was seen in orders for design work (190%), valves (870%), shell equipment (80%) and pump equipment (30%).



# 4.3. Investment activities

#### Investment management in 2012:

• Introduction of the investment management regulation.

 Synchronization and harmonization of planning processes with the processes for building the project portfolio of Rosatom State Corporation.

# Main investment focuses on the horizon for 2013-2017:

 maintaining the current production process that aims to meet the needs of both the nuclear industry and external high-margin markets on which OJSC Atomenergomash enterprises already operate;

• optimizing the product specialization between the Holding's production sites;

• entering new markets with high margins;

 developing new high-tech products/technologies that meet the latest requirements for efficiency and safety.

### 4.4. Innovative activities

#### The main focuses of the innovative (technological) development strategy of OJSC Atomenergomash:

• the development of new products;

 the efficient use and development of existing production potential (through the introduction of advanced production processes) and the establishment of new types of production with the commissioning of advanced equipment.

# Key development projects for the period of 2012-2017:

 the development of heavy equipment production for the VVER reactor plant (CJSC Petrozavodskmash and the Volgodonsk branch of CJSC AEM Technologies)

• the establishment of a production and engineering base to manufacture turbine plant equipment for the Arabelle project (Alstom Atomenergomash joint venture)

> the construction of a workshop to manufacture special heavy valves (CJSC Petrozavodskmash)

- an increase in capacity for the production of nuclear and thermal products (OJSC ZiO-Podolsk)
- the modernization of the production and technological base of OJSC Energomashspetsstal
- the acquisition of wind turbine production technologies.



### 4.5. Improvement of performance efficiency

The quality of the manufactured products is one of the main parameters of competition in the power engineering industry. OJSC Atomenergomash implements quality management activities with two main focuses:

• certification of subsidiaries and affiliates for compliance with ISO 9000:2001;

• large-scale investment programs for technical upgrades aimed at improving the performance efficiency of enterprises and the quality of equipment.

OJSC ZiO-Podolsk	$\checkmark$
OJSC SverdNIIkhimmash	$\checkmark$
OJSC TsKBM	$\checkmark$
CJSC Petrozavodskmash	$\checkmark$
ARAKO spol s.r.o.,	$\checkmark$
OJSC Venta	$\checkmark$
OJSC IFTP	$\checkmark$
OJSC SNIIP	$\checkmark$

#### **RPS** program

OJSC Atomenergomash enterprises utilize the concept of lean production known as the Rosatom Production System (RPS). The goal of the RPS is to improve the performance efficiency of enterprises in the industry by continuously improving workplaces, technologies, production and business processes. In 2012, a total of 29 RPS projects were carried out at 13 enterprises of the division, including: OJSC ZiO-Podolsk, OJSC Afrikantov OKBM, OJSC OKB GIDROPRESS, OJSC TsKBM, OJSC NPO TsNIITMASh, OJSC SNIIP, OJSC SverdNIIkhimmash, OJSC Venta, ARAKO spol s.r.o., OJSC VNIIAM, CJSC Petrozavodskmash, LLC Stalenergoproekt and CJSC ATM.

#### **RPS results in 2012**

Growth in productivity for certain projects:

- Production of steam generators 33%;
- Production of MCPU pumps 50%;
- Production of control and protection system for Solenoid Stepper Drive-3 - 60%;
- Production of MCP pipe components 50%.









# 5. Corporate governance

Company personnel structure



# 5.1. Management structure and bodies



### 5.2 Risk management system

#### Main objectives of the CRMS:

- to support the implementation of Rosatom State Corporation's strategy by managing risks;
- to promptly identify emerging risks, as well as assess and minimize risks that could affect the activities of Rosatom State Corporation and its organizations;
- to introduce continuous monitoring and risk communication procedures;
- to identify risk owners and their responsibilities;
- to integrate the risk management process into the management decisionmaking process in order to better utilize resources through managing the balance of risk and return;
- to provide information support to the management and employees of the Corporation and its organizations for the adoption of management decisions and to identify opportunities to optimize risk management processes..

#### **CRMS** target model



Risk management takes place depending on where the risk occurs and the degree of the risk's impact on the Company's activities. The decision on which risk management method to take is made either by the Company's senior management (for political, financial, market and strategic risks at the project initiation stage) or by the management of the relevant divisions (operational and other insignificant risks).

### 5.3. Equity capital

OJSC Atomenergomash had charter capital of RUB 738,149 as of December 31, 2012. As part of the state registration of amendments to the Charter of OJSC Atomenergomash, the Company's charter capital was increased over the reporting period through the placement of common registered shares in a private offering. The decision was adopted at an extraordinary meeting of OJSC Atomenergomash shareholders held on November 26, 2012 to make a fourth additional share issue. The additional shares underwent state registration in late December 2012.

#### Structure of OJSC Atomenergomash equity capital as of December 31, 2012

Shareholder	Number of shares	Proportion, %
Open Joint-Stock Company Atomenergoprom	490,386	66.43
Open Joint-Stock Company TVEL	51,000	6.91
Open Foreign Economic Joint-Stock Company Techsnabexport	28,935	3.92
Limited Liability Company Energomashkompleks	460	0.06
Closed Joint-Stock Company AEM Invest	24,050	3.26
Closed Joint-Stock Company AEM Finance	50,974	6.91
INTERNEXCO GMBH	92,344	12.51
TOTAL	738,149	100

#### Board of Directors (as of 2013)

#### Yekaterina Lyakhova

Chairman of the Board of Directors, Director of Investment Management and Operational Efficiency at Rosatom State Corporation

#### Andrey Nikipelov

Member of the Board of Directors, CEO of OJSC Atomenergomash

#### Yevgenia Gorbunova

Member of the Board of Directors , Director of the Development and Restructuring of the Development and International Business Unit of Rosatom State Corporation

#### Alexey Kalinin

Member of the Board of Directors, Director of the International Business Department at Rosatom State Corporation

#### Igor Shpagin

Member of the Board of Directors, Deputy Director of the Legal and Corporate Operations Department and Head of the Division for Corporate Work with JSC, FSUE and FSE Rosatom State Nuclear Energy Corporation

#### Company management (as of 2013)

Andrey Nikipelov CEO

Vladimir Razin Production Director

Denis Tarlo Commercial Director

Vadim Pesochinsky Economics and Finance Director

> Ksenia Sukhotina HR Director

Konstantin Tulupov Strategy Director

Sergey Kuleshov Corporate Governance Director

> Alexander Levenshtein Internal Audit Director

Yevgeny Pakermanov Project Director

> Vladimir Ushakov Advisor to the CEO

Anatoly Ogurtsov Advisor

Natalia Shirokovskikh Chief Accountant

# 6. Personnel and environmental policy



# Environmental protection expenses, ths RUB

### 6.1. Personnel policy

OJSC Atomenergomash is one of the largest divisions within Rosatom State Corporation in terms of the size of its assets, the scale of its regional presence and its number of employees. As of the end of the 2012 reporting year, the headcount of the Holding's key subsidiary and supervised companies stood at 22,505 people (based on the data consolidation profile except ARAKO and LLC STEP).



Total number of employees by enterprise

#### Regional breakdown of HR numbers



Men Women













6.2. Environmental responsibility

Environmental safety issues are an essential part of Atomenergomash Group's positioning both in terms of the market for advanced energy solutions and in terms of environmental protection within the framework of business activities.

It should be noted that waste of low hazard classes – 4 and 5 – accounted for the vast majority of production waste from the Holding's enterprises, or more than 99%. OJSC Energomashspetsstal produced the largest amount of waste in the group due to the specific features if its operations – manufacturing large castings and forgings from special steel for equipment production. The vast majority of waste is deposited in a landfill or recycled.

Total waste volume in 2012 amounted to 39,266 tons (versus 63,983 tons a year earlier).



A UJSC Energomashspetsstal B OJSC ZiO-Podolsk C OJSC Afrikantov OKBM D OJSC Venta E CJSC Petrozavodskmash F OJSC SNIIP G OJSC OKB GIDROPRESS H OJSC TsKBM I OJSC SverdNIIkhimmash J LLC STEP K OJSC OZTMITS

# **Contacts**

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Web-site:	www.aem-group.ru/wps/wcm/connect/aem/siteeng/
E-mail:	aemlaaem-group.ru
E-mail:	aem@aem-group.ru

Commercial Department		
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Telephone:	+7 (495) 668-20-93, ext. 1279	
E-mail:	marketing@aem-group.ru	

# **AEM Companies**

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#### JSC Energomashspetsstal

Address: 84306, Kramatorsk, Donetsk Region, Ukraine Phone: +38-06264-60132 Fax: +38-06264-65567 Website: <u>www.emss.ua</u>

#### **JSC OKB GIDROPRESS**

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#### **JSC Venta**

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#### JSC SNIIP

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#### JSC Petrozavodskmash

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#### Chladici veze Praha, a.s.

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