Extracts from the "Socio-economic strategy of Murmansk region till 2025"

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1. Murmansk region profile

It has a unique climate, resource potential, strategic significance and it is a main outpost of Arctic project.

Murmansk region was established in 28th of May, 1938. The territory of the region covers Kola Peninsula which is washed by Barents and White Seas. The region occupies an area of 144.9 thousand square kilometers. The Murmansk region has a moderate Arctic sea climate which is influenced by the Gulf Stream.

In fresh water resources and in White and Barents seas which are surround peninsula there are significant stocks of bioresources. Kola Peninsula is characterized by diverse landscapes, unique ecosystems, including areas, virtually unaffected by economic development (east part of the region).

There are 60 big deposits on Kola Peninsula with different types of minerals (coppel-nikel, iron, apatite and nepheline ores and ores of rare metals). Also there are such reserves as mica, raw materials for building materials and ceramic products, stone facing, semi-precious stones. On the shelf of Barents Sea there are oil and gas resources, one of them is unique Stockman AG which is strategically significant not only in the regional scale but also in the national one.

The population of the Murmansk region on 1.1.2010 is 836374 which is 6.2% of the population of North-West of Russia and 0.6% of Russia.

Murmansk Sea Port is the only non-freezing and deep, having a direct and convenient access to the ocean routes of the equipped marina in the European part of Russia. The most important strategic objects are located on the territory of the region such as the base of the Northern Fleet (Severomorsk) and the Kola Nuclear Power Station (Polyarnie Zori). Norwern Sea route which is a strategic sea transport route provides access to natural resources of the Far North, Siberia and the Far East as well as the development of transit from the Atlantic to the Pacific Ocean. Based in the port the Nuclear Icebreaker Fleet is operating the route.

Murmansk region has a border with Finland (EU) and Norway (NATO).

Economic specialization of the Murmansk region includes the extraction and processing of mineral resources, industrial production of copper, nickel, cobalt, semi-precious metals, primary aluminum, electricity and chemical products, fishing and fish processing.

2. Historical retrospective

The new frontier of Arctic development began in the Soviet time.

1. Before XX century the territory of Murmansk region was lightly populated and poorly studied territory. Before World War I, active geographic expeditions were held in the region and as a result of it was a development of logging on the south of the region, the construction of the port Ekatereninsky harbor, railway construction (was completed in 1916 and brought together central Russia and the northern coast of the Kola Peninsula) and the construction of the port Romanov-on-Murman.

2. In the 20s of XX century, in diplomatic isolation, a new view on the Kola Peninsula as an important source of resources for development of economy of Soviet Russia began to produce.

3. Before the Second World War main directions of the region future development were determined:

- bases for fishery and for deer-raising industries were laid;

- developing of mineral resources of the region and building factories of non-ferrous metallurgy as well as factories of service industries became a new direction in region development;

- formation in the region of the base of Northern Fleet became a beginning of Arctic development;

- foundation of strong research module.

4. In 1950-80s Murmansk region was transformed into a powerful industrial region and a strategic outpost - the main base of the Northern Fleet and the outpost of Arctic exploration. Technologies required massive use of manpower which launched the process of rapid population growth. Workers' settlements proliferate and gradually acquire the status of cities. In the late 1980s, the population of the region reached more than 1.2 million people.

Thus, the result of development of the Murmansk region had become surplus population on the territory which was not suited for life as well as serious environmental problems in the form of ecosystem: degradation and the emergence of the region on the map of environmental "hot spots".

5. In the 1990s Murmansk region faced a precarious position of its resource-strategic region that was reflected in the inability of the central government to support investment and motivational components of development at the same level.

3. Main outcomes of 1990-2000. Problems in Murmansk region development.

3.1 Recession in 1990 and the problem of growth in 2000

In 1990 Murmansk region as well as the entire country experienced a deep transformation crisis which accompanied by a recession in the economy in all sectors. In 2000 region entered a phase of a long economical growth - GRP increased 3.91 times from 55.1 billion rubles in 2000 to 215.9 billion rubles in 2008. However, Russia's GDP over the same period increased by more than 5.6 times. Murmansk region had 0.6% of GRP of Russia and 6.3% of GRP of the North West Federal district.

The lowest growth rates among regions of the North West Federal District in 2000 with relatively high levels of GRP per capita due to the following:

1. Predominance of "old" industrial sectors, primarily mining complex in the structure of the economy.
2. The decline of the fishing industry in 1990 which is not fully overcome until now.

   Fishing industry - the basic and traditional branch of economy of the Murmansk region which provided 6.6% of GRP and 2.7% of the total employed (2008). In 2000 the fishing industry gradually released from the crisis. But even taking into account seasonal fluctuations it have not yet regained the levels of catch and fish production of the Soviet period.
3. Outflow of the economically active population and young people in other parts of the country and abroad.

3.2 Current outcomes of World economic crisis for Murmansk region: recession in 2009.

Despite the fact that on formal grounds such as economic diversification and dependence on the conjuncture of prices in world commodity markets, in comparison with other regions of Russia, Murmansk region was not related to the zone of high risk, the impact of the global financial crisis severely affected the region.

1. Steep decline of industrial production;
2. Unemployment and unbalanced labor market;
3. Regional budget deficit.

3.3 The level and quality of life in the Murmansk region

Standard of living of Murmansk region determined by the high average per capita income which, however, essentially equalized with the high cost of living and moves Murmansk region in ratio of average income and a living wage to the average positions in the North West Federal District.

On the human development index adopted by the UN as a benchmark which allows level of socio-economic development of the territory evaluation, Murmansk region occupies 28 th place among the regions of Russia.

In comparison with other North regions in European part of Russia, Murmansk region has:

- high GRP per capita;
- high life expectancy;
- high number of university students on 10 thousand people.

Specific climatic conditions set special requirements for the quality of social and humanitarian spheres. Climate creates certain age restrictions on the possibility of migration and people's adaptation to a long stay in the region.

Special type of the town which was formed in the second half of last century in many ways does not meet the requirements of a modern attractive urban environment which should be no less intense than in larger cities in southern Russia. Towns in the Murmansk region characterized by strong social and energy infrastructures of the Soviet type which is excessive force in a mass exodus in the 1990s.

3.4 Decline of agriculture sector in 1990 and its consequences

Change of ownership and changes in organizational and production structure of agriculture led to a significant decrease in food production.

The serious decline in production has led to two circumstances: consumption of basic food products in the Murmansk region did not meet medical standards and the structure of supply which was recommended for residents of the Far North.; the dependence of regional food producers from external suppliers of agricultural raw materials significantly increased to more than 90% of food supplied to the region from outside. Murmansk region purchases meat and meat products imported in frozen form which can not save the full range of vitamins and amino acids which are necessary for the inhabitant of the Far North.

3.5 Indigenous North peoples and traditional farming

1890 of representatives of indigenous North peoples live in Murmansk region (1791 – Sami, 109 – Nenets, Evenki, Mansi). Most of the live in Lovozero district (1079 people), others in Kola (243) and Kovdor (147) districts.

Traditional types of farming of indigenous peoples are reindeer herding, fishing and hunting. But in our days only reindeer herding is not lost its economical importance. Trade fishing on the territory is not allowed. For Sami there is a free fishing quote but only for personal use.

The Government of the Murmansk Region has organized the implementation of venison in the region with fundamentally new conditions.

To protect the rights and interests of the peoples of the North was established 17 generic and neighbor-territorial communities and 8 associations of Sami and Komi-Izhemtsy who transferred land for reindeer herding and tourism services for rent.

3.6 Transformation of the settlement system: the structural problems of energy

By 1989 the population of the Murmansk region reached 1,164,586 of people.

Carried out from 1930-50 large-scale projects for developing the mineral resource base, providing Murmansk strategic function in terms of the Cold War (ice-free port with direct access into the North Atlantic and World Oceans) and the need to develop the northern sea route – with all available at that time technologies - demanded the involvement of significant human resources, stationed in the major urban centers: Murmansk, Apatity, Kirovsk, Monchegorsk, Kandalaksha, and closed garrisons of the Northern Fleet. For this purpose the State developed and implemented an extensive system of support for the northern territories including the Murmansk region.

The economic difficulties of the 1990s forced the state to substantially revise the priorities of development which resulted in the reduction of the Northern Fleet, reducing turnover in the Northern Sea Route, as well as in the revision of northern benefits.

3.7 Budgetary institutions network

In connection with the specific nature of the settlement system structure most of the budgetary institutions located at two major sites - they reached the density of the network, typical of old residents of Central Russia territories.

Average provision of organizations of Education and Heath care in Murmansk region is higher than Russia's in total. But Murmansk region lags behind in number of homes for the elderly and disabled. Besides, there is a shortage of places in institutions neuropsychiatric profile in the region as well as not high enough level of coverage for senior citizens and disabled unsteady forms of social services.

Bad road network development in the area and low population density (Lovozero and Terskiy districts - 0,2 people per 1 sq. km.) are prerequisites for the implementation of the principle of remote delivery of public services with the use of advanced communications, medical, educational, social and humanitarian technologies.

Extra-budgetary social network in the area is underdeveloped. Non-state sector is represented mainly by institutions of higher education which is concentrated in Murmansk and Kola town and it mostly provides training in humanities, economics and management. In Health care field non-governmental sector has developed into a specialized health care consumer - dentistry, obstetrics and gynecology.

The existing budgetary network is deployed by the resident population and as a result there are some missing components that can be claimed temporary population (primarily tourists and temporary workers).

3.8 Regional finance

During 2000-2008 Murmansk region demonstrated one of the highest in the North West district growth of consolidated budget's revenues.

The basis for Murmansk region budget is the following:

- tax profits;
- individual income tax;
- corporate property tax, in the aggregate is for more than 58% of regional income and more than 61% of the revenues of the consolidated budget of the region.

The main budgetary risks for the Murmansk region:

1. Strong exposure to conjunctural risks which are expressed depending on the financial and economic situation of large companies of mining complex and its level of return is directly related to the change in prices on world commodity markets.
2. Management risks associated with low levels of program planning budget expenditures.

3.9 Environmental situation: a zone of ecological disaster and high risks

Murmansk region is the world's largest concentration of nuclear power facilities.

Industrial and social infrastructures of Murmansk region economy are based and developed through economic activities and are intensively exploiting various kinds of natural resources and having a negative impact on the environment. The main sources of environmental pollution are the enterprises of mining and agricultural sectors, transport and utilities.

Over the past 3-5 years, reducing emissions of pollutants into the air from stationary sources of emissions was 9-10%. At the same time every year the mass of pollutant emissions per inhabitant of the region from mobile sources is growthing (2005-2008 - 63%).

Companies mining complex of the Murmansk region are the main sources of waste. In addition, the mining complex has a negative impact on the environment due to land alienation under piles of overburden and tunnel rocks, the discharge of pollutants and the deposition of tailings fields, emissions of sulfur dioxide, carbon dioxide, nitrogen oxides, hydrocarbons.

Enterprises of housing and communal services make a significant contribution to environmental pollution. Also there is an urgent issue of protecting the public water supply from possible radiation emissions from nuclear power, radiation-hazardous facilities located in the region.

One of the problems in the region is to ensure environmental safety during the transportation and transshipment of crude oil and petroleum products. There is an acute problem in the disposal of solid wastes containing petroleum products. The problem of waste of electroplating facilities is not solved. One of the urgent problems of the region remains the quality of cleaning and disinfection of drinking water.

3.10 System of cross border and international cooperation

In 1990 the regional system of the Barents Euro-Arctic region is gradually drawn. The strategic agenda for the Murmansk region is based on the priority of national interests of Russia which are largely influenced by the context of regionalization and interdependent development. Collaboration is built in the form of broad information exchanges at the intergovernmental, regional and human levels. The main partner and the ideological leader of the model of international cooperation in the Barents Euro-Arctic Region is Norway.

Murmansk region is a resource region of inefficient resource economics. The efficient use of natural resources and the functioning of basic infrastructure, environmental issues and sustainable development are, in addition to cultural interaction, the most important subjects for international and cross-border cooperation in recent decades. Because of the difference between levels of economic development northern regions of Russia are the counterparts of the Nordic countries which are taking and not proposing the agenda in issues in which Russia as a whole is a "driven" country. In this sense, international communication makes Murmansk region a subject of cooperation and a target market, on the other hand, it serves to Russian region a source of ideas, experiences and best practices for upgrading.

4. Outside factors: new opportunities in development of the region

4.1 Arctic is again on the agenda

Research and development of the Arctic is again on the agenda - now mainly due to resources of the shelf and adjacent areas. Russian Arctic agenda and format of the Barents Region are basic frameworks for international cooperation.

If the previous stage of the economic development of the Arctic has been largely linked to the resources of the continent which are located above the Arctic Circle, the new wave of development of the Arctic latitudes involves commercial development of offshore resources, and therefore involves fundamentally new and broader challenges of sustainable development which implies adequate consideration of environmental risks posed by climate change, human-induced destruction of ecosystems and these trends with more intensive exploitation of resources. In addition, the development of the shelf will be on a new, almost "deserted" technology platform.

4.2 The crisis of world economy and turn the commodity supercycle

The main consequence of the global financial crisis for Russia is a turn of the commodity supercycle. This turn at the same time problematize a significant part of development projects launched or planned in the previous step and reiterated the commitment of policy on technological innovation and economic growth, reducing dependence on primary commodities and, ultimately, the radical modernization of society and economy.

4.3 Restructuring and modernization of the Russian Navy under the military reform

Military reform was announced on Oct. 14, 2008 at the board meeting of the Defense Ministry.

Military reform is reflected in:

- transition from the four tier system of governance "Military District - Army - Division - Regiment" to the three-tier "Military District - Operational Command – Brigade";
- reducing the number of military units;
- reduction in troop strength up to 1 million people.

4.4 New generation and technologies which are going to change society

New generations such as “Echo–Boomers” and Millennials and technologies. Customer and intellectual economy. Society of the future - more mobile, communicative, open and pluralistic; and new requirements for cities appeared.

To attract and retain "talents" must ensure the following:

- new requirements for the city as a space of comfort, life, and exchange;
- tourism as a way of spending free time and get new emotions;
- transportation and information accessibility and opportunities for self-realization, which can reduce the leakage of human capital and openness to attract the attention.

5. Challenges in the Murmansk region development

At the junction of accumulated structural economic and social issues and "big" trend has developed the system of challenges for the Murmansk region which are relevant in the medium and long term. Challenges are ambivalent by the nature - its carry both risks and opportunities for development.

1. Strategic megaprojects are essential for the development of the region but the use of their potential for the benefit of the region now involves non-trivial solutions and mechanisms.

2. The unstable structure of the region's economy which is a characteristic of industrial society with a predominance of industrial commodity undergoing modernization.

3. Social and humanities problem. The gradual loss of accumulated human capital on the territory and difficulty with attracting professionals from outside of the region due to the lack of variety of opportunities for self-realization and the failure of urban spaces and contemporary perspective, generated by new generations of comfort, flexibility, diversity and mobility.

4. Murmansk Region infrastructure was formed, mainly, in 1960-70 at current to that time technology platform - today it is morally and physically obsolete. It requires a comprehensive modernization and development in accordance with purposes of economic and social renewal.

5. The sustainability of natural resources of the North is becoming a condition and criteria of development.

6. Key issues of macroregion - environment, sustainable resource usage and management of the northern territories and socio-humanitarian crisis - are common to the Murmansk region and its Arctic neighbors and that their solution requires joint efforts, ideas and actions.

6. Scenarios and possible actions

Firstly, the space of possible scenarios for the Murmansk region "is cut" on two dissimilar horizons: integrated development based on urban system "resists" rotational development "treasuries" of the Kola Peninsula and the continental shelf.

The level of uncertainty about the prospects for the Arctic as a future resource base is still high because of the potential of technologies (in energy and transport) and social (consumption) shifts as well as gradually emerging global political consensus on the issue of climate change.

Secondly, already declared and initiated major projects - the development of the Shtokman field development and Marine Transport Node - can move at a later period and their composition - revised. Financial status of corporations representing the major parties to the two key projects as well as the profitability of projects greatly depends on the state of the world economy.

Development opportunities associated exclusively with the shift resource development, involve only a limited part of the Murmansk region in implementing the agenda of modernization which puts the task of forming "a society and the knowledge economy". The transition to a new quality of economic growth based on innovation, knowledge and human capital, mainly for raw materials and a transit region itself seems daunting task that requires not only efforts to create a comfortable living and working conditions in the region especially in its major urban centers but also a fundamental revision of the relationship to the resources of the territory and shelf.

In the case of the conservation and development of hospital and fulfilling the urban system it comes to the region as a "territory for life" which is characterized by an update but the "old residents" settlement system and the complexity of today on its version of the structure of the economy are closely linked with the modern urban space.

On the other hand, more critical "scenario" condition for the development of the Murmansk region is outlined: the degree of openness and inclusiveness in the region of macro-regional "agenda" and a variety of international exchanges and cooperation projects as opposed to conservation policy "regime" and "closed" as to enhance its military-strategic importance.

The main condition for realization of future projects is environmental security and sustainable development because of trans-regional nature of the resource itself and the technologies of their development. In the case of the involvement of resource shelf of the Arctic seas in the economic turnover management of environmental risks and safety in the Arctic will come to a new level.

On the other hand, the complex problems of social and humanity sector associated with the aging of the population, departure of young population and "provincialism" of the north territories gradually increasing. With this problem Russian northern territories and northern areas of Scandinavia have faced, it

is a macro-regional problem. The degree of economic structure and urban spaces will be adequate to the demands of new generations, and Murmansk will get elements of the “metropolitan” and the “center”, will depend on the possibility of the Murmansk region to keep active and promising young people and attract talent from outside i.e. to create “human” base for future development.

The military-strategic importance of the Murmansk region as a place of ground-based sites and services of the Northern Fleet of Russia as a result of the modernization of the Military Forces would continue to rise.

Thus, four possible scenarios for the Murmansk region were formed, the main significance of which is to form a space of discussion and thinking about important strategic decisions, to identify fundamental differences between the scenarios.

1. "Pantry" - a strategic reserve (developing resources);
2. The terminal and “base of the fleet " (active strategy of complex development with developed urban infrastructures as a base);
3. “Global resources” (development of resources based on a rotational basis, open to international exchanges space);
4. “Capital of Arctic” (a powerful spurt of urban development, the acquisition of the regional capital of Murmansk, the complex reindustrialization and modernization).

7. Goal and purposes of authorities and vision of Murmansk region future

7.1 Goal and purposes of regional authorities

Goal: provision of high perceived quality of life and social stability, opportunities and human capital development and self-supportive environment (within the region) for the full spectrum of military - strategic, research, development and economic purposes of Russia in the Arctic and the macro-region of the North Atlantic basin.

The main purposes for regional authorities in the frames of strategy of socio-economic development of Murmansk region are the following:

1. Attracting investment in the economy of the Murmansk region.
2. Promote the development of new sectors, intensive in terms of knowledge, new technologies and other innovations based on potential investments in the strategic projects and changes in society's demands and trends of integration into the global system of relations and markets.

3. Development of towns.
4. Development of human potential of Murmansk region on the following directions:
    - health;
    - education;
    - social responsibility and active life style.
5. Stability and reducing inequalities by providing equal opportunities and access to infrastructure, services and public goods.
6. Modernization and development of infrastructure of the region based on advanced technologies.
7. Sustainable development and livelihoods in the Kola Peninsula: ecological-environmental aspect, the prudent use of natural resources and potential of the territory, the stabilization of population size.
8. Develop a positive and vibrant international and national image of Murmansk region. Brand "Capital of Arctic"

7.2 Vision of "Murmansk region 2025"

In 2025:

Murmansk is main science, staff, culture, and business center in Arctic.

Based on the benefits of geographic location, inherited from the Soviet era infrastructure and considerable human resources, Murmansk region is a major outpost of Russia in the Arctic and North Atlantic macro-region, focusing on its territory following:

- Northern Fleet base;

- technological system of ports, supply systems, processing and site logistics for the projects of hydrocarbon production on the shelf of Arctic seas, taking into account the proximity to the rich resources of the Barents Sea shelf;

- the largest ice-free deep-water port in Russia with direct access to ocean routes, year-round nature without ice-breaking navigation which is guaranteed by the warm Gulf Stream;

- primarily in the European part of Russia, Center of Use of oceanic biological resources;

- National Research, knowledge and excellence in the Arctic Center.

3. Natural resource area, ocean and adjacent shelf of the northern seas are the basis of the Murmansk region development.

4. Nature, landscapes and climatic resources of the region will be included in the system of management through the creation and promotion of the complex eco- and sports- tourism products to attract the attention of world markets.

5. The number of population of the region stabilizes and will characterize much greater transferability.

6. Modernization and renovation of urban environment and real estate (Murmansk, Kirovsk, Apatity, Polyarnie Zori, Kandalaksha)

7. Energy will have more distributed character; most of it will be based on carbon-neutral sources, and will rely on a network that provides optimal power consumption and high stability and security of the system.

8. The budgetary sector will be optimized, upgraded and will be placed on a new technological platform and will be supplemented by a wide range of private institutions of health industry and education sector. On the whole, sustainable mechanisms for continuous updating and improvement of social infrastructure which will be directly related to the perception of quality of life and development of human capital will be created.

9. The quality of governance in the region will be improved.

8. The main directions of socio-economic development of Murmansk region.

“Programme of activities”

8.1 Main principles of Murmansk region development

1. Sustainability

- Preservation of ecology, nature, habitat and ecosystems;
- Accurate use of resources;
- Sustainable system of resettlement, population and cultural assimilation.

2. Priority of social stability, development and exposure of human potential (society and economics of possibilities) and modernization of economics and society which were transferred to the base of innovation and knowledge.

8.2 Main directions of socio-economic development

Challenge1. Strategic projects play a decisive part in development of Murmansk region. But these projects can be implemented on the minimized list of locations – main part of its potential is “hidden” from the region. Full potential of strategic projects can be implemented with special conditions, mechanisms and organizational innovations e.g. cluster initiative and the system of agreements on strategic partnership.

1. Strategic investment projects.

Perspectives of development of Murmansk region can be determined by first of all, implementation plans of the subjects of management of investment projects in the area within their own development strategies and secondly, by realization of programmes and projects which were developed on the initiative of authorities. The list of strategically important projects related to the use of transit and resource potential of the region and the adjancent sea space was formed.

First of all, the integrated development of the Shtokman gas condensate field. The project envisages an integrated development of Shtokman gas condensate field which exit to the project output 71.1 billion cubic meters of natural gas and production of 27.2 million tones of LNG by 2021. The project is planned construction of a sea mine complex, offshore pipeline to the coastal infrastructure, facilities for the preparation of natural gas, port transportation engineering complex and a plant for liquefied natural gas in the village of Teriberka, there is also the possibility of building a gas-chemical complex.

Natural gas supplies through the pipeline Teriberka - Murmansk - Volkhov to consumers of the North-West region of Russia and for export to Western Europe as well as the supply of LNG to markets in the U.S. and Europe will be from Shtokman gas condensate field.

The joint venture “Shtokman Development AG” (Ltd. Gazprom (Russia) – 51%, Total S.A. (France) – 25%, Statoil ASA (Norway) – 24%) was established for the project.

The volume of project investments is 44 billion U.S. dollars including 17 billion dollars - investments in the Murmansk region. Expected economic effects of the project to the Murmansk region will be reflected in an increase of GRP on 36.5% (81.1 billion rubles) from the level in 2008 and the creation of 1000 new jobs places.

Secondly, integrated development of the Murmansk Transport Hub (MTH). The project aims using the potential of the MTH for cargo services of the Northern Sea Route, the Barents Euro-Atlantic Corridor as well as cargo hydrocarbons associated with the development and exploitation of the Shtokman and Prirazlomnoye fields. The project of development of MTH is included in the Federal target program "Development of Transport System of Russia (2010-2015)" and it provides diversification and competitiveness of ports in the North-West Russia.

Structurally (by geographic location constructed facilities) project can be divided into "western" and "eastern" part. As part of the "western" component of the project envisages the construction of port transshipment complex for coal and general cargo capacity of 20m tones of coal a year, the port complex for transshipment of oil and oil products output of 35 million tons of crude oil per year as well as construction of a refinery with a processing capacity of 6 million tons per year. As part of the "eastern" component of the project is proposed to build a container terminal in the MMTP with capacity of 1 million TEU, the reconstruction of the coal terminal of MMTP with capacity of 9.6 million tons of coal per year, the construction of distribution and logistics complex and logistical center in the creation of port special economic zone. The project also is going to provide modernization of the railway network of the Murmansk region, “Kola” highway, the airport of Murmansk.

To implement the project formed Management Company Ltd. “MTH” (MMTP - 40%, Railways - 25%, Rosneft - 15%, Rosmorport - 15%).

The total investment for the project provided by the federal target program "Development of the transport complex of the Russian Federation" 2010-2015" will be 117.4 billion rubles which includes 51billion rubles – from budget and 66.4 billion rubles from other sources. Expected economic effects of the project for the Murmansk region are an increase in GRP by 14.7% (32, 7 billion rubles) from the 2008 level as well as the creation of about 1700 new job places.

Thirdly, the implementation of projects of construction of new mining and processing factory and mining-metallurgical one which includes construction of new mining and processing, mining and metallurgical fabrics. Realization of investment projects aimed at replacing a decreasing natural resource extraction from existing fields as well as production of new products for the region.

The total investment on these projects will amount to 1.805 billion dollars (54.2 billion rubles). Expected economic effects of projects in the GIC for the Murmansk region are an increase in GRP 13, 1% (29 billion) from the 2008 level and the establishment of 3600 new job places.

These projects will provide significant long-term capital inflows and the growth of GRP.

But using the most advanced, most “deserted” and "modular" technologies strategic projects will provide a very limited direct contribution to the development of the local labor market - only about 6,300 new jobs - and the regional economy as a whole. Implementation of capacity-building strategic projects as giant markets, innovation, knowledge, skills, ideas, equipment, services and materials in general will require a complex, ambitious and innovative mechanisms to scale up the positive momentum of mega-projects and implement it for new purposes and tasks of modernization and the transition of the regional economy into a postindustrial order.

2. Clusters around strategic projects

In order to take full advantage of innovative and high-tech capabilities of strategic projects, scaled momentum of development, asked by them, it is necessary to stimulate the formation of clusters in the Murmansk region associated with the production of resources on the shelf, the development of ore reserves and transport logistics.

First, technological cluster of offshore production in the Arctic: feature of this cluster is that it focuses on investment demand, burnt through the development of the Shtokman gas condensate and Prirazlomnoye oil fields. Taking into account that the main part of investment inflows will occur in 2011-2017, major efforts to stimulate the creation of the cluster by the Government of the Murmansk region should be undertaken in the near future (2010-2012). 150 billion rubles can be utilized as part of a technology cluster of offshore production in the Arctic according to Center of Strategic Research “North-west”. After the first phase of Shtokman at full capacity after 2017 year, the cluster should become the main supplier of services and personnels for Arctic exploration in the Barents region thereby achieving global competitiveness.

In addition to the core of the cluster ("Gazprom mining shelf", Shtokman Development AG), it will include a number of companies that are suppliers of specialized equipment, services and technologies of production on the shelf.

Most of the orders (naval engineering, maintenance and installation) can and should be placed at the shipyard area - Shipyard "seal": SY - 35, SY - 10 SY - 82 and others.

As a part of the cluster, it is important to strengthen the position of geological, geophysical and exploration companies, located in the Murmansk Region, Federal State Unitary Enterprise "Arcticmorneftegasrazvedka", Ltd. "Sevmorneftegazrazvedka and JSC Arctic Marine Engineering Geological Expeditions", and etc.

It is crucial to use the amount of knowledge about the Arctic which was accumulated over several decades of Kola Science Centre of RAS and other scientific organizations in the region.

In collaboration with technology suppliers of gas production offshore and specialized equipment Arctic Training Center must conduct a needs analysis and develop and introduce new curricula for the training of specialists required for the cluster deployed in educational institutions in the region, including the Murmansk State Technical University.

Centre of "crystallization" of the cluster must be established by the Government of the Murmansk Region Association "Murmanshelf" which unites more than 240 industrial enterprises, construction, transport, service, logistics, financial and educational organizations. Already, the Association is largely serves as a focal point for the preparation of business and labor to carry out major investment projects for offshore production in the Arctic and is a venue for the transfer of offshore technology.

Secondly, mining - chemical and metallurgical cluster of south of Murmansk region: the creation of a cluster due to the change of technological platform in the mining industry that, in one hand, leads to a reduction in the number of employed in enterprises, on the other hand - to improve the requirements for personnel. Cluster development is closely linked to the commissioning of new fields and the arrival of new investors, in the future it should work for the needs of mining companies.

For support of the cluster, the Government of the Murmansk region is required to initiate the creation of techno-parks service in Apatity and Kandalaksha as well as an industrial park in Monchegorsk which will allow Russian companies to the consumers of integrated technology solutions and the suppliers of those decisions to establish interoperability and conduct effective training of personnel to work with the new technique.

Scientific and educational module both on the basis of existing organizations (Kola Science Centre RAS, Kola Branch of Petrozavodsk State University, Apatity Branch of MSTU) and by attracting new ones (for example, St. Petersburg State Mining Institute) should be developed due to the complexity of the conditions of extraction of individual minerals (the transition to underground mining), and more knowledge-intensive mining in Apatity.

As part of the cluster, solutions for environmental problems which are associated with mining activities must be found. It is as land reclamation and solving problems with the existing waste rock dumps and tailings as well as the implementation of the principle of waste production and sustainable development.

Thirdly, production and transport logistics cluster is based on Sea Transport Hub (STH): features a cluster is to leverage state funds and private companies on the basis of public private partnership. Basically the STH project is a cluster which includes stevedore company, Murmansk FGUP "Rosmorport" (safety of navigation, pilotage services, icebreaking wiring, towing), logistics and transportation company, Ltd. “Russian Railways”, the operator of PSEZ, cargo owners, oil refinery, etc. The success of the project of the MTH depends on the performance of all components of the cluster and will it be able to continue offering competitive and diverse product despite of the weaknesses of the port.

Challenge 2. Narrow raw profile of the regional economy creates high risks of instability in the face of external factors but also improves the stability of the population and settlement system and development of local culture.

3. Restoring the traditional base - fishing industry sector in the new technological and organizational basis.

First of all, modernization of the fishing fleet for ocean and coastal fisheries, construction of processing facilities (primarily in the immediate vicinity of the catch), infrastructure, storage (including refrigeration),

packaging and transportation of fish, branding and marketing finished (packaged and branded) products on the Russian domestic and foreign markets is necessary.

In this area of need as to continue the current practice of state support for businesses (subsidies to enterprises for goods sold, compensation of the cost of interest on loans obtained to upgrade and purchase of equipment, provision of deposit base), and improve the investment climate in the fishing industry. In addition, the Regional Government should support the associative and cooperative practices of small and medium-sized enterprises to strengthen their negotiating position with major market players and retailers, thereby including the provision of local employment and develop the coastal settlements.

Secondly, a comprehensive scientific assessment of the development potential of fish farming and exploitation of biological resources under-utilized facilities in the region with subsequent involvement of strategic investors with the necessary technology and capital. From the executive bodies of local self-government and required the introduction of measures to encourage investment in aquaculture (subsidized credit agreements, security deposit base, operational issues concerning allocation of land and water areas, etc.).

Thirdly, the creation and support of specialized areas in Murmansk live / chilled and frozen fish (fish stock exchanges). The project, aimed primarily at establishing networks between fishing companies and processors, retailers, wholesalers and logistics companies need to envisage the establishment of large retail fish market that could become an important component of the image of Murmansk.

4. Tourism – it is important to use a unique potential area for significant development of new economic sectors to ensure the sustainability of resettlement. Modern tourism sector, based on the unique and significant global resources and recreational space, attractors, can become a new economic base for the most of the area.

The first direction is ski tourism in Hibiny (Kirovsk, Apatity, Apatity, Kandalaksha, Polarnie Zori, and Murmansk).

Second direction is development of forestry eco –tourism which provides following issues:

establishment of the tourism product and its state support;

training and certification of guides;

establishment of infrastructure of eco-tourism (hostels, camping, and cottages);

organization of complex services (transportation, catering, entertainment and leisure - tour of notable places, untouched corners of nature, fishing, gathering berries and mushrooms, photography, sale of souvenirs, etc.)

promotion.

Third direction is sport fishing and fishery tourism, aqua tourism (rafting and ascend rivers).

Fourth direction is development of ethno-cultural tourism and cultural entrepreneurship among indigenous people of North in the form of developing of crafts and the production of souvenirs, ethnic groups and art groups, individual creativity.

The fifth is the cruise, educational and business city tourism in Murmansk.

Among other things, the ambition with respect to the tourism sector, it is quite reasonable in terms of quality of attractors which will require investment in modern infrastructure of the external high-speed passenger transport: Airports in Murmansk and Apatity, transport interchange complex at the base of the railway station, rehabilitation and modernization local small aircraft, and development of road networks.

5. Restoration potential agro-industry and food industry, ensuring the needs of local people in high-quality dietary foods. In order of better service on intra-market and ensuring necessary for the inhabitants of the Far North and the parameters of the diet in accordance with the objectives stated in the Doctrine of the food security of the Russian Federation, it is necessary to carry out a series of measures to restore agricultural production and processing of agricultural products and economic development of efficient and competitive agricultural sector of Murmansk region. In addition, development of agriculture complex and food industry will enhance the sustainability of the regional economy and create new economic base for a number of villages and small towns.

Strategic sub-branches of agroindustrial complex in the Murmansk area are the following:

Beef and dairy cattle. It is envisaged the establishment of modern farms.

Pig-breeding in the form of the development of modern farms which are going to be equipped by complexes recycling waste from pigs in energy (biogas) and fertilizers.

Aviculture: poultry meat and eggs.

Norwern reindeer farming which is mainly oriented on the intra–region market and providing the deep processing of raw deer - meat, hides and horns.

Fur farming.

Greenhouse vegetable production on the basis of advanced technology of hydroponics.

Collection and processing of wild mushrooms and berries.

Update of agriproduction by attracting strategic investors should be accompanied by, firstly, investment in harvesting and fodder, and secondly, by creating conditions for modernization and development of small and medium food enterprises of the Murmansk region which will provide the marketing of final products in packaging, under the brand name and with high consumer properties. In addition, in the situation of difficulty of access of small suppliers to the shelves of major retailers, the importance is development of modern trade infrastructure in various formats. Also it is important to consider the possibility of creating

special retailers which will sell mainly local product and locally-owned producers in the principles of cooperation (joint ownership) or created under the state initiative.

Concomitant elements of the strategy to create a modern agro-industrial complex in the Murmansk region are the following:

creation of agrotechcentr - service centers and providing modern farming techniques in the lease of agricultural producers;

formation of a system of financial and organizational information support to investors and insurance risks associated with investing in agro-industrial complex;

introduction of energy saving technologies and use of alternative energy sources in enterprises of agriculture and food industry;

improving housing conditions of employees agro-industrial complex;

development of transport-forwarding company;

development of human capacity of agro-industrial complex which correspond correspond to the requirements of prospective pledges and anticipated projects including training managers of enterprises sector.

The total estimated funding for this strategic direction is 36.8 billion rubles.

6. Traditional farming as the foundation of life and culture of Indigenous peoples. Traditional farming deserves special attention for the reason that they related to cultural identity and social development of Indigenous Peoples of the Far North which are living in the Murmansk region. Main directions of development of traditional farming include:

firstly, the development of reindeer herding as a foundation for preserving the traditions and culture of Indigenous Peoples of the Kola Peninsula which involves the creation of modern infrastructure, access to key Russian and international markets venison, namely:

construction which meet the requirements of the European Union of slaughter points and refrigeration in reindeer farms Murmansk region;

construction of a certified factory for processing venison, hides, blood, bones, endocrine glands and the production of a wide range of products including pharmaceuticals and biological additives.

It is important to form a unified marketing strategy and effective distribution channels for recognizable brand Sami (Murmansk / Kola) reindeer meat:

creating special for export lending for reindeer farming of Murmansk region;

certificate for reindeer farms for reindeer meat export to the EU and other important markets;

agro-industrial complex documents for export of pharmaceuticals and biological aditives to the South – East of Asia.

It is going to be established, along the routes of reindeer grazing (also on the basis of deer's slaughter stations and fish receiving stations), the network of intermediate bases for:

- reception, storage, primary processing, storage and preparation for transportation of products of traditional economic and traditional crafts of Indigenous Peoples of the North (venison, fish, wild game, wild plants);

- providing for Indigenous Peoples who work in traditional economic activities and traditional crafts of with food, consumer goods and industrial and domestic uses, material and technical means of fishing gear;

- veterinary activities in reindeer farms;

- preventive medical examinations of indigenous peoples who live in the traditional way;

- organization of cultural, educational and other activities and etc.

Also it is important to organize complex geo-botanical surveys on the territory of all reindeer farms and analysis of possibilities of optimization the borders of pastures;

secondly, the creation of conditions for the commercial development of wild plants.

Challenge 3. How to retain and attract young talent Murmansk region?

7. Urban economics and development of urban spaces: develop a network of major cities/ towns and Murmansk as a main city of a macro region. In the situation of rising awareness, mobility and the demands of people for the environment, only a modern urban economy, creating an abundance of new work places and a comfortable modern urban space, it will be able to attract and retain talented young people.

In Murmansk and the main elements of the urban system Kirovsk - Apatity - Polarnie Zory – Kandalaksha, it needs to implement large-scale urban development projects that have unfolded in the following areas:

Firstly, the formation and development of the so-called "urban" sectors of the economy as a basic sector of urban employment, aka "window of opportunity" for self-actualization of young people and attracting talents.

"Urban" sectors include:

branches of modern service industries (retail and commercial networks, HORECA – hotels, restaurants and catering, complex business services (banking, insurance, legal, consulting, etc.));

creative industry which is bringing together companies working in the field of contemporary commercial art, recreation and entertainment, commercial and industrial design, marketing, advertising, PR and so on;

urban tourism and special events industry (business tourism, conferences and forums, exhibitions and festivals, the economy of the capital functions in Murmansk).

Since the base of the urban economy are small and medium-sized enterprises, which are driven by private entrepreneurial initiative, an important element in urban development sector is a system of state support of small and medium businesses.

Secondly, the development and improvement of the quality of urban environment of Murmansk and other major urban centers in the region as a breeding ground for the development of creative industries and services and communication platform for residents and visitors alike. This area includes the development of a master plan for the city as a physical projection of the conceptual solutions which are associated with the formation and reform of the urban environment; stimulating projects for the creation and renovation of public spaces and public areas, shopping streets; activities aimed at improving the quality of outdoor urban infrastructure (landscaping and lighting, pedestrian and green areas and etc.); support and promotion of urban greening projects, improving the quality of urban ecology.

Thirdly, advanced technologies and high quality of urban infrastructure – “smart”, resource-efficient and environmentally friendly city which includes activities on improving the quality of housing services through the introduction of an integrated system of standards (as well as the mechanism of their implementation and monitoring) in the field of resource and energy efficiency in residential and commercial urban property; export and adaptation of energy-efficient, "green" solutions for heat and electricity; promotion of the concept of "smart" house, upgrading the existing housing stock, taking into account possibilities of the modern local and alternative energy, advanced materials and technologies in design and construction of buildings and utilities.

Fourthly, the development of high-speed external urban transport which is ensuring the effective integration of people of the region into the global economy. Key infrastructure of the outside passenger transport for the Murmansk Region are the airports in Murmansk and Apatity which are in need of modernization and development, expanding the route network of regular and charter flights, and equipping of related sectors such as shuttles to the city (or other destination), aerotropolis and hotel zone. It is important also to stimulate the development of telecommunications infrastructure of key urban centers, including the introduction of wireless high-speed data transfer (WiFi and WiMAX).

Fifthly, new opportunities for development. Stimulation and support of a new quality of urban construction development projects through the development (adaptation) and the introduction of system of standards and norms in the field of construction and development, ensuring quality and energy efficiency of constructed facilities as well as concept of "inlining" of new facilities in the system of Murmansk; stimulation the development of new formats in the housing construction, construction of commercial and business real estate; support and stimulation of projects of integrated environment development as a key to scaling "urban" economy.

Key ideas and directions of work in the "City Project" should be reflected in the strategies of cities, masterplans, integrated programs, resource conservation and energy efficiency, the brand concept of the city. Murmansk is the key element but not the sole subject of urban development.

8. Innovation and the economy based on knowledge: the University, its innovative belt and network center of knowledge and excellence in the Arctic.

First, it is necessary to update the university environment and education. In order to modernize the university environment and create Kola (Arctic) University four-sided cooperation between the regions must be established, the Ministry of Education and Science, universities and corporations who wish to participate in the process. Corporations can enter into Board of Trustees of the University, to participate in the updating of curricula and educational technology, sponsor research and development of research and experimental base.

Second, it is need to deploy the so-called innovative university belt which will be locus of regional innovation system. Priority areas for research, research, brainstorming and innovation in the university environment and pre-university include for Murmansk: marine activities and technologies, the study of the ocean - biological resources and the resources of the shelf, wave and tidal power, and so on, technology life in the Arctic, Arctic ecosystems and climate change, research directions is only possible with funding from the overwhelming proportion of research from the federal budget.

Innovation Zone of the University must include the full range of infrastructure development of ideas, the creation of technology, and its registration and prepare for the introduction and commercialization including such forms as patents, licenses and company spin-off. Key elements of innovation zone of the Arctic University are:

- center of design and technology including training and research laboratory complexes and funds of specialized research grants;
- business - incubator with center for patent search and protection;
- centre for Technology Transfer;
- dual (created in collaboration with the university and the city) Technology Park which focusing on the deployment of high-tech start-productions and companies.

Third, project network center of knowledge, competence and excellence on the issues of life, work and resources of the Arctic must be created. The first step in the implementation of the project is proposed by the Governor of the Murmansk region and supported by the Chairman of the RF Government initiative to establish a Center for the Study and security in the Arctic. The center should include three parts:

- science and education (Kola Scientific Center of Russian Academy of Sciences, Arctic training center, training unit of Ltd. “Gazprom mining shelf”, Shtokman Development AG, “Rosneft”);

- innovation and technologies (Industrial and Technology Park based on the Undersea Research Center and high-tech repair "United Shipbuilding Corporation”, “Association Murmanshelf", Russian Corporation of Nanotechnologies, vesture fund);

- safety ("The administration of the seaport of Murmansk”, rescue units MOE of Russia, Murmansk Basin Emergency and Rescue Department, Ministry of Transport of Russia, management of search and emergency services of the Northern Fleet).

Further elements of the center of excellence can become the Murmansk Marine Biological Institute and Murmansk oceanarium.

Fourth, the project aimed at developing pre-university vocational education through the creation of resource centers for specialized education at the level of "high school - institution of primary vocational education” which will allow to high school students to mster individual educational programs and reduce the flow of the labor market of people without a profession; a two-level systems in which will be trained on the program of initial vocational training and the system of secondary vocational education (including applied bachelor degree program) that will allow to persons with primary vocational education to receive vocational training for the next level with reduced programs; creating optimum conditions for the further development of vocational education, which include: providing network of collaboration of institutions of education, science, business and economics in general which is equal to the definition of networking as an essential element of the knowledge economy; changes in the educational process in educational content, focused on training in the form of applied bachelor degree which lays the foundation of establishing a professional culture and the fundamental competences, the development of public evaluate of the quality of vocational education, preparation of rating agencies of vocational education, the comparison of rankings of institutions of vocational education, the comparison of rankings of institutions of vocational education, comparing them with ratings of similar institutions in other regions.

9. Cultural and spiritual development, health as the basis of human capital

Firstly, the formation of cultural policy in the Murmansk area, including work with the values of young people through education as a basic element.

Secondly, ensuring cultural diversity of the territory.

Third, promoting a healthy lifestyle through education aimed at increasing the knowledge people in the region about the risks to health (smoking, alcohol and drug use), health, ways to strengthen it, the development of physical culture and mass sport, increase the availability of sports infrastructure

(playgrounds, swimming pools, complexes, stadiums, etc.) and raising the status of sports competitions held in the Murmansk region (Polar Olympics) as well as more active involvement in the region to the Cup of Russia, Europe and the world in winter sports.

10. Affordable, comfortable and modern (based on advanced technologies and architectural decisions) housing for the Far North.

The housing industry, which has experienced a deep recession due to a decline in demand (population outflows from the region, the reduction, but then restore the income level at the lack of quality supply), needs a comprehensive restoration, but on a fundamentally new basis:

First, there is need in the transition to a modern and more efficient group of technologies - the so-called MMC (Modern Methods of Construction), the supposed "panel" principle of construction and the minimization of wet operations, and are used primarily when low-rise construction. However, an important condition for successful installation of technological solutions is the consideration of the specific natural and climatic conditions of the region (districts).

Secondly, state stimulation of the housing market by launching special mechanisms to stimulate demand and competition, in particular, the establishment of a regional fund mortgage lending is a must.

Thirdly, it is necessary to develop construction at the expense of reconstruction and development of the productive base of the complex - the building materials industry, development of training, retraining and professional development for the construction industry, promote technical upgrading, development of new technologies and on this basis, increase production capacity and competitiveness of the construction contract and construction organizations of the region to implement projects of industrial and social purposes.

Fourth, there is need to develop institutions and organizations serving the investment process: financial and credit institutions, insurance, leasing, consulting firms, the strengthening of institutions to enforce property rights and contractual obligations, facilitate the establishment and activities of professional self-regulatory organizations in the field of engineering studies, architectural and building design and construction.

Fifth, the government program is needed to attract private investment and investment from the federal center for development of regional construction industry, namely: building on the territory of the Murmansk region's own factories for producing building materials (factory producing ceramic bricks, plant for production of panels for low-rise and high-rise housing, a factory for cement production) which will reduce the cost of construction in the region.

Sixth, there is need to pursue in the Murmansk region subprogram "Providing housing for young families" federal program "Housing".

Challenge 4. Aging infrastructure which not allows the high (necessary) quality of life, the conditions for dynamic development of economy both in terms of infrastructure constraints and human capital development.

11. Modernization and development of budgetary network includes:

First, the development of primary health care and improving disease prevention, improving the availability and quality of specialized including high-tech health care, improving health care for mothers and children.

Second, the development of technologies "remote" the provision of basic budgetary and public health services, education and social assistance and protection. Tv-component in health, education, social protection and provision state services must consistently grow.

The most important task is to ensure coverage of all (especially the most remote and inaccessible) settlements systems, "remote" delivery of public services, relying on the "anchor" facility in Murmansk and Apatity in the urban system - Olenegorsk - Apatity - Kirovsk - Polarnie Zory. As part of developing and implementing the concept of remote delivery of educational services, it is important to pay attention not only to the organization and technology platform (including basic software tele-education - knowledge management system) but also expertise and content – i.e. content and range of educational products. It is necessary to attract large companies and major universities by the definition of specialization and the formation of the content.

The range of public services provided in the "remote" mode, it must be consistently expanded. In small and remote settlements centers "remote" provision of public services should be combined and integrated, i.e. provide the access to the Internet, telemedicine services, distance education, public services.

There is need to separately develop the concept of providing health and education services for shift workers at the Shtokman field and the onshore processing facilities at the complex in Teriberka.

Thirdly, there is need to consistently implement optimization (without reducing the quality and accessibility of public services) of the budget sector, updating the material and technical base and introduce advanced technologies in medicine, education and management of budget sector.

Complex modernization of the budget sector which is associated with changes in the level of applied technologies, principles of organization, goal-setting and management; it must be accompanied by the introduction of new systems of incentives and programs, training and retraining of personnel.

Fourth, it is necessary to stimulate the development of off-budget sector service delivery of social purpose: educational services and health industry which is able to serve the specific needs of visitors (tourists and watches), reflecting changes in the perception of the necessary "minimum" in the population.

This requires a comprehensive program of public-private partnerships in socially important sectors (health, cultural development and education), implying investment incentives and guarantees to private investors (including foreign) wishing to invest in these sectors. The aim is to ensure the development of prospective and new segments of the so-called health industry (yoga, fitness, spa, dance, aerobics, etc.) and "factories" of human capital.

12. Ensuring a high level of social services

Firstly, the development of a network of social services and strengthening their logistical base, creating new institutions and services such as provision of social services targeted at certain categories of citizens, the opening of residential homes and small capacity semi-stationary facilities (offices) of social services and etc.

Secondly, the provision of additional social support to certain categories of citizens at the expense of the regional budget in the long-term targeted programs: "The older generation" for 2008-2010, "Assisting individuals who have served their sentence of imprisonment, and facilitate their social rehabilitation in the Murmansk region "for 2010-2012.

13. New (CO2-neutral and "smart") energy

The development of the energy system in the region will be implemented in the following areas:

First, the introduction into the Murmansk region intelligent electrical networks which can independently monitor the status and operation of consumers, generators, power lines and substations which will smoothly carry electricity with maximum economic efficiency.

The transition to the use of superconducting cables will significantly reduce the loss of electricity, transmitting large power flows under normal dimensions of the cable to extend the life of the cable lines, improve their fire and environmental safety, and reduce the amount of land in urban areas alienated for the construction of energy facilities.

Secondly, the transition to a CO2-neutral generation including with the use of local building power. The Kola nuclear power plant will remain an important structural element of the power of Murmansk. However consideration should be given to modernize or build new power plants (Kola NPP-2 with the commissioning of power unit № 1 in 2018 and the power unit № 2 in 2020).

The development of the Shtokman gas condensate field and pipeline Teriberka - Volkhov should lead to the gasification area. In Murmansk and in settlements located along the future pipeline, should be introduced electricity and heat-generating sources on the basis of combined-cycle. In particular, Thermoelectric plant and heat boiler serving Murmansk, in need of replacement.

In the Murmansk region should expand use of renewable energy sources. It is currently used only hydropower potential and on an experimental basis - tidal (Kislogubskaya tidal power station). Should be a comprehensive assessment of wind potential in the region on which to consider the feasibility placing wind farms, additional evaluation capacity of tidal energy (according to preliminary data, the most suitable location of the tidal power station - the western coastline of the Kola Peninsula), additional evaluation of the territory for setting Small Hydropower, A technical re-equipment of hydropower station (primarily Nizhnetulomskaya, Pazskiy cascade, Knyazhegubskoy), assessment of the potential use of biological resources (peat, wood) to produce electricity.

The final stage of changes in energy power system (after 2025) will become full-fledged development (intellectual and symmetric) energy networks based on a strong network of diverse distributed sources of energy. In fact, as the number of resource generating buildings and structures and the formation of renewable energy will increase diversification of the "resource base" of energy. All sources and consumers will be linked in a single "virtual power plants», automatically regulating / balancing energy markets in real time.

Challenge 5. The sustainability of development, ecology and conservation of habitat as a condition for development of the North and the Arctic.

14. "Big Environmental Project" - working with legacy issues, with international resources and creating a new image of the territory. Environmental issues should be - and already is - one of the key themes that form the region-wide (including international) agenda, and one of the key criteria (possible) implementation of investment projects, particularly relating to the operation of ecosystems. This requires the following actions and initiatives:

- development of high and specific environmental requirements for the declared and implemented projects, in particular commodity;

- incorporation of environmental requirements, objectives and basic principles of sustainable development contained in the pool of federal strategic planning documents, the regional planning and management practices. In addition, a continuous learning and updating these standards and rules of the new data provided by Russian and international scientific and expert communities;

- ensuring the protection and regeneration of natural resources of the region;

- provision of resource management that promotes the responsible use of the resource potential and sustaining economic growth area as well as through the establishment of environmentally sound closed technological systems for complex processing of natural mineral and biological material and disposal of accumulated industrial waste;

- ensuring high-quality recreational resources;

- safety of human life;

- for the efficient operation of environmental information there should be wide public awareness activities and discussion topics, ecological balance and sustainable development in regional and international formats. This involves a mandatory open environmental information as well as information highlighting the known results and all the possible consequences of any (economic, scientific, military) activities for the ecosystems in the region. Environmental issues should be one of the main directions of work of the Network Coordination Center, knowledge and excellence in the Arctic;

- development of forums which provide platforms to discuss the environmental challenges of the region, on the basis of existing international organizations, and using the opportunities that have established international network of nongovernmental organizations;

- development of a regular convention activity in the region;

- research (practical), industry conferences, the development of environmental policy as an essential element of the image of the Murmansk region.

Challenge 6. Provincialism of all macro-region

15. "Murmansk is a capital of Arctic"

- Murmansk as a place for presentation and discussion of Russian and international agenda for the Arctic; a dense series of events and openness - Murmansk as a place of exchange - of information, trade and economic, intellectual, cultural and human, an international brand image of the city of Murmansk and the Murmansk region;

- the formation of a dense round calendar of events for the macro-regional topics (economy, resources, ecology, security, transportation, culture and peoples of the North, the information society and people) and the active participation of the Murmansk region with the Foreign Ministry in shaping current and ambitious agenda for the Barents Euro-Arctic and Arctic in total;

- Annual Murmansk Economic Forum has become a key event and a discussion platform for discussion of key topics on the agenda of Arctic exploration.

8.3 Mechanisms for implementation: the role of the federal center, the policy of Regional Executive Authorities (REA) and the formation of coalitions

1. Budget and Policy of REA system. The regional budget allocated for the tasks of socio-economic development (within the policy) is the main mechanism for implementing the Strategy.

2. Strategic partnerships with key investors and building coalitions for the successful implementation of strategic projects, the formation of clusters and the center of knowledge and excellence in the Arctic and the modernization of the university environment. Partnering with major investors in the region, may be recorded in a strategic partnership agreement that provides for coordination mechanisms between the investor and REA as well as voluntary commitments corporations to participate in social development areas and other development projects. Partnerships related to the formation of the cluster, drawn agreement on "the cluster initiative; authority area can provide information support to initiate activities.

3. State Program of socio-economic development of the Murmansk region, connecting major regional initiatives and strategic projects in a single system of measures of the Murmansk region. The program will be a coordinated and focused policies and actions Federation, Murmansk region and the corporate sector, aimed at ensuring a high rate and a new quality of social and economic development of the main outpost of Russia in the north. Programme shall include the following:

- formation of a new high-tech industrial base of the Murmansk region on the basis of a unique resource potential and by providing an attractive tax environment for investors. Main projects: onshore Shtokman project in Teriberka (training, LNG and gas products) construction of which must be supported by a package of tax incentives, similar to (a number of components) the one that currently applies to the territories with the status of special economic zone (SEZ) cluster of technological and material support of maritime activities such as port of SEZ project of MTH and SEZs under development fish megafarm and tourist areas.

- urban spaces of the future: modernization and development of Murmansk and reference sites of the settlement. A key priority: Murmansk which in 2016 will celebrate 100 years since its foundation;

- implementation of transport-transit potential of the Murmansk region through the development of the Murmansk transport hub;

- establishment of infrastructure and base of study and future development of the Arctic. Key elements: Center for the coordination of national and international Arctic projects and network cluster of knowledge, technology and information about the Arctic and Antarctic as well as the formation of the National Center for excellence in the Arctic on the basis of the structures, RAS, universities and corporate development programs, technology, implementation of a unique natural potential through the formation of tourism and recreation cluster.

4. Initiate and support projects of infrastructural development and innovative pilot projects that would receive financial, technical and organizational support from the national (EBV) and international development institutions (EBRD, IFC) as well as through budgetary programs of federal ministries. Energy

infrastructure development programme and modernization of buildings and structures, upgrading of infrastructure provision and management of key resources (water, waste, etc..) as well as the introduction of advanced "smart" systems of resource management (energy, water) providing greater efficiency, may receive financial and technical (and advice) support from international development institutions and the Federal Ministries of Economic Development and Energy.

5. Synchronization of strategic and spatial planning of the Murmansk region and municipalities.

6. Improving the system of public administration of the Murmansk region.

9. Stages of the strategy:

I. 2010 preparation stage

II. 2015 Implementation

III. 2020-2025 expansion and update