



## Substantiation of Strategic Points for Efficient Functioning of Production Infrastructure of the Southern Region

Khasan Alimsultanovich Taimaskhanov<sup>1\*</sup>, Maula Abdurahkmanovich Betilgiriev<sup>2</sup>,  
Lolita Musaevna Idigova<sup>3</sup>, Magomed Shavalovich Mintsae<sup>4</sup>, Dena Karim-Sultanovich Bataev<sup>5</sup>

<sup>1</sup>Grozny State Oil Technical University Named after Academician M.D. Millionshchikov, 100, Isaev Square, Grozny 364051, Chechen Republic, Russia, <sup>2</sup>Grozny State Oil Technical University Named after Academician M.D. Millionshchikov, 100, Isaev Square, Grozny 364051, Chechen Republic, Russia, <sup>3</sup>Grozny State Oil Technical University Named after Academician M.D. Millionshchikov, 100, Isaev Square, Grozny 364051, Chechen Republic, Russia, <sup>4</sup>Grozny State Oil Technical University Named after Academician M.D. Millionshchikov, 100, Isaev Square, Grozny 364051, Chechen Republic, Russia, <sup>5</sup>Grozny State Oil Technical University Named after Academician M.D. Millionshchikov, 100, Isaev Square, Grozny 364051, Chechen Republic, Russia. \*Email: [karina.hachukaeva@mail.ru](mailto:karina.hachukaeva@mail.ru)

### ABSTRACT

The article analyzes optimal conditions of efficient functioning and strategic development of production infrastructure of the Southern Region. According to the authors, it principally depends on taking into account the specificity of the region when defining the policy of regional authorities, population, and manufacturers. The authors note that the main condition of the production infrastructure development is supporting efficient work of the manufacturing industry. According to the authors, almost all areas and objects of the regional social and production infrastructure require close attention. However, it is possible to predictably include some objects in social and production areas. In the article the authors revealed prerequisites of the development of the essentially new Concept of Developing Infrastructure of the Chechen Republic (ChR) for the Med-term Perspective within the Strategy of Social and Economic Development of the ChR till 2020. When creating this Concept of Developing Infrastructure of the ChR for the Med-term Perspective, the authors took into consideration the whole range of the implemented and developed documents of the federal level, strategies, and programs related to developing industrial ministries and departments.

**Keywords:** Production Infrastructure, Concept of the Infrastructure Development, The Chechen Republic

**JEL Classifications:** H54, O10, O18, R13

## 1. INTRODUCTION

Production infrastructure holds a special place in the economic system of the region. Its main feature is supporting efficient operation of industry. Regional peculiarities of estimating the efficiency of the production infrastructure functioning are stipulated by its role in providing the integrity and increase in the level of integratedness of the economic space of the country, comprehensive economic and social development of territorial systems. Therefore, the increase in the production potential of the region must become a condition of the accelerated modernization of enterprises. The production potential is an aggregated ability of production systems to produce material benefits and meet social needs stipulated by the existing resources and efficiency of using

them (Veselovsky et al., 2015; Dudin et al., 2014; Dudin et al., 2013; Sandu et al., 2014; Troshin et al., 2014).

Based on the definition of the production potential, it is possible to think that the potential of the production infrastructure of the region is an aggregated ability of the components of the production infrastructure to provide the industry development on the basis of the existing resources and efficiency of using them (Afonasova, 2010; Dzhamaldinova and Sidorov, 2012; Kopylova, 2011; Menshikova and Levitsky, 2013; Menshikova, 2012; Pogodina and Medvedeva, 2013).

In the social and economic development of the Chechen Republic (the ChR) elements of the production infrastructure are especially

important, because regional infrastructure objects are not only components of some production industries and types of activity, but also the main factor that provides terms and conditions for functioning of other sectors of economic activity. Today it is extremely urgent for the republic to choose top-priority areas of the development taking into account its resourceful potential, natural and climate conditions for the purpose of revealing competitive advantages.

The developed and far-reaching infrastructure, availability of its basic elements optimally correlated, the level of its development, technical, ecological, and economic state play a key role in efficient functioning of other sectors of the national economic complex. The efficiency of functioning of objects of the regional infrastructure depends on taking into account the specificity of the region when determining the policy of regional authorities, population, and manufacturers. It is necessary to state with certainty that efficient functioning of sectors of the regional economy under modern conditions and future forming of market principles anticipate reconsideration of principles and factors of successful functioning and improving of the regional infrastructure, its elements in all sectors of activity. In the future it will require the development of a principally new Concept of Developing Infrastructure of the ChR for the Med-term Perspective (hereinafter referred to as the concept) within the Strategy of Social and Economic Development of the ChR till 2020. We define its main goal in full, timely, and efficient provision of the industry and population of the republic with infrastructural services.

## 2. DESCRIPTION OF THE OFFERED CONCEPT

When developing the offered concept, its goals and tasks were tied with federal and regional targeted programs and investment projects implemented on the territory of the ChR.

Along with this, the Concept of Developing Infrastructure of the ChR for the Med-term Perspective concretizes basic areas of the development of the infrastructural complex of the republic taking into account specific peculiarities, and defines the tasks to be solved in the nearest future. In the List of Federal Targeted Programs (FTP), within which various investment projects are implemented on the territory of the ChR, a lot of objects of the regional infrastructure are modernized, reconstructed and sometimes extensively repaired.

However, the majority of components still remain without due attention. It can but not have a negative impact on the tempos of the economic growth. In our opinion, almost all areas and objects of the regional social and production infrastructure require close attention. However, it is possible to predictably include some objects both in social and production area.

The offered concept formulates and stipulates strategic goals and tasks, top-priority areas and scenarios of the development, calculates target parameters and basic indicators of the development of the infrastructure objects.

When developing the Concept of Developing Infrastructure of the ChR for the Med-term Perspective, the whole range of the implemented and developed documents of the federal level, strategies, and programs related to developing industrial ministries and departments was taken into account.

Strategic goal of the concept is to develop practical recommendations on improving the infrastructural service of the real sector of economy and population of the ChR by optimizing objects and elements of the regional social and production infrastructures.

The basic tasks of the concept within the distinguished components include the following:

1. Contribution to the renewal, formation and development of the transportation sub-complex of the republic as a component of both social (passenger transportation) and production infrastructure (freight transportation) that provides the population of the republic and the real sector of economy with transportation services on the sufficient level
2. Creation of favorable conditions and further stimulation of the most efficient use of the transit potential of the republic and providing population and freight transportation safety
3. Contribution to the development of the science-driven types of activity, increase in the investment attractiveness of the transportation complex of the ChR
4. Stimulation of the priority development of the social infrastructure objects as compared to other areas of economy as a factor of stable development of the ChR
5. Creation of conditions for the development of promising energy efficiency technologies to develop the infrastructure of settlements of the ChR
6. Decrease in barriers for the production and social integration of economy and social area of the ChR with regions of the North-Caucasian Federal District
7. Renewal and development of production in mountain, submontane and rural territories of the ChR, and
8. Development and implementation of the efficient policy in the area of environmental protection and use of ecologically safe sources of power.

The concept was developed taking into account the following principles:

- Recommendations on forming and implementing the program on developing the transportation infrastructure taking into account the necessity to liquidate breakdowns in the transportation network of the republic
- Using promising pilot projects in the housing and utility sector for heating, illumination, gasification, water supply, canalization, processing of domestic household waste, etc.
- Formation of objects of the educational area to provide the population of the republic and other regions of Russia with the accessibility to educational services, stimulation of using new and promising educational programs and technologies, creation of favorable conditions for the research activity and innovations, and
- Interrelation of bodies of the executive power of all levels, private business in the process of achieving goals and tasks of the strategic development of the ChR.

## 2.1. Transportation Complex

The “Transportation Strategy of the Russian Federation for the Period till 2030” states that in the SCFD the transportation components of the regional infrastructure is the most important sector of social area and regional economy.

The program of developing transportation and transportation infrastructure in the ChR is appealed to become a key factor of achieving strategic goals and completing tasks of social and economic development of the region.

The basic areas for the mid-term perspective within the offered concept must include:

- Dynamic and comprehensive development of components of the transportation infrastructure in accordance with the strategies and programs of social and economic development implemented in Russia and the ChR, and
- Providing availability of transportation services for economy and population maintaining the quality due to the development of the road network.

The state of social and economic development of the ChR assumes the necessity of prudent use of financial resources allotted by the federal center to finance all areas. That is why there is a need to range programs and concepts according to the level of their importance for the republic.

Transportation infrastructure is among first items in the list of the top-priority areas.

Landscape conditions in the republic pre-determined the highway transport as basic and the most intensively used element of the road and infrastructure complex, especially in mountains and submontane regions of the ChR.

In our opinion, programs and concepts of the development of regional infrastructure must be focused on solving the following social and economic problems:

- Provision of social and economic integrity of the region and country as a whole by providing road and transportation accessibility
- Use of foreign experience related to forming and functioning of objects of road and transportation infrastructure, and
- Implementation of alternative technical and technological innovations when modernizing federal and republican highways, improvement of exploitation characteristics in accordance with the increased requirements related to the traffic intensification.

Based on the global experience, we distinguished two approaches to modernizing regional transportation system, particularly the highway network where the improvement of the transportation infrastructure is provided by the construction of separate objects of the road infrastructure, or reconstruction and modernization of those that already exist.

For the ChR it is reasonable to start renewing and improving the road infrastructure with the basic repair and reconstruction of

federal routes and highways as well as the construction of the engineering infrastructure bringing them up to the general global standards. It is necessary to pay special attention to the pipeline transport.

## 2.2. Housing and Utility and Everyday Economy

Accommodation provision is one of the most important areas related to the increase in the quality of the people’s lives.

At the present time the housing and utility sector is characterized by a high level of wear and destruction. The services offered by the housing and utility sector are of extremely low quality. All objects of the infrastructure were constructed 30 years ago and have been almost fully worn out.

In addition to the mentioned above, there is also a problem related to the imperfection of the regulatory framework. Therefore, it is necessary to develop and approve basic provisions of the water supply policy. It will also contribute to attracting private investments in the area of water supply.

It is necessary to supplement the concept with measures related to reconstructing technical and technological objects of the existing waste treatment facilities, constructing new alternative wastewater treatment, water declinature, and rain water clearance facilities.

For the quality of the rendered services and works performed by the housing and utility sector, it is necessary to renew and develop objects of the housing and utility sector under market conditions, to implement new equipment and technologies developed by design engineering bureaus and innovational enterprises.

## 2.3. Communication

The state and functioning of informational and communicational technologies (hereinafter referred to as the ICT) and means of communication are among the regional infrastructure components.

Under modern conditions when information is the most expensive products, the ICT and means of communication are a promising demanded area of regional infrastructure that has a high potential of the economic growth.

### 2.3.1. Power economy

Such regional infrastructural components as engineering infrastructure, including power supply, are extremely important for the economy and population.

OJSC “Nurenergo” that was renewed in 2001 within RAO UES allots and sells electrical power in the ChR.

The ChR has its own required natural and resourceful opportunities for producing power. However, it remains a power subsidized region.

In order to develop the integrated power grid of the republic, the development of the “General Scheme of Electrical Power of the ChR for 2020” and the “Concept of the Development of the Electrical Power Supply System of the ChR till 2020” are of prior importance.

The republic performs works on creating its own power generating capacities on the Chanty-Argun River, sub-stations “No. 84,” “Samashki,” “Vostochnaya,” “Gudermes,” and “Kurchaloy-110” that can produce cheap electrical power.

However, it does not exclude the necessity to use power saving technologies. Its example is the innovational project offered by the Moscow Science and Technologies Committee named “Foton Autonomous Power Saving Complex.” The complex is meant to illuminate residential houses, apartment houses, and power lines at the expense of renewable sources of light. Positive experience of using the complex lies in saving about RUB 10 thousand per year per one floor when used in apartments houses. The producer provides the warranty of 20 years for the solar battery, and up to 10 years for illumination tools.

At the present time on the territory of the ChR there are 14 different programs aiming at the renewal of socially and economically important objects of the republic economy including programs of innovational development of the ChR. For example (Idigova et al., 2013; Idigova et al., 2013; Reshiev, 2013; Taimaskhanov, 2014).

- FTP “National System of Chemical and Biological Safety of the Russian Federation (2009-2013),”
- State program “On Developing Agriculture and Regulation of Markets of Agricultural Products, Raw Materials, and Food for 2013-2020”, and
- Republican targeted program “Use of Non-traditional and Renewable Sources of Power in the ChR for 2012-2015.”

At the present time within implementing these programs the republic is preparing a comprehensive project with the participation of “Aren-Stroitsentr” LLC jointly with the highest educational establishment - Grozny State Oil Technical University named after Academician M.D. Millionshchikov – on creating highly technological production – an experimental-industrial geothermal station on the basis of implementing a circular scheme of using the deep heat of the earth. Territorially the pilot geothermal station of the circular scheme (GSCS) will be located in the Khankalsk Deposit (Grozny rural area) and will be meant for supplying objects of the rural (greenhouse) facilities, urban community facilities, and industrial objects with heating due to using the deep heat of the Earth (heat of the geothermal waters reservoir) instead of expensive natural gas.

It is planned that the Grozny GSCS will be the first pilot geothermal heating station on the territory of the ChR put into operation in 2015.

## 2.4. Health Service

We offer to define two basic tasks in the concept in the area of health service:

1. Maintaining the population’s health
2. Guaranteed provision of high quality medical aid.

In order to solve the tasks, it is necessary to fulfill several conditions. Particularly, for the ChR they are the following:

- Creation of the motivation and possibility to conduct a healthy lifestyle

- Improvement of the system itself related to providing medical aid
- Efficient management of funds in programs of state warranties
- Countrywide use of achievements of the medical science and innovational projects, and
- Health service informational support.

Innovational pilot projects of the Volgotech Research and Production Enterprise LLC can help to solve the majority of the mentioned tasks. It offers the “Cardinet Online Clinical Informational System” project.

This system allows to make notes in the patients’ clinical records by several establishments simultaneously. Besides, it provides automatic integration of indicators of medical measuring equipment, storage, collection and processing of research results and specialists’ inspections, recommendations, counter-indication, and doctor’s prescriptions.

## 2.5. Education

FTP “education” was implemented on the territory of the ChR according to the following areas:

- “Stimulation of general educational institutions that actively implement innovational educational programs,”
- “Rewarding the best teachers,”
- “Development of the technical basis of modern informational educational technologies,”
- “Annual providing schools with training aids and equipment,”
- “Stimulation of the talented youth,” and
- Comprehensive modernization of education.

The above elements of the educational area development programs aim at solving a number of problems including the following:

- Old-fashioned and low quality computer equipment in educational institutions
- Failure and non-availability of connection to the Internet in educational institutions, and
- Insufficient quality of maintenance service.

All the mentioned above have a negative impact on the quality of educational services rendered to the population of the republic. It limits the possibility to use new technologies in the educational process, and does not allow participation in special projects and grants. Above all in the educational area it is necessary to create and stimulate in every possible way the participation of the talented youth in both national and foreign grant-forming programs and projects (Malyshev et al., 2015; Zaurbekov et al., 2016; Mintsaev et al., 2015; Zaurbekov et al., 2015; Musaeva and Betilgiriev, 2015).

In 2012 the government of the republic took additional measures on state support of small and mid-sized enterprises. The State Autonomous Establishment “Center of Microfinancing Subjects of Small and Mid-Sized Business” was formed within the ChR Government. The regional Fund of Supporting Small and Mid-sized Entrepreneurship granted 33 loans in the amount of above RUB 20 mln.

Today the republic that once was half destroyed is gradually turning into a blooming area and dynamically developing. It is possible to forecast with certainty that in the short-term perspective the ChR will become all-sufficient subject of the Russian Federation that can occupy the leading positions in the Russian economic space.

To a great extent efficient functioning of regional economy depends on efficient use of objects of infrastructural areas that have a direct impact on the tempos of economic growth and development, efficiency of using production capacities, investment attractiveness of the region, and quality and level of the life of the subject population.

The importance of the production infrastructure on the regional level increases if and when the economic independence of regions increases, large territorial and production complexes are formed, and sectorial approach is changed by the territorial one in the management of objects of the production infrastructure.

### 3. CONCLUSION

Summing it up, it is necessary to note that the main task is the cooperation of the republic enterprises in the area of electronics, machine-building not so much with Russian partners as with foreign ones that are leaders. The world brands like SAMSUNG, Apple, Philips, Sony, Xerox, Bosch, Indesit, etc. still willingly establish their assembly plants in countries with cheaper labor forces than in their native countries or being guided by the nearness of the large sales market. The creation of favorable conditions for their appearance in the ChR is as urgent task the same as the renewal of the oil and gas complex that during many years has been a standard-bearer of the Russian oil production.

The value of these companies is not so much in the fact that they create highly paid workplaces as in the inflow of the leading management, valuable experience of efficient use of resources, and science-driven technologies. Such giant companies are a sort of drivers for the development of the business area of the republic, increase in the transparency of conditions of the economic activity, compliance with the contractual obligations of the parties, and integration of the republic economy in the global economic cooperation. Therefore, it is important to study and practically use the experience of successful international cooperation of the Republic of Tatarstan, the Kaluga Region, and the Lipetsk Region.

The economic crisis caused by Western sanctions against Russia and characterized by the meltdown of the national currency in December 2014 makes solving of tasks related to developing the real sector of the republic economy and overcoming the subsidized character more topical. We consider oil, gas and chemical sectors, as well as production of electronics, other devices, and machine-building to be top-priority sectors of the economy of the ChR. The current stable, sometimes deficit, demand for products of these sectors in the Russian Federation, high indicators of the profitability of the production make business in these sectors profitable and attractive for enterprises. The government of the ChR does not need to look for billion investments to implement projects. It is enough to simply create favorable investment climate

in the republic. Then the capital will occur itself and organize everything in the best manner possible.

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