DIMITROVGRAD

NUCLEAR INNOVATION CLUSTER

Nikolay Gorshenin

the major of
Dimitrovgrad

DIMITROVGRAD

Population: 121,5 thousand people.
Total area : 10 309 ha

Dimitrovgrad has made a true break in its development. That is connected with the foundation of nuclear and innovation cluster thanks to the key supervising of government of Ulyanovsk region, administration of Dimitrovgrad, State Corporation "Rosatom" and FMBA of Russia.

The key aim of cluster is creating and further developing of "innovation researching area" in the town Dimitrovgrad.

The basis for creating and developing of Cluster is strong concentration of technological, research and staff competition manufacturing enterprises which are participants of the Cluster in different fields (research, manufacturing and educational).

The project in building of the Federal High Technology Center for Medical Radiology (FHTCMR) has become the key direction , determining Dimitrovgrad's further innovation policy.

This project of FHTCMR with FMBA of Russia was supported at high level.

The foundation of the future center, manufacturing of molybdenum 99 and other radioactive nuclides on the basis of State Scientific Center – Research institution of Atomic Reactors (JSC "SSC RIAR") got to the "project bag" of the Council for Economic modernization of Economics, supervised by the president of RF Vladimir Putin.

Parallel to it, it is planning to build Radiopharmaseutical factory, where they will create medicines for effective treatment (curing of oncological diseases on the basis of short-lived nuclides).

It is planning also to build Science campus with the essential modern infrastructure in western region of the town. Dimitrovgrad's system of railway and car transport will be upgraded as far as a huge flow-in of foreigners and people from other regions is expected. It is supposed to renew river service for passengers for both from Dimitrovgrad and from the surrounding residential places and resting places.

The creation of nuclear cluster in Dimitrovgrad is a strategy problem of our country. It can help to get over the underrun of Russia in the field of nuclear medicine.

Dimitrovgrad has always been creative and high-flying town. This project gives a wonderful opportunity to show the town and to become Nuclear Innovation Center of Russia.

the Major of Dimitrovgrad
N.A. Gorshenin.

International airport: Kurumoch Samara – 110 km
Ulyanovsk – Vostochny – 70 km
Distance to (km):

Ulyanovsk	Samara	Kazan	Nizhny Novgorod	Moscow
80	140	260	560	975

INVESTMENT CLIMATE

Investing advantages:

- Useful economic and geographical position
- High investment and innovation potential
- Developed transport infrastructure
- Experienced staff
- Existence of the system of preference advantage
- Coordination of all investment projects at each realization stage according to the rule " united window"
- Existence of the unique multi-discipline experiment basis on RIAR's site

USEFUL GEOGRAPHICAL POSITION IN THE CENTER OF INDUSTRIAL DEVELOPED AND DENSELY POPULATED PRIVOLZHSKY FEDERAL DISTRICT

PREFERENCE ADVANTAGES

Aid grants	Tax advantages
Reimbursement of outlays: - For underpinning, connecting and technological linking to the network of engineering and technical supplies - for taking possession of land property -for payment of interest for loans and credits	13,5 % - tax rate for organization profit in the stake loading to the district budget 0% - tax rate for the property of the organizations. 0% - tax rate on the land-value tax 0% - tax rate on the transport tax

Aid grants are available annually according to the results of tax payments in the district budget during the following 8 years

NUCLEAR INNOVATIVE CLUSTER

JSC SSC “RIAR”

Project cost - 43 billion rubles

- complex site for testing, design and technological decisions in development of nuclear power, innovation technology of a fuel cycle, creating of new knowledge and competences

Research complex JSC SSC “RIAR” is in the only one in the country and one of the few in the world where there is such combination of research reactors, materials research and radiochemical laboratories, on where is it is possible a complex solution of a wide range of tasks.

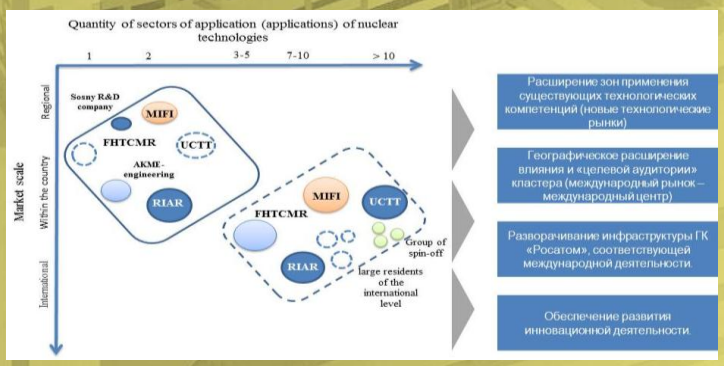
ENERGY TECHNOLOGY OF NEW GENERATION

Within the Federal target program **"NUCLEAR POWER TECHNOLOGIES OF NEW GENERATION FOR 2010-2015 AND FOR ALTERNATIVE TILL 2020"**

1.Construction of new multipurpose fast research reactor MBIR
2.Modernization of existing reactor base (BOR-60)
3.Construction of experimental visualization semi-industrial complex PRK
4.Construction of nuclear station with the trial power unit in capacity of 100 MWt with Multipurpose reactor on fast neutrons with Lead-bismuth coolant (NS with TPU with MBIR with MTBF -100)
The project is realized on condition of public- private partnerships (JSC "AKME - engineering")
5.Production of a radionuclide of Mo-99

INTERNATIONAL CENTER FOR COLLECTIVE USE

On the basis of the accredited Center for collective use of JSC SSC RIAR "Radiation - material science - research center".
Introduction of development and rendering of services in the field of nuclear medicine, nuclear technologies and safety that will allow:
- to develop the international cooperation
- to increase efficiency of usage of research complexes
- to increase volume of rendering of services at 5-10 time (to 3-6 billion rubles).



The strategic scheme of development of Nuclear Innovation Cluster defines main aims and tasks for the next 5 years

NUCLEAR INNOVATIVE CLUSTER

Project cost – 14 billion roubles.

Federal High-Technology Center for Medical Radiology (FHTCMR) Federal mediobiological agency of Russia (FMBA)

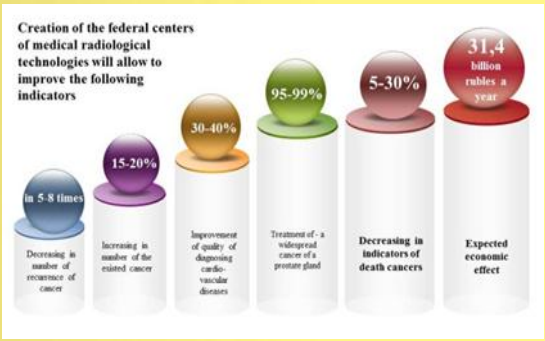
The center of medical radiology will serve patients nationally. It will accept patients with cancer and diseases of cardio- vascular system: the project plans the combination of two therapeutic offices first in Russia - proton and radionuclide therapy.

In Russia 320 thousand patients need radiation therapy

Design capacities of the Center (in a year):

- **18 thousand inpatients**
- **17 thousand diagnostic researches**
- **15 thousand therapeutic procedures**
- **115 thousand out-patient visits**

Introduction in a system of the medical center will allow to make the real break in a cancer therapy. It is established that from the beginning of wide application of PET - diagnosis in oncology the forecast of survival rate of patients increased in 2 times.



Providing population with the high-technology medical radiological care in the directions:

- ✓**oncology**
- ✓**cardiology**
- ✓**cardiovascular surgery**

Application of modern technologies:

- ✓**radionuklide diagnosis**
- ✓**radiation therapy**
- ✓**interventional radiology**
- ✓**complex diagnosis and therapy of socially significant diseases**

Center staff (FHTCMR):
Only-1430 people

doctors – 340
the average medical personnel – 460
the younger medical personnel – 350
the technical personnel – 120
support personnel – 160

Radiopharmaceutical factory

Dosage forms of the radioisotopes made by RIAR will be made in laboratory. This **production will allow to provide 100 % of internal Russian requirement and 15 % of the international market of radiopharmaseuticals.**

Research work on the synthesis of alternative new drugs will be carried out on the basis of the laboratory.

NUCLEAR INNOVATIVE CLUSTER

CAMPUS construction

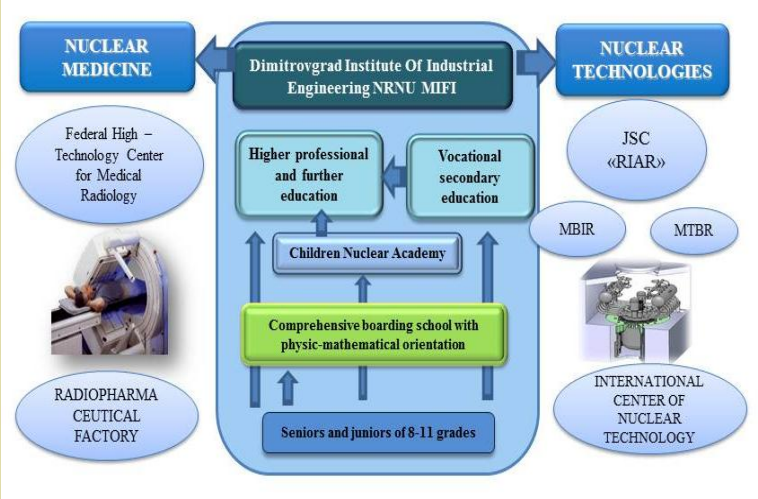
With a view of ensuring comfortable accommodation 1430 it is high - the qualified experts it is projected new by a vein micro the area in close proximity to ФВЦМР FMBA of Russia, which will include:

- 76 ha build-up area

Construction of 70 single-family houses, 618 flats;
Construction of a school, a kindergarten, public objects;
Construction of a hotel
Expenses for infrastructure providing (water supply, heat supply system, motorways).

THE STAFF

The branch of National Research Nuclear University "MIFI" in Dimitrovgrad



The opening of the branch of DIIE NRNU MIFI took place on the territory of the town in 2011 year. **Expecting result:** nuclear and innovation cluster will be provided with recruitment needs on the basis of the continuous multilevel system, with special education in the field of nuclear technologies and nuclear medicine, including Children Nuclear Academy, network boarding school, technical college, institution, Master's degree programme, postgraduate training programme. The center for training and retraining for the innovation production and medicine will become the key component in the town.

Staffing requirements:
SSC RIAR – 150 men annually
FHTCMR – 100 men

ENGINEERING INFRASTRUCTURE

It is very important in the development of the Nuclear Innovation cluster on the development of engineering and transport infrastructures as well as the establishment of a modern urban space that would provide a comfortable living as the residents of the town and its visitors (development of hotel, entertainment areas, construction and modernization of sports objects, recreation facilities etc)

As a part of the target program "Development of the engineering infrastructure of the western district of Dimitrovgrad 2012-2013" implemented measures for heat, electricity and water supply, the development of the road network in the amount **1,8 billion rubles.**

FORMATION OF THE MODERN URBAN ENVIROMENT

Construction of an Indoor swimming pool of Olympic reserve

Swimming pool corresponds to Olympic standard swimming pools FINA (FR1.1., FR 3) swimming and water polo and synchronized swimming. Pool deck is additionally equipped with underwater lighting and viewing windows.

The composition of the pool has:

- ✓**Pool 0,5* 20 meters (capacity 120 people per shift)**
- ✓**Gym training lessons 12* 24 meters**
- ✓**Swimming pool for those who can not swim (capacity 20 people per shift)**
- ✓**Terrace of 710 seats in the hall of the main swimming pool, including 104 spectator seats for physically challenged people**

Construction of the Ice Palace

The construction of the ice Palace is intended for major events (the number of seats more than 2700), training command lessons, training athlets and sports students as well as for recreational visits of different age groups of visitors.

Construction area of the site: 4 ha

PROJECT PERIOD:2012-2013

Construction of “Sport and Health Center”

On the territory of 8410 square meters the project is planned to build a building of a sport complex, a car parking for time and landscaping of the adjacent territory.

“Sport and health Center” is a gymnastic complex aimed at competition and training lessons for team sports (tennis, basketball, volleyball etc) as well as fitness..

Reconstruction of the City park of recreation and culture

On the territory of 10545 square meters it will be planned:

- to establish 15 attractions of large and small size, including water attractions
- to create path network for walking and cycling
- to establish the elements of improvement (gazebos, urns, benches)
- to place outdoor café with 60 seats
- to create the external infrastructure in the form of access road to the park entrance and parking for 150 car seats.

FORMATION OF THE MODERN URBAN ENVIROMENT

Construction of International Hotel “Holiday Inn”

On June 5 2012 there was a ceremony of laying the first stone of the construction of the hotel with the concept “holiday Inn 3”

Hotel options:
- 140 seats
- total area 0,59 ha
- location Lenin Avenue 1

Creation of the Industrial park on the basis of JSC “Dimitrovgrad Automobile Units Plant”

Modernization of the production together with foreign partners, the alliance “Renault-Nissan” has begun on the basis of JSC “DAUP”.
In the place of field assembly it will come:
aluminum casting
cooling
lighting
stamping

Programs, concerned with the problems of development of urban infrastructures in Dimitrovgrad

•City target program **“Reconstruction and modernization of engineering systems and housing and communal services in Dimitrovgrad for 2009-20015”**
•City target program **“Energy conservation and energy efficiency in Dimitrovgrad in Ulyanovsk district for 2010-2015”**
•City target program **“Construction stormwater treatment facilities of Pervomaisky district collector for 2011-2013”**
•Arranging of collection, transportation, disposal and recycling of household and industrial waste in Dimitrovgrad Ulyanovsk district.
•“**Development of engineering infrastructure of the western district in Dimitrovgrad for 2010-2013**”

Environmental remediation

A set of measures aimed at developing urban environment in particular – an environmentally safe and comfortable environment in places of recreation includes:

• Development of the coast zones of water recreation
• Development of forest park complex o the town
• Development of the coast of the river Cheremshan
• Development of recreation zone “golden lake”
• Improving of “Fish Park”