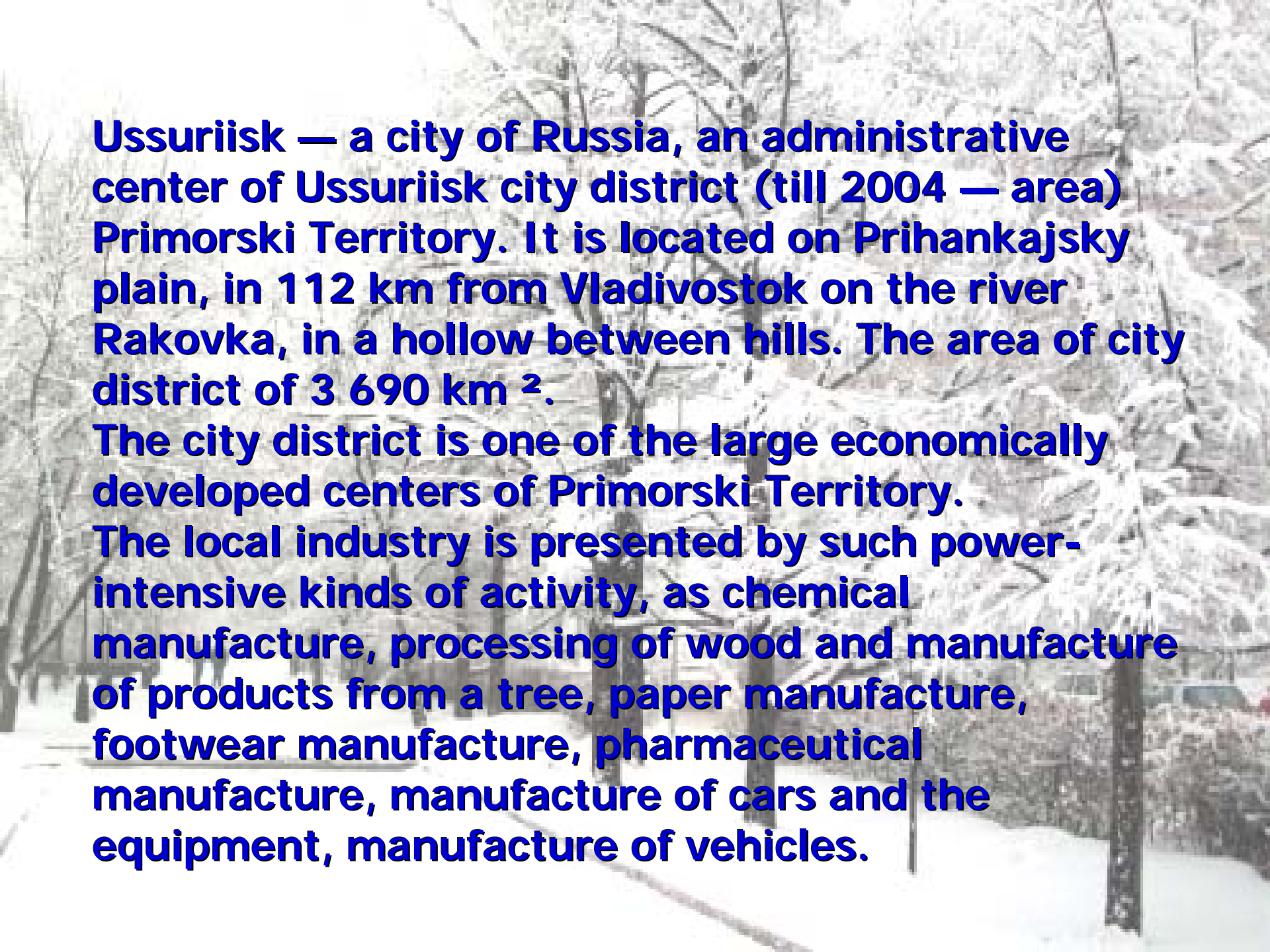


**The long-term target program  
«About power savings and about  
increase of power efficiency of  
Ussuriisk city district  
for 2010-2014»**

A background image of a winter landscape. The scene is filled with snow-covered trees and a path leading through them. The lighting is soft, suggesting an overcast day. The snow is thick and covers the ground and the branches of the trees. The overall tone is cold and serene.

**Ussuriisk — a city of Russia, an administrative center of Ussuriisk city district (till 2004 — area) Primorski Territory. It is located on Prihankajsky plain, in 112 km from Vladivostok on the river Rakovka, in a hollow between hills. The area of city district of 3 690 km <sup>2</sup>.**

**The city district is one of the large economically developed centers of Primorski Territory.**

**The local industry is presented by such power-intensive kinds of activity, as chemical manufacture, processing of wood and manufacture of products from a tree, paper manufacture, footwear manufacture, pharmaceutical manufacture, manufacture of cars and the equipment, manufacture of vehicles.**

**Now creation of conditions for increase of efficiency of use of energy and other kinds of resources is one of the major strategic problems of development of Ussuriisk city district.**

**Carrying out of a consistent policy of power savings and increase of efficiency of use of fuel and energy resources in housing-and-municipal and budgetary spheres of Ussuriisk city district is a necessary condition of development of district as a whole.**

**The basic problems:**

- insufficient control over received, made, transported and consumed power resources in connection with insufficient equipment account devices, both manufacturers, and consumers of power resources;**
- irregular distribution of the information and social advertizing in the field of power savings and increase of power efficiency in housing-and-municipal and budgetary spheres, in connection with absence of effective systems of stimulation of increase of power efficiency and economy of fuel and energy resources in the given spheres.**

**The decision of problems of power savings a programm -target method is caused by following reasons:**

- complex character of a problem and necessity of coordination of actions under its decision;**
- necessity of increase of efficiency of an expenditure of budgetary funds and decrease in risks of development of Ussuriisk city district;**
- necessity to provide performance of problems of the social and economic development put at local level.**

**The Program name** - The long-term target program «About power savings and about increase of power efficiency of Ussuriisk city district for 2010-2014»

**The basis of working out of the Program:**

- The federal law from November, 23rd, 2009 № 261-FL «About power savings and about increase of power efficiency and about modification of separate acts of the Russian Federation»;
- The decision of the head of Ussuriisk city district from December, 26th, 2008 №1641 «About definition of the Order of decision-making on working out, formation and terms of realization of long-term target programs of Ussuriisk city district».

**The customer of the Program** - Administration of Ussuriisk city district.

**The purpose of the Program** - Maintenance of rational use fuel - power resources at the expense of realization of actions for the power savings and increase of power efficiency in housing-and-municipal and budgetary sphere of Ussuriisk city district.

## Program problems:

- to perform carrying out of a complex of the actions providing rational use of fuel and energy resources at the expense of power savings and increase of power efficiency in municipal authorities, available housing, the municipal enterprises of a housing-and-municipal complex, on objects of street illumination;
- to cut down expenses of means of the local budget on payment of power resources by municipal authorities;
- to provide the account of volume of consumed power resources in municipal authorities, municipal available housing, the municipal enterprises of a housing-and-municipal complex, their monitoring and an effective utilization;
- to continue work on revealing of ownerless objects of the real estate used for transfer of power resources, as additional source of replenishment of the local budget, decrease in losses in municipal networks;
- to provide regular distribution of the information and social advertizing in the field of power savings and increase of power efficiency in an order established by the legislation of the Russian Federation

## **Terms and stages of realization of the Program -**

The program is realized in 2010 – 2014 in one stage

## **Volumes and sources of financing of the Program -**

The total amount of financing of the Program for 2010-2014 makes 591,123 million roubles, including:

- the local budget – 151,172 million roubles
- off-budget sources – 439,951 million roubles
- means of municipal authorities and the resource-supplying enterprises - 333,173 million roubles
- means of proprietors of premises – 106,578 million roubles
- means of the operating organizations, associations of proprietors of habitation, housing, housing co-operatives and other specialized consumer cooperative societies – 0,200 million roubles

## **System of the organization of control over Program realization -**

Control over Program realization is carried out by administration of Ussuriisk city district, in the name of life-support management.

### **The expected end results of realization of the Program:**

- the increase in a share of volumes of consumption of power resources, calculations for which are carried out with use of devices of the account (regarding apartment houses – with use of collective devices of the account), in total amount of the power resource, consumed on territory of Ussuriisk city district: on electric energy from 97,2 % to 98,2 %, on thermal energy from 15,5 % to 80,0 %, on water from 55,4 % to 94,0 % by 2014 under the relation with 2009;
- decrease in a share of expenses of the budget on maintenance with power resources of budgetary establishments from 5,25 % of the municipal budget in 2009 to 2,83 % in 2014;
- increase in a share of the budgetary establishments financed at the expense of the municipal budget, in total amount of budgetary establishments in which relation obligatory power investigation to 23,8 % in 2011 and 100 % in 2012 is carried;
- equipment of budgetary establishments by January, 01st 2011 on 100 % devices of the account of power resources;
- equipment of multiroom apartment houses by December, 31 2013 on 100 % common-house devices of the account of power resources;
- decrease in losses of power resources on objects of a municipal infrastructure:
- the electric power by its transfer on distributive networks from 116,46 thousand kilowatt-hour in 2009 to 89,04 thousand kilowatt-hour in 2014;
- thermal energy by its transfer from 8,9 Gkal/hour in 2009 to 7,7 Gkal/hour in 2014году;
- waters by its transfer from 317,02 thousand in cubic meter in 2009 to 255,17 thousand in cubic meter in 2014.

## The electrical supply:

The electrical supply of Ussuriisk city district is carried out from the Far East power supply system (Open Society «Far East power company»).

In the organization of transfer of electric energy to consumers Far East power company, operation and the maintenance of electric networks in borders of Ussuriisk city district are engaged municipal unitary enterprise "Ussuriisk - electric system"

Level of losses of the electric power in networks is a vital issue in enterprise activity.

The given losses can be broken into some components:

- losses at exhibiting of accounts;
- discrepancy of dates of removal of indications of settlement counters with the settlement period;
- calculations of the consumed electric power by consumers on the basis of the established specifications of consumption;
- presence of ownerless consumers;
- losses from electric power plunders.

The basic way of decrease in the specified losses – perfection of system of the account released in an electric network also is useful for the consumed electric power and first of all installation of devices of the account of the expense of the electric power on border of a balance accessory and operational responsibility, for the purpose of more correct formation of the commercial account. Installation of devices of the account will allow to reduce losses, will give the chance to apply new technologies on the organization of the commercial account taking into account borders of a balance accessory.

## The system of a heat supply:

### **Now the system of a heat supply of Ussuriisk city district includes:**

- generation (thermal energy development), carried out from boiler-houses of the Ussuriisk municipal unitary enterprise of thermal networks, which is the basic source of a heat supply of a city and adjoining settlements (to 68 % of development of thermal energy for needs of available housing and social objects);
- thermal energy transfer – the Ussuriisk municipal unitary enterprise of thermal networks (68 % own heat energy and 7,1 % from foreign suppliers heat energy);
- consumers – the population, the organizations social, cultural and a household purpose, other objects of Ussuriisk city district.

Building of Ussuriisk thermal power station would allow to liquidate a number of small boiler-houses and to adjust the centralized heat supply of a city of Ussuriisk. Also it essentially would lower emissions of harmful substances in atmosphere. Owing to a rise in prices for oil products black oil use as basic fuel for boiler-houses strongly raises thermal energy cost price, has negative influence on city ecology. High potential of economy of money resources is concluded in refusal of use as fuel for boiler-houses of black oil and transition to other kinds of fuel – coal and gas.

## Water supply:

In territory of Ussuriisk city district there is a centralized and decentralized water supply.

Principal view of the equipment of system of water supply is the pump equipment.

Now the structure of the given equipment includes the noncontrollable asynchronous electric drives which operating mode isn't connected with an actual mode of a water intake, that is are maintained on a total power without dependence from that, how many water it is required.

To lower losses of the electric power and to prolong service life of pump units, at enterprise "Ussuriisk-water canal" since 2007 work on introduction of system of frequency regulation of productivity of pumps as a part of the automated control system from control office is spent.

By results of the given work as has shown operating experience of the frequency converter of firm "SIEMENS" at pump station on Arsenyev's street of Ussuriisk, consumption of volumes of the electric power has decreased on 7 %.

## Water supply:

In territory of Ussuriisk city district the centralized and decentralized systems of water removal operate.

Now at sewer pump stations (further- SPS) 60 % of all pump equipment are made by the equipment of a domestic production with noncontrollable asynchronous electric drives. «Ussuriisk - the Water canal» maintains pumps import manufactures of firm Grundfos on twelve SPS, as the most hi-tech equipment with frequency management of a drive of the pump. Operating experience of the given types of pumps has shown their reliability and convenience in service, combination in itself of high EFFICIENCY, current consumption reduction on 57 %. Within the limits of the program of power savings "Ussuriisk-water canal" installation of pumps of firm Grundfos on 20 SPS of Ussuriisk city district is planned.

Sharply there is a question on the account of municipal resources, on availability and quality of given municipal resources to consumers, about the account of losses of given municipal resources. In this connection there was an objective necessity of more rational use of the account of actually consumed cold water. On objects "Ussuriisk-water canal" within the limits of the power savings program is planned installation as devices of the account of water on water supply so account devices on objects of dump of sewage that will allow to reduce losses of water to 1,5 % and, as consequence, to save variable expenses, in particular on current consumption, chemical reagents.

## Gasification:

One more power effective project in territory of Ussuriisk city district is gasification.

The basic sources of heat in Ussuriisk city district are boiler-houses. Gas arrival on territory of Ussuriisk city district will allow to translate industrial boiler-houses on the new non-polluting carrier.

Gas supply of a city of Ussuriisk is carried out only by liquefied gas.

According to the concept of gasification of Ussuriisk city district transfer of a part of boiler-houses of Ussuriisk city district into natural gas from a gas pipeline in the city of Vladivostok is planned. The project the organization of a pipeline network in territory of all city for increase of reliability of supply of consumers is recommended.

## Street illumination:

The general extent of networks of external illumination of Ussuriisk city district makes 152,915 km, or 32 % from the general extent of an street high system of district.

The basic actions for maintenance of power efficiency of street illumination are:

- replacement gas-discharge (mercury) lamps on more highly effective sodium high pressure lamps;
- replacement of fixtures with gas-discharge lamps on streets with the most intensive evening movement on highly effective and power economic light-emitting diode fixtures of street illumination;
- transition to highly reliable system of circular-frequency telecontrol by networks of external illumination;
- replacement of transmission lines on the basis of not isolated wire (and or the EXPERT) on an electric main on the basis of the self-bearing isolated wires.

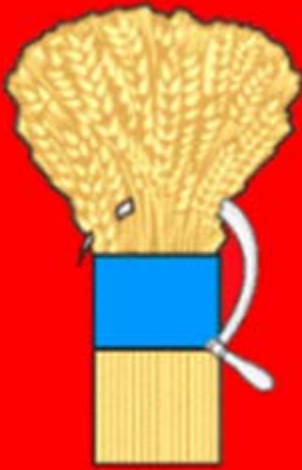
The major problem is decrease in consumption of power resources by inhabitants at the expense of propagation of advantage and prestigiousness of power saving up behavior, public opinion creation about importance and necessity of power savings. Distribution of materials after propagation of power savings and the information on necessity of carrying out and a course of realization of actions in the field of power savings and increase of power efficiency is supposed to be realized through:

- network the Internet, including on an official site of administration of Ussuriisk city district;
- television (commercials and social advertizing);
- through the advertizing areas.

Also during program realization it is necessary to teach supervising and ranking officers of establishments of budgetary and housing-and-municipal sphere to use various financial mechanisms for realization of actions for power savings.

The mechanism of realization of the Program consists in performance by all participants of the Program of a cycle «planning - realization - monitoring» indicators and resources for Program realization under each municipal contract or other civil-law contract.

Program actions are realized by the main managers, municipal budgetary establishments by means of the conclusion of municipal contracts according to the Federal law from July, 21st, 2005 № 94-FL «About placing of orders for deliveries of the goods, performance of works, rendering of services for the state and municipal needs».



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