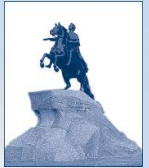
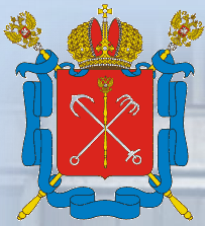


Regional Policy in Energy Savings

Реконструкция
панельных домов
Reconstruction of
large-panel housing
Мастер-класс, Санкт-Петербург
Masterclass, Saint-Petersburg
07-2002





The project

«The energy efficient block - demonstration area of environmental and climate protection»

Proposals of industrial clusters in the area of rising energy efficiency and resource conservation.

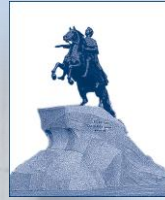
Nominee of the All-Russian contest

«**ENERGIUM-2012**»,

Held on the initiative and with the support of
Russian Ministry of Economic Development.

143 Russian energy efficient best practices.

9 energy efficient best practices in St. Petersburg.

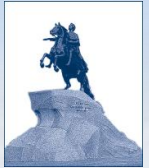
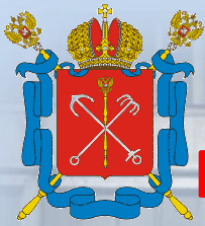


The initiator

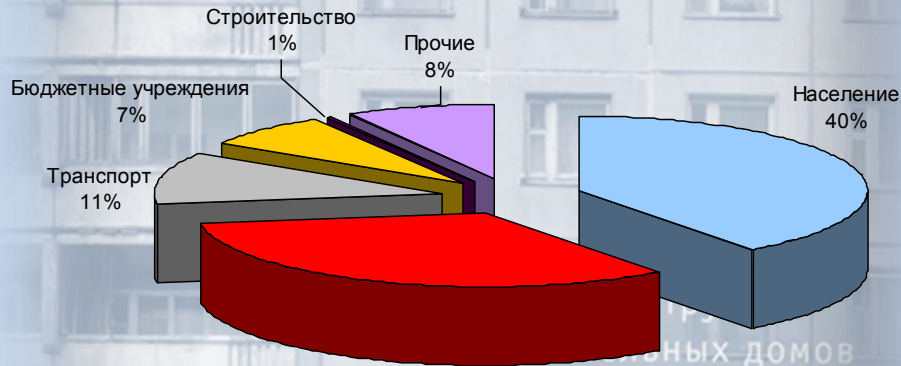
Non-profit partnership “The Saint-Petersburg home owners association”.

The partnership was set up following the decision of the Governor of Saint-Petersburg in 1999.

The founders of the partnership are city and district associations of home owners, the Committee for city property management, the Government of Saint-Petersburg, the Saint-Petersburg industry support foundation, the Committee for economic development, industrial policy and trade of the Government of Saint-Petersburg.



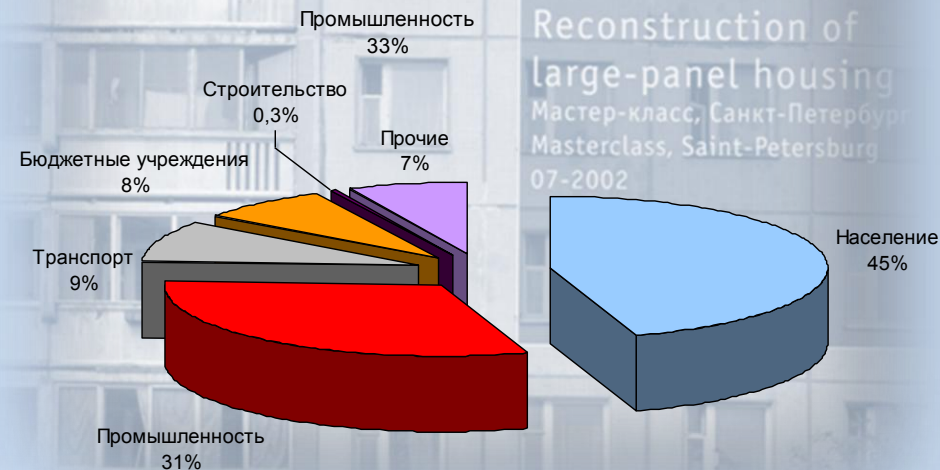
Regional program of St. Petersburg in the field of energy conservation and energy efficiency increase



The fuel and energy balance of St. Petersburg
(final consumption)
The population **40%**

Total consumption of fuel and energy
resources **15 842 thousands TOE**

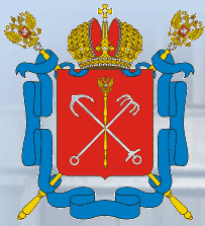
Final consumption of fuel and energy
resources **12 579 thousands TOE**



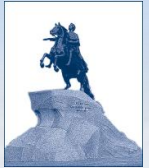
The energy saving potential
(final consumption)
The population **45%**

Total energy saving potential
4 318 thousands TOE

Total energy saving potential
of final consumers **3 424 thousands TOE**



Legal basis

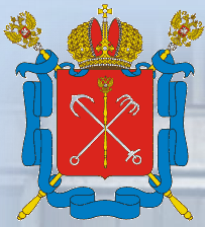


Order of the Ministry of Regional Development of the Russian Federation of 27.06.2012 № 252 “On approval of the approximate conditions of an energy contract aimed at preserving and (or) increase the efficiency of the consumption of utilities by using the common property in an apartment building”

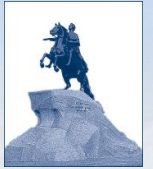
The condition about the sides of the energy service contract (one of the possible options):

the customer - the management company, homeowners, housing, housing-building society or other specialized consumer cooperative in the interests of the owners of the rooms in an apartment house in his own name

the performer - resource supplying organization or other organization providing energy services.



Legal and regulatory framework of St. Petersburg in the field of energy saving and energy efficiency



Resolution of the Government of St. Petersburg № 405 of April 28, 2012 "On approval of the list of mandatory measures of energy conservation and energy efficiency of common property of owners of rooms in apartment building"

The list includes measures which should be undertaken at the same time :

- installation of shared heat meters,
- installation of devices that provide regulation of heat consumption, depending on the outside temperature,
- installation of shared hot water metering device,
- installation of shared cold water metering device,
- installation of shared electricity metering device,
- replacing incandescent lamps in common areas for energy-efficient lamps,
- insulation of door units at the entrance to the houses, door frames of transition balconies and provision of automatic door closing,

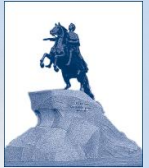
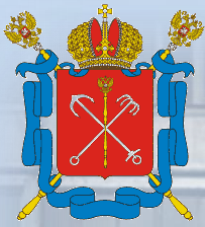
and undertaken regularly:

Recovery of pipe insulation of the heating system using energy efficient materials,

Recovery of isolation of heat exchangers and pipelines of hot water system using energy efficient materials,

Sealing and packing of door blocks on the entrance to the house, door blocks of transition balconies, cellars and attics, window units in the entrances.

Masterclass, Saint-Petersburg
07-2002



Innovations

Urban association of homeowners highlights the importance of institutional innovation

Innovation is considered as a process of introduction innovation aimed at improving the process and the results

Innovation is divided into technological and institutional

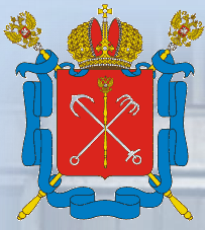
Institutional Innovations

New forms of organization and management

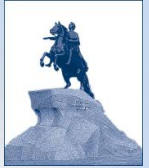
New financing schemes

New forms of investment

Реконструкция
панельных домов
Reconstruction of
large-panel housing
Masterclass, Saint-Petersburg



Institutional innovations



New forms of organizations and management of energy service agreements

A standard form of energy service agreement

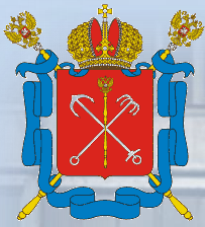
2010-2011 years.

The analysis of offered at the market energy service agreements about financing of energy efficiency measures about financing energy-efficient arrangements in apartment buildings, a standard form of agreement for homeowners associations of all legal forms was developed. At the moment, energy service agreements are concluded with the homeowners association, with a homebuilding co-operative, with house-hold cooperative and homebuilding operating cooperative.

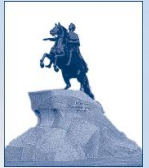
Energy service company

January 2013 year.

Creation of LLC «PPEK» of municipal homeowners association and Russian-Norway LLC «R-Energo» in order to introduce new forms of organization and implementation of the concept of financing projects to improve energy efficiency in apartment buildings in St. Petersburg, relying on the experience of Nordic countries.



Institutional innovations



New forms of financing of energy-saving measures

2010

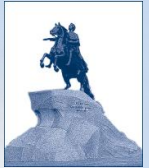
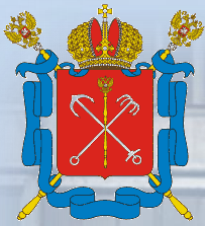
A report of concernment with the Nordic Environmental Financial Corporation in loans for the project «Energy Efficient quarter» of up to 5 million Euros.

2012

Trust fund of energy efficiency with the Consortium «Logic - heat installation» for implementation of pilot projects of commercial financing for energy efficiency of households and housing in St. Petersburg with the use of financial credit facilities and agreements of contracting in energy conservation in the existing housing stock up to a total area of 250 thousand sq. m and a total amount of up to 30 million rubles.

2012-2014

Investment agreement with the Center of energy-saving technologies LLC "INNOKOR" to carry out measures of energy conservation and energy efficiency of general building lighting.



Institutional innovations

New forms of financing of energy-saving measures

2013 -2015

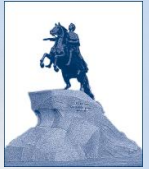
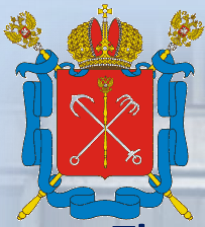
Investment agreement with the Innovative Corporation “Technoprom” on financing projects with use of commercial financing agreements of contracting in energy conservation in the existing housing stock of up to 1 billion 125 million rubles.

2013-2014

Investment agreement with Norwegian financial brokerage company «GREEN ENERGY ONE AS», intending to establish a presence in the area of energy efficiency in St. Petersburg, through participation in the financing of projects worth up to 125 million rubles with the ultimate aim of reducing the consumption of heat, water and electricity in the residential sector.

10% -15% own investments

The St. Petersburg House Property Owners Association invests in the energy-saving measures, providing that the functions of the General Customer of Energy Service Contract are fulfilled.



Energy service companies

The Center for Energy Efficient Technologies LLC «INNOKOR» works at the market of energy saving and energy audits since 2009 and has completed more than 1000 lighting projects in the field of housing in St. Petersburg and the Leningrad region.

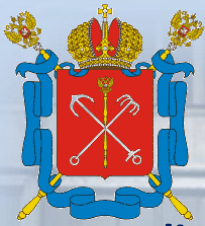
2012

September. Energy service agreement. Customer Homeowners Association «On shore», 3 residential buildings: St. Petersburg, Kolpino, Anisimova Street, 5. The total area of buildings is 17,171.5 sq. m. Installation of 86 lamps CA-18 with optical-acoustic switches.

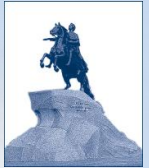
December. Energy service agreement. Customer Housing construction and operational cooperative «Grafit– ZHSEK»: St. Petersburg, Kolpino, Zavodskoy avenue, 56. The total area of building is 12389,2 sq. m. Installation of 166 lamps CA-18 with optical-acoustic switches.

2013-2014

The plan is to install 10000 units of energy-saving equipment - intelligent lighting systems in apartment buildings.



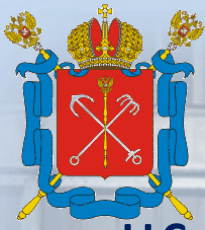
Energy service companies



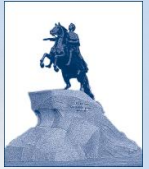
A list of works carried out by LLC «INNOKOR»:

- Analysis of information about energy consumption and payments during the last three years;
- Conducting energy monitoring, reporting for rapid energy audit including the act establishing the basic level of energy resources consumption and operating costs;
- Scheduling average consumption of electricity per month in volume and value terms ;
- approval of method of calculation of the documented savings;
- coordination plan for energy saving measures;
- conducting energy saving measures, installation of energy-efficient lighting equipment;
- facility commissioning;
- guarantee maintenance.

December 2012 – October 2013. Homeowners Association «On shore» gets **50%** energy savings per month.



Energy service companies



LLC «The First Petersburg Energy Service Company» (LLC«PPEK») was established in January 2013 by the City homeowners association and LLC "R-Energo" in order to implement a Norwegian-Russian model of financing energy-saving measures for large-panel 137 series.

2011

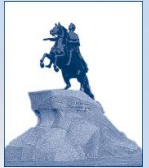
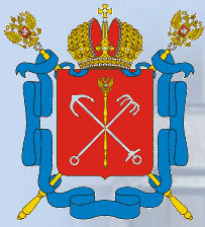
May. Energy service agreements, the customers were :

- homeowners association №1160: St. Petersburg, Industrialny avenue, 11, building 1. The total area of building is 10758 sq.m. Building volume 47759 cu. m.

- homeowners association №1161: St. Petersburg, Nastavnikov avenue, 41, building 1. Building volume 182685 cu. m.

August. Energy service agreement, the customer was the housing savings cooperative №4: St. Petersburg, Tverskaya street, 45. The total area of building 14646,7 sq.m. Building volume 39107 cu. m.

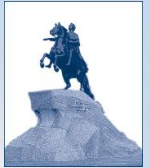
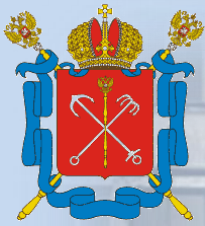
September. Conducting an open tender by requesting quotations of subcontractors to carry out the energy saving measures, including the supply of energy-efficient equipment and materials, installation and maintenance services.



Energy service companies

A list of works carried out by LLC «PPEK»:

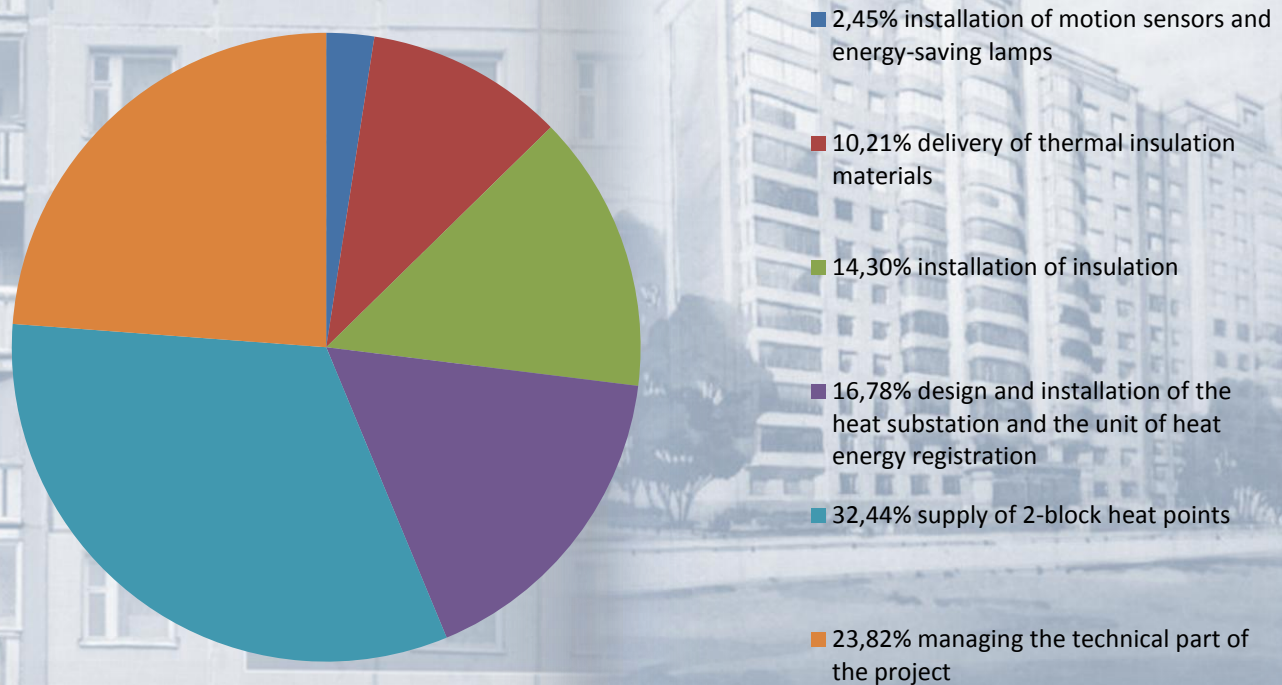
- The choice of standard buildings of standard construction (large panel 137 series is 17% of the housing stock of St. Petersburg);
- Energy survey implementation of the infrastructure of a residential area in Krasnogvardeiskiy district of St. Petersburg on the example of 3 apartment buildings;
- Preparation of preliminary reports on the possibility of implementing the Pilot project of energy efficiency level increase in residential houses in terms of energy service contract;
- Conclusion of energy service contracts with the General Customer Municipal homeowners association and customers from homeowners associations;
- Conducting an open tender by requesting quotations of subcontractors to carry out the energy saving measures, including the supply of energy-efficient equipment and materials, installation and maintenance services.

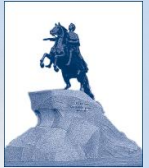
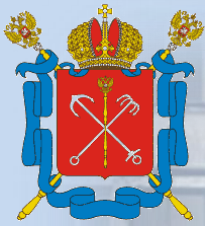


Energy service companies

The structure of financial costs of saving measures by the type of work for a typical apartment house of 137th large-panel series.

Energy saving measures





Recommendations for a participant of energy service contract

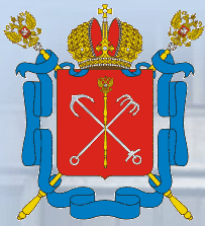
Rapid analysis of homeowners association balances during 3 years with the calculation of financial stability indicators, standard measures of liquidity for the current and the absolute values and of the index of financial autonomy in order to assess the ability to pay for long-term period.

The analysis of monthly consumption data during 3 years in order to form a list of energy saving measures.

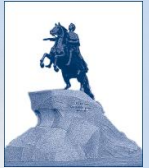
Evaluation of construction, repair and financial costs.

Checking credit financing opportunities taking into account savings of homeowners association/ housing construction cooperative / housing savings cooperative and individual financial capacity of owners.

Studying the conditions of state and municipal support for energy-saving measures for the apartment building.



The project “Efficient Energy Management -EFEM”. South-East Finland-Russia ENPI CBC Programme



Project duration: 12/2012 – 11/2014

Lead partner: Lappeenranta University of Technology

Partners:

- St. Petersburg State Polytechnic University,
- VTT Technical Research Centre Finland,
- The St. Petersburg House Property Owners Association,
- Production, Research and Designing organization “Venchur”.

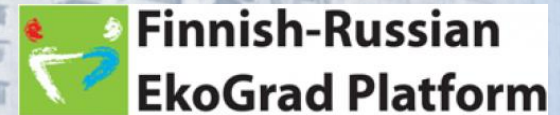
Associate partners:

- Committee on Construction of St. Petersburg ,
- Committee on Energetic and Engineering Support of St.Petersburg.

The project “EkoGrad Platform” aims to improve the competitiveness of Russian-Finnish technology cluster in the Russian construction markets.

The purpose is to increase the volume of high quality, eco-efficient and competitively priced construction.

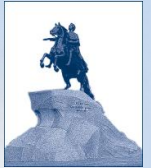
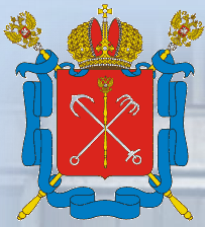
Special attention will be paid to SME-sector enterprises to encourage their production activities in Russia.



The project “St. Petersburg Cleantech cluster”

Project networking the Cleantech sector in St. Petersburg aiming at establishment of St. Petersburg Cleantech cluster in the long run. Green Net Finland will bring the experiences from the Finnish Cleantech cluster and benchmark some Nordic and European clusters.





The future of energy-efficient development in Saint-Petersburg:

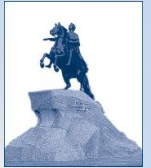
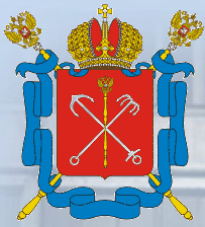
A typical large-panel building in St.Petersburg is about 53% of the housing stock.

Predictive value of reducing carbon dioxide emissions as a result of the complex energy-saving measures will reach **65 %**.

The number of apartments in the typical panel houses is 724,620 with a total living area of 89260.27 sq. m.

The annual economic effect of reducing the cost of energy-efficient heating after renovation will be about 4 billion Euro per year.

Presented economic impact is the theoretical potential of reducing costs of heating with simultaneous reconstruction of prefabricated buildings.



Thank you for attention!

Presentation creators:

Saint-Petersburg Industry Support Foundation

**Committee of industrial politics
and innovations in Saint-Petersburg**

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Noncommercial Partnership

«The St. Petersburg House Property Owners Association»

Industrialny avenue, 11-2, 195426, Saint-Petersburg, Russia

E-Mail: npgorod@mail.ru Web: www.pbgorod.nethouse.ru

www.npgorod.wix.com/spbgorod