

Programme "Energy Saving" in educational establishments the Russian Federation

16th Session of the Energy Efficiency 21 Project (EE 21)
Geneva, 29 June - 1 July 2005

In 1999 a Complex Programme on Saving and Rational Use of Energy Resources in Educational Establishments was sanctioned by the Board of the Ministry of Education of the RF

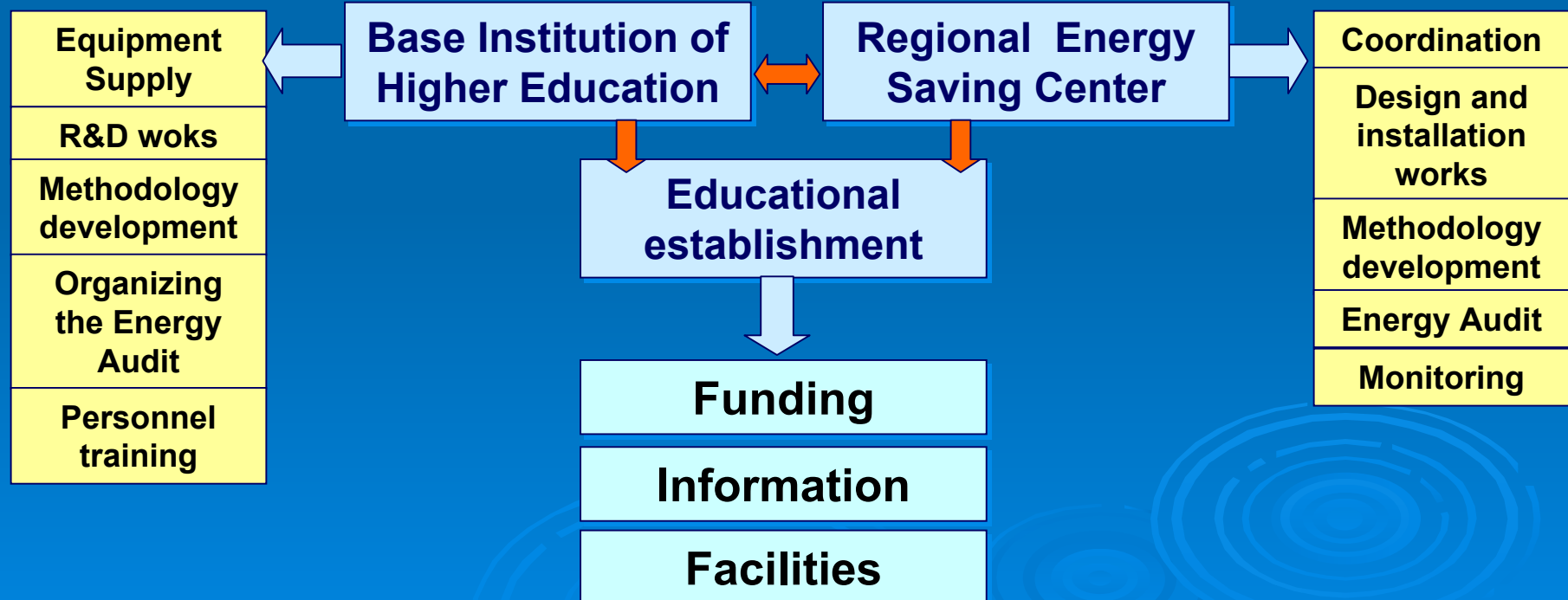
Institutional-financial scheme of the Programme management

Agreement

Ministry of Education
of the RF

Regional
Administrations

Ministry of Energy of
the RF



Stage I

Energy inspection of buildings of educational establishments, assessment of the energy saving potential, formation of the infrastructure on the basis of universities

Modernization and re-construction of energy supply systems with the use of low-cost energy saving measures, installation of energy consumption control and metering systems

Training and vocational re-training of qualified specialists dealing with energy saving in educational establishments

Development of model fast pay back energy saving measures and their dissemination in educational establishments of the Ministry of Education of the RF

Regional Energy Saving Centers at Universities

North-Western FD

- ESC within the Arkhangelsk State University (SU).
- ESC within the Murmansk SPU.
- Educational-scientific ESC within the Novgorod SU.
- ESC within the Petrozavodsk SU.
- Interuniversity ESC on a basis of the St. Petersburg SEU.
- Institute 'Energy Saving' within the Vologda STU.
- Regional ESC within the Ukhta STU.

Urals FD

- ESC within the South Urals SU.
- RESC within Ural STU

Siberia FD

- Regional Innovation ESC within the Altai STU.
- CENEf of the Krasnoyarsk STU.
- Regional ESC at the Novosibirsk STU.
- Technical Center "Energy" within the Omsk STU.
- Regional Scientific Technical ESC within the Tomsk STU.
- Regional ESC within Irkutsk STU

Central FD

- STESC within the MEI (TU).
- STK "Energy saving" within the Belgorod STA of building materials.
- ESC of the Ivanovo SEU.
- Regional ESC within the Kostroma STU.
- Innovation ESC within the Kursk STU.
- Regional ESC within the Orel STU.
- ESC of the Tambov STU.
- Center "Energy efficiency" within the Tver STU.
- Educational-technical Center "Energy efficiency" of the Tula SU.
- Laboratory of energy audit and resource saving within the Bryansk SITA.

Southern FD

- Regional ESC within the Volgograd STU.
- ESC of the Southern-Russia STU.

Privolzhskiy FD

- NICE within the Nizhny Novgorod State Technical University (STU).
- ESC Tatarstan within the Cabinet of Ministers of Republic of Tatarstan.
- Innovation ESC within the of Saratov STU.
- ESC within the Samara STU.
- ESC within the Ufimskiy Oil STU.
- Scientific-educational ESC within the Perm STU.
- ESC within the Vyatka SU.
- Udmurt ESC of the Izhevsk STU.

Far-East FD

- ESC within the Far-East SAEU



Stage II

Introduction into Programmes of Higher educational establishments, technical colleagues, technical high schools, dissemination of the model energy saving measures

Development of the new energy saving equipment and technologies

Development of the scientific and methodical bases for the establishment of a complex long-term energy saving programmes for educational establishments

Development of the information-analytical energy consumption monitoring programme “Metering and control of the fuel and energy resources (F&E resources) consumption”

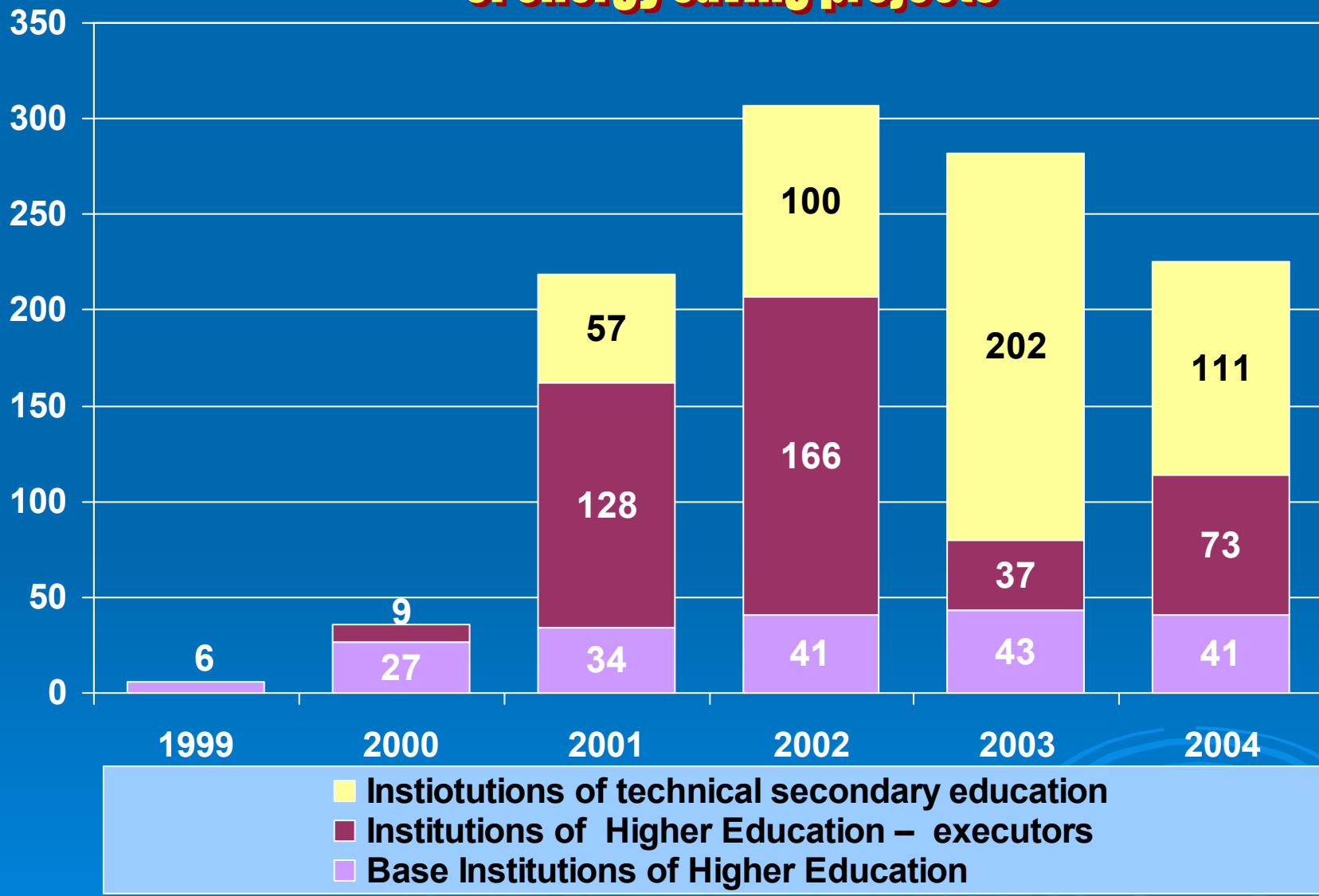
During 5 years energy saving measures have been implemented at 923 educational establishments.

The amount of extra-budgetary funds raised totals to more than \$35 million.

Energy Saving Program finance in 1999-2004

Year	Amount of finance, million dollars				Annual economical effect, (million dollars)
	Total	Including			
		Russian Ministry of Education	Regional Administrations	Own means of edu- cational institutions	
1999	1.16	0.36	0.2	0.49	0.48
2000	6.99	3.03	2.46	1.49	3.31
2001	11.52	3.43	5.35	2.74	3.97
2002	8.54	3.35	2.52	2.67	3.18
2003	14.59	5.35	2.86	6.37	4.44
2004	13.31	4.15	2.29	6.87	4.22
TOTAL	56.03	19.69	15.69	20.64	19.62

Participation of educational institutions in the implementation of energy saving projects





Economically efficient energy saving measures in Russian Educational Sector UNDP/GEF Project

LONG-TERM

Energy saving in educational establishments,
reduction of green house gases emissions

GOAL

SHORT-TERM

Development and testing of replicable
models of implementation of low-cost
energy saving measures in schools and
universities



THE BASIC DIRECTIONS OF THE PROJECT



**Educational Program on
Energy Saving**



**Realization of demonstration projects,
development and realization of revolving
finance mechanisms**



**Creation of conditions for sustainable
development of the results of the pilot phases
of the project in Russia**



PROJECT STAKEHOLDERS

National Project Executing Agency:

- Ministry of Education and Science of the Russian Federation

Project stakeholders:

A. Russian institutions:

- * Regional and Local Administrations in the pilot regions;
- * universities, schools;
- * NGOs;
- * companies and communities in the pilot region

B. Foreign institutions:

- * NEEG - Norwegian Energy Efficiency Group;
- * Norwegian Nature Conservation Society.



PROJECT BUDGET

Total budget: – 4.1 mio.USD

Major Donor:

GEF - Global Environment Facility – 1 mio.USD

GEF Executive Agency:

UNDP – United Nation Development Program

Co-financing Agencies:

- * Russian Ministry of Education and Science – 700 thsd. USD
- * Regional / local administrations in the pilot regions ~ 700 thsd. USD
- * Russian higher education institutions ~ 700 thsd. USD
- * Norwegian Ministry of Foreign Affairs – 600 thsd. USD
- * Nefco - Nordic Environment Finance Corporation ~ 300 thsd. USD
- * Administrations of the pilot regions – 100 thsd. USD



PROJECT OBJECTIVES

The overall objective -

contribute to the reduction of greenhouse gas emissions by improving the energy efficiency of Russian educational facilities.

The immediate objective of the project –

develop and verify replicable models for low-cost energy saving measures in both municipal and federal educational buildings.



PROJECT STAGES

Terms: January 2003 – January 2005

Project Stages :

- I. Implementation of the subprojects in the pilot region
- II. Development of information materials and infrastructure for disseminating and sustaining project results
- III. Dissemination of information, knowledge and experiences achieved within the project in all Russian Federal Okrugs



PROJECT TERRITORY

Pilot regions:

- Republic of Karelia
- Arkhangelsk Oblast
- Murmansk Oblast
- Tver Oblast





ENERGY EFFICIENCY EDUCATION PROGRAM

Results achieved:

- School educational program on environment and energy efficiency developed and approved on local and regional level as elective course;
- Teachers training system developed for the pilot regions;
- Public boards in operation in the pilot regions;
- NGO activities established to participate in dissemination of the results;

Expected results:

- Scientific evaluation of the results and documentation of energy saving from 60 schools.



SUSTAINABLE FUNDING MECHANISMS FOR FINANCING ENERGY EFFICIENCY

Results achieved:

- 15 experts on energy saving project management trained;
- 20 school energy efficiency projects prepared;
- Key Numbers method developed and approved for typical Russian buildings and climatic zones;

Expected results:

- 20-30 % energy saving in 8 to 10 municipal schools and in 4 university buildings;



CAPACITY BUILDING AND DISSEMINATION OF PROJECT RESULTS

Results achieved:

- 15 experts trained and follow-up training started;
- 7 Federal Energy Efficiency Centers based at universities defined, dissemination launched;

Expected results:

- Pilot projects on energy efficiency developed for every 7 Russian Federation Okrugs;
- Information System covering the network of all project stakeholders and interested parties all over the Russia created.



PROJECT WEBSITE

www.energy-efficiency.ru/project

Экономически эффективные энергосберегающие мероприятия в российском образовательном секторе

Русский / English

[О проекте](#)

Краткая информация о проекте.
Буклет и презентация

[Школьная программа](#)

Образовательная программа по энергосбережению для средней школы

[Подготовка экспертов](#)

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Бесплатно.

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Ссылки на организации-спонсоры и участников проекта.

[Тендеры, вакансии](#)

Официальные объявления о тендерах на закупку товаров и услуг

[О проекте](#)

Проект **"Экономически эффективные энергосберегающие мероприятия в российском образовательном секторе"** ставит целью разработку и апробацию тиражируемых моделей организации и проведения низкочастотных мероприятий по энергосбережению в образовательных учреждениях России.

[Посмотреть буклет проекта \(на рус. и англ. яз.\)](#)
[Скачать презентацию проекта \(на рус. яз.\)](#)

Проект реализуется под руководством Министерства образования и науки РФ при финансовой поддержке Программы развития ООН / Глобального экологического фонда (ГЭФ) и софинансировании Министерства образования и науки Российской Федерации, Северной финансовой корпорации (NEFCO), МИД Норвегии, региональных администраций пилотной территории Проекта, средств образовательных учреждений Министерства образования Российской Федерации. Пилотная территория Проекта—Республика Карелия, Архангельская, Мурманская, Тверская области.

ПОДПРОЕКТЫ:

Aims of the website:

- Project presentation.
- Presentation of project results. Project outcomes are free for downloading and use.
- Information system for dissemination project results.

Cost Effective Energy Efficiency Measures in the Russian Educational Sector

THANK YOU!