

The Nordic Environment Finance Corporation (NEFCO) is an international finance institution, which was established in 1990 by the five Nordic countries, Denmark, Finland, Iceland, Norway and Sweden. NEFCO finances a wide range of environmental projects in Eastern Europe, mainly in Russia, Ukraine and Belarus in order to generate positive environmental benefits for the Nordic region.

NEFCO provides financing for projects aimed at reducing environmentally harmful emissions and discharges, such as greenhouse gases and toxic pollutants. Currently, NEFCO's project portfolio of approved projects contains over 400 projects.

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Windmill for Dolgoschelye village

In 2009, a windmill, with a generating capacity of 90 kW, was installed in the village of Dolgoschelye in the northern part of the Archangel region of Russia. The windmill was purchased, transported and installed with the help of a loan disbursed from NEFCO's Facility for Energy Saving Credits.

The sole source of power for this village, of slightly over 700 inhabitants, which depends on small scale fishing for its livelihood, has been four diesel generators, which require 240-250 tonnes of fuel at an annual cost of some EUR 120,000.

"This windmill will enable the local community to reduce its dependence on diesel fuel and provide clean energy for the village's school, day care centre, library and health centre, to mention a few examples. The project is in other words both environmentally and socially beneficial, says NEFCO's Senior Manager, Elisabet Paulig-Tönnes.

The project was carried out in close cooperation with the Energy Efficiency Center in Archangel. The Dolgoschelye windmill project will reduce the release of carbon dioxide by some 204 tonnes per year.



Refurbishment of schools in Ivano-Frankivsk

In 2010, NEFCO agreed to co-finance an energy efficiency project in Ivano-Frankivsk, a municipality situated in Western Ukraine, which has some 240,000 inhabitants.

Under the terms of the project, four pre- and five general schools will be refurbished by replacing thermal insulation on water pipes, installing new heating units and replacing existing windows with double-glazed, energy efficient ones.

The business plan for the project was prepared by the Ukrainian company Fiatu LLC and co-financed by The German Society for Technical Cooperation. The project has also been supported by The Institute for Budgetary and Socio-Economic Research (IBSER) in Ukraine.

The total investment cost for the project is EUR 344,000 (UAH 3.6 million) and the estimated payback period is 3.5 years. It is estimated that the municipality will save EUR 98,000 per year in heating costs as a result of these energy efficiency installations.

The Ivano-Frankivsk project is one of the first municipal energy saving projects in Ukraine to be financed by NEFCO under the framework agreement, which was ratified by the Ukrainian parliament and signed by President Victor Yanukovich in 2010.

Ukraine accounts for 12.2 percent of all the funds disbursed by NEFCO's two main financial instruments; the Investment Fund and the Nordic Environment Development Fund.



Clean water and energy saving in Kostomuksha and Segezha

In 2009, NEFCO signed two new energy saving agreements with the city of Kostomuksha and the Valday settlement in the Segezha municipal district in Karelia. The Valday project includes the reconstruction of the drinking water supply system. The Kostomuksha project is aimed at installing automatic heating subcentrals connected to local school buildings and day care centres.

It is estimated that both projects will reduce carbon dioxide emissions by some 643 tonnes per year. NEFCO approved the loans for both projects from its Facility for Energy Saving Credits.

"The projects which we are involved in benefit the environment and generate savings for the municipalities in question. For instance, the project in Kostomuksha will save approximately 15 per cent of the municipality's annual heating costs for the buildings concerned," says Senior Manager Elisabet Paulig-Tönnes from NEFCO.



Upgrading the hospital and day care centre in Velsk

In 2006, NEFCO and the municipal authorities from Velsk district, which is located in the southern part of the Archangel region of Russia, concluded an agreement to institute energy saving measures at the Central District Hospital and the Orlyonok Day Care Centre.

The district hospital has some 220 beds and caters for close to 500 patients a day. The day care centre has some 160 children.

The total investment cost for the project was RUB 9,987,000 and NEFCO's Facility for Energy Saving Credits provided RUB 8,830,000, with the municipality topping up the rest.

Under the project, heat pipes, valves and floors were insulated and incandescent lamps were replaced with energy efficient ones. A new automated heating substation was also installed and the windows were renovated and insulated.

The project has resulted in savings of over 1.5 million kilowatt hours of electricity per year and has reduced emissions of carbon dioxide from the city by some 425 tonnes per year, mainly as a result of reduced consumption of heavy crude oil.

Overall, the quality of life for both patients and day care children has improved considerably, thanks to high-quality controlled indoor temperature.

NEFCO'S Energy Saving Credits



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The Facility for Energy Saving Credits

The Nordic Environment Finance Corporation's (NEFCO's) Facility for Energy Saving Credits is a loan programme, which falls under the Nordic Environment Development Fund (NMF) and is intended to offer small scale financing primarily for energy saving measures in municipally owned buildings such as schools, day care centres, hospitals and sports facilities. The energy saving measures can, for instance, include refurbishment of heat sub-centrals, installation of thermostatic valves together with insulation of windows and doors.

Loans can also be granted for the replacement of mercury-vapour street lamps with energy saving ones. In exceptional cases small scale wind mills can be financed by the facility. The facility only provides loans to Russian or Ukrainian municipalities or municipal companies.

The main objective of the facility is to promote emissions reductions via reduced energy consumption, and the environmental monitoring is mainly focused on the release of carbon dioxide, nitrogen and sulphur oxides as well as volatile compounds.

Under the terms of the facility, NEFCO may finance, in local currency, up to 90 per cent of the investment costs of any project being financed under the credit programme. In Russia, the maximum loan amount granted under the facility is RUB 9.5 million and in Ukraine it is UAH 3 million.

The repayment of the loan is directly linked to the savings of the investment with a maximum repayment period of 5 years. The Nordic Environment Development Fund (NMF) has funds in excess of EUR 60 million and has, since its inception, approved over 200 projects.

Terms and conditions

LENDER	Nordic Environment Finance Corporation.
BORROWER	Municipality or municipally-owned company in Russia or Ukraine.
ELIGIBILITY CRITERIA	Investments in energy saving technologies in social facilities such as schools, day care centres, hospitals and sports facilities.
LOAN AMOUNT	Maximum loan amount; RUB 9.5 million in Russia and UAH 3 million in Ukraine. NEFCO can finance up to 90% of project costs.
PAYBACK PERIOD OF INVESTMENT	Up to 4 years. Project payback is calculated by dividing the total project cost with the anticipated annual cost savings generated from the project.
INTEREST RATE	Fixed at 3% per annum and tied to the duration of the facility. No commission or other fees.
CURRENCY	Lending in local currency.
ENERGY AUDIT	Energy audit is required.
SECURITY	Municipal guarantee .
DISBURSEMENT	The loan agreement is signed between the local bank and the borrower and funds are disbursed through the bank. NEFCO has an arrangement with local banks for on-lending of the energy saving credits. The loan is disbursed to the borrower's account in three tranches based on the project implementation schedule and the respective contractual obligations of the borrower.
REPAYMENT SCHEDULE	The loan shall be repaid in equal quarterly installments, with the first payment being effected approximately 6 months after project completion. Payments are made to the local bank.
LEGAL SUPPORT AND MONITORING COSTS	The legal as well as the monitoring costs related to the project are covered by NEFCO.
BORROWER COSTS	Preparation of energy audit and business plan.
PROCUREMENT	Procurement of goods and services financed by NEFCO shall be open and fair.
DURATION OF PROCESS	The whole process, from application to the first disbursement of the loan, can take up to 6 months.

Geographic distribution of NEFCO-financed energy saving projects in Russia



The application process



Examples of NEFCO financed energy savings projects

Case 1
 Customer: Municipality
 Project description: Energy savings measures in one school and two buildings of the central district hospital. Insulation of pipelines, reconstruction of heat points with balanced heating system, replacement of lamps windows and doors, introduction of energy monitoring system.

Investment: **RUB 9.3 million**
 NEFCO share: **RUB 8.0 million**
 Payback time: 5.2 years (planned 4.6 years)
 Reduction of CO2 emissions: 214 tonnes per year

Case 2
 Customer: Municipal utility company
 Project description: Modernization of street lighting system. Replacement of 1,200 DRL-250 W lamps by Dnat-150 W lamps including installation of control system and introduction of multi- tariff electricity metering.

Investment: **RUB 4.1 million**
 NEFCO share: **RUB 3.4 million**
 Payback time: 4.4 years
 Reduction of CO2 emissions: 413 tonnes per year

Case 3
 Customer: Municipality
 Project description: Installation of individual heat points with balanced heat system in 14 buildings of the educational sector. The project covered installation of thermostatic valves on heating devices and heat metres as well as introduction of an energy monitoring system.

Investment: **RUB 10.6 million**
 NEFCO share: **RUB 9.5 million**
 Payback time: 4 years
 Reduction of CO2 emissions: 1,970 tonnes per year

Case 4
 Customer: Municipality
 Project description: Installation of 11 modern automatic heat points with balanced heating system including insulation of pipes in buildings of the educational sphere.

Investment: **RUB 10.1 million**
 NEFCO share: **RUB 9.0 million**
 Payback time: 4.8 years
 Reduction of CO2 emissions: 580 tonnes per year