

NEFCO'S Energy Saving Credits



Nordic Environment Finance Corporation



The Facility for Energy Saving Credits

The Nordic Environment Finance Corporation's (NEFCO's) Facility for Energy Saving Credits is a loan programme, under the Nordic Environment Development Fund (NMF) which 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 for Energy Saving Credits 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 Facility, NEFCO can finance, in local currency, up to 90 per cent of the investment costs of any project being financed under the credit programme. The maximum loan amount granted under the Facility is equivalent of EUR 400,000 in local currencies.

The repayment of the loan is directly linked to the estimated savings of the investment with a maximum repayment period of 5 years. 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, sports facilities and replacement of street lights.
LOAN AMOUNT	Maximum loan amount: equivalent of EUR 400,000 in local currencies. The loan is provided in RUB in Russia or UAH in Ukraine. NEFCO can finance up to 90% of project costs.
PAYBACK PERIOD OF INVESTMENT	Up to 5 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 loan. No commission or other fees.
CURRENCY	Lending in local currency.
ENERGY AUDIT	Energy audit is required.
SECURITY	Municipal budget guarantee.
DISBURSEMENT	In Russia, the loan agreement is signed between the local bank and the borrower and the funds are disbursed through the local bank. NEFCO has an arrangement with local banks for on-lending of the energy saving credits. In Ukraine, the loan agreement is signed between NEFCO and the borrower. The loan is disbursed to the borrower's account in the local bank in three tranches based on the project implementation schedule and the terms of the loan agreement.
REPAYMENT SCHEDULE	The loan shall be repaid in equal quarterly installments, with the first payment being effected approximately 6 months after project completion.
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 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 and Ukraine



The application process

Project proposal

A two-page project proposal conforming to a standardized format is submitted to NEFCO by the applicant.

Business plan

After NEFCO has assessed the project proposal and if approved, the applicant is requested to present a business plan.

The business plan, written in English, should conform to NEFCO's standard template. External consultants, appointed by NEFCO, review the plan, which is then presented to the NEFCO's investment committee. A decision on whether the business plan has been approved or not is normally made within one month.

Loan agreement

If the business plan is approved, negotiation and signing of loan agreement.

Loan disbursement

Upon fulfilment of all the required conditions precedent for disbursement, the loan is disbursed in three tranches.

Environmental reporting

Up until the full repayment of the loan, the borrower is required to submit annual reports about the project's environmental effects.

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: Energy savings measures in two day-care centres, three schools and five healthcare facilities. Installation of solid fuel boiler, replacement of windows and external doors, automatic regulation for heat consumption etc.

Investment: **UAH 1.2 million**
NEFCO share: **UAH 1.1 million**
Payback time: 3.8 years
Reduction of CO₂ emissions: 89.4 tonnes per year

Case 4

Customer: Municipality

Project description: Energy savings measures in one day-care centre and replacement of obsolete street lights with new LED lamps. Installation of metering and control devices for heating, installation of new heat exchanger etc.

Investment: **UAH 3.6 million**
NEFCO share: **UAH 3 million**
Payback time: 5 years
Reduction of CO₂ emissions: 519 tonnes per year



Low-energy solutions in Gurievsk

In 2011, the municipality of Gurievsk in the Kaliningrad region in Russia joined forces with NEFCO to upgrade the town's street lighting system. Energy-intensive lamps were replaced by light-emitting diode (LED) lamps, which consume less energy and do not contain toxic substances or hazardous heavy metals. Lamps containing mercury were removed for safe recycling.

These replacements have reduced electricity consumption by some 270,000 kWh per year, which translates to 122 tonnes reduction in carbon dioxide emissions. The reduction in energy consumption has resulted in annual savings of some 1 267,000 roubles for the municipality.

NEFCO financed the Gurievsk project from its Facility for Energy Saving Credits, channelled through Raiffeisen Bank in Russia.

The project in Gurievsk was NEFCO's first municipal energy saving project in the Kaliningrad region. NEFCO has previously financed similar projects in the Archangel region and in Segezha in Northern Karelia, where mercury lamps were replaced with energy saving sodium lamps.



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.

In this project, four pre- and five general schools have been 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. The municipality has saved approximately EUR 98,000 per year in heating costs as a result of these energy efficiency installations.

Ukraine accounts for 17 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 respectively, 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 focused at installing automatic heating subcentrals connected to local school buildings and day care centres.

It is estimated that both projects have reduced 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 benefit the environment and generate savings for the municipalities in question. For instance, the project in Kostomuksha has saved approximately 15 per cent of the municipality's annual heating costs for the buildings concerned," says Senior Manager Elisabet Paulig-Tönnies from NEFCO.



Energy efficiency support for Zhytomyr

In 2012, the Ukrainian city of Zhytomyr and NEFCO signed a EUR 300,000 loan agreement to finance energy efficiency measures in the city. The funds were used to revamp the city's street lighting system and refurbish municipally owned buildings with more efficient insulation systems and heat exchangers.

The project will save approximately 560 megawatt hours of electricity and 360 megawatt hours of thermal energy per year for the city. Moreover, the city of Zhytomyr will recoup some 721,000 UAH from these energy saving measures. Environmental payoffs will also be substantial as the project is expected to reduce CO₂-emissions by some 483 tonnes per year.

The Zhytomyr energy efficiency project was approved by the Ministry of Finance and the National Bank of Ukraine. The feasibility study for the project was financed by the Swedish International Development Cooperation Agency (Sida). The Ukrainian Institute for Budgetary and Socio-Economic Research (IBSER) has also provided technical support for the project.

One of the buildings that were renovated is the municipality's biggest day-care centre, number 21, for almost 400 children aged 0-6 years.

"It used to be draughty and cold at the day-care centre in the winter. With the new windows and new thermostats, we can now regulate the temperature and don't need to wrap up the children when they're indoors," explains the Head of the day-care centre Kateryna Tomaskevka.

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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