

National Fund for Environmental Protection and Water Management
Green Investment Scheme Operator in Poland



GREEN INVESTMENT SCHEME

PROJECTS REALIZATION IN POLAND



Warsaw 2014

Green Investment Scheme (GIS) in Poland

Thanks to restructuring of the Polish economy in the nineties of the twentieth century, greenhouse gas emissions in Poland were reduced significantly below the target level set in the Kyoto Protocol. On 29 April 2008 Poland met the necessary criteria and qualified for inclusion to the international system of emissions trading (Article 17 of the Kyoto Protocol), including trade of AAUs. The Polish Act on the management of emissions of greenhouse gases and other substances as of 17 July 2009 (the "GIS Act") set forth, inter alia, that: proceeds from the transactions will be "greened", namely assigned exclusively for financing the projects aimed at reducing greenhouse gases emissions or adaptation to the climate changes – both investment (i.e. hard) and non-investment (soft). According to the GIS Act, the National Operator of Green Investment Scheme is the **National Fund for Environmental Protection and Water Management (NFEP&WM)**.

The National Operator ensures the implementation of GIS in accordance with the following principles:

- transparency in funds disbursement
- projects identification using competitive call for proposals mechanism
- projects selection meeting the eligibility criteria through a competitive process
- estimation of the funded projects impact on the environment in accordance with the developed methodology
- projects selection and their ranking based on economic efficiency of obtaining the environmental effect
- strict rules regarding monitoring, reporting and verification of existing beneficiaries and NFEP&WM

Within the scope of the GIS, the National Operator is currently implementing financial programs in the following areas:

Biomass heat and power plants

Beneficiaries: private entities conducting projects concerning construction of biomass plants

Types of projects: construction of biomass plants for heat and electricity generation (dispersed sources with a rated thermal power below 20 MWt)

The minimum total cost of the project: approximately EUR 0.5 million

Possible forms of co-financing:

- subsidy up to 30% of eligible costs
- loan up to 45% of eligible costs

Exemplary project:

Construction of biomass heat and power plant with ORC block in Gdańsk

In December 2013 MALTEUROP POLSKA Sp. z o.o. completed construction of a modern biomass-fired cogeneration ORC block type heat and power plant in Gdansk. Within the scope of the project cogeneration ORC block of "split" version was built as well as the necessary buildings and power and heating connections.

The effects:

- Installed power:
 - heat: 4.15 MW
 - electricity: 0.95 MW



- Planned energy generation:
 - heat: about 89 TJ/year
 - electricity: about 68 GWh/year
- Production of renewable energy will help to avoid the emission of over 62,000 tonnes of CO₂ per year

Agricultural biogas plants

Beneficiaries: private entities conducting projects concerning generation of biogas to produce electricity (and heat) or to introduce a clean gas to the gas distribution grid.

Types of projects:

- construction of heat and power plants using biogas from agriculture
- construction or modernization of installations used for production of biogas from agriculture
- minimum total cost of the project amounting to approximately EUR 1.25 million



Possible form of co-financing:

- subsidy up to 30% of eligible costs
- loan up to 45% of eligible costs

Exemplary project:

Construction of agricultural biogas plant in Grochów Szlachecki

The construction of agricultural biogas plant in Grochów Szlachecki was finished on December 31, 2013. The project concerned construction of agricultural biogas plant producing electricity and heat in cogeneration with the necessary connections.

The effects:

- installed electric power: 0.7 MW
- installed heat capacity: 0.7 MW
- The planned production of electricity: 5.6 GWh/year
- Reduction of CO₂ emissions as a result of production of renewable energy will amount to 4 615 tons per year

Construction and reconstruction of electricity networks for connecting renewable wind energy sources (RES)

Beneficiaries: private entities implementing projects for efficient transmission and distribution of electric energy

Types of projects: the construction, extension or reconstruction of the electricity network aimed at enabling wind farms connection to the national power grid, including the implementation of the following tasks:

- construction of new sections of overhead and cable networks and ensuring connection for wind farms (transformer, line segment from the energy source to a connection to the national grid)
- construction of the reserve sources of electricity in order to stabilize the networks periodically supplied from renewable energy sources
- power grid modernization consisting in increasing the permissible operating temperature of the transmission line (in order to connect new wind farm).



Possible form of co-funding: subsidy up to 40% of eligible costs (around EUR 50 for each kW of connected electrical power from the wind power generation sources)

Exemplary project:

Construction of the infrastructure necessary to connect the wind farm “Iłża” to National Power System

Currently, one of the most advanced projects is carried out in the commune of Iłża in the south-central part of the country. MOLEN WIND II Sp. z o.o. will have constructed the infrastructure for connecting the wind farm “Iłża” to the National Power System by the end of June 2014. The activities involve the construction of the heat and power station and a network of 30 kV cable lines to connect turbines of the local wind farm.

Expected results:

- introduction to the National Power System electricity generated by connected wind power plants – 105 GWh/year
- avoiding carbon dioxide emissions as a result of work of connected wind power plants – 93.5 thousand tons/year

Energy efficiency improvement in public buildings

Beneficiaries:

- public institutions
- local government units
- NGOs
- churches and other church organizations
- universities
- cultural institutions
- research institutes
- health care facilities
- Polish Academy of Sciences



Types of projects: modernization aimed at improvement of energy efficiency of public buildings, especially:

- insulation of external building partitions
- windows and doors replacement
- reconstruction of the heating system (including replacement of the heat source)
- replacement of HVAC systems
- setting up energy management systems
- use of renewable energy technologies
- replacement of interior lighting systems with energy-efficient ones

Possible form of co-funding:

- subsidies up to 30% of eligible costs
- loan up to 60% of eligible costs
- in case of projects concerning improvement of energy management in selected public finance buildings: a grant of up to 100% of eligible costs

Exemplary project:

Improvement of the energy management in 11 public buildings in Miedźna Commune

The project named “Comprehensive thermal efficiency improvement with the modernization of the heat sources in the public buildings in Miedźna Commune”, (completed in November 2013) concerned 11 buildings located in 4 towns in the commune: 5 kindergartens, 4 primary schools, building of a junior secondary school with integration units and the building of the municipal office. The scope of work included:

- insulation of walls
- ceilings and roofs
- replacement of windows and doors
- modernization of central heating system
- stoves replacement
- connection of new heat substations
- valves fitting
- installation of internal central heating systems
- installation of programmable weather controllers
- upgrading of the domestic hot water system

The effects

- The total reduction in energy consumption by 20 230 GJ per year
- Avoiding emissions of 1,439 tons of CO₂ per year, as a result of lower demand for energy

Energy-efficient street lightning (SOWA programme)

Beneficiaries: local government units

Types of projects:

- modernization of street lighting systems
- installation of equipment for intelligent lighting control
- installation of controlled systems of power reduction and stabilization of the supply voltage

Possible form of co-funding:

- subsidy up to 45% of eligible costs
- loan up to 55% of eligible costs



Project example :

Implementation of energy-efficient and intelligent street lightning in Krasnystaw

In February 2014 NFEP&WM entered into an agreement for the modernization of lightning - the exchange of 1738 light points and control cabinets in Krasnystaw. The project is planned to begin in July 2014 and to finish at the end of September 2014. Moreover, as a result of improving safety through better lightning of roads and the urban space, electricity consumption in Krasnystaw will fall by approximately 600 MWh per year, and therefore the annual CO₂ emission will fall by 535 tons.

Low-emission urban transport (GAZELA programme)

Beneficiaries:

- local government units
- entities performing public tasks in the field of local transport

Types of projects:

- development of low-emission public transport fleet, such as:
 - purchase of new hybrid CNG buses
 - drivers training
- investments in infrastructure and management, such as:
 - modernization and construction of service stations and fuel stations for public transport vehicles to fit the needs of hybrid CNG buses



- modernization and construction of bicycle routes
- modernization and construction of bus lanes
- modernization and construction of car parks of "park and ride" type
- implementation of urban traffic management systems
- implementation of the system of urban cycling

Possible forms of co-funding: subsidy up to 100 % of eligible costs

As a result of the first call for proposals for funding the above undertakings, in April 2014 two winning, major projects (from the cities of Gdynia and Częstochowa) were selected; they will receive funding, while another 15 projects are placed on the reserve list.

Implementation of existing projects within the scope of GIS

Since 2010, the GIS National Operator announced 16 calls for proposals, covering all of the above financial programs. The information on the calls and their results are published on the website www.nfosigw.gov.pl. Till the end of March 2014, more than 300 subsidy agreements were concluded with the beneficiaries, for the following amounts:

- **EUR 113.2 million** – energy management in public buildings
- **EUR 14.9 million** – construction, extension and reconstruction of electricity networks for connecting renewable wind energy sources
- **EUR 11.7 million** – biogas plants producing agricultural biogas
- **EUR 4.2 million** – energy-efficient street lighting
- **EUR 3 million** – biomass heat and power plants

More than 200 projects in the field of energy management in buildings have already been completed. Thereby, the energy efficiency of a number of nurseries, kindergartens, schools, universities, hospitals and cultural facilities has been improved. During the last call for proposals under the program (January 2014) another 149 applications for the projects funding were submitted, the total cost of which amounts to nearly EUR 170 million. In addition, in 2013 the National Operator conducted two calls for proposals within the scope of programs: energy-efficient street lighting (33 projects selected) and low-emission urban transport (17 projects).

Till the end of 2014, the GIS National Operator plans to spend the amount of approximately EUR 32.2 million and till the end of 2015 – additional EUR 34.8 million.

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