

Financial support for CO₂ reduction projects

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- ***Legal and institutional measures to promote investments in GHG emission reduction projects***

Strategical documents

- National sustainable development strategy, 2001 (National environmental strategy, 1996);
- National energy efficiency programme, 2006;
- National energy strategy, 2007;
- National strategy for implementation of UNFCCC, 2006;
- Single Programming Document, 2004
- Lithuanian strategy of EU structural aid use in 2007-2013;

National sustainable development strategy, 2001

- To reduce energy intensity of GDP by 50% up to 2020;
- To reach the share of renewables – 12% in TPES by 2010;
- To reach the share of renewables – 10% in total electricity production by 2010;
- To reach the share of CHP –35% of total electricity production by 2020;
- To reduce CO₂ emissions per GDP, per energy unit;
- To reduce SO₂, NO_x emissions per GDP, energy unit.

The responsible institution is Ministry of Environment

National energy efficiency programme, 2006

- **Aim:** Upgrading the efficiency of energy production and consumption and extension of use of renewable energy sources.
- **Targets:**
- CHP would make 20% up to 2010 and 35% up to 2020 of all electricity produced
- RES would make 12 % in total primary energy supply up to 2010
- RES would make 7% of total electricity consumption up to 2010
- heat consumption in buildings would be reduced by 7% up to 2010
- waste energy resource utilisation would make 2 TWh up to 2010;
- biofuels would make 5.75% of all fuel used in transport sector by 2010;
- GHG emissions would not exceed Kyoto target (8% reduced GHG emission level of 1990);
- CO₂ emissions would decline by 32% from 2004 level in 2010;
- SO₂ emissions would decline by 3% from 2004 level in 2010;
- NO_x emissions would decline by 21% from 2004 level in 2010;

The responsible institution is Ministry of Economy and **implementing body** is Energy Agency

National strategy for implementation of UNFCCC, 2006

- **Aim:** To implement Kyoto target
- **Targets:**
- To ensure natural gas share of 35% in 2012
- To ensure 13% of RES in total primary energy supply up to 2012 (not less than 12 TWh produced from RES) and 15% by 2020;
- To reduce energy intensity of GDP by 40-50%;
- To ensure the share of new technologies by 20-25% in industrial production;
- To increase the share of CHP and achieve 35% in electricity production by 2020
- To ensure 13% of biofuels used in transport sector by 2012

The responsible institution is Ministry of Environment, LEIF

National energy strategy, 2007

- **Aim:** well balanced, modern energy sector able to ensure security of supply and having small impact on environment, creating conditions for economic growth. The chapters in strategy are based on priorities of energy sector development.
- The targets:
- To reach the share of renewables – 12% in TPES by 2010 and 20% by 2025;
- To reach the share of renewables – 7% in total electricity production by 2010 and 10% by 2025;
- To reach the share of CHP –20% up to 2010 and 35% up to 2020 of total electricity produced in that year;
- The Law sets a target to increase the share of bio fuel consumed in the transport sector to 5.75% in 2010, 15% by 2020 and 20% in 2025

The responsible institution is Ministry of Economy and
Implementing body is Energy Agency

Institutions

- Lithuanian Environmental Investment Fund
- Energy Agency;
- Ministry of Economy;
- Ministry of Environment;
- Fund for implementation of National Energy efficiency programme
- Energy Efficiency Fund of Vilnius energija

LEIF goals and functions

- **The main goal of the LEIF is to support public and private sectors in realization of environmental projects and projects to reduce the negative impact of economic activities on environment in compliance with the Environmental Strategy of the Republic of Lithuania.**
- The Fund supports investment projects in the form of soft loans and subsidies. The Supervisory Board of the Fund establishes on annual basis, which type of applicants and which field of environmental investments shall be granted the aforementioned types of financing.
- The Fund provides financial support for environmentally beneficial investment projects of legal bodies duly incorporated in the Republic of Lithuania and engaged in economic activities, as well as appropriate projects of natural persons **and municipalities**, the implementation of which reduces negative impact on environment by the economic activities.
- Only the projects ensuring the sustainability of environmental effect are supported.

LEIF activities in climate change mitigation process

- The main source of the LEIF is 20% (since 2003 – 30%) of the pollution tax paid to the LEIF since the year 2000 on the basis of the Law on Environmental Pollution Tax. It makes about 12 mill. Lt/year. Phare capital grant is another important financial resource of the Fund. The LEIF has already received 11,5 mill. Lt from Phare funds.
- The extension of LEIF loans for financing investment projects is made through commercial banks, leasing companies, which can co-finance the projects as well as assume the risk for non-repayment of a loan.
- As per order of the Minister of Environment of the Republic of Lithuania (2003) LEIF has been charged with the implementation of mechanisms as set out in the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and the requirements of any related EU legislation.
- LEIF has been also authorized to manage and administer the Greenhouse Gas Registry

- ***Joint Implementation projects in Lithuania***

Main legal documents for JI

- The Order “On the Approval of the Inter-institutional Allocation of Functions Relating to the Joint Implementation Mechanism for the Implementation of the UN FCCC Kyoto Protocol, **Strategic Directions** for the Implementation of this Mechanism and Recommendations for the Realization of Joint Implementation Projects” of the Ministry of Environment and Ministry of Economy of the Republic of Lithuania approved on 19 May 2004 establishes priority areas for joint implementation projects:
 - Introduction of technologies based on production of electricity and heat (cogeneration) from **renewable energy sources** (wind and geothermal energy, solar energy, biomass, hydro-power, etc.);
 - Replacing one type of fuel (in energy or heating sector) with renewable and/or **less pollutant fuels**;
 - Increasing **energy efficiency**, including energy saving methods;
 - **Production of energy from methane** that is generated in agriculture and other sectors of economy and from gas obtained during oil production;
 - **Planting of forests** and other activities related to the development and protection of greenhouse absorbents and accumulators;
 - Reducing pollutant emissions from **transport vehicles in major** ¹³
cities

The Rules of carrying out JI projects

- Approved by Order of Minister of Environment on 1 April 2005;
- Track 2 procedures;
- National institution, temporarily carrying functions of Independent Entity –LEIF
- Independent Entity- JI Supervisory committee (JISC) on 15 November 2006 started accreditation process of Verifying institutions for JI:
<http://ji.unfccc.int/AIEs/ApplicAccr.html>.
- Handbook on procedures for Joint Implementation in the Baltic Sea Region should be used;

The main stages for JI

- Project idea by project Supplier should be submitted to the Ministry of Environment;
- For energy related projects the project idea is submitted to Ministry of Economy as well;
- The project idea is submitted to LEIF (National Institution) for evaluation;
- Based on **evaluation of LEIF and remarks** from Ministry of Economy Ministry of Environment decides to **approve or reject project idea**;
- Further if project idea is approved by Ministry of Environment Project Supplier develops Project Document and submits it to LEIF;
- The LEIF **evaluates PD and presents Report of evaluation to Ministry of Environment**;
- This report means that PD is approved;
- The implementation of project can be started after approval o PD by LEIF;
- The project monitoring is needed and independent experts can be contracted from list of experts adopted by Supervisory Committee
- The monitoring report is submitted to LEIF and LEIF develop **JI project implementation verification report**;
- The JI project implementation verification report came into force in 15 days after its official publication;
- At the same time Emission Reduction Units verified in JI implementation₁₅ verification report are registered in GHG Emission Registry at LEIF.

Jl projects (PD approved) in Lithuania

- Lapes landfill gas utilisation for energy generation project, Project supplier- JSC “Ekoresursai” – Project Document approved on 14.12.2006;
- Rudaiciai wind mill park, Project supplier JSC “Veju spektras”, Buyer of ERUS – Latvian company “E-kvotas”, PD approved on 18.07.2006
- Benaiciai wind mill park, Project supplier “ – JSC “Achema”, PD approved 19.09.2006
- JSC Achema N₂O reduction project in UKL-7 installations, Project supplier – JSC “Achema”, PD approved on 08.01.2007
- JSC Achema N₂O reduction in GP installations, Project supplier – JSC “Achema”, PD approved on 08.01.2007
- Reprocessing of raps for biofuels production, Project supplier – “JSC “Mestilla”, PD approved on 29.03.2007
- Sudenai and Landimai wind mill parks, Project supplier – JSC “Vejo elektra”, PD approved on 21.02.2007

The reserve for JI for 2008-2012

- **Total reserve for JI -1 mill. ERUs;**
- Minoil “Flare gas reduction project “- 18,929 EURS
- Lapes landfill gas utilisation for energy generation project – 25,840 ERUs;
- Rudaiciai wind mill park – 232,265 ERUs;
- Benaiciai wind mill park – 148,550 ERUs;
- Sudenai and Lendimai wind mill park – 110,940 ERUs;
- Total: 536,524 ERUs;
- Free reserve: 463,476 ERUs

- ***Financing of GHG emission reduction projects in Lithuania***

Funds and programmes to support sustainable energy projects

Time period	Name	Budget spent (per year or over a period)
2005-2007	The special programme- implementation of energy saving projects	1,7 mill. EUR/year
1996-2006	Lithuanian environmental investment fund	4.5 mill. EUR/year
2005-2008	Fund for implementation of National Energy efficiency programme	0,580 mill. EUR/year
2006	Financing programme for Multi-flat buildings modernization	2 mill. EUR
2004-2006	Operational programme 1: Ensuring of Energy Supply Stability, Accessibility and Increased Efficiency	82.76 mill. EUR/period

Financial aid to GHG reduction projects in recent years

	Industry	Public sector	Households	Transport
Investment subsidies	For private companies 75% from Structural Funds: Measure “Direct support to business”	For public sector 75% from Structural Funds: Measure “Ensuring of energy Supply Stability. Accessibility and Increased Efficiency “	For individual metering and regulation system in apartments (75% from Energy efficiency fund of Vilnius Energija)	75% for transport infrastructure development and quality of services from Structural funds: Priority 1.1
Soft loans	The loan should not exceed 80% of project value and provided from Lithuanian Environmental Investment Fund	The loan should not exceed 80% of project value and provided from Lithuanian Environmental Investment Fund	15-30% loan subsidy from “Financing programme for Multi-flat buildings modernization ”	

Subsidies for GHG emission reduction projects from LEIF

- The amount of the **subsidy** to one beneficiary may not exceed **350,000 Litas in three years** and **70 % of the total amount** of investment in environmental protection measures.
- Subsidies from the money of the Fund may be granted to **beneficiaries** only together **with a loan provided by a Credit Institution** (Commercial Bank, Leasing Company) for financing of the implementation of the beneficiary's project.
- Subsidies may be granted **to municipalities** and enterprises of municipalities **regardless of whether a Credit Institution** is financing their projects or not.
- The Fund may grant subsidies only for partial or total covering of a loan provided by a Credit Institution.
- Fund payments to the beneficiaries are made on the basis of an agreement on subsidies through a Credit Institution.
- The **subsidies are repaid after** a beneficiary has **fully completed implementation of the project.**

Soft Loans to GHG emission reduction projects from LEIF

- The maximum amount of a loan for financing a single investment project shall make up to **1,5 mln. litas**.
- The loan shall be provided only in national currency. Maximum term for the loan allocation **is 5 years**, if the loan is provided by the Fund.
- Fund loans are provided through Credit Institution (Commercial Banks, Leasing Companies) which assume the risk for loan non-repayment and which provide at least **30 percent** of the loan amount from their own fund.
- Fund does **not calculate interest for its part of the loan**; the interest is dependant on the margin set by the Credit Institution.

- ***Use of Structural Funds for GHG emission reduction projects***

SF in 2004-2007

Single Programming Document, Measure 1.2: Ensuring of Energy Supply Stability, Accessibility and Increased Efficiency

The funds allocated: 82.76 MEUR.

Supported activities:

- 1 - Development of energy supply networks: building of new electricity transmission lines, **development of regional district heat supply networks**, development of local natural gas distribution networks, regional cooperation and development projects;
- 2 - **Renovation of boilers and** adjustment to use other fuels (biomass or natural gas)
- 3 - **Local and renewable energy sources** development projects
- 4 - **Increase of energy efficiency** in public sector: insulation of buildings, reconstruction of energy supply equipment in buildings, energy audits etc.

SF in 2007-2013

- ***The programme of “Economic growth”***
- Priority 4.1 “Energy supply networks”
 1. Modernization of district heat supply system – 254 mill. Lt (6mill/project)
- ***Programme “Cohesion promotion”***
- Priority 3.4 “Increase in energy production and use efficiency and use of renewable energy sources”:
 1. Increase in energy production efficiency- 95 mill. Lt (6 mill. Lt/project).
 2. Use of renewable energy sources – 127 mill. Lt (18 mill. Lt/project)
 3. **Renovation of public buildings-** 791 mill Lt

The maximal amount of support for **one project for municipalities – 4 mill. Lt**

The maximal amount of support for project for governmental institutions – 8 mill. Lt

- ***Local climate change mitigation strategies in Lithuania***

Local climate change mitigation strategies

- Local authorities in Lithuania can develop their own climate change mitigation strategy based on global, EU and Lithuanian policy priorities and established targets and contribute considerably to achieving the Lithuanian Kyoto targets for CO₂ emission reduction.
- The first step in developing climate change mitigation strategy at local level – selection of the main themes relevant to climate change mitigation at local level.
- Based on experience of other countries the following main themes or priority areas for local climate change mitigation strategy development can be addressed: 1. Climate policy, 2. Buildings & housing; 3. Infrastructure (energy supply, transport, waste management etc.); 4. Land-use, forestry & agriculture. .

The framework for local climate change mitigation strategies

- The targets based on EU and Lithuanian policies (Lithuanian sustainable development strategy, National energy strategy) relevant to climate change mitigation should be defined for the main themes.
- The indicators should be developed to establish targets: GHG emissions (per capita, per GDP, per TPES); The share of energy saving in energy used in buildings; The share of biofuels in fuels used in transport sector; The share of Renewable Energy Sources (RES) in electricity and heat production; The share of RES in primary energy supply (TPES); The share of (Combined heat and power production) CHP in electricity production etc.
- The targets should be allocated for short-term, medium-term and long-term.
- Before a municipality can get to work on one or more themes, it should define a level of ambition to it. Distinctions in the framework are made between an active policy, a leading policy and an innovative policy.
- Based on the outcome, the municipality establishes its policy for the next five years (short-term), 15 years (medium term) and long-term (25 and more years).
- Action plan or action programme, which includes the measures, and actions to be implemented in established year frame is developed.
- Monitoring of strategy is necessary using indicators (CO2 balancing tool is useful)

Directive 2006/32/EC on end-use energy efficiency and energy services

- The directive was adopted on 5 May 2006. The directive should be transferred into national legal system on April 2008;
- The national energy saving target for Lithuania in 2016 is 332,6 thousand toe (3,9 TWh);
- The savings should be monitored since 1 January 2008;
- There are 3 main measures to implement directive: Energy services and energy audits; Voluntary agreements and White certificates (can be proposed by EC in 3 years after implementation of Directive)
- VA can be signed with Ministry of Economy. The examples of VA in Lithuania exist. In 2006 3 larger companies of chemical industry: Achema, Lifosa and Mazeikiu Nafta” signed VA with Ministry of Environment. They agreed to cooperate in preparation of legal documents and support environmental awareness actions in Lithuania;
- The idea of VA in energy savings were discussed with the major Lithuanian energy suppliers. The VA today can be the optimal way to implement Directive 2006/32/EC in Lithuania;

Conclusions

- Government needs more attention in implementation of national strategies on local level;
- Incentives for municipalities to develop local GHG mitigation strategies are necessary
- Investments for GHG reduction projects can be obtained from Structural Funds, LEIF and Joint Implementation projects;
- Local climate change mitigation strategies based on priorities of National strategy for implementation of UNFCCC should be developed within the framework of Local energy development plans or Strategic development plans;
- The targets set for municipalities in GHG emission reduction can be achieved mainly by supporting GHG emission reduction projects through Structural Funds.
- LEIF grants and soft loans can be also used.

Conclusions

- Other measures: town twinning, emission trading between municipalities, voluntary agreements can be used also to implement local GHG mitigation strategies;
- The CO₂ balancing tool can be applied for monitoring local GHG emission reduction strategies, in emission trading between municipalities, voluntary agreements, JI projects;
- CO₂ balancing tool can be applied for energy saving monitoring necessary for implementation of Directive 2006/32/EC;
- The post-Kyoto climate change mitigation architectures impose stringent targets for GHG emission reduction in 2020;
- The extended CDM and JI foreseen in post-Kyoto climate change mitigation architectures will be probably programme based instead of project based and CO₂ balancing tool would be good tool for monitoring and baseline setting;