

EuroACE

THE EUROPEAN ALLIANCE OF COMPANIES
FOR ENERGY EFFICIENCY IN BUILDINGS

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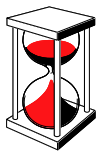
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Working paper: current financial and fiscal incentive programmes for sustainable energy in buildings from across Europe

Overview

Please note that:

- This list relies on the International Energy Agency's energy policy and MURE databases
- In some cases, National Energy Efficiency Action Plans have been drawn upon
- The geographical scope is the EEA – though Croatia, Cyprus, Estonia, Latvia, Lithuania and Malta have not yet been covered yet due to time constraints
- It is by no means comprehensive
- If the language in places sounds odd, this is because it has not been edited following automatic translation, due to time constraints
- Where information is absent, this is just due to time constraints, not necessarily because the information is not available
- **It is a living document, and any information which would complement, supplement and/or improve the accuracy of this document is gratefully received to the pedro@ukace.org email address**
- If you are reading this as a PDF, you may find the bookmarks function in Acrobat Reader helpful to navigate through this document

There are numerous important sources used for this document, as well as significant reports not used here (yet). These include (very far from exhaustive):

- The [International Energy Agency Energy Efficiency Policies and Measures database](#)
- The [MURE II database](#)
- National Energy Efficiency Action Plans submitted under the Energy End-use Efficiency and Energy Services Directive
- A Central European University report for UNEP, entitled '[Assessment of Policy Instruments for Reducing Greenhouse Gas Emissions from Buildings](#)'
- A EURIMA report, entitled '[Better Buildings Through Energy Efficiency: A Roadmap for Europe](#)'
- Countless national Government ministry, energy agency, development bank and other individual bodies' websites

Austria

Federal Promotion of Extraordinary Efficiency in Buildings – 2006 to at least 2010

€1.78bn over 4 years for energy efficiency and renewable heat

Stated objective(s)	Responsible	Type	Sector	More info
Climate change mitigation; energy efficiency	Ministry of the Environment	Grants	Residential large and small	

In January 2006, Austria's federal and state governments announced a programme to reduce the climate impacts of housing. Under the deal, residential buildings must clearly exceed regulatory standards to qualify for state funding. The agreement includes an initial insulation standard of 65kWh per square metre, falling to 25-45 kWh/m² by 2010. It also introduces new incentives for use of renewable heating systems.

Total funding available is to remain at 1.78 billion. The programme is expected to generate 10,000 additional jobs.

Energy Efficient Housing Programmes - Constitutional Treaty Between Austrian Federation and Länder – 2007, ongoing

€2bn per year, including for energy efficiency and renewable heat – proportion unknown

Stated objective(s)	Responsible	Type	Sector	More info
Housing improvement	Ministry of the Environment; Provincial governments	Grants	Existing residential	

The Länder administer subsidies of more than 2 billion annually for housing support programmes. Therefore, a majority of dwellings are constructed or renovated with public support. The financial support allocated to housing support schemes is guaranteed by the Financial Distribution Act (allocating federal tax revenues to executive bodies on federal, provincial and municipal level) for the years 2005-2008 and needs to be re-negotiated for periods thereafter.

The large amount of public money involved in the housing sector is of significant relevance for heating related energy demand and CO₂ emissions. Specific schemes can give relevant incentives for more sophisticated energy solutions, like solar heating systems, optimised thermal insulation or even zero-energy-houses.

Therefore, the Environment Minister, representing the federal government, entered into a constitution based treaty (according to Art. 15a of the Federal Constitution) with the Länder aiming at optimising the use of subsidies for housing schemes by introducing minimum standards with respect to energy profiles. This type of treaty is legally binding and needs to be implemented in legal terms by the Parties until January 2007.

The agreement provides for: shift of subsidies from construction of new dwelling to thermal renovation of existing dwellings; high quality standards for thermal renovation, including the whole building shell (exterior walls, windows and doors, ceilings and roof); maximum energy performance codes for newly constructed buildings that go well beyond standards that are foreseen in general construction codes; replacement of old fossil fuel heating systems by highly efficient systems based on renewable energy (solar or biomass) or natural gas.

klima:aktiv Programme – 2004 to 2012

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change; energy efficiency	Ministry of the Environment; Austrian Energy Agency	Grants	Existing and new residential, commercial and public	klima:aktiv website (German)

The klima:aktiv programme, running from 2004 to 2012, is overseen by the Ministry of Environment and managed by the Austrian Energy Agency. The programme aims to support energy efficiency and increased use of renewables in all sectors of the economy through direct grant support, information, and advice.

The programme has four target groups:

- 1) Energy efficiency and buildings
- 2) Mobility
- 3) Communities
- 4) Renewable Energy

These four categories comprise 22 sub-programmes, aimed at technology and service markets. They develop technological and organisational solutions able to compete on the market, take care of innovative quality standards, and promote training of all relevant professional groups.

8 sub-programmes in the energy efficiency & buildings category aim at:

- reducing heating costs and CO2 emissions through the reconstruction and modernisation of tourist enterprises, office buildings and business centres
- the modernisation of large residential buildings
- supporting ecological new buildings with passive-house technology
- encouraging energy-saving in households through widespread campaigns
- assisting companies in optimising their energy use
- providing energy performance contracting to optimise energy consumption in federal buildings
- supporting large-scale buyers in purchasing energy-efficient appliances
- providing information on energy-efficient products

Within the Mobility category, the eco-driving initiative also aims to promote a fuel-efficient driving style.

The programme also trains klima:aktiv experts, for example fuel saving advisors, expert advisors, modernising managers.

The programme is publicly visible, and will be present at about 1500 events in 2008 - 2.5 million customer contacts, half of them active enquiries, are estimated for 2008.

Third-party financing for energy efficiency investment – 2003, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Development bank	Preferential loans; third-party financing	Existing residential, commercial, industrial and public	More info

The Bürges Förderungsbank, a specialised bank that administered ERP funds, provided financial support inter alia for energy efficiency investments like insulation.

Third Party Financing for Efficiency Improvements in Public Buildings – 2001, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of the Environment	Third-party financing	Existing public buildings	More info

In March 2001, the Federal Ministry of Economic Affairs and Labour, together with the Federal Ministry of Agriculture and Forestry, the Environment and Water Management, launched an initiative on third-party financing (TPF) of energy efficiency measures in public buildings. The launch followed a successful pilot project in 64 federal schools with a usable floor-space of more than 500 000 square metres. In 2001, it was assumed that around 20% of federal buildings (representing 50% of heated space in federal buildings) were eligible for classical energy-saving contracting - measures and investments with relatively short payback periods due to energy savings could be undertaken by a third party (a "contractor" an energy planning consultant) AS of 2001, there were plans for the general renovation of a further 20% of federal buildings within the next ten years, although through a differentiated model of "guaranteed energy savings" rather than a classic third party financing. The potential annual savings of energy costs after the implementation of the projects was estimated at 6.5 million.

Stimulus Package II – 2009

€100m budget for energy efficiency in buildings

Stated objective(s)	Responsible	Type	Sector	
Job creation; energy efficiency	Federal Government;	Subsidies	Existing residential and	Briefing on Austrian Energy Agency site

	building societies		commercial buildings	
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As part of Austria's economic stimulus package, €100m worth of subsidies were announced, commencing April 2009, for the thermal refurbishment of buildings. Insulation and window replacements can receive a 20% subsidy up to a maximum of €5,000 per single-family house. Efficient boilers are also eligible, but only if thermal improvements are already included in the refurbishment. Required energy savings should either amount to a 50% reduction in heating demand, or demand of no more than 75kWh per m² per year.

Belgium

Subsidies for energy efficient equipment – Wallonia – 2004, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Directorate-General of Technology, Research and Energy (DGTRE) of Wallonia	Grants	Commercial	More info

The government of Wallonia since 2004 provides subsidies to private sector entities in industry, agriculture and services wishing to invest in energy efficient equipment meeting minimum standards, as follows:

- Lighting: Must meet UREBA standards, subsidy of EUR 150/kW, up to EUR 5000 per project.
- Variable speed motors (cooling, air compressor, ventilation, pump): Minimum energy saving of 10%, subsidy of EUR 100/kW, up to EUR 5000 per project.
- Refrigeration: Installation of system with minimum energy savings of 20%, subsidy of EUR 1250 per cooling system of a minimum of 15 kW; also provided for energy use analysis system.
- Heat recovery (industrial and artisanal ovens, drying equipment): Subsidy of EUR 50/kW of recovered heat, up to a maximum of EUR 7500.
- Burners (direct flame and radiant tube, for dryers, metal treatment, post combustion, make up air, heat modulators): Subsidies between EUR 3.75 and EUR 12.75 per kW, up to a maximum of EUR 7500.
- Large space heaters: Subsidy of between EUR 6 and EUR 25 per kW, up to a maximum of EUR 2500 per piece of equipment (maximum of four per company).
- Condensing gas boilers: Meeting established standards, subsidy depends on installation capacity, to a maximum of EUR 12 500.
- Heat pumps: Meeting established standards, subsidy of EUR 1 500.
- Microgeneration and high efficiency cogeneration: Subsidy covers 20% of the cost, up to a maximum of EUR 15 000.
- Thermal regulation (thermostatic valves, regulated thermostats, outdoor thermostat): Subsidy covers 30% of the cost, up to a maximum of EUR 300.
- Gas heating (for replacement of electric heating systems in social housing): Subsidy of EUR 150 per kW, plus 50% of the cost of extension and connection, to a maximum of 150m per extension.

The maximum subsidy is limited at EUR 7500 per year per location, except for condensing gas boilers of over 500 kW capacity, for which the limit is EUR 12 500.

Tax reductions for home improvements – Federal – 2003, ongoing

€37m in 2003; for energy efficiency and renewable energy measures

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Ministry of the Economy	Tax breaks	Existing and new residential	Ministry of the Economy info page (French)

Since January 2003, the Federal Public Service (FPS) of Belgium offers tax reductions for individuals undertaking energy efficiency and certain renewable energy investments in their homes. As of January 2005, renters can also apply for the tax reductions.

Tax reductions are offered when undertaking one or more of the following 8 measures:

- 1) Replacement or maintenance of water heating systems, with new heaters meeting minimum efficiency requirements (reductions amounted to 15% of investment in the first year, up to 40% in the following years);
- 2) Installation of a solar water heating system;
- 3) Installation of solar photovoltaic panels for electricity production, with installed system meeting certain efficiency requirements;
- 4) Installation of geothermal heat pump (since 2004);
- 5) Installation of double glazed windows meeting minimum efficiency standards (U value);
- 6) Roof insulation, meeting minimum efficiency standards (R value);
- 7) Installation of thermostatic valves or regulated thermostats (reductions are offered for the installation of one of the systems where the other is already present, or for the installation of both together if neither are present)
- 8) Undertaking an energy audit

Tax reduction maximum amounts have progressively increased, and for the 2008 fiscal year (for expenses incurred in 2007) the tax reduction amounts to 40% of the expense for all measures, up to a maximum amount of EUR 2650 per household, whether for new construction or renovation. For 2009 the maximum is EUR 2770. For solar heat and photovoltaics the limit in 2009 is EUR 3600.

Subsidies for energy efficiency audits and energy analysis systems – Wallonia – 2002, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Directorate-General of Technology, Research and Energy (DGTRE) of Wallonia	Grants	Commercial	More info

The government of Wallonia since 2002 provides subsidies to private sector entities in industry, agriculture and services wishing to undertake an energy audit or pre-investment feasibility study. The studies must be undertaken with a view to invest in energy efficient or renewable energy systems, high efficient cogeneration, or to elaborate an energy efficiency action plan.

The subsidy covers 50% of the cost of the study. For companies that have signed a voluntary agreement with the government on energy efficiency, the subsidy covers 75% of eligible costs, and can cover services provided internally within the company.

For professional federations offering energy services within the same sector, and aiming to provide energy efficiency audits covering a significant portion of companies in the sector, the subsidy covers 100% of eligible expenses. Audits must be completed within three years of the date the subsidy was approved.

The Wallonia government also provides subsidies for the establishment of an energy analysis system. This refers to a diagnostic tool comprising various measuring devices (monitoring electricity use, temperature etc.) allowing for continuous and real-time monitoring of the company's energy usage. The subsidy covers 50% of eligible costs, which are the purchase and installation of necessary equipment (measurement instruments, accessories, wiring, software etc.), their installation, and training personnel in the system's use.

Companies developing products that contribute to increased energy efficiency can benefit from a 50% subsidy when seeking technical certification, covering test trials and administrative costs.

Subsidies to Improve Energy Efficiency of Public Buildings – Wallonia & Brussels Capital Region – 2000, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Wallonia and Brussels Capital Region governments	Grants	Existing public and publicly owned residential buildings	More info

Various financial incentives have been introduced by the regions for improving the energy efficiency of existing buildings.

Wallonia

The Walloon Region's MEBAR programme subsidizes low-income households to improve the energy efficiency of their dwellings. The Region's AGEBA funds go to municipal, provincial and regional buildings, and its ECHOP funds go to schools and hospitals. These latter two programmes were harmonised under a new scheme, called UREBA. The Region also provides a subsidy to municipalities for the replacement cost of inefficient public lighting (EP-URE programme). The subsidy covers some 70% or more, depending on the energy efficiency of the replacement.

Brussels-Capital Region

The Brussels-Capital Region allocates subsidies to municipalities, local public bodies, schools and hospitals. Subsidies amount to 20% of the investment costs if they are considered to be of an energy efficient nature. Energy audits are subsidised up to 50% of the cost to a maximum.

Subsidies for roof insulation – Flanders – 2006, ongoing

Exact budget for roof insulation unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Flemish Government	Subsidy	Existing residential	Flemish Energy Agency info page (Flemish)

In 2009, home-owners and housing providers with at least 40m² of loft space who improve their loft insulation (or insulate it in the first place) to a high standard, can receive up to €1000 (depending on surface area) subsidy from the Flemish Government.

Support for solar photovoltaics – Flanders – 2006, ongoing

Exact budget unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Flemish Government	Feed-in tariff	All	Flemish Energy Agency info page (Flemish)

For every 1,000 kWh of electricity generated by solar panels the owner receives a green power certificate. Each certificate can be redeemed by the system operator at a guaranteed value.

Facilities commissioned by the end of 2009 are eligible for support of €450 per 1000 kWh of electricity for 20 years from the commissioning of the plant. From 2010, photovoltaic solar panels installed on non-insulated roofs are no longer eligible for support.

Those who commission their panels in:

- 2010 is for 20 years are eligible for an aid of 350 euro/1000 kWh;
- 2011 is for 20 years are eligible for an aid of 330 euro/1000 kWh;
- 2012 is for 20 years are eligible for an aid of 310 euro/1000 kWh;
- 2013 is over 15 years are eligible for an aid of 290 euro/1000 kWh;
- 2014 is over 15 years are eligible for an aid of 250 euro/1000 kWh;
- 2015 is over 15 years are eligible for an aid of 210 euro/1000 kWh;
- 2016 is over 15 years are eligible for an aid of 170 euro/1000 kWh;
- 2017 is over 15 years are eligible for an aid of 130 euro/1000 kWh;
- 2018 is over 15 years are eligible for an aid of 90 euro/1000 kWh;
- 2019 is over 15 years are eligible for an aid of 50 euro/1000 kWh;
- 2020 is for 15 years qualify for a grant of 10 euro/1000 kWh.

Subsidies for very low energy refurbishment – Flanders – ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Flemish Government	Subsidy	All	Flemish Energy Agency info page (Flemish)

This scheme provides subsidies per unit (e.g. m² of insulation, m² of solar protection, replacement boiler etc) of energy efficiency measure to encourage very low energy refurbishment. It is financed by electricity network operators. For new homes specifically, the subsidy increases the higher the as-built energy standard is.

Lower VAT on home refurbishment – Federal – ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Flemish Government	Tax reduction	Existing and new residential	Flemish Energy Agency info page (Flemish)

The VAT reduction – from 21% to 6% – is for all refurbishment of privately owned homes over five years old, and not just for energy efficient refurbishment. Both materials/equipment and labour are eligible. For the 2009 tax year only, the VAT reduction is also valid for new homes at up to €50,000 per home.

Bulgaria

National Program for Renovation of Residential Buildings in the Republic of Bulgaria – 2006 to 2020

BGN13m in 2006 to BGN130m in 2020 for energy efficiency measures

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Regional Development and Public Works	Grants	Existing residential	More info from MURE database

On January 20th, 2005, the Government adopted the National Programme for renovation of the residential buildings in Republic of Bulgaria.

The Program priority is the multi-families residential buildings. The Programme foresees within the 2006 – 2020 period 684 683 dwellings to be renovated, of which 362 792 are Panel, 152 686 – Ferro-concrete and 169 205 – Massive. The total value of the Programme implementation needed financial resources is amounting to 4 150 000 thousand BGN. The State will support the panel dwelling proprietors by means of direct subsidy of 20% from the renovation total value. The direct State subsidy increases smoothly from 13 000 thousand BGN in 2006, to 130 000 thousand BGN in 2020. The Programme implementation is assigned to the Minister of Regional Development and Public Works who coordinates the relevant activity among all Administrations and other interested parties. Every year the Minister of Regional Development and Public Works proposes, within the framework of the budget procedure, planning of the needed Programme implementation direct State subsidies.

Municipalities actively participate in the residential buildings renovation process. With decision by the respective Municipal Council is created Municipal Association (MA) as a legal person, to support methodically and technically the activity on the organization and implementation of investment projects for residential buildings renovation, with participation of: the Municipality, Condominiums – legal persons, energy service companies, banks and other interested persons. MA elaborates proposals for project areas (districts in the residential complexes) for implementation on the Municipality territory of investment projects for residential buildings renovation; assigns projects by means of competition; finances the project implementation and is responsible for spending the State subsidy for every specific project.

National Strategy for financing the building insulation for energy efficiency – 2006 to 2020¹

€81.3m from 2006 to 2020 additional to above programme for energy efficiency measures in existing public buildings

Stated objective(s)	Responsible	Type	Sector	More info from MURE database
Energy efficiency	Ministry of	Grants	Existing public	MURE database

¹ Note overlap with programme above

	Regional Development and Public Works			
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SCHEDULE AND SCOPE

According to this measure, during the next 15 years (2006 – 2020) have to be thermo-insulated at least:

- 508 State owned building;
- 3,454 Municipal owned building;
- 651,000 Private flats in panel blocks.
- The Strategy's priority buildings are audited & certified, based on adopted annual Target EE Programs (TEEPs), following adopted pre-determined common criteria for selection.

STATE SUBSIDY

(By type of property)

- State owned buildings - M€75, including M€1.3 for audits and certification;
- Municipal owned buildings - M€5 for audits and certification;
- Private owned multi-family residential panel buildings – M€250 for insulation (20% of the sum for building renovation), including M€25 for audits

So, for the implementation of the NATIONAL STRATEGY FOR FINANCING THE BUILDING INSULATION FOR ENERGY EFFICIENCY AND ACTION PLAN FOR ITS IMPLEMENTATION, 2006-2020 (the Strategy), During the next 15 years the State Budget shall provide the Total sum of M€330.

Residential Energy Efficiency Credit Facility REECL – 2005, ongoing

€50m credit fund, €10m grants fund (time period unknown), supporting energy efficiency and renewable energy

Stated objective(s)	Responsible	Type	Sector	More info from MURE database
Energy efficiency; climate change	EC; EBRD; Bulgarian Energy Efficiency Agency	Preferential loans; grants	Existing residential	REECLE Programme homepage

To help Bulgarian households reduce their energy bills and consumption the European Commission, the European Bank for Reconstruction and Development, and the Bulgarian Energy Efficiency Agency have developed a € 50 million Residential Energy Efficiency Credit (REECL) Facility to provide credit lines to reputable Bulgarian banks to make loans to householders for specific energy efficiency measures including double-glazing; wall, floor, and roof insulation; efficient biomass stoves and boilers; solar water heaters; efficient gas boilers; and heat pump systems.

To help stimulate the uptake of residential energy efficiency projects, an additional € 10 million in grant financing is earmarked in support of project development and incentive grants paid to REECL borrowers after verification by independent consultant that each eligible residential energy efficiency project has been completed. Each borrowing household will benefit from a 20% incentive towards the cost of the energy savings projects (to a maximum of € 850).

The grant financing comes from the Kozloduy International Decommissioning Support Fund (KIDSF), set up in 2000 with contributions from the European Commission, EU member countries, and Switzerland. KIDSF financially supports the early decommissioning of units 1-4 of Kozloduy Nuclear Power Plant. KIDSF also supports energy sector initiatives associated with the decommissioning effort, such as improving energy efficiency in Bulgaria.

Building Tax Exemption – 2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change	Ministry of Finance	Tax break	Residential	More info from MURE database

Amendment of the Local Taxes and Fees Act (from 6 July 2007) changed the provision for building tax exemption for the owners of buildings (from 2005), as follows:

The owners of buildings, having obtained a certificate category A, issued in the terms under Energy Efficiency Act and Building Certificate Regulation, are exempt from building tax:

- for the term of 7 years, considered the year after the year of certificate issuing;
- for the term of 10 years, considered the year after the year of certificate issuing if RES are used in the energy consumption of the building.

The owners of buildings, having obtained a certificate category B, issued in the terms under Energy Efficiency Act and Building Certificate Regulation, are exempt from building tax:

- for the term of 3 years, considered the year after the year of certificate issuing;
- for the term of 5 years, considered the year after the year of certificate issuing if RES are used in the energy consumption of the building.

Czech Republic

EKO-ENERGIE – ongoing

Exact budget for energy efficiency in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; competitiveness	Ministry of Industry and Trade	Grants	Commercial (SMEs)	Ministry of Industry and Trade info page (Czech)

This program is designed primarily for SMEs, but larger companies of 250+ employees are not excluded. The program offers wide opportunities for reduction of energy demand by thermal insulation. The EKO-ENERGIE program will include subsidies up to 40 % for businesses.

The aim of the EKO ENERGIE project is to support the activity of business in reduction of energy demand of their production and the consumption of primary energy resources, since the reduction of the energy demand leads directly to higher competitiveness of the Czech industry. In the Czech Republic, the program is managed by the Ministry of Trade and Industry and it is being implemented by the Government agency CzechInvest.

The registration applications will be accepted solely via the eAccount application at CzechInvest's website www.czechinvest.org. This website also includes exhaustive information on other programs administered by CzechInvest. Then applications are accepted from March 5, 2009.

The subsidies are designed for SMEs (as defined in EC directive no. 70/2001) who are registered in the country and who have no outstanding debts towards employees and authorities. To receive EU subsidies, the companies must submit so-called registration application, which will provide basic information on the applicant, and full application with appendices – energy audit, business project, financial plan and documents that prove the ownership of the land and the building. The aim of the project is to reduce the energy consumption of the buildings.

Integrated Operational Programme: Intervention 5.1 – 2008 to 2012

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; competitiveness	Ministry of Culture	Grants	All non-residential	More info

IOP is a thematic program focused on optimizing of public administration services and its utmost priorities include revitalization of heritage sights, the modernization of the buildings and their equipment.

IOP Intervention 5.1 is a part of the “national support for regional development” and it is being managed by the Ministry of Culture. The aim of the project is to renovate the heritage buildings and to leverage the state conservation fund for better use of cultural heritage in the Czech Republic. The program is scheduled for the period from December 5, 2008 to December 31, 2012. The total sum allocated to those projects amounts to CZK 3,900 million with the support of CZK 100 to 500 million

per project. The financial means can be used for reconstruction of UNESCO and National Conservation Fund – listed buildings or buildings that are mentioned in the candidate list. The projects must be of evident direct benefit both in their impact on social and economic growth and in boosting the attractiveness of the environment so that they have further multiplication effect across the Czech Republic. The projects should also allow for follow-up by other projects in services and business (tourist industry, crafts, educational activities).

The applications can be submitted by municipalities, their fully owned daughter organizations, NGOs or civic associations in compliance with the valid legislation.

National Environment Fund: 'Green to Savings' – 2009 to 2012

CZK 35bn over four years for energy efficiency and renewable heat measures

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency; climate change	Ministry of the Environment	Grants	Existing and new residential	Czech Television press announcement (Czech)

The Ministry expects about 40,000 grant applications to be filed in the first few months of the scheme (launched in April). Over the next four years, the program is anticipated to provide subsidies for up to 250,000 households. In 2009, it is expected that the program will provide about CZK 10 billion, with another 25 billion to follow in the next three years.

Citizens can apply for subsidies for thermal insulation of apartment houses, non-panel technology and the installation of sustainable power resources for the production of heat, such as solar collectors, heat pumps or biomass boilers (includes all the available types in the country).

The program is divided into three parts. One focuses on energy savings in heating, the second supports newly-built houses of the passive energy standard and the third supports the use of renewable resources for flat and water heating. The extent of Government subsidies differs in each of the categories, with most support given to complex and combined solutions that lead to the reduction of emissions.

The Government will contribute about 40 to 50 per cent of the funds, and the return-of-investment is – depending on the particular project – about eight to ten years.

Applications are accepted by the offices of the National Fund for the Environment and offices of the largest banks with whom the Ministry signed a contract – these are: Česká spořitelna, ČSOB, Komerční banka, UniCredit Bank and LBBW. The banks will also be providing commercial credits for financing of remaining costs. The grants themselves are financed by the sale of emissions permits to other countries.

National Environment Fund: municipalities and communities stream – 2009 to 2012

CZK 5bn over four years for renewable heat and electricity measures

Stated objective(s)	Responsible	Type	Sector	More info
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Energy efficiency; climate change	Ministry of the Environment	Grants	Public	
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National Environment Fund: Operational Programme Environment – ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; competitiveness	Ministry of the Environment	Grants	All non-residential	More info

Up to 85 per cent subsidy is available to applicants who apply for the Operational Program Environment. The program is made yet more attractive by the fact that given the growing prices of energy, the return of investment is ensured.

The operational program Environment is designed for towns and cities, communities and the institutions of government administration, as well as to R&D institutions, legal and physical entities and non-profit organizations. The recipients of the support can include municipalities, cities and regions, including their organizational units, civic associations, churches, religious societies, NGOs, public universities, business companies fully owned by cities or other public subjects, foundations and foundation funds.

The aim of this operational program is to protect and improve the quality of the environment as the basic principle of sustainability. The supported projects include reduction of energy by improvement of thermal insulation properties of walls and roofs, replacement or reconstruction of insulation materials. Depending on the specifics of the project, the OP is divided into 7 priority axes that govern the allocation of subsidies.

The program can be used to finance thermal insulation of buildings or complete energy management solutions, including recuperation of heat or environment-friendly heating of buildings – for instance gas or renewable resources of energy such as heat pumps, biomass boilers, solar systems etc. Two priority axes of this program directly concern energy in buildings:

Priority axis 2 – Improvement of the quality of air and reduction of emissions

It supports projects that aim at improvement or protection of the quality of air and at reduction of emissions with the emphasis on new, environment-friendly means of power production, including use of renewable power resources and better energy properties of the building envelope.

Priority axis 4 – Sustainable use of energy resources

It supports projects aimed at long term use of energy resources, namely the renewable energy resources, and energy savings. The long-term aim of the program is to improve the use of renewable power resources in production of electricity and more efficient use of waste heat.

The subsidy can amount up to 85 per cent of the total project costs but in practice, given the high number of applicants, the subsidies amount to about 60 per cent of the costs.

All the projects are conditioned by public co-financing. The applicants can draw government support during the implementation of the project against invoices by the suppliers. The support includes the design of the project. The applications are processed in 2 to 4 months depending on the scope of the project.

Panel Programme – 2004, ongoing

CZK 4.1bn for low energy refurbishment of panel block buildings in 2009

Stated objective(s)	Responsible	Type	Sector	Briefing on programme by Knauf (Czech)
Energy efficiency; competitiveness	Ministry of Culture	Preferential loans	Existing residential	

The program Panel is the most favourite of all the funds operated by the National Fund for the Development of Housing since this program provides subsidies for reconstruction and modernization of old, panel high-rise blocks. This year, the program provides new opportunities and the amount of subsidies to be provided to applicants has risen to CZK 4.1 billion.

The program Green to Savings – GIS is not the sole program launched by the government. In 2009, the government plans to strengthen the already running program Panel which has been designed and which is managed by the National Fund for the Development of Housing. The banking guarantees are provided by the Czech Guarantee and Development Bank.

The program Panel is aimed at the owners of high-rise blocks or flats and it provides subsidies for complex reconstruction or modernization of such constructions. It is available both to the physical and legal entities who are owner or co-owners of such buildings.

The complex regeneration of high-rise blocks is an essential part of the whole program as it will allow these building to move as close as possible to the low-energy standard. The importance of this goal is proved by the fact that 26 per cent of Czech population live in such buildings. Thermal insulation is one of the pillars of the program.

The reconstruction must include the repair of static deficiencies and improvement of thermal insulating properties; this condition does not apply only in these cases when the actual condition of the building does not require such intervention. The directive clearly states that the buildings shall comply with all the valid norms for energy efficiency and that the overall consumption of energy will be clearly defined.

The program is implemented in compliance with the directive of the government no. 299/2001 Coll. In implementing of the program, the National Fund of the Development of Housing works closely with the Czech Guarantee and Development Bank. The program includes three tools of support:

- National interest subsidy
- Banking guarantee for credit
- Consultancy and support

The program panel is implemented via a “supported credit”, i.e. the credit interests are subsidized by the government. The project has been running since May 2004 and it is focused on repairs of apartment buildings built by the panel technology.

Denmark

Renovation Fund – 2009, ongoing

DKK 1.5bn over eight months for energy efficiency and renewable heat measures

Stated objective(s)	Responsible	Type	Sector	
Job creation, energy efficiency	Ministry of Enterprise and Construction	Grants	Existing residential	Renovation Fund homepage (Danish)

The Renovation Fund provides grants for 40% of wages up to a maximum of DKK 15,000 for general home renovation, and 20% of material costs (only if they involve energy efficiency measures) up to a maximum of DKK 10,000. At present, most of the funds money has already been allocated.

Finland

Energy Grants for Residential Buildings – 2003, ongoing

€24m per year for energy efficiency and renewable energy measures

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change	Ministry of the Environment; Housing Finance and Development Centre of Finland	Grants	Existing residential	Housing Finance and Development Centre grants info page

As authorised in the State Budget, The Housing Finance and Development Centre of Finland (ARA) can fund the reparation and improvement of residential buildings. The grants must improve the energy economy of residential buildings to reduce both energy consumption and greenhouse gas emissions.

Grants award independent energy audits, external repair work, ventilation and heating system improvements and the implementation of renewable energy sources. The grants cover 40% of the actual costs of the audit and 10-15% of other measures' costs. Local authorities manage funding.

Tax breaks for residential refurbishment – 2000, ongoing

€180m in 2007 for labour costs of installing energy efficiency and renewable energy measures; twice that amount anticipated for 2009

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; infrastructure improvement	Finnish Tax Administration	Tax break	Existing residential	More info

A household tax deduction has been available since 2000 for the labour costs incurred in replacing, upgrading and repairing the heating systems of small residential houses. According to the instructions issued in 2005 by the Tax Administration, 60% of the labour costs may be deducted. The maximum amount of household deduction was EUR 1,150 and the house owner bore the first EUR 100 of the labour costs. The household deduction is available for the taxation of both spouses. In 2006, the basis of the household deduction was amended so that both a household deduction and an energy subsidy (see above) are available for upgrading the heating system. The amount of tax deduction has now been increased to up to €6,000 (still at 60% of the labour costs) and extended to cover general maintenance and renovation of homes, including energy efficiency.

Energy audit subsidy – 1992 to 2016

€5.1m from 1992 to 2005 for energy audits in municipal buildings; €3.4m from 1992 to 2006 for energy audits in commercial sector buildings; €11.6m from 1992 to 2006 for the industrial sector

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency	Ministry of Trade and Industry	Subsidy	Public, commercial and industrial	

The Ministry of Trade and Industry has been supporting the energy audit activities of municipalities and federations of municipalities, and the commercial sector, since 1992. The subsidy available for energy audits is 40%. For those that have joined energy conservation agreements, the subsidy is 50%. The effects of the audit subsidies granted are included as a whole in the evaluation of the energy audit activities.

The Ministry has been supporting the energy savings investments of municipalities and federations of municipalities since 1997, and those of the commercial sector since 1999 (industrial sector since 1998). Support for projects involving new technologies, amounting to 25–35% as a rule, is granted to all. Support for projects involving conventional technologies, amounting to 15–20% as a rule, is only granted to those that have joined the energy conservation agreements. The savings effects of the investment subsidies have not been evaluated separately so far. It can be assumed that most of the effects will be reported through energy audits and the follow-up system of the energy conservation agreements.

The use of energy subsidies as an economic control method will also continue as part of the new energy-efficiency agreements planned for 2008–2016.

France

No interest loans for energy retrofits (ECO PTZ) – 2009, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Climate change mitigation; energy efficiency	Development bank	Preferential loans	Existing residential	

This convention was signed on Feb 26, 2009 and will apply from spring 2009 in any bank. The loan will be granted to all particulate owners, whatever his financial resources, for up to €30,000 loan over 10 years. This no-interest loan can be combined with tax credits (see further below) in the same field. Works considered are either by combination of actions in the following fields or by achieving an overall minimum performance.

Fields of actions are:

- Insulation (roof, external walls, windows)
- Heating and hot water systems (installation, control)
- Heating with renewable energy

Some annex works can also be financed:

- Control and regulation systems
- Installation of an energy efficient ventilation system when doing insulation work or replacing windows
- Insulation of ducts and pipes
- Balancing heating systems
- Installation of shutters and sun protections outdoors
- Replacing of door to outside by an insulated one...

Minimum requirements for each field and for the overall performance are given in the decree. The companies installing the system will have to certify the performance and supply the invoice.

Preferential loans for retrofitting social housing (ECO PRET LOGEMENT SOCIAL) – 2009 to 2010

€1.2bn for loans for energy efficiency in social housing

Stated objective(s)	Responsible	Type	Sector	More info
Climate change mitigation; energy efficiency	Development bank	Preferential loans	Existing residential	

This convention, also signed on Feb 26, 2009 concerns special loans for social housing at 1,9%. €1.2 billion will be granted in 2009 and 2010 to allow to the retrofit of 100,000 dwellings per year.

In addition a credit on land tax equal to 25% of the amount of work done is granted.

White Certificate Trading – 2006 to 2009

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Agency for the Environment and Energy Management	Trading	Existing residential and commercial	ADEME briefing on scheme Ministry of Industry info page

Under the French program of White Certificates Trading, suppliers of energy (electricity, gas, heating oil, LPG, heat, refrigeration) must meet government-mandated targets for energy savings achieved through the suppliers' residential and tertiary customers. Suppliers are free to select the actions to meet their objectives, such as informing customers how to reduce energy consumption, running promotional programmes, providing incentives to customers and so on. A list of ratified activities was ratified to help the various actors to facilitate the operations. Those exceeding and undercutting their objectives can trade energy savings certificates as required for common compliance.

Energy suppliers who do not meet their obligation over the period (2006-2008) must pay a penalty of euro 0,02 per kWh. Lump evaluation of energy savings are established for each process, expressed in kWh of final energy, cumulated and present-worthed over the life of the product.

The first, experimental phase of the scheme will run for three years from 1 July 2006 to 30 June 2009. It is intended that during this time, the scheme will result in 54TWh of cumulated energy savings.

OSEO Innovation for SMEs – support for RD&D – 2005, ongoing

Between €460m and €500 per year from 2007 to 2013, including for energy efficiency and renewable energy; proportion unknown

Stated objective(s)	Responsible	Type	Sector	
Innovation; competitiveness	Ministry of Economy, Industry and Employment; Ministry of Higher Education and Research	Preferential loans; grants	Commercial	Scheme homepage

Established in 2005, OSEO is a French public organisation that funds and advises small- and medium-sized enterprises (SMEs). Part of OSEO's activities involves supporting innovation in SMEs, and since 2008, in larger enterprises meeting similar barriers to innovation as SMEs.

OSEO Innovation offers a combination of grants and zero-interest advances to SMEs and larger enterprises for research, development, innovation and deployment activities, with the latter

accounting for the majority of financial support. The advances are repaid in accordance with the financed project's level of success.

Support for research, development and innovation in industry and industrial services is offered to SMEs, as well as enterprises with less than 2000 or even less than 5000 employees. For these companies, separate funding for the development of methodologies, norms, models or new procedures. Grants and interest-free advances are also provided to public research organisations to help with deployment of technologies to the marketplace and to enterprises.

OSEO Innovation also provides support to SMEs that have little experience with innovation activities, through funding for technical feasibility studies and for obtaining patents. OSEO Innovation also provides loans to companies requiring investment in non-technical aspects of developing new products, production tools, technologies and market deployment. These range from EUR 40 to 400 thousand over six years. It can also offer loan guarantees cover 60% of a loan taken for research, development and/or deployment activities.

In 2007, OSEO supported 208 projects in the field of Energy for a total of EUR 27.4 million. These included use of technology for improved energy consumption monitoring, high-efficiency construction materials, and a variety of renewable energy projects. The latter include biomass heat production projects, building construction using renewable energy, and solar photovoltaic technology development. Most projects supported rational use of energy in buildings, industry and transport, followed by biomass, hydrocarbon, and solar energy production.

OSEO also supported 164 projects for a total amount of EUR 16.47 million in the ground transport sector. Several projects involved reduced CO₂ use, hybrid vehicles, and new petrol injection techniques to reduce consumption.

Since January 2008, the Industrial Innovation Agency (AII) has been incorporated into OSEO, along with any existing projects it was supporting. The new programme stemming from this fusion is called Strategic Industrial Innovation (ISI), and has a budget of EUR 300 million for 2008. ISI targets not only SMEs but companies with up to 5000 employees. ISI supports collaborative projects between research centres and enterprises, aiming at research, development and deployment. The projects must be led or headed by a leading enterprise. ISI seeks to promote programmes that address major preoccupations and challenges, including reducing energy consumption, promoting clean transport, zero-emission energy production and increased use of renewable energy. Of the 17 projects being financially supported by ISI are:

- The HOMES programme, led by Schneider Electric, on energy-efficient construction. The programme involves 16 partners, and has a budget of EUR 88 million over 5 years. OSEO's contribution is of EUR 39 million.
- The LowCO₂Motion programme, headed by the car supplier Valeo, on research and development to improve vehicle engine efficiency and economise on fuel consumption when vehicles break and stop. The programme involves 8 partners, has a budget of EUR 212 million over 5 years, with OSEO's contribution totalling EUR 63 million.

Financing for Energy Efficiency Investments – 2002, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Economy, Industry and Employment	Preferential loans	Commercial	Scheme homepage

Funds for energy efficiency investments in industry are available from SOFERGIE, created in 1980 (a group of companies that finances energy-saving investments) to facilitate lease financing for energy management with the hope that this funding would give structure to a body of “third-party investors” who would identify, analyse, carry out and finance investment in “turn-key” energy conservation projects remunerated out of the resulting savings.

The Decret n°2002-636 of 23 April 2002 broadens the scope of intervention of authorised companies specialised in the financing of energy efficiency through lease credit (SOFREGIE). In addition to financing equipment, SOFREGIE can also finance associated costs such as construction, land and transport.

Government Crediting and Loan Guarantee for Energy Efficiency and Renewable Energy Investment – FOGIME – 2001, ongoing

€17.8m budget, able to guarantee €244m of loans; time period unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change	Agency for the Environment and Energy Management	Preferential loans	Commercial	More info

The FOGIME, a loan guarantee fund for small and medium-sized businesses energy sustainability (efficiency and renewables) investments, was created in November 2000. It is a co-operative effort between the French development bank for SMEs (BDPME) and the French Agency for Environment and Energy Management (ADEME).

FOGIME has a budget of approximately 17.8 million Euro, which can guarantee up to 244 million Euro of loans to the private sector.

This guarantee is only available for SMEs more than three years old with less than 500 m FF turnover and less than 500 employees (to evolve to 250 m FF and 250 employees to correspond to EU criteria for SMEs). Eligible investments include: high performance production, use, recovery and energy storage equipment; energy efficient modifications of production processes and renewables.

The guarantee covers medium and long-term risks (2-15 years) and insures the risk taken by the financial institution providing the loan. The guarantee covers 70% of the loan in comparison to 40% average coverage rates for other SME projects covered by BDPME.

Energy efficiency tax credit –2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency; climate change	Ministry of Finance	Tax rebate	Existing and new residential	

The government has committed to improving the tax credit for main residence equipment expenses aimed at saving energy and developing renewable energies. This tax incentive guides individuals towards investing in equipment eligible for tax credit, satisfying the high performance criteria.

From 1 January 2005, a tax credit was introduced for expenses for the main residence for the most energy-efficient equipment and equipment using renewable energy (Article 200(c) of the French General Tax Code).

Through the 2006 Finance Law, the Government wanted to improve this provision, by significantly increasing tax credit amounts. For equipment improving energy efficiency, these rates are at present:

Equipment	Tax credit	application
Condensing boiler Isolation materials Heating control	25% 40% when buying a house < 1977 and work to be done in less than 2 years	Retrofit * only
Production of renewable energy Solar	50%	New and retrofit*
Production of renewable energy Wood Heat pumps (except air/air)	40% in 2009 ³ 2010 : 25% 40% when buying a house < 1977 and work to be done in less than 2 years	New and retrofit*
Connection to a heating system renewable or cogeneration Recovery of rain water	25%	New and retrofit*
Installation of insulation material	25% insulation - 40% when buying a house < 1977 and work to be done in less than 2 years	Retrofit * only
Realise a non mandatory diagnostic of energy performance	50% diagnostic	Retrofit * only

* retrofit: building must be more than two years old

The Environment Round Table has decided on the principle of a renewal of the tax credit within the framework of the "Modernising buildings and cities" programme, the definition of which must be examined within the context of the work of the operational committees (COM-OPs), in particular the "Existing buildings" COM-OP. The most important objective of such a reform would be to continue strengthening the system to continuously ensure that the tax advantage benefits the most efficient equipment on the market in terms of energy and CO₂ emissions saved.

Reduced VAT rate for district heating -2006, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info

Energy efficiency; climate change	Ministry of Finance	Tax reduction	Residential	
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Provisions aimed at promoting heating networks: in accordance with the European VAT Directive agreement in February 2006, Law No 2006-872 of 13 July 2006 on national housing commitment establishes, in Article 76 thereof, a reduced rate of VAT at 5.5% on heating network subscriptions. It also introduces a reduced rate of VAT on the supply of heat if this is produced from at least 60% biomass, geothermal energy from waste and recovered energy.

Realisation of low consumption buildings (AAP PREBAT)

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change	Agency for the Environment and Energy Management	Grants	New residential (60%) and commercial	More info

All main provinces in France have now launched calls for projects of realisation of low consumption buildings. Although these calls may vary per region they are mainly requiring to achieve the label BBC (Low consumption Building):

	New buildings	Retrofits
Residential area	from 40 et 75 kWh/m ² shon ² depending on climate and altitude	80 kWh/m ² shon or energy consumption divided by 4 after work.
Non residential	Regulation level – 50% (or -60% in some calls)	To achieve regulation level of new buildings or to divide by 4 energy consumption after work

These requirements will be stronger in the next calls which will include a category of positive energy buildings. In February 2009, 200 projects have been elected and by end of 2010, the double is expected (ca. 20 per province). Grants obtained are mainly from 40 to 80 €/m² in new buildings and 50 to 100 €/m² in retrofits. They concern mainly residential buildings (60%).

² Surface hors œuvre nette : net area outside the shell

Germany

KfW Build Ecologically Programme – 2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Climate change mitigation	Development bank	Preferential loans	New residential	

Long-term, low-interest loans for the building of new KfW 40 or 60 energy-saving houses, passive houses and installation of renewables-based heating technology in new buildings. In 2005 as of 30.11., support towards new building of 6800 KfW 60 energy-saving houses and 2700 KfW 40 energy-saving houses incl. passive houses.

KfW Housing Modernisation Programme – 2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Housing improvement	Development bank	Preferential loans	Existing residential	

The housing modernisation programme of the KfW reconstruction bank provides long-term, low-interest loans for various measures to modernise and improve housing. Especially low interest rates are granted for energy-related improvement work (eco-plus measures; thermal insulation and heating modernisation on basis of renewable energy). The aim is the reduction of CO₂ emissions by 0.36 million t from 2005 to 2010, or approx. 7 % of the CO₂ reduction targeted for private households in the national climate protection programme.

History of the housing modernisation programme of KfW: The reconstruction bank provides loans at a rate lower than market rates for a ten-year period for modernising and renovating housing. Up to the end of 1999, low-interest loans totalling DM 78.4 billion had been earmarked for the modernisation of 3.6 million dwellings. Some 22% of the funds were committed to energy conservation. In a second phase of the programme, from February 2000 to June 2002 about 11,400 loans were committed for financing the modernisation of 120,000 dwellings.

KfW CO₂ Building Rehabilitation Programme – 2001, ongoing

€4bn (in loans) from 2006 to 2009; €2bn per year in 2010 and 2011

Stated objective(s)	Responsible	Type	Sector	More info
Climate change mitigation; energy efficiency	Development bank	Preferential loans; grants	Existing residential	

The Climate Protection Programme for Existing Buildings was launched in January 2001 to provide financial support to the activity. It is a modernisation programme for existing buildings to improve energy efficiency and reduce CO₂ emissions. Between 2001 and 2005 about 95,000 reduced interest

rate loans worth Eur 5 bn were approved. Modernisation of heating installations, thermal insulation and replacement of windows in more than 300.000 dwelling was supported by these loans.

In 2006, the programme was furnished with means of Eur 1 bn per year until 2009 (means until 2011 are promised) and relaunched with improved conditions. In August 2008, an extra EUR 500 million was provided, as the EUR 900 million envelope ear-marked for 2008 was nearly exhausted.

Reduced interest rate loans are approved for the modernisation of existing building to the energy level of a newly built houses pursuant to the Energy Conservation Ordinance or 30% below that level for buildings built before 1984. These modernisation receive a partial debt relief as additional benefit. Furthermore there are four special packages for buildings built before 1995. The first three packages support the modernisation of heating installations, the change of the heating system to more energy-efficient sources, the thermal insulation of the building shell, the replacement of windows and some other measures in standardised combinations. The fourth package is flexible. An expert has to confirm that the modernisation is reasonable. Every modernisation leads to 40 kg CO₂ reduction as a general rule. In 2006 more than 180.000 loans worth about 9,6 bn were approved to energy conservation activities in more than 265.000 dwellings.

Loans are provided with an interest rate below market level. Since January 2007 non-repayable grants are also available. Since the programme began in 2001, over 628 000 homes have been renovated, with loans totalling EUR 12.05 billion. The government estimates that renovations undertaken in 2005, 2006 and 2007 avoided the emission of 2 million tonnes of CO₂ per year.

Combined Heat and Power support – 2002, ongoing

Exact budget for CHP unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	Ministry of Economics and Technology	Feed-in tariff, subsidy	All	Federal Office of Economics and Export Control info page (German)

The scheme's goal is to increase the share of electricity from CHP to 25% of Germany's generation. A fixed price is paid for the electricity generated by CHP plant, whether it is fed into the grid or consumed on site. The main eligibility criterion is for CHP plant to be designed to provide heat in the first instance. From the beginning of 2009, micro-CHP plant (in addition to district and community CHP) is eligible for support too, but this support is based on installed capacity and the level of utilisation. Support is also available for district heating infrastructure.

Hungary

National Energy Conservation Programme – 2002, ongoing

\$12m in 2008 for energy efficiency and renewable energy measures

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Energy Centre Hungary	Grants	Existing residential	Government portal info page (Hungarian)

The National Energy Conservation Programme has been offering energy efficiency grants to households each year for the last 6 years.

In 2008, five different types of energy efficiency improvements are subsidised as part of the programme, each with a different subsidy intensity (SI), that is the percentage of the overall investment that is subsidised by the state.

1. Change or insulation of windows and doors, SI of 15% up to a maximum per dwelling of HUF 265,000
2. Improvement of heating and hot water supply (eg, change of boiler), SI of 20%, up to a maximum per dwelling of HUF 400,000
3. Thermal insulation of existing buildings, SI of 20% up to a maximum per dwelling of HUF 400,000
4. Complex energy efficiency improvement of buildings, SI of 18% up to a maximum per dwelling of HUF 720,000
5. Use of renewable energy (biomass, geothermal energy, wind, waste, solar collectors and Photovoltaic) for generating heat and/or electricity, SI of 25% up to a maximum per dwelling of HUF1,000,000

Grants for Renovation of Prefabricated-Panel Residences – 2006, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Energy Centre Hungary	Grants	Existing large residential	More info

The "Panel Program" grant funds the renovation of residential buildings built with prefabricated panels; these are large, 10 storey buildings with low thermal U value. The grant includes some funds for renovation of roads, parking areas, playgrounds and parks in the buildings' vicinity.

Eligible energy conservation actions include change of doors and windows, thermal insulation of walls and ceilings, modernisation of HVAC systems.

The Hungarian state will refund renovation expenses to a maximum of one third of the total investment, an amount not to exceed HUF 500.000 per residence. The remaining two-thirds of the investment can come from the local municipality and from the dweller (own contribution).

Emissions avoided by this efficiency upgrade may qualify for trade.

Structural Funds for Environment Protection and Infrastructure Operative Programme (EIOP) Subsidies

HUF280m in 2006 for energy efficiency; total budget (unknown time period and proportion for energy efficiency and renewable energy) is HUF2bn

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; infrastructure investment	Ministry of Economy and Transportation	Grants	Large existing commercial, public and residential	More info

The Environment Protection and Infrastructure Operative Programme of Hungary's National Development Plan specifies measures to promote energy efficiency and renewable energy sources.

In 2006, the EPIO provided 280 million HUF in subsidies to three types of energy efficiency project: the modernisation of buildings and institutions, the development of district heating systems, and the promotion of cogeneration.

Since the program's inception, has focused on:

- a) installation of systems producing wood chips and pellets, baling equipment, and vegetable oil presses,
- b) promotion of investments in renewable energy (biomass, geothermal energy, solar collector, PV, wind power, hydro power)
- c) district heating systems using biomass or geothermal energy or waste deposit gases
- d) modernisation of buildings, district heating systems, application of cogeneration.

German Coal Aid Revolving Fund – 1991, ongoing

Current exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; pollution mitigation	Energy Centre Hungary	Preferential loans	Large existing commercial and public	More info

Funded by the German government, the German Coal Aid Revolving Fund (GCARF) started in 1991 with an original target to provide financing for the private sector to support energy efficiency investments and reduce pollution. The Fund is administered by the Hungarian Credit Bank. Its scope has been expanded to include municipalities. The main objectives are to replace traditional energy sources with renewable or waste-related energy sources, to induce energy saving in businesses and to reduce energy waste at the lowest possible cost. The preferential interest is one-third of the central bank's base rate with an additional 2.5% interest.

From 1991 to 2002 the total amount of investments approved for "live projects" was HUF 14.4 billion, of which HUF 11.9 billion was made up of preferential credits. In 2000, the GCARF allocated

more than HUF 1 billion in preferential credit for SMEs, which resulted in energy savings of 325 TJ per year and total investment of HUF 1.6 billion. In 2001, a total of HUF 0.89 billion was spent on renewable investments from preferential credit. In 2002, the amount of the preferential credit was increased to HUF 1.51 billion. A total investment of HUF 3.53 billion resulted in 1.04 PJ energy savings.

Main fields of activity:

- energy conversion equipment, distribution networks and heating systems; district heating systems
- control and automation of technological processes and equipment
- lighting modernisation
- CHP generation
- metering, data processing and control
- heat insulation

Ireland

Low Carbon Homes Programme – 2008 to 2011

€9m from 2008 to 2011

Stated objective(s)	Responsible	Type	Sector	Sustainable Energy Ireland info page
Climate change mitigation	Sustainable Energy Ireland	Grants	New residential	

The Low Carbon Housing Programme is the successor to Sustainable Energy Ireland's (SEI) House of Tomorrow Programme. It aims to support the development of new low-carbon and energy efficient housing through providing capital grants to developers. The programme invites proposals for housing developments incorporating design and technology features that lead to a reduction in CO₂ emissions from energy use in a typical new home by at least 70% relative to a reference dwelling built to baseline Building Regulations 2005 standards. The developments covered by the programme will combine heat and electricity demand reduction, efficient low-carbon heat supply, and efficient low-carbon electricity auto-generation.

The minimum requirements are that development proposals reach the following targets:

- A building energy rating (BER) of A2 or better;
- Achieve an energy performance coefficient (EPC) less than 0.25 (below the current Building Regulations figure of 0.6);
- Achieve a carbon dioxide performance coefficient (CPC) less than 0.30 (below the current Building Regulations figure of 0.69);
- Generate electricity onsite (for supply or export) per unit to the equivalent of 10 kWh/m² per year or greater (primary energy).

Specific requirements include 14 different aspects:

- 1) Onsite electrical generation: Microgeneration technologies and large-scale solutions are both supported, both renewable and CHP. Use of smart meters is also important.
- 2) Passive design strategy: To minimise energy demand, particularly through passive heating, ventilation and daylighting design and technology features.
- 3) Site layout and house design: Should reduce site exposure using natural shelter and landscaping and to maximise solar gain.
- 4 & 5) Ventilation and structural sealing: To minimise heat loss and ensure good air quality.
- 6) Insulation of the building envelope: U-value specifications must exceed those of the 2007 Building Regulations. Indicative acceptable reference values in W/m²K are provided as follows: Doors less than or equal to 2.2; Windows less than or equal to 1.8; Walls less than or equal to 0.22; Floors less than or equal to 0.20; Roofs less than or equal to 0.13.
- 7) Thermal bridging: To avoid excessive heat loss and local condensation.

8 & 9) Lighting and appliances: Incorporation of low-energy light fittings; all appliances provided by the developer must meet the highest energy efficiency rating for that product type (A+).

10) Principal auxiliary heating systems: Using central heating condensing oil, gas boilers (must be high efficiency, can incorporate solar panels) or wood pellet boilers, solar space heating, heat pump, group or community heating system.

11) Secondary heating systems: Must present standard of efficiency higher than prevailing practice.

12) Building materials: Must be sustainable, for example CFC and HCFC free, include recycled content, low toxicity or low embodied energy materials.

13) Water: Water economy measures must be undertaken where practicable.

14) Information and advice: The developer must commit to providing homeowners with appropriate information and advice on operating energy-saving features and appliances.

The preferred scale of projects is between 5 and 15 units, though one-off houses are not precluded. Indicative funding is that up to 40% of eligible expenditure, up to a maximum of EUR 15 000 per unit will be provided. The level of support will be dependent on various factors, such as the level of innovation proposed, the performance improvement achieved (in terms of energy and CO₂ reductions), and in certain cases the typical floor area of the dwellings in the development.

Energy Efficiency Tax Incentives for Business – 2008 onwards

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency	Revenue Commissioners	Tax break	Commercial	

As part of its Budget 2008, the Irish government announced that it would make tax incentives available in 2008 to businesses investing in certain energy efficient technologies, which are yet to be specified. Details of the proposal will be devised by the Department of Communications, Energy and Natural Resources, Sustainable Energy Ireland and the Department of Finance, with a view to launching the scheme in 2008.

Grants scheme for residential energy efficiency investments – 2008 onwards

Commitment to a €100m grants budget; time period unknown

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency; climate change mitigation	Department of Communications, Energy and Natural Resources	Grants	Existing residential	

As part of Budget 2008, the Irish government announced that it would introduce a grants scheme in

2008 for householders investing in improved insulation and certain other, to be defined, energy efficiency technologies. If successful, this pilot project may lead to a multi-annual grants scheme, in line with the Programme for Government commitment to introduce a Eur 100 million insulation grants scheme. Details of the scheme will be devised by the Department of Communications, Energy and Natural Resources and Sustainable Energy Ireland with a view to launch in early 2008.

CHP Deployment Programme – 2006, ongoing

€11m from 2006 to 2010

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; pollution prevention	Sustainable Energy Ireland	Grants	Commercial and residential	Sustainable Energy Ireland info page

In the 2006 Budget presented to the Dail in December 2005, the Minister of Finance announced the allocation of Eur 65 million over the period 2006 to 2010 to "launch several innovative grant schemes relating to biofuels, combined heat and power, biomass commercial heaters and domestic renewable heat grants". An indicative allocation of Eur 11M was made for a CHP programme to run between 2006 and 2010.

The new SEI CHP Deployment Programme will provide grant support to assist the deployment of small-scale (<1MWe) fossil fired CHP and biomass (anaerobic digestion (AD) and wood residue) CHP systems. It supersedes the "Combined Heat and Power RD&D" Programme.

At present the Programme includes feasibility studies, to assist investigation into the application of CHP across all size ranges and technologies and investment grant support for small-scale fossil fired CHP with a capacity = 50kWe and < 1MWe. The Programme aims to include biomass (anaerobic digestion (AD) and wood residue) CHP, and micro CHP.

Italy

Financial Law 2007 – 2007, ongoing

€200m per year from 2007 to 2009; proportion on measures for buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Economy and Finance	Tax incentives; preferential loans	unclear	Italian Parliament legislation page (Italian)

Approved at the end of 2006, Financial Law 2007 (Finanziaria 2007) establishes several measures for energy efficiency:

Paragraphs 344 to 349 establish fiscal incentives for energy enhancement of buildings, put into effect by decree 19/02/2007 (GU n. 47 del 26-02-2007). Paragraphs 1110 to 1115 establish a revolving fund (200.000.000 € yearly) to finance measures for GHG reduction (for the period 2007-2009): a) high performance micro-cogeneration plant; b) electricity and heating production from small scale renewable sources; c) high efficiency electric engine substitutions (more than 45 kW); d) interventions for improving energy efficiency among the end uses in the civil sector; e) dinitrogen oxide abatement in industrial processes; f) research and development plans on new technologies and low or zero emissions energy sources.

Regional Measures for Energy Efficiency: Sardinia Energy Auditing and Renewable Energy Production – 2007, ongoing

€1.5m in 2006 for audits, energy efficiency and renewable energy

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Sardinia Regional Council	Preferential loans	Commercial	Legislation on Italian Energy Agency site (Italian)

In 2006, the Sardinia Regional Authority established financial incentives for local enterprises to conduct energy audits and to invest in energy conservation - through efficient production and operation and through the development of local renewable energy sources.

Regional Measures for Energy Efficiency: Val d'Aosta – 2006, ongoing

€1.1m in 2006 for energy efficiency and renewable energy

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Val d'Aosta Regional Council	Preferential loans	unclear	Legislation on Italian Community Network site (Italian)

In January 2006, the Val d'Aosta launched a program to offer financing and credit for the installation of systems for:

- the rational use of energy
- energy efficiency improvements in buildings
- use of renewables energy sources

Regional Measures: Marches Incentives for Small Enterprises – 2003, ongoing

€3m for energy efficiency and renewable energy; time period unknown

Stated objective(s)	Responsible	Type	Sector	Legislation on Italian Community Network site (Italian)
Energy efficiency; climate change mitigation	Marches Regional Council	Grants; tax rebates	Small commercial	

Promotion and incentives for small and medium enterprises in the industry and services sectors. Incentives for energy savings and the development of renewable energy sources.

Luxembourg

Energy Efficient Partner – 2008 onwards

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Economy and Foreign Trade	Preferential loans	New residential	Ministry of Economy and Foreign Trade info page (French)

In May 2008, the Ministry of Economy and Foreign Trade launched a partnership agreement to include the financial sector in supporting improved energy efficiency in the building sector.

Under the agreement, participating banks will offer reduced interest rates on loans financing the construction of passive houses (those with class A energy performance certificates) or low-energy consumption houses (those with class B energy performance certificates). The reduction offered must be at least equivalent to a reduction of 0.125% on the interest rate granted for the full duration of the loan.

Participating banks are awarded the status of Energy Efficient Partner, and can use the Energy Efficient Partner logo on all their communication supports. The agreement has been signed by four banks, Dexia, Fortis, ING and Raiffeisen.

Investment Grants for SMEs and non-industrial enterprises – 2004, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of the Middle Class	Grants	Commercial	Policy briefing page on Government portal site (French)

On 30 June 2004, a law providing wide-ranging support measures for SMEs was passed. Article 4 of the law outlines investment grants provided to SMEs in the fields of environmental protection and the rational use of energy. So as not to duplicate the provisions of the law of 22 February 2004 targeting the industrial sector (see separate entry), the law explicitly excludes industrial sector enterprises.

The law provides for both material and non-material investments, such as licences as patents, as well as non-patented knowledge and training. Grants are provided in the following four areas.

Adaptation to new standards

Grants are provided to assist SMEs in adapting to new European Community standards and regulations, for a period of three years starting from the new regulation's entry into force. Up to 15% of eligible investment costs associated with implementing the new standard/regulation can be supported during this period.

Surpassing existing standards

This grant scheme is provided to enterprises of all sizes that undertake investments to surpass existing required standards, or who undertake eligible investments in the absence of any standards or regulations. The grant scheme covers up to 30% of eligible investment costs. This can be increased by up to 10% if the company is an SME.

Energy investments

This grant scheme is provided to enterprises of all sizes that make investments leading to energy-savings, renewable energy, or the production of combined heat and power (CHP). Up to 40% of eligible investment costs can be covered. This can be increased by up to 10% if the company is an SME. The grant can also be increased by 10% should the investment allow for the independent energy supply of a community.

Consulting fees

For SMEs requiring consultation services in the field of environmental protection or rational use of energy, the scheme covers up to 50% of the fees paid.

Netherlands

More with Less Programme – 2008 to 2020

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Housing, Spatial Planning and the Environment	Third-party financing	Existing residential	More info

The "More with Less" programme is a joint initiative from the Dutch government, energy retailers, social housing providers, construction and installation companies. It aims to make 500 000 buildings 30% more energy efficient in the period 2008 - 2011, increasing to 2.4 million buildings by the year 2020

The programme is supported by home owner and consumer representative organisations and aims at specific target groups: home owners, tenants, housing companies and building owners, ensuring that all market parties involved participate and send out the same message.

"More with Less" attempts to tackle the obstacles to energy conservation within each target group. The energy efficiency measures and programme benefits are provided at periods within the regular renovation cycle, that is in the case of removal and renovation, when people are already inclined to invest. The programme focuses on enabling building owners to conserve energy with the least possible effort. The entire process, from receiving an certified energy advice up to installing the required energy efficiency measures, is taken care of by the contact person of the building owner. The contact person can be the contractor, the energy counselor, the installer, the architect; it is s/he who is a one-stop contact point and can if needed arrange for various aspects of the programme: subsidies, energy label, offers, finance, etc.

To overcome financial barriers the programme ensures fixed monthly expenses. In other words, the increase of monthly expenses for energy efficiency investments will be at least set-off by the monthly gains in terms of reduction of the energy bill. This is accompanied with education in cooperation with consumer organisations and feed back on energy use every two weeks.

Energy Investment Tax Deduction – 2004, ongoing

€137m in 2005

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Economic Affairs	Tax break	Commercial	More info

Since 1997, the Energy Investment Allowance has encouraged entrepreneurs who invest in relatively innovative energy-efficient technologies or projects of renewable energy to deduct (under certain conditions) part of their investment costs from their corporate income tax.

The list of eligible technologies and equipment is updated annually and includes projects of CHP.

In 2004, the net benefits were decreased to 13% of investment costs (the precise rate of the benefits depends on the applied tax tariff). The Energy Investment Allowance has been decreased to 44% as from 1 January 2005.

Norway

Incentives for Low-energy Housing – 2002, ongoing

NOK12m in 2006 for energy efficiency and renewable energy

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Norwegian State Housing Bank	Preferential loans	Residential	Housing Bank page on loans and grants

The Housing Bank assists with building additional environmentally friendly homes with reduced energy needs. The Housing Bank provides support to projects that contribute to expertise development in the environmental and energy fields, and focuses on supporting projects with a high level of ambition and a high transfer value. The basis for the Housing Bank's environmental work is the environmental action plan for 2005-2008, issued by the Ministry of Local Government and Regional Development.

In 2006, of the homes the Housing Bank approved for foundation loans, 45% were built with features that provide energy saving relative to current norms. In that year, it gave approximately NOK 12 million in resource grants to 52 projects related to the environment and energy. The Housing Bank provided support to projects that focused on topics such as developing low-energy housing and passive houses and environmentally friendly renovations and modernisations.

Subsidies for Energy Efficiency and Renewables – 2002, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Norwegian Energy Agency (ENOVA)	Grants	Commercial and residential	Norwegian Energy Agency homepage

Subsidies for energy efficiency and renewables come from a fee on the transmission tariffs and from ordinary grants over the state budget. The government has granted Nkr 280 million in the budget for 2002 and the income from the fee is stipulated at Nkr 200 million. The income is directed to a new energy trust, the Energy Fund, that was established on 1 January 2002. Enova will be in charge of this trust, which will secure a long-term financial frame over the years to come. Enova will use the money to reach government objectives, which include:

- Reaching an annual increase in the use of central heating based on new renewable energy sources, heat pumps and waste heat by 4 TWh/year by 2010.
- Constructing wind generators with a production capacity of 3 TWh/year by 2010.
- Limiting energy use considerably more than would be the case if developments were allowed to continue unchecked. In 2002 approximately Nkr 100 million should be used for work tied directly to energy efficiency.

Poland

Thermo-modernisation fund – 1999 to 2016

ZL 270m in 2008 for energy efficiency in buildings; ZL 500m allocated between 1999 and 2008

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Ministry of the Economy	Preferential loans	Existing residential	Baltic Energy Efficiency Network briefing on fund

The Thermal Modernisation Law and Fund have been introduced in 1999 to support the energy efficient refurbishment of buildings in Poland. The refurbishment projects must meet certain technical and financial criteria, which need to be verified by an energy audit and a financial analysis. The energy savings after refurbishment need to achieve a savings rate of at least 25 percent.

The loan of the bank can amount up to 80 percent of the costs of the refurbishment project. If the loan (plus interest), are theoretically repayable on schedule (within 10 years = maximum loan period), then the state owned “National Economy Bank” (BGK) can issue a bonus of 25 percent of the loan rate.

Procedure: An investor (e.g. housing cooperative or homeowners’ association) willing to modernise the building applies to the BGK for a thermo modernisation bonus via a lending bank. The results of the respective energy audit are attached to the application. If the refurbishment project is completed successfully, the bonus will be granted just after completion of the investment.

Evaluation: Until mid-2002 the thermo modernisation fund was not a very successful scheme. This was mainly due to complicated (application) procedures, e.g. for housing cooperatives and a high level of interest rates. From 2003 on, after the conditions have been amended, and massive promotion activities were introduced, the number of applications increased significantly. Meanwhile, the volume of the fund is by far not sufficient and not meeting the demand.

Infrastructure and Environment Operations Programme – 2008 to 2013

Up to €1.5bn for energy efficiency measures in buildings

Stated objective(s)	Responsible	Type	Sector	
Modernisation	Ministry of the Economy	Subsidy	Public and not-for-profit sectors	More info

- Financial support for projects relating to the energy efficiency modernisation of public buildings and for exchanging the equipment in these buildings for energy saving equipment.
- Full financing for the preparation of the complex documentation required to apply for and implement undertakings under this measure.
- Actions to support energy efficiency modernisation projects for public buildings under regional operations programmes.

Portugal

National Energy Efficiency Action Plan: Portugal Efficiency 2015 – 2008 to 2015

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Economy and Innovation	Various	Commercial, residential and public	Portuguese Plan (Portuguese)

In February 2008 the Portuguese government published a draft National Energy Efficiency Action Plan, Portugal Efficiency 2015. The Plan sets a target of reducing energy consumption by 10% by 2015, and elaborates a series of 12 programmes establishing various targets to 2015 and measures to be taken across various sectors in order to achieve this goal.

Transport Sector targets and measures:

- Reduce by 20% the number of light-goods vehicles over 10 years old;
- Reduce average CO2 emissions for new cars sold annually by 20% (from 143 g/km in 2005 to 110g/km);
- Ensure that 20% of the vehicle stock is equipped with monitoring equipment (on-board computer, GPS, cruise control, automatic verification of tyres);
- Establish an innovative platform for traffic management with GPS-optimised routes;
- Developing urban mobility plans for district capitals and corporate centres with over 500 workers;
- Transfer 5% of individual transport modes to collective ones;
- Shift 20% of international goods transported by road to maritime transport modes;
- The creation of a fleet of "green" taxis, with low greenhouse gas emission levels.

Residential and Services sectors targets and measures:

- Sustainable urban rehabilitation programme, with the aim of having one in every 15 households meet an optimal energy class (greater or equal to B-);
- Programme to replace 1 million large electric appliances (white goods), providing a EUR 50 bonus for the replacement with an A+ appliance and EUR 100 for an A++ appliance; old appliances must be handed over for recycling;
- Phase-out of incandescent light bulbs, large-scale substitution of incandescent light bulbs with CFLs (5 million)
- Simplified permits for efficient construction projects
- Stimulating small-scale electricity production so as to turn 75 thousand homes into electricity producers (installed capacity of 165 MW) by 2015;
- Having one in every 15 buildings equipped with solar hot water heaters.

Industry targets and measures:

- Voluntary agreement with manufacturing industry to reduce energy consumption by 8%;
- Establishment of agreements with industry for the rational use of energy

- Creation of an Intensive Energy Consumption Management System, extended to medium-sized enterprises (with consumption over 500 toe), with fiscal incentives provided for identified energy management measures to be implemented.

Public sector targets and measures:

- Energy certification of all state buildings to be completed;
- 20% of state buildings to fall within energy performance class greater than or equal to B;
- 20% of the state vehicle fleet to produce CO2 emissions less than 110g/km;
- Phase-out of inefficient street lighting;
- 20% of traffic lights to use efficient lighting (LED).

Information and communication measures:

- Launch of the "Energy Plus Bonus" to reward excellence in energy efficiency for companies, buildings, schools and others;
- "Energy Efficiency Plus" programme: an energy efficiency "seal of approval" to identify best practices for homes, public buildings, enterprises, schools and equipment.
- Information and communication campaigns to increase awareness and knowledge of energy efficiency and actions that can be taken, including training schemes, with a budget of up to EUR 2 million per year.

Fiscal measures

- Create a new taxation regime for vehicles and industrial fuels;
- Creation of an accelerated depreciation regime for investments in energy-efficient equipment and vehicles in the industry and service sectors;
- Providing fiscal incentives for micro-production and progressively aligning the tax system with that of the energy certificates for buildings (for example fiscal benefits for class A/A+ level homes);

Financial measures and incentives:

- Encouraging reduced electricity consumption - providing an incentive for major consumers to reduce consumption by providing bonuses to those who consume less, and establishing an Energy Efficiency Fund;
- Efficiency cheque: Providing an "efficiency cheque" for two years, worth 10% or 20% of annual electricity costs to consumers with verified energy reductions of, respectively, 10% or 20% following investments in energy efficiency;
- A reduction of 2.5% in the electricity tariff to those with lower energy consumption, and creating pricing schemes in favour of efficiency;
- The creation of a subsidised low-interest personal line of credit, in the amount of EUR 250 million per year, for investments in energy efficiency measures, with an emphasis on urban rehabilitation. Interest rate reduction of 4% provided for credit, up to 8% without guarantees;
- Stimulating Energy Service Companies (ESCOs), by providing incentives for their establishment (QREN), calls for tender for public sector audits, and establishing regulations for an "efficiency contract".

As part of the Action Plan, in September 2008 the Portuguese government began distributing 5 free high-efficiency light bulbs to each of the poorest 13 per cent of households in the country.

Romania

Programs for the thermal rehabilitation of multi-level residential buildings – 2002, ongoing

Supports energy efficiency and energy audits; exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Development, Public Works and Housing	Grants	Existing residential	More info from MURE database

The Government adopted in 2002 the Government Urgency Ordinance 174/2002 regarding the establishment of special measures for thermal rehabilitation of some multi-level residential buildings, that was approved by the Law 211/2003, further amended and modified by the Law 260/2006. The GUO 174/2002 establishes special measures for the thermal rehabilitation of some blocks of flats (condominiums) that were built during the period 1950-1990 in order to increase the energy performance of these buildings. The blocks of flats - condominiums that are going to be rehabilitated are included in the annual thermal rehabilitation action programs developed by the Ministry of Development, Public Works and Housing on the basis of the proposals submitted by the municipalities taking into account the eligibility criteria and the main criteria established by the law.

The special measures for thermal building rehabilitation to be established by energy expertise and energy audit and according to the law they may include:

- Heat insulation of the building shell (exterior walls and roof) as well as of the basement, replacement or double glaze of the windows and exterior doors, construction works and painting of the external walls and other structural and non-structural parts of the building shell;
- Works for reducing the thermal losses of the pipes and furniture from the basement of the building.

The coordinators of the annual programs are the mayors of the municipalities, cities and localities, respectively the district mayors of Bucharest. They put in place the necessary measures for developing the energy expertise and energy audit of the building and to conclude the conventions with the owner association of the buildings that are included in the annual programs in order to continue the actions for designing and carrying out of the building thermal rehabilitation works.

The necessary funds for the energy expertise and audit, feasibility study and design of the thermal rehabilitation works for the buildings included in the annual program are provided by State budget allocations.

The funds for the carrying out of thermal rehabilitation work are shared as follows:

- 34% from State budget allocations. These allocations are approved on a yearly basis, and funds are provided out of the budget of the Ministry of Development, Public Works and Housing.
- 33% from funds approved for this use on a yearly basis by local authorities.
- 33% from maintenance funds of the owner associations.

The construction authorization for carrying out of the thermal rehabilitation works of the buildings included in the annual programs are issued free of charge. The methodological norms for applying the GUO 174/2002 were approved by Government Decision 1070/2003, modified by the Government Decision 1735/2006.

Slovak Republic

Environmental Fund – 2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Ministry of Environment	Grants; preferential loans	Commercial, residential and public	More info from MURE database

The Environmental Fund was established in 2005 to implement state promotion of the environmental care, and operates under the Ministry of the Environment.

The Fund provides various subsidies, in the form of grants and soft loans, which support investment in energy efficiency and renewable energy. Legal and natural persons are eligible for this support.

The Fund is financed through fees and fines linked with the environmental pollution, with grants and subsidies covering the following areas:

Heat and hot water production using low-emission energy sources. The support is meant to achieve prescribed emission limits by means of the change of fuel used or the change of combustion technology. This includes projects oriented at public buildings (schools, hospitals, office buildings etc.)

Heat and hot water production using renewable energy sources (RES). Financial support is provided for the construction of new RES equipment substituting original fossil fuel combustion boilers, or for the development of new equipment and facilities (Biomass, solar energy, heat pumps etc.).

Support of the production of heat, hot water and electricity by the utilisation of RES (solar-thermal systems, photovoltaic panels, wind power plants, etc.). These projects generally target applicants who are natural persons.

Slovenia

Stimulation of the investments in utilization of RES in households – 2002 to 2009

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation	Ministry of Environment and Spatial Planning	Grants	Residential	More info from MURE database

The Slovenian government established in 1995 The Agency for Efficient Use and Renewable Sources of Energy (AURE) as a body within the Ministry of Environment and Spatial Planning, responsible for implementation of energy policy in the field of energy efficiency and utilization of renewable energy sources.

One of the activities of AURE was a yearly action for stimulation of the utilization of renewable energy sources in residential buildings.

This action has been defined every year based on the available financial means from the budget.

The description of measures, duration and instruments are presented below:

- Thermal solar systems; 2002-2009; subsidy
- Heat pumps combined with solar systems; 2002-2009; subsidy
- Biomass heating boilers; 2002-2009; subsidy
- Photovoltaic; 2005-2009; subsidy

Financial stimulation for energy efficiency renovation and sustainable building of new buildings – 2008 to 2016

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Ministry of Environment and Spatial Planning	Grants; preferential loans	New and existing residential and public	More info from MURE database

Instruments for stimulation of energy sanitation of old buildings and for building of new low energy and solar passive residential buildings are presented.

The energy sanitation of old buildings includes thermal insulation of buildings and replacement of un-energy efficient windows. The financial stimulation is designed to support the investment in new over standard energy efficient building.

The energy efficiency measures are:

- energy sanitation (thermal insulation of shells and lofts, replacement of windows),
- building of new low energy buildings,
- building of new passive solar buildings.

Financial stimulation for energy efficiency heating systems – 2008 to 2016

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency; climate change mitigation	Ministry of Environment and Spatial Planning	Grants; preferential loans	Existing residential	More info from MURE database

The goal of these instruments is to progress implementation of energy efficiency measures to decrease the energy consumption for space heating in residential buildings:

The energy efficiency measures are:

- replacement of boilers with unsuitable capacity with high energy efficient device (condense boilers, modular boilers),
- installation of special biomass boilers with very high efficiency,
- optimization of heating system operation: thermostatic valve, control and hydraulic balance of heating system)
- use of thermal solar system and heat pump for space heating and preparing of hot sanitary water
- use of heat pump for space heating and preparing of hot sanitary water (utilization of air heat, heat of underground water, geothermal or under land heat)

Financial stimulation for efficient use of electricity – 2008 to 2016

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Environment and Spatial Planning	Grants; preferential loans	Existing residential	More info from MURE database

The energy efficiency measures to decrease the electricity consumption of the household's electricity appliances and lighting. Electricity consumption of appliances presents 56% (about 1700 GWh/year) of all electricity consumption in households and 11% for lighting.

The programme for efficient use of electricity in households includes the following measures:

- stimulation for purchasing of most energy efficient households appliances: refrigerators, freezers, washing machines, dishwashers,
- stimulation of energy efficient lighting: purchasing of efficient florescence lamps,

- penetration of intelligent energy meters in households: internet monitoring, remote control, quick measure and advice at consumers.

Scheme of efficient use of energy for households with low income – 2008 to 2016

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Social equality; energy efficiency	Ministry of Environment and Spatial Planning	Grants	Existing residential	More info from MURE database

The target of the measures is families with low income: financial poor family with children and old poor people.

The implemented energy efficiency measures focused on technologies and did not consider the social status of a household (family). The last data show that 14% of all households are under poverty threshold and they do not have enough funds for implementation of energy efficiency measures.

The financial subsidy is to enable implementation of low investment measures to reduce the energy cost and increase living comfort.

The energy efficiency measures are:

- sanitation of buildings to achieve minimum of energy efficiency standard: thermal insulation of lofts, draught proofing and thermal insulation of critical parts,
- energy efficient lighting and other measures.

Programme of energy audits of companies and buildings – 2008 to 2016

Exact budget for energy audits in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Environment and Spatial Planning	Grants	Commercial and public	More info from MURE database

The programme of subsidies of energy audits for companies or institutions and buildings has been in force since 1993. The aim of the programme is to stimulate energy audits and prepare energy efficiency measures for companies or institutions. An energy audit gives consumers or responsible for energy (management) a clear picture about the structure of costs for energy consumption and priority of organization and investment measures for energy efficiency in their company or institution. The proposed energy efficiency measures are bases to prepare an operation plan for their implementation.

The Agency for efficient use and renewable energy (AURE) is responsible for the implementation of the programme.

Spain

Energy Efficiency Action Plan – 2008 to 2012

€2,367 for sustainable energy, of which €804m for 2008 to 2012 for sustainable energy in buildings

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	Ministry of Industry, Tourism and Commerce	Various	All	Institute for Diversification and Saving of Energy briefing on Plan (Spanish)

Follow the link to read the full plan, which supersedes the 2005-2007 action plan. Pages 106-128 provide an overview of policies for buildings, some of which are covered below.

Support for Energy Efficiency in Buildings – 2008 to 2012

€804bn from 2008 to 2012

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Provincial Governments	Grants; preferential loans	Existing residential and public	Energy Efficiency Action Plan on IDAE site (Spanish)

Four measures in the above action plan provide financial and/or fiscal support for sustainable energy in buildings. These are all devolved at provincial government level:

- Refurbishment of the building envelope
 - €175m for 2008-2012
- Improvement of heating, ventilation and cooling system efficiency
 - €243m for 2008-2012
- Improvement of interior lighting efficiency
 - €173m for 2008-2012
- Promotion of the construction of new and refurbishment of existing buildings to very low energy standards
 - €209m for 2008-2012

Building Technical Code / Solar Panel Requirements – 2006, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Industry, Tourism and Commerce	Grants; preferential loans	Existing residential and commercial	More info

To complement the incorporation of these standards [EPBD requirements] into its national law,

Spain further required all new or renovated buildings to install solar power systems capable, at a minimum, of heating water.

A package of minimum construction standards, Spain's Building Technical Code (CTE - Código Técnico de la Edificación) will, specifically promote solar energy by recommending public subsidies, tax benefits and interest-free loans for construction companies to install solar panels. Though nationally-applicable, these subsidies are likely to differ in amount from region to region.

The CTE supports Spain's goal to install 5 million square meters of thermal panels with 143MW capacity by 2010.

Sweden

Energy Declaration of Buildings Act - Incentives for Investment in Lower-Energy Buildings – 2006, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Ministry of Sustainable Development; Swedish Energy Agency; National Board of Housing, Building and Planning	Grants	Residential and commercial	More info

The Swedish Energy Declaration of Buildings Act was proposed to harmonise domestic legislation with the EPBD and came into force in 1 October 2006. Under Swedish legislation, buildings are subject to inspections, and certain information about a building's energy use and indoor environment will be certified in an energy declaration when buildings are constructed, sold or rented out (this since January 2009).

Financial support mechanisms:

The Act on Tax Reduction for Certain Environmentally Enhancing Installations in Single-Family Houses came into force on 1 January 2004. The idea behind the legislation was to stimulate certain environmental improvements in permanent buildings.

- Special investment support for energy-saving measures and conversion to renewable energy in public premises has been introduced. This also applies to installation of solar cell systems.
- Support for purchase of energy-efficient windows and biomass boilers is set at 30% of the cost exceeding SEK 10.000; support capped at SEK 10.000 for windows and SEK 15.000 for boilers.
- Support when converting from electric heating to a heat pump (except air heat pumps) or district heating. This support is from 2006 to 2010.
- Public authorities can receive support to effectivise their buildings. Up to SEK 10 million per building.

Switzerland

Updated Climate Penny Fund: Climate Cent Foundation – 2005, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	Climate Cent Foundation homepage (German)
Climate change mitigation; energy efficiency	Climate Cent Foundation	Flexible, from voluntary fund	Residential	

Chronology:

2004

Under a voluntary agreement with the Government, the Swiss private sector proposes to launch an innovative Climate Penny Fund. Oil importers agree to contribute one or two Swiss cents per litre of gasoline and diesel sold.

The revenue from this voluntary 'tax' is to be spent on emissions reduction projects in Switzerland and abroad through the Kyoto flexible mechanisms. The projected revenue equates to ?45 to ?90 million, depending on whether it is decided to apply a one or two cent rate for the climate penny.

The private sector has proposed this fund as an alternative to a possible CO2 tax.

The Climate Penny is involved in two of the four government proposals under the CO2 law; these proposals are in public consultation until 20 January 2005. Subsequent to these consultations, the government/parliament will take a decision on which proposal to implement.

2005

The Swiss Federal Council and the Climate Cent Foundation signed an agreement to implement the Climate Cent charge on transport fuels from 1 October 2005. In signing, Swiss oil importers agree to contribute between 1.3 and 1.9 Swiss cents per litre of gasoline and diesel fuel sold to the Climate Cent Foundation. The contributions are expected to total 100 million Swiss Francs (CHF), funds to be used to reduce and offset Swiss carbon dioxide emissions.

Being a voluntary measure, the Climate Cent on transport fuels did not require Parliament's approval. Moreover, the government had no say in how revenues were to be used. In late summer of 2005, DETEC (Department of Environment, Transport, Energy and Communication) concluded an agreement which setted the milestones to be met by the Climate Cent Fund. The agreement requires the Climate Cent Foundation to reduce at least 0.2 MtCO₂ through domestic projects; credits of up to 1.6 MtCO₂ can be purchased abroad. The Foundation plans to invest CHF 180 million in refurbishing Swiss buildings to be more energy efficient and CHF 190 million in other domestic energy efficiency and renewable energy projects.

Funds are managed by the non-governmental Climate Cent Foundation.

2007

Before mid-2007, the Foundation, a private consortium of Swissoil, Economiesuisse and the Swiss Touring Club, must prove its ability to reduce emissions. If not, the Swiss Federal Council will then implement a carbon tax on petrol fuels to match that already levied on other fuels.

In 2007, the Climate Cent Foundation, proved its ability to reduce emissions, and as a consequence the Swiss Federal Council waived the implementation of a carbon tax on petrol fuels to match the carbon tax already levied on other fuels.

The emissions reduction target is that of reducing 9 Mio tonnes of CO₂ emissions between 2008 and 2012, of which more than 1 Mio tonnes in Switzerland.

2008

The Climate Cent Foundation has committed itself towards the Swiss Confederation to reducing twelve million tonnes of CO₂ over the period 2008 to 2012, of which at least two million tonnes within Switzerland. The Climate Cent Foundation is funded by a charge levied on all petrol and diesel imports at a rate of 1.5 cents per litre.

Despite this private and voluntary foundation the Swiss Government has introduced a CO₂ levy in 2008.

In 2006, the CO₂ emissions from heating fuels decreased by 4.6% compared to 1990 levels. The reduction target of at least 6% set by Parliament and the Federal Council was thus not achieved. A levy of 12 CHF per tonne of CO₂ emitted has therefore been charged on fossil fuels used for heating (heating oil, natural gas) as of January 2008.

- With effect from 2008 a levy of 12 CHF per ton CO₂ (corresponding to 0.03 CHF per litre heating oil) if the emission from fossil fuels in 2006 is declined less than 6 % compared to 1990.
- With effect from 2009 a levy of 24 CHF per ton CO₂ (corresponding to 0.06 CHF per litre heating oil) if the emission in 2007 compared to 1990 is decreased less than 10%
- With effect from 2010 a levy of 36 CHF per ton CO₂ (corresponding to 0.09 CHF per litre heating oil) if the emission in 2008 compared to 1990 is decreased less than 13.5% or in one of the following years is decreased less than 14,25%.

United Kingdom

Community Energy Saving Programme – 2009 to 2012

€350m from 2008 to 2011

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	Department of Energy and Climate Change	Grant	Residential	CESP consultation on DECC site

The new Community Energy Savings Programme is intended to support new and existing partnerships of local councils, voluntary organisations and energy suppliers to go street-by-street through communities offering free and discounted central heating, energy efficiency measures and benefit checks.

This programme will be funded through a new and additional obligation on the energy suppliers and electricity generators. Around 100 new community schemes might be created benefiting some 90,000 homes over the next three years.

The government intends to provide a visible and community-based approach to the energy efficiency programme, where every household in a neighbourhood has the best possible package of help by offering face-to-face contact and advice.

Carbon Emissions Reduction Target – 2008 to 2012

£2.8bn from 2008 to 2011

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	Department of Energy and Climate Change	Flexible	Existing residential	CERT briefing on Defra site

The Carbon Emissions Reduction Target (CERT) - which came into effect on 1 April 2008 and will run until 2011 - is an obligation on energy suppliers to achieve targets for promoting reductions in carbon emissions in the household sector.

It is the principal driver of energy efficiency improvements in existing homes in Great Britain. It marks a significant strengthening of efforts to reduce household carbon emissions with a doubling of the level of activity of its predecessor Energy Efficiency Commitment (EEC).

CERT will deliver overall lifetime carbon dioxide savings of 154 MtCO₂ equivalent to annual net savings of 4.2MtCO₂ by 2010, and equivalent to the emissions from 700,000 homes each year and will stimulate about GBP 2.8 billion of investment by energy suppliers in carbon reduction measures.

In addition to the energy efficiency measures of the current EEC, suppliers will be able to promote microgeneration measures; biomass community heating and CHP; and other measures for reducing the consumption of supplied energy. CERT will maintain a focus on vulnerable consumers and will include new approaches to innovation and flexibility. Suppliers must direct at least 40% of carbon

savings to a priority group of low-income and elderly consumers. Extending the priority group to include the over 70s seeks to ensure that a large number of fuel poor households, who are not eligible under the current criteria, become eligible for support.

In addition, the newly-launched ACT ON CO2 advice line will help customers take advantage of suppliers' offers under CERT. In September 2008 The Government proposed to increase the existing CERT target by 20 per cent in the present period up to March 2011. This will require additional expenditure by the energy suppliers of an estimated GBP 560 million on providing, for example, discounts to households for energy efficiency measures.

Stamp Duty Relief for Zero Carbon Homes – 2007, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	HM Revenue and Customs	Tax break	New residential	More info

To support the move to zero carbon homes, the UK government announced in the 2007 Budget that from 1 October 2007 all new homes meeting the zero carbon standard costing up to GBP 500,000 would pay no stamp duty, and that zero carbon homes costing in excess of GBP 500,000 would receive a reduction in their stamp duty bill of GBP 15,000.

Low Carbon Buildings Programme – 2006, ongoing

£86m; time period unspecified

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; demonstration	Department of Energy and Climate Change	Grants	Residential, commercial and public	Programme homepage

The Low Carbon Buildings Programme (LCBP) is the UK Government's GBP 86m grant programme for microgeneration technologies, launched in April 2006 offering capital grants to successful applicants.

The main objectives are to demonstrate the potential for encouraging both energy-efficiency and microgeneration technologies, such as solar photovoltaics, wind turbines and heat pumps, in a range of buildings, driving down costs in the process, and making the microgeneration market more sustainable. The programme funds single installations in households and large-scale developments in the public and charitable sectors. Potential beneficiaries include schools, community centres and local authority buildings.

Part of the UK's 2006 Microgeneration Strategy, Phase One of the Low Carbon Buildings Programme, which will run until 2010, will fund a range of microgeneration technologies including:

- Solar photovoltaics
- Wind turbines
- Small hydro

- Solar thermal hot water
- Ground/water/air source heat pumps
- Bio-energy
- Renewable CHP
- MicroCHP (Combined heat and power)
- Fuel cells

Two streams of grants are available under phase one of the programme:

- householders and community organisations.
- for medium and large microgeneration projects by public, not for profit and commercial organisations.

Under Phase One of the scheme (large scale projects), the Government has established carbon reduction targets that go beyond the building regulations, although by end 2008 it was too early to say what the results were.

Landlords' Energy Saving Allowance – 2004, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	HM Revenue and Customs	Tax rebates	Existing residential	Briefing on HMRC site

This policy, announced in 2004, provides an incentive for private landlords to improve the energy efficiency of the residential properties that they let. The policy provided upfront relief (up to GBP 1500) for capital expenditure on investment in cavity wall and loft insulation. In 2005, it was extended cover solid wall insulation, in 2006 to include draught proofing and hot water system insulation, and again in 2007 to include floor insulation. Also in 2007, the programme was extended to 2015, and the government also sought state aid approval to extend its availability to corporate landlords.

Scotland – Public Sector Central Energy Efficiency Fund – 2004, ongoing

Exact budget for sustainable energy in buildings unknown; £25m invested to date

Stated objective(s)	Responsible	Type	Sector	
Energy efficiency	Scottish Government	Preferential loans	Public	Fund homepage

The Public Sector Central Energy Efficiency Fund (CEEF) was established to improve uptake of energy efficiency across the public sector in Scotland.

This revolving loan fund provides financial assistance to help Scottish local authorities, Scottish NHS Boards, Scottish Water and the Scottish Higher and Further Education sector acquire and install energy efficiency and microgeneration technologies through interest-free loans. Around GBP 25 million has been invested in the scheme with 900 projects implemented. Due to the revolving nature of the fund this will continue to finance projects indefinitely.

Climate Change Levy – 2001, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change mitigation; energy efficiency	HM Revenue and Customs	Tax; tax breaks; preferential loans	Commercial	Briefing on HMRC site Briefing on Carbon Trust site

The Climate Change Levy was introduced in April 2001. The levy applies to electricity, gas, solid fuel and liquefied gases used for lighting, heating and power in the business and public sectors.

The levy was designed to be broadly revenue neutral in concept: at the time of introduction it formed part of a "Levy Package" where the revenue collected is recycled back to business through a 0.3% reduction in National Insurance Contributions and also a system of enhanced capital allowances and interest free loans for investments in energy saving technologies. Electricity produced from qualifying renewable sources and energy used and generated in approved combined heat and power schemes are exempt from the levy.

There is also a reduced (20%) rate for energy-intensive businesses that enter into voluntary agreements to reduce their energy use and/or emissions.

Northern Ireland Warm Homes Scheme – 2001, ongoing

€20m per year in 2007 and 2008

Stated objective(s)	Responsible	Type	Sector	
Social equality	Northern Ireland Department for Social Development	Grants	Existing residential	Briefing on eaga site (managing agent)

The Warm Homes Scheme was launched in Northern Ireland in 2001; it is funded by the Department for Social Development (DSDNI) and managed by eaga. Like Warm Front, it is the main instrument aimed at tackling fuel poverty in private sector housing, targeting tenants and owner-occupiers. It offers grants of up to GBP 850 for the installation of insulation measures (including boiler jackets and window and door draught insulation) and energy advice. Eligible households are those receiving social or disability benefits, and households with young children and householders over 60 are specifically targeted. The latter group is also eligible for Warm Homes Plus, involving heating system replacement and/or upgrade grants on top of insulation measures.

Funding for the scheme has increased from approximately GBP 3 million in 2001 to just over GBP 20 million in 2006-07 and 2007-08, allowing an increase in the number of homes that can be targeted from 8 250 to 10 000.

Scottish Energy Assistance Package – 2009, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Social equality	Scottish Executive; Energy Saving Trust	Grants	Existing residential	Programme homepage

The Central Heating Programme was introduced in 2001 to tackle fuel poverty. It is funded by Communities Scotland and managed by Scottish Gas.

Funded by the Scottish Government, the Energy Assistance Package gives advice and support to help maximise income, cut fuel bills and make homes warmer and more comfortable. It combines and replaces the Central Heating and Warm Deal programmes in Scotland.

Scotland – Community and Householder Renewables Initiative – 2001, ongoing

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Climate change	Energy Saving Trust and Community Energy Scotland	Grants	Existing residential and third sector	Initiative homepage on Energy Saving Trust site Briefing on Scottish Executive site

SCHRI is funded by the Scottish Government and provides funding to householders and advice and funding to communities. The household stream is managed by the Energy Saving Trust and the community stream is jointly managed by the Energy Saving Trust and Community Energy Scotland.

- The objectives of SCHRI are:
- To support the development of community scale renewable projects
- To support the installation of household renewables
- To raise awareness of renewable technologies and their benefits to Scotland
- To provide support to the renewables industry

Community Stream

From 2003/04 to 2008/09 the Energy Saving Trust successfully managed the community stream of the Scottish Community and Householder Renewables Initiative (SCHRI) throughout Scotland except in the Highlands and Islands area. Community Energy Scotland managed the community stream of the SCHRI in the Highlands and Islands. The SCHRI was funded by the Scottish Government.

From April 2009 Community Energy Scotland took over the management of the community renewables grant programme, now called Communities and Renewable Energy Scheme (CARES). CARES continues the support available for communities under the previous Scottish Community and

Householder Renewables Initiative (SCHRI). The scheme provides support and grants for community groups Scotland wide.

For further information on the CARES please visit www.scotland.gov.uk/Topics/Business-Industry/Energy/19185/Communities or contact Community Energy Scotland on 01349 860120 or at www.communityenergyscotland.org.uk/.

Please note that The Energy Saving Trust continue to manage the programme providing grants for renewables to householders.

Household Stream

SCHRI provides grants to householders of up to 30% of the costs to a maximum of £4,000. The installer and product must be accredited.

The technologies available for funding are:

- solar photovoltaic
- micro hydro-electric
- micro wind
- solar water heating
- solar space heating
- automated wood fuel heating systems (boilers and room heaters/stoves)
- heat pumps (ground, air and water source)
- connections to the Lerwick District Heating Network

Reduced sales tax for energy saving materials

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	More info
Energy efficiency	HM Revenue and Customs	Tax break	Residential and charity	

By virtue of a policy announced in 2000, a reduced rate of Value Added Tax (VAT) of 5% - the lowest VAT rate allowed under EU agreements - is charged on certain energy saving materials, provided that they are professionally installed in a residential or charitable property (such as non-business or village hall). The reduced rate covers:

- all insulation, draught stripping, hot water and central heating controls;
- installations of solar panels, wind and water turbines;
- ground-source and air-source heat pumps and micro-CHP; and
- wood/straw/similar vegetal matter-fuelled boilers.

Additionally, grant-funded contractor installations of central heating systems and heating appliances; and grant-funded installations of factory-installed hot water tanks, domestic combined heat and power units, and heating systems that use renewable energy also benefit from the reduced rate when installed in sole or main residence of a person over 60 or in receipt of certain benefits.

Wales Home Energy Efficiency Scheme

Exact budget for sustainable energy in buildings unknown

Stated objective(s)	Responsible	Type	Sector	
Social equality	Welsh Assembly Government	Grants	Existing residential	Briefing on eaga site (managing agent)

The HEES Wales scheme was launched in 2000; it is funded by the Welsh Assembly Government (WAG) and managed by eaga. HEES provides grants for heating and insulation improvements not only for owner-occupiers, but also to tenants. There are two levels of the scheme for those receiving social benefits, the first targeting households with young children or pregnant householders.

A grant of up to GBP 2 000 can be received for home improvement measures. The second level (HEES Plus) awards grants of up to GBP 3 600 to those over 60, single parents with young children, disabled or chronically ill householders, and those with a disabled young child. Householders over 80 automatically qualify for HEES Plus. Some homes that need oil central heating may receive a grant of up to GBP 5000. Homeowners over 60 not receiving any social benefits can still be eligible for grants of up to GBP 500 for home energy efficiency improvements.

Since 2004, all households applying for the scheme receive advice on the benefits they are entitled to and the assistance available to them under HEES.

Warm Front Scheme

€874m from 2008 to 2011

Stated objective(s)	Responsible	Type	Sector	
Social equality	Department for Environment, Food and Rural Affairs	Grants	Existing residential	Scheme homepage

The Warm Front Scheme was launched to tackle fuel poverty in the private housing sector in England in 2000, and is the UK's largest fuel poverty reduction programmes. It is a public grant programme, funded by Defra and managed by eaga. The programme is designed to provide grants to private sector households with dependent children, the elderly, the long-term sick and the disabled, who are in receipt of certain benefits.

Warm Front now offers central heating to all eligible households and gives them the option to receive the full range of appropriate measures over a period of time, subject to the maximum amount of grant that can be paid. Eligible households generally are those which receive some form of social benefit, and the scheme continues to target households with members over 60 and under 16 years old. Eligible households can receive up to GBP 2700 worth of free central heating and energy efficiency measures. In August 2006, a GBP 300 rebate scheme for a new heating system was launched for householders over 60 not in receipt of a qualifying Warm Front benefit.

Since the scheme's introduction in June 2000, over 1.7 million households have received assistance. Given the number of homes benefiting from the Warm Front Scheme and the reduction in average

running costs per property, the potential energy savings amount to almost 10 GJ per household every year for the next 20 years.

The government provided additional funding to the Warm Front programme in 2008. The extra funding is designed to reduce fuel bills for approximately 35 000 households, taking the Warm Front budget for 2008-2011 to GBP 874 million.