

## Solar Energy Activities in Belgium

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### GENERAL INFORMATION

Current solar heating and cooling actions in Belgium include those in Table 1.

**Table 1**  
**Solar Heating and Cooling Programs**

AREA	REGIONAL PROGRAM NAME	IEA SHC PROGRAMME TASK
Active Solar	SOLTHERM	TASK 24
Passive Solar	SUSTAINABLE	TASK 28 & 30 (& 27)
Daylighting	ARCHITECTURE	TASK 31
PV for Buildings	PV IN BUILDINGS	

Program aspects are shown in Table 2.

**Table 2**  
**Aspects of Solar Heating and Cooling Programs**

	Gov. Funds	Gov. Research	RD&D activities	Information Program	Subsidies – incentives	Commercial actions	Market trend
SOLTHERM	X		X	X	X	X	Up
SUSTAINABLE	X	X					
ARCHITECTURE							
DAYLIGHTING	X	X		X		X	Up
PV IN BUILDINGS	X		X		X	X	Up

### PROGRAM STRUCTURE

#### National and Regional Matters

During the restructuring of Belgium as a federal state, energy competencies were split between national matters (federal level) and regional matters (sub-federal level).

At the regional level, three independent energy authorities (VIREG, DGTRE and IBGE) coexist, respectively controlled by the Flemish Region, the Walloon Region and the Region of Brussels Capital.

National matters include:

- Sustainable policy definition
- Initiation of national programs promoting environmental protection and RUE (Rational Use of Energy)
- Regulation of the utility sector
- Nuclear power generation
- International cooperation

Regional matters include:

- Implementation of sustainable development, environmental protection and RUE (Rational Use of Energy) policies
- Ruling of energy distribution
- Energy infrastructure development
- Management of natural resources, including RES (Renewable Energy System) development
- Scientific research and technology development

## **Government Policy and Objectives**

### *NATIONAL POLICY*

At the federal level, since 1997, a sustainable development plan must be prepared every four years, and a report on the state of sustainable development every two years. In this framework, during 2000 and 2001:

- Primary energy sources to be used to meet the demand were defined
- A nonbinding target of 6% overall green electricity use for 2010 has been set
- Green electricity premiums have been decided
- Tax exemption for the integration of some RUE measures in domestic buildings has been implemented.

Complementary actions are taken at the regional level.

### *FLEMISH REGION*

Existing RUE (Rational Use of Energy) and RES (Renewable Energy System) schemes were :

- Full financing of approved RUE and RES projects conducted by statutory research institutions
- Co-financing of technology demonstration projects
- Financial assistance to RTD projects for private companies
- Subsidies for i.a. RES systems investments.

Additionally in 2001, the region established :

- A green certificates system
- Binding targets for suppliers use of green electricity (5% in 2010, noncompliance penalties are set).

### *WALLOON REGION*

Existing RUE and RES schemes were :

- Co-financing of technology demonstration projects
- Financial assistance to RTD projects for private companies
- Subsidies for RUE measures and RES systems (including Combined Heat and Power) investments, both public and private.

Additionally in 2001, the region established :

- A long-term plan for energy, including a specific budget for RES electricity investments
- A green certificates system
- Binding targets for suppliers use of green electricity (12% in 2010, noncompliance penalties are set).

#### *REGION OF BRUSSELS CAPITAL*

RUE and RES schemes are limited to subsidy granting for RUE measures and RES systems investments (excluding the utility sector).

#### *ENERGY AGENCIES*

Solar energy technologies for buildings and other RE technologies are regional matters. The three regional agencies are :

- VIREG for the Flemish Region
- DGTRE for the Walloon Region; and
- IBGE for the Region of Brussels Capital

### **FUNDING**

Solar heating and cooling actions funding are estimated in Table 3.

**Table 3**  
**Solar Heating and Cooling Funding**

	<b>2000</b>	<b>2001</b>	<b>Trend</b>
	<b>Euro</b>	<b>Euro</b>	
Active Solar	250,000	500,000	Up
Passive Solar	625,000	625,000	Up
Wind Energy			Up
Bioenergy			Up
All Renewable Energy <sup>1</sup>	60,000,000	60,000,000	Up

### **RESEARCH, DEVELOPMENT & DEMONSTRATION**

Major areas of RD&D activities for solar building technologies and research institutions are shown in Table 4.

**Table 4**  
**RD&D Activities**

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<sup>1</sup> For RES electricity in the Walloon Region alone

AREA	RESEARCH INSTITUTIONS	D & D INSTITUTIONS
Active Solar	Architecture & climat	3E, Institut Wallon
Passive Solar	BBRI, Architecture & climat	BBRI, Architecture & climat
Daylighting	BBRI, Architecture & climat	BBRI, Architecture & climat
PV for Buildings	BBRI, Architecture & climat IMEC	3E

Industry involvement is generally limited to in-house RD&D.

## OTHER GOVERNMENT SUPPORTED ACTIVITIES

### Information and Promotional Activities

SOLTHERM, the Solar Hot Water Promotion Program of the Walloon Region, is the only integrated promotion activity currently running in Belgium. The program includes product quality enhancement, training of installers and architects, promotional activities, auditing of and advising on public facilities. Its objective is to have 200,000 m<sup>2</sup> of solar collector installed between 2000 and 2010.

Figure 1 illustrates the objectives of the SOLTHERM program in terms of m<sup>2</sup> of solar collectors to be installed yearly.

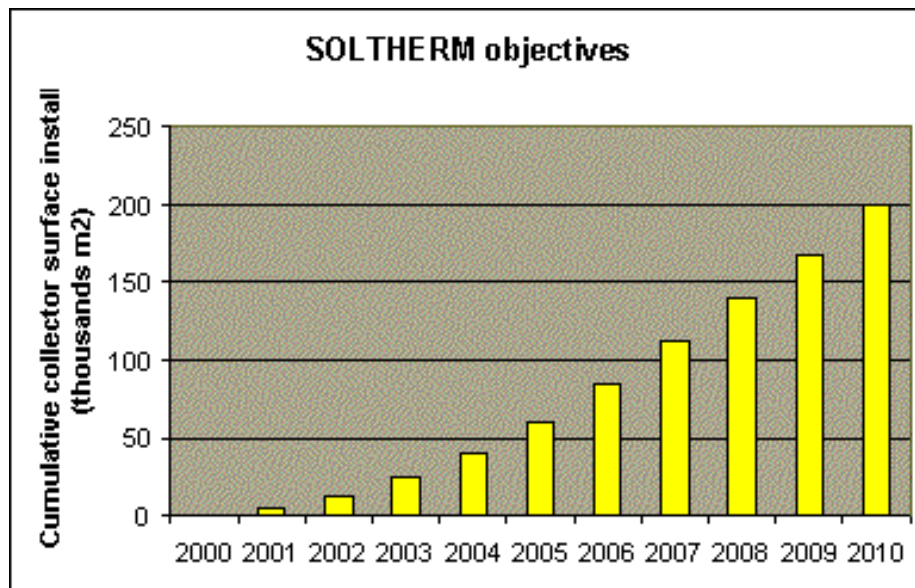


Figure 1. SOLTHERM objectives for 2000-2010.

### Subsidies and Incentives

The Table 5 summarizes the subsidies and incentives currently granted for solar system installation in Belgium.

#### Table 5

## Subsidies and Incentives for Solar System Installation

	Active Solar	PV
National level	15 % tax deductible (from 2003 on)	Green electricity premium of 2 c€/kWh
Flemish Region	From 75 to 150 €/m <sup>2</sup> collector installed	75 % of investment Buy back tariff of 15c€/kWh + green certificates
Walloon Region	From 150 to 600 €/m <sup>2</sup> collector installed	Green certificates
Region of Brussels Capital	From 150 to 250 €/m <sup>2</sup> collector installed	

No real incentive is granted to daylighting or passive solar technologies.

### Standards and Certification

In the Flemish Region, building standards are evolving in the direction of the Energy Performance European Standard. Hopefully, this will open new perspectives for large-scale passive solar and daylighting applications.

There is no evidence that the Walloon Region or the Region of Brussels Capital will follow this way soon.

## COMMERCIAL ACTIVITY

### Status of the Industry

There are presently three active solar products manufacturers (and 18 distributors of foreign products) active in Belgium. The main manufacturer also is a large exporter of solar absorbers to Germany. Belgian manufacturers have a domestic market share of about 30%. Solar collector installations over the next three years is estimated to be 12,000 m<sup>2</sup>.

There is only one PV manufacturer in Belgium. The PV capacity installation is expected to be minimal in the coming three years (perhaps, 15 kWp).

### State of the Market

An active solar market has been growing at an average rate of 30-50 % in recent years. The PV market growth is less sustained.

### Utility Programs

According to an agreement with the federal government, utilities serve as relays in the present RE promotion programs. Utilities contribute up to 33% in the subsidies granted for active solar and/or PV systems installation.

## OUTLOOK

The short-term outlook, until the end of 2003, is quite good for solar energy systems for buildings. Beyond 2003, the level of interest will depend on whether the current policies are continued or not.

The renewal of building standards according to the Energy Performance European Standard should be a powerful drive for solar building applications. Political attention should be drawn to this point in the Walloon Region and the Region of Brussels Capital.