

BUILDING MOMENTUM FOR SOLAR THERMAL MARKETS IN BELGIUM

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Abstract

The solar thermal market in Belgium is at the beginning of a new era. Since 2000, several regional governmental initiatives and action programmes have been initiated. The Soltherm programme of the Walloon regional government is the most extensive one. The integrated approach of market and quality development is presenting its first successes. The solar industry willingly takes up its responsibility through a restructuring and the implementation of a quality system for suppliers and installers.

Samenvatting

De zon-thermische markt in België is aan het begin van een nieuw tijdperk. Sinds 2000 zijn er verscheidene regionaal gouvernementele initiatieven en actie programma's opgestart. Het Soltherm programma van de Waalse regering is van deze het meest uitgebreide. De geïntegreerde benadering van de markt en de kwaliteitszorg presenteert nu zijn eerste succes. De zonne-industrie neemt zijn verantwoordelijkheid door herstructurering en de implementatie van een kwaliteitssysteem voor leveranciers en installateurs.

Introduction

Market development of solar thermal applications in Belgium, has not been able to keep up with the evolution of other EU member states, and has remained at a marginal level.

Over the past years commercial and non-profit market players have taken the initiative to organise themselves into several federations to support the development of the solar energy market in Belgium.

APERe (Association for the promotion of renewable energies) was created in 1991 as a non profit organisation by some ten associations and research centres mainly active in the Walloon Region. Similarly, in 1996, 22 founding members established ODE Vlaanderen (Organisation Sustainable Energy Flanders) as a independent and permanent regional network in the Flemish Region.

Since the late nineties, two separate solar industry associations co-existed: BELSIA – grouping suppliers of solar equipment in general, and Solar.be – grouping collector manufacturers. Earlier this year, both organisations merged into BELSOLAR (Belgian solar industry association).

Recently, these organisations have been able to put the issue of solar market development on the political agenda. The matter has received substantial attention by public authorities over the past 3 years, which has led to several market development programmes which are described below.

Present market situation

Present market volume is estimated around 3000 to 4000 m² collector surface per year for the whole of Belgium, with an average annual growth of between 30 and 50% over the past 3 years.

Although no detailed statistics are available, it is estimated that the total installed collector surface by the end of 2001 is at approximately 20000 to 26000 m², corresponding to around 2 m² per 1000 inhabitants.

Investment subsidy versus market development action plan

Investment subsidies for solar thermal installations exist on different levels since the second half of the nineties. A subsidy given by gas and electricity utilities exists on a national level, separate public programs exist for small and larger systems on regional and provincial government levels and in total about 100 municipal governments provide also additional financial support.

Depending on the location of the solar thermal installation, total investment subsidies for a residential solar installation can amount up to 2750 Euros with typical mean values around 1500 Euros. At presents this represents in general about 40% to 50% of the total installation cost.

For medium size and larger installations a total subsidy amount typically representing 30% (and up to 40% in the Walloon Region) of the installation cost can be obtained.

However, up to now none of these subsidy systems have been able to create considerable market growth or initiate the development of a viable industrial sector and often annual subsidy budgets foreseen were hardly addressed.

Therefore active market development programs have been initiated for the first time in 2000 and are becoming increasingly important. Within these programs or initiatives different aspects of the solar market development are emphasised. An overview of the present initiatives is presented in the table below, also indicating how these initiatives compare to 2 European projects in which Belgium participates.

Table 1 Overview of recent market development initiatives in Belgium. It is indicated if the program contains activities on solar thermal (ST) and/or photovoltaic (PV) solar energy applications. Furthermore it is shown that 3 different aspects can be addressed: quality, market development and training of professionals (installers).

	ST	PV	Quality	Market development	Training
SOLTHERM Wallonia	●		●	●	●
VLAZON	●	●	●	●	●
SWH Promotion Campaign Brussels	●			●	
Quality System BELSOLAR	●	●	●		●
SOLTHERM EUROPE INITIATIVE	●		●	●	●
SOLAR KEYMARK (ALTENER)	●		●		

Governmental initiatives in Belgium

1.1 SOLTHERM Wallonia : Investing in a healthy solar future

In 2000, the Walloon regional Government (Ministry of the Walloon Region – DGTRE – Energy Department) initiated the SOLTHERM action programme. It has a horizon up to the year 2010 and the aim of developing the solar industry and business into a commercially viable sector. Among others, this means boosting the present annual installed collector surface of around 1000 m²/yr to app. 30000 m²/yr in 2010.

In order to meet these objectives an integrated approach is realised: promotion and information towards the general public, quality initiatives in collaboration with suppliers and installers, specific actions for larger systems and a comprehensive training program.

Intensified commercial promotion of solar thermal with the potential buyers and information towards the general public are organised using not only standard printed or internet material (www.soltherm.be). For example, a very successful multiplication effect was reached by initiating a working group of so-called “Active Municipalities” who are supported (organisational level) in organising local promotion activities and financial incentives etc. Some 30 municipalities participate in this initiative at present.

The results of these promotional efforts are presented in more detail in the graph below. In the first year of the campaign a total of 1323 m² of collector surface, i.e. 213 residential systems, have been installed. This corresponds to approximately 0.4 m² per 1000 inhabitants or 1 m² for every 1000 housing units. Monthly volumes vary from 15 m² to 225 m². One can also notice only a minor seasonal dependency in the market exists: just over

50% of the systems are installed during 5 summer months (June - October). This sales volume surpasses the goals set for the program for the first year (150 systems) but it is expected that a sustained and even increased effort will be required to attain the 2002 goals, being 850 residential systems.

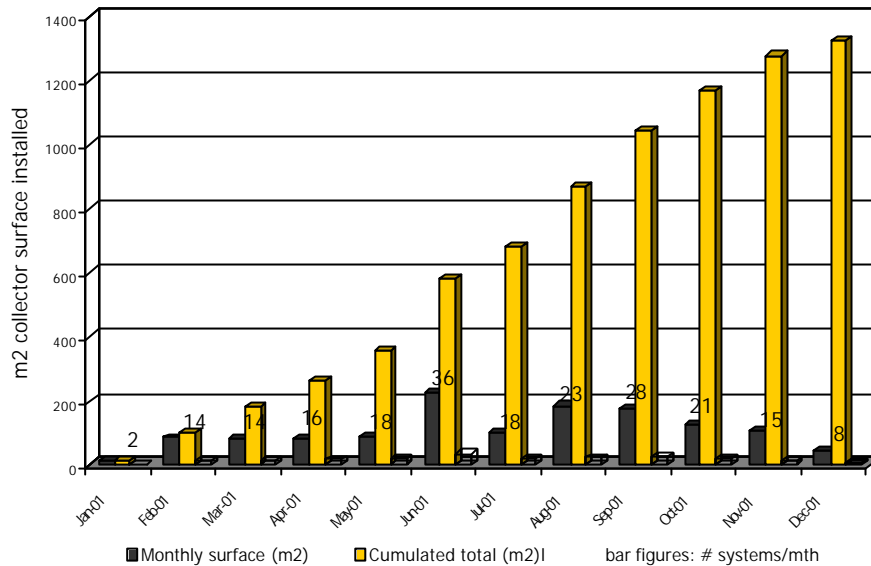


Figure 1 The installed solar collector surfaces in 2001 (first campaign year) are presented. The light bars present the total cumulated collector surface (in m²); the dark bars present the monthly collector surfaces installed (in m²). The figures mentioned near the bars indicate the number of systems installed per month.

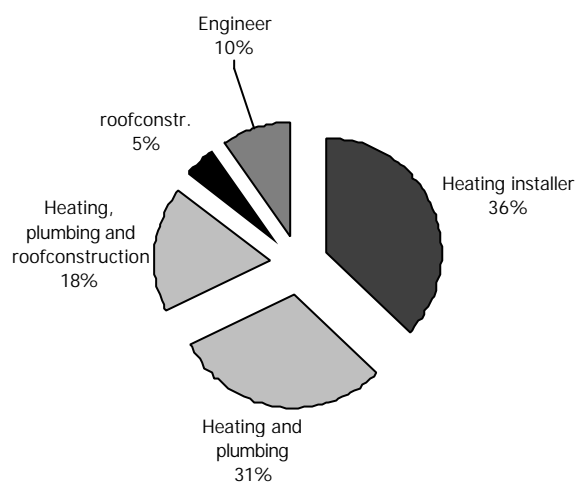
Although the market development campaign focuses nearly totally on the residential sector, some actions are realised towards the tertiary sector: a standardised pre-feasibility analysis service is implemented and financed by the Walloon regional government for 20 demonstration projects (sports centers, hospitals, social housing projects, etc). Some 8 projects have been analysed and a first project, a public swimming pool with 250 m² collector surface has entered the realisation phase.

On the technical and professional level different initiatives are implemented within the program: a training program for installers and for architects as well as a quality system for suppliers and installers. This quality system is discussed in more detail further on in this article. It consists of a set of criteria on the level of products (systems) and installation (guarantee, training etc) which are checked on beforehand or at different intervals. The system operates on a voluntary basis: suppliers and the installers can sign a voluntary agreement to participate and respect the criteria. In return, they are referenced as so-called SOLTHERM-installers and –suppliers and promotion is made for them through the campaign marketing actions and tools (www.soltherm.be). In 2002 a more intensive collaboration between this government program and the industrial branche organisation is realised through means of a joint single quality system and an agreement on joint preparatory actions for 2003.

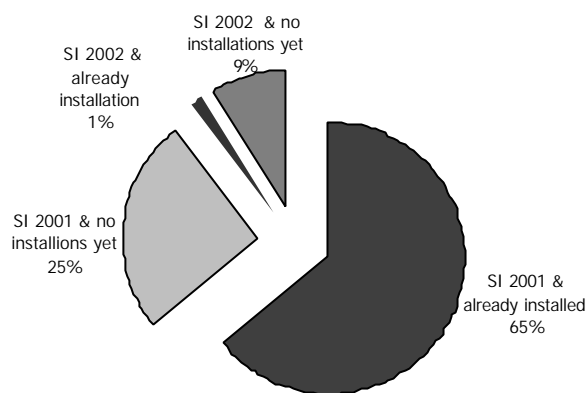
Out of the 35 (local and international) brands represented on the Walloon market, currently 14 solar water heater suppliers participate in the Soltherm quality system. Out of the approximately 5000 relevant installers in Wallonia, 70 are presently in the system. The chart below presents the main professional training of the participants (left). The chart on the right indicates if they have participated in 2001-2002 (and thus have been trained at least by their supplier for the solar water heaters specifically) and if this has already resulted

in installations sold. Out of all installers participating in 2001, 5% of them were responsible for over 50% of the market.

Table 2. Soltherm Installers participating in the quality system: main professional background (left) and results of their participation (right).



Main professional background of the 70 Soltherm installers



Current results of Soltherm installers participating since 2001 and 2002 (SI= Soltherm installer)

1.2 Solar water heater promotion campaign of the Brussels Capital Region

During 2001-2002 a promotion campaign is set-up by the Brussels regional government (Brussels Institute for Environmental Management – Department of Energy). Among the projects realised or presently under construction in the centre of Brussels are:

- 5 demonstration houses with residential solar water heating system
- 2 demonstration renovation projects of 100 m² each of collective systems for apartment buildings
- retrofit of social housing blocks with 3 collective systems for 100 housing units

The campaign also generated a series of professional tools aiming at lowering the threshold for solar systems for conventional construction parties: type tender documents for small and large solar water heating systems made available to engineering offices and architects, simple design guidelines for building designers, specific address-lists of solar suppliers and installers active in the brussels region, standardised offer format for residential systems etc.

1.3 VLAZON

For historical reasons (i.e. the presence of a research laboratory and active SME's) the Flemish regional Government has had more emphasis on photovoltaic systems up to now. At present a strategic solar market development program is under realisation (financed by the Flemish Regional Government – ANRE – Department of Energy).

The program aims at developing strategic research and development activities, quality guidelines for products, services and training of professionals. On a more general level it aims at creating a stable environment for the industry and the market to develop.

BELSOLAR: The industry teams up

1.4 Merging into one national player

A well-structured professional supply chain is considered to be essential to meet the needs of a growing market. Two separate industry associations existed by the end of 2001: Belsia and Solar.be, each with a different emphasis with respect to member types and location.

The major challenge for Belsia during its first years of existence was to become a valid representation of the Belgian solar industry. At the end of 2001, Belsia counted 17 members active in the field of solar energy as dealers, manufacturers or system suppliers and another 18 associated members, being R&D centres, NGO's and consultants. The majority of the members however was based or active in the Flemish region of Belgium. Solar.be put the emphasis on the manufacturing aspect of the industry and therefore had only 3 members which were mainly active in the Walloon region.

In order to become a national organisation being the one representative and 'spokesperson' for the solar industry on all national and regional levels, Belsia and Solar.be merged beginning of 2002 into a new federation called Belsolar. At the same time a quality system defining requirements for membership of this new organisation have been implemented.

In this context, recent activities and initiatives covered by Belsolar include:

- Lobbying for a stable and certain investment subsidy scheme for solar thermal systems
- Development of a Belsolar quality system
- Increasing partnership with authorities in order to jointly develop market development strategies that best suit the Belgian market requirements

At this moment no specific installer branch organisation for solar energy systems exists in Belgium but first steps are being taken to further develop this.

1.5 Quality system BELSOLAR

Belsolar, the recently established national industry association strongly values the link between sustainable market development and quality of products/services supplied, in a market in the process of take-off.

Next to the existing Soltherm quality system Belsolar had a quality system in preparation since 2001. In order to avoid the existence and overlap of two distinct parallel systems Belsolar has teamed up with the Walloon regional Government in order to implement a single quality system valid for the whole Belgian market. Both existing members and new candidates will have to comply with the quality system in order to be able to be a member of the new federation Belsolar.

The quality system is a preparation to the integration of the recent European standards but has a wider scope :

- Criteria with respect to the collaboration between suppliers and their official installers (agreements on quality of training and installation work).

- Technical criteria, based on the EN-standards, for the solar systems marketed in Belgium. These integrate aspects regarding performance on component and system level as well as durability and documentation.
- A set of minimum BELSOLAR guarantee conditions towards the end customer
- A code of conduct with respect to commercial communication and information.

Integrating into the European picture

In order to integrate belgian initiatives into European developments, Belgium participates in the Soltherm Europe Initiative (www.soltherm.org) and in IEA Task 24 Solar Procurement. The Walloon Soltherm and Belsolar quality systems were tightly integrating European standards and conceived as a preparational phase to the Solar Keymark.

Conclusions

The solar thermal market in Belgium is at the beginning of a new era. Since 2000, several regional governmental initiatives and action programmes have been initiated. The Soltherm programme of the Walloon regional government is the most extensive one. The integrated approach of market and quality development is presenting its first successes. The solar industry willingly takes up its responsibility through a restructuring and the implementation of a quality system for suppliers and installers.

The market is small but on schedule with growth objectives: approximately 4000 m² in 2001 with a mean annual growth of 30 to 50% for this year (and noticed over the past few years).