

Summary

The country has favourable conditions for solar thermal: the average annual period of sunshine is about 2100 hours, in some regions it may reach 2500 hours. The overall market is still rather small, though it is growing at a steady pace.

Despite the fact that there are many companies, there were not any special marketing strategies in place and there are not any visible attempts to make the general public aware of the many varieties and possibilities. There is no Solar Thermal Association in the country though interest has been expressed on behalf of market actors participating in a survey. There is a testing centre at Bulgarian Academy of Science for solar collectors testing but it is not entitled to issue certificates.

Country Overview

Population: 7.6 million inhabitants
 Size: 111 000 km²
 GDP pc (€): 8 350 (PPP)
 Climate: Temperate continental with clearly marked four seasons. Considering its small area, Bulgaria has an unusually variable and complex climate. The country lies between the strongly contrasting continental and Mediterranean climatic zones located in the country's southern regions. Bulgarian mountains and valleys act as barriers or channels for air masses, causing sharp contrasts in weather over relatively short distances.

Temperature Data

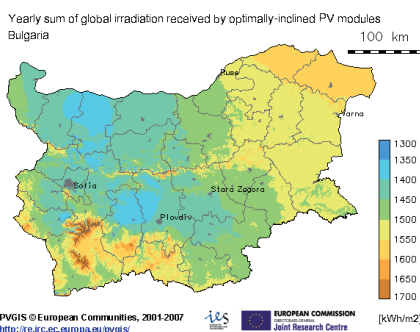
Indicator	Year 2007
Average annual temperature (°C)	10.5
The highest monthly average temperature (°C) for July and August	27
The lowest monthly average temperature (°C) for January	-5
Total precipitation per year (mm)	630

Market potential: solar radiation and heat demand

Global Radiation

The main data of solar radiation in Bulgaria is as follows :

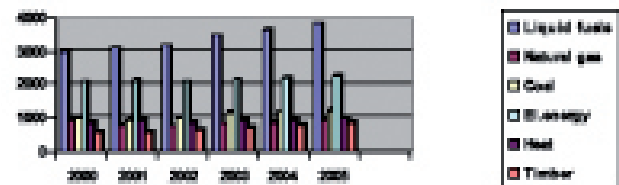
- The average solar radiation is 1517 kWh/m² (1410-1600 kWh/m²);
- The average annual period of sunshine is 2150 hours (2100-2500 hours);
- The total theoretical potential of the country is about 13x10³ ktoe;
- The usable annual potential is about 390 ktoe. (4535 GWh).



Energy Balance

Bulgaria is heavily dependent on energy as it imports more than 70% of its primary energy sources and it is mainly reliant on energy sources from Russia: oil, natural gas, high-quality coal and nuclear fuel. This structure of the energy balance causes concern in terms of the security of energy supply so Bulgaria is making efforts in two key areas:

- Reduction in specific energy intensity per GDP unit in economy; and
- Utilization of local renewable energy sources (RES).



Solar Thermal Statistics

Expert estimations show that in 2005 in Bulgaria there were 56 000 m² solar collectors. The actual expected installation of solar collectors is 5000 m²/year by 2010 and 8000 m²/year by 2015. So in reality it is expected that in 2010 Bulgaria will have 80 000 m² solar collectors and 120 000 m² solar collectors installed in 2015. Statistical data for the market of solar thermal systems is not available. Estimation of the solar collectors market development is done by reviewing respective sectors.

The solar thermal installations, implemented under different programs, were mainly for:

- Hot water in public buildings (hospitals, kindergartens, etc.), in domestic and tourism sector;
- Solar dryers in the wood processing and agricultural products industries.

The following main clients in the collective sector are distinguished now:

- Hotels, holiday houses, camping, swimming pools;
- State and municipal buildings (hospitals, kinder-gardens, social houses, elderly people's homes, etc.);
- Multi-storey buildings (mainly in new buildings);
- Industry – for wood processing and agricultural products.

Imports / exports figures

From the survey made under this project out of the 19 participating firms 42.1% offer Bulgarian collectors, 10.5% Turkish collectors, 47.4% Chinese collectors, 36.8% German collectors, 5.3% Czech, 5.3% Italian, 5.3% Austrian and 5.3% Greek collectors.

Sources of financial support

Title of support	Description	Specification of projects	Height of donation
REECL	The Kozloduy International Decommissioning Support Fund (KIDSF) administered by EBRD via credit line: Small credits for households	<ul style="list-style-type: none"> • Energy efficiency measures in buildings (replacement of windows, thermal insulation of walls, etc.) • RES application including solar thermal systems 	20% Max 600 Euro
BEERECL	The Kozloduy International Decommissioning Support Fund (KIDSF) administered by EBRD via credit line: Credits for private industries up to 2,5 million Euro	<ul style="list-style-type: none"> • Industrial energy efficiency • Renewable energies incl. solar thermal applications 	20 %
EU Structural Funds Operational Program Regional Development and Operational Program Competitiveness	Measures for increasing the energy efficiency in companies and for use of RES, including solar collectors.	Should be part of a set of measures, not a stand-alone measure	85 %
EU Structural funds Operational Program for rural development 2007-2013	Developing and equipping installations for production of heat and/or electric energy from RES, including solar systems	Eligible only: <ul style="list-style-type: none"> • Rural municipalities; • SMEs for projects up to 1 MW 	100 % 70 %

Further information

Further information on: www.cres.gr/trans-solar