

The „Solar Roof Špansko Zagreb“ Project has been presented in Cavtat

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The project demonstrates the possibility of energy saving, thermal energy up to 60%, electric energy up to 50% and water energy up to 55 %

Dr. Ljubomir Majdandžić, President of the Croatian Solar Energy Association, presented the measurement results of a three-year long “Solar Roof Špansko Zagreb” Project at the European Business Forum on Renewable Energy Resources, that was organized by the Croatian Chamber of Commerce and held in Cavtat from 11 to 14 November .

Croatia boasts of excellent conditions for use of renewable energy resources, especially sun and wind, but its application is very rare and only two wind power parks have been realized so far, while generation of solar electric power is applied in small units on private houses, and one of such houses is owned by dr. Majdandžić. However, pursuant to law, until 31 Dec 2010, minimum portion of electric power generated from a plant that uses renewable energy resources must amount to 5.8 per cent in total consumption of electric power. State incentives shall be granted for such production. Potentials for the above exist also in the Dubrovnik-Neretva County, according to the words of the County Head Mira Buconjić. There are ca 230 sunny days in a year and 60 % of optimum wind potentials. The “Solar Roof Špansko Zagreb” Project demonstrates large savings in household energy, thermal energy up to 60%, electric energy up to 50% and water energy up to 55 %. Besides, this project enables decrease of emission of green-house gas carbon dioxide by ca 6,500 kg a year.

Dr. Majdandžić has placed 10 m² solar collectors for obtaining thermal energy on a section of the southern roof of his house in Špansko, under the angle of 30°, and solar photovoltage modules of 7.14 kW capacity for obtaining electricity on the other section of the roof. The project also includes a system for collection of rain-water of 8,000 l volume. Majdandžić says that this is the first solar photovoltage system as a pilot-project in Croatia operating parallel with the distribution network that is envisaged for electric power supply of energy-using devices in households while the surplus of the electric power is delivered to the distribution networks. In other words, while solar modules are not generating enough electric power, supply of energy-using devices shall be supplemented with the energy taken over from the network. There are also three internal electricity meters connected to a PC. These are: electricity meter for measuring generated electricity, electricity meter for measuring used electricity, electricity meter for measuring surplus electricity delivered to the distribution network when one’s own needs of household energy-using devices are fulfilled. Storage of thermal energy for heating and preparation of consumable hot water shall be provided by a combined solar container of 750 l volume. As an additional power source, when the solar energy cannot generate usable heat, gas shall be used as an ecologically acceptable additional power source in the system of heating and preparation of consumable hot water. The system is designed for complete automatic operation. The most often reasons for inadequate exploitation of the solar energy lie in the lack of knowledge related to new technologies and a wrong opinion that this might be a costly investment. However, experts argue that there are

several top manufacturers of solar collectors in Croatia, and the repayment term of the investment, depending on the technology type, varies from 5 to 7 years. A whole range of renewable energy resources projects are underway and they are anticipated to be realized. Executive regulations came into force on 1 July this year and they, among others, regulate the incentive price for generation of electricity from renewable resources, said Vesna Trnokop-Tanta, Vice-President of the Croatian Chamber of Commerce in Cavtat. The incentives granted to the production of renewable energy are in form of non-repayable funds for manufacturers of equipment with a view of enhancing domestic industry. This year 4.5 million kunas have been granted in form of the above incentives. Besides, Vesna-Trnikop-Tanta argues that manufacturers of renewable energy shall be granted incentives through preferred tariffs, and the amount of the tariff shall be regulated by the regulations that came into force on 1 July this year. However, the above regulations have not been implemented so far due to the deficiency of the administration.