

Renewable Energy's City of Dardesheim / Germany

Status of the Dardesheim Renewable Energy Projects (2012)

General goal of the town: All energy for the city of Dardesheim's 950 inhabitants (electricity, heating/cold and vehicle fuels) should be provided by regionally produced renewable energy sources (wind power, biomass, solar energy and hydro pump storage).

Realization status:

Wind

4 pioneer wind power plants (1 x 80 kW and 3 x 250 kW, two bladed wind mills) since 1994/95 produce the equivalent of all electricity needed by private households within the city - approximately 1 million kWh

Wind energy farm with 62 MW (28 x 2.009 kW Enercon E-70s totalling 56 MW, 1 x 6 MW Enercon E-112 with 6 MW. In 2007, the wind farm produced 135,000 MWh, or 45 times Dardesheim's total electricity consumption (3 million kWh) and 15 times more than all the town's energy needs (about 8 million kWh for electricity, heating/cold and vehicle fuels).

Solar

15 Photovoltaic plants since 2005 produce the equivalent of half of the Dardesheim household electricity use. Additional solar collectors and wood gasification boilers provide household hot water and heating.

Biomass/Biofuels

Several private heating systems are based on biomass.

Two local motor vehicle enterprises offer since beginning of 2005 the change from diesel engines into operation based on domestic vegetable oil (rape seed) and two service cars of the energy farm are running based on local rape seed oil.

Other Transport

Two further service cars of the energy farm are driven based on electricity provided by the local wind turbines and solar roofs

Jobs

Local ENERCON service base with at present already 8 maintenance jobs and 2 further employees of the wind farm

The former 7 hectare Soviet radar station in the middle of the wind farm has been reconstructed into the "Druiberg Renewable Energy's Information Center" with presently 75 job creation scheme workers.

Other Information and Tourism

Public, town council and district administration have been following the Dardesheim energy projects for 10 years now with a high level of public agreement and participation, accompanied by the "Dardesheimer Windblatt" published bimonthly and distributed free of charge to all households in Dardesheim and the surrounding villages.

Regular guided tours are offered for national and regional political officials and tourists interested in

renewable energies, schools, kindergartens, local associations and citizens

Offer of an annual award of an environmental protection price endowed with 5,000 Euros under the patronage of Dr. Hermann Scheer (deceased member of the German parliament and president of Eurosolar) and German television journalist Dr. Franz Alt, awarding regenerative/ecological projects created by citizens, associations, companies and institutions.

Feasibility study “Dardesheim CO2 - free” by the Technical University of Braunschweig, the aim of which aim is to analyze the feasibility for the municipality heating system based on domestic biomass and solar collectors.

Feasibility study “80 MW Druiberg Wind Farm coordinated with Wendefurth 80 MW Hydro Pump Storage Plant, both providing Dardesheim and surrounding villages 100 % wind energy” by ISET/University of Kassel

Setting up a consortium, “Virtual combined renewable energy power plant,” to develop a “100 % regional renewable energy solution” for the whole Harz District around Dardesheim totaling 250,000 inhabitants and coordinating all renewable installations with the consumers’ demands.

Further goals of the project:

Increase of the creation of regional economic values (e.g. the total investment > 80 Mio. Euros was spent in the area of 70 kilometers around exclusively in the Bundesland of Saxony-Anhalt);
creation of more regional jobs, stabilization of existing social structures e.g. by sponsoring and co-operation with
local associations; offering unlimited investment shares with annual return of at least 8 % exclusively for citizens of the surrounding municipalities; promotion of local and international visitors tourism, co-operation
with the neighbouring restaurants and the Romanesque hotel “Wasserschloss Westerbürg”, youth co-operation
in the context of the annual Dardesheimer open air festival “Rock in May”. (first Festival worldwide to be powered by 100% Renewables)