

Renewable Energy's City of Dardesheim / Germany

Status Quo of the Dardesheim Renewable Energy Projects

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

Realization status:

- **4 pioneer – wind power plants** (1 x 80 and 3 x 250 KW) since 1994/95 producing a sufficient annual quantity of electricity for the private households within the city of approximately 1 million kWh
- Wind energy farm with **62 MW** (28 x Enercon E-70, each 2.009 kW, in total 56 MW, 1 x Enercon E-112 with 6 MW in 2007 producing 135.000 MWh, 45 times more than Dardesheim's total electricity consumption (3 Mio. kWh) or 15 times more than all energy needs (about 8 Mio. kWh for electricity, heating/cold and vehicle fuels)
- **9 Photovoltaic - plants** since 2005 producing **one third of the Dardesheim household's electricity**, about 10 private solar collectors provide household's warm water, different private heating systems 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**
- Two further **service cars** of the energy farm are driven **based on electricity** provided by the local wind turbines and solar roofs
- **Local ENERCON service base** with at present already 8 maintenance jobs and 2 further employees of the wind farm
- Reconstruction of the former 7 hectares large Soviet radar station in the middle of the wind farm wind park to the "**Druiberg Renewable Energy's Information Center**" with **at present 75 job creation scheme workers**
- Population, town council and district administration following the Dardesheim energy projects for 10 years now with a **high level of public agreement and participation**, accompanied by the **bimonthly** published "**Dardesheimer Windblatt**" distributed free of charge all households in Dardesheim and the villages around
- **Regular guided tours** for national and regional political deputies, tourists interested in renewable energies, schools, kindergartens, local associations and citizens
- **annual award of an environmental protection price** endowed with **5.000 Euros** under the **patronage** of **Dr. Hermann Scheer** (member of the German parliament and president of Eurosolar) and German television journalist **Dr. Franz Alt**, awarding regenerative/ecological projects of citizens, associations, companies and institutions
- **Feasibility study "Dardesheim CO₂ - free"** outworked by the Technical University of Braunschweig aiming for an municipality heating system based on domestic biomass and solar collectors
- Feasibility study "**80 MW Druiberg Wind Farm coordinated by Wendefurth 80 MW Hydro Pump Storage Plant both providing Dardesheim and villages around by 100 % wind energy**" outworked 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 having 250.000 inhabitants including 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 Westerburg", youth co-operation in the context of the annual Dardesheimer open air festival "Rock in May".