Landkreis Nordwestmecklenburg
Stabsstelle Wirtschafts- und Regionalentwicklung
Rostocker Straße 76,
23970 Wismar
+49 (0) 3841 3040 9811
+49 (0) 3841 3040 8 9811
y.rowoldt@nordwestmecklenburg.de
www.nordwestmecklenburg.de

Case study – Solar thermal

PROJECT: RES-CHAINS
PROGRAM: SOUTH BALTIC PROGRAM
MADE BY: YVONNE ROWOLDT
LANDKREIS NORDWESTMECKLENBURG
FOR: SOUTH BALTIC PROGRAM USERS
DATE: NOVEMBER 2012

Solar centre Mecklenburg-Vorpommern (solar heating)

THIS PROGRAM IS PART FINANCED BY THE SOUTH BALTIC PROGRAM AND THE EUROPEAN UNION.

Summary

THE SOLAR CENTRE MECKLENBURG-WEST POMERANIA is solar information, demonstration, congress and research centre, solar technology and industrial centre. They pursue the aim of long-term support of climate protection and the creation of innovative workplaces thanks to the use of regenerative energies. The ecologically restored manor house, a listed building, is used for conferences, congresses, exhibitions, training courses, information and advice and is also open to external event organisers.
The solar thermal plant supports heating for centre and is a part of exhibition and research at this place.

Site details

Start of operation (year): 2002
Location : Wietow
Coordinates (for the map):
Area (m^2):56
Orientation (north, south, …) :east-west
Angle:12

Construction and installation

How is the generated energy used?	Heat water, heat
Type and material of the solar collector	Flat-plate collector, building integrated
What type of storage tank is used? (if installed)	10 000 steel
Where has the collector been manufactured?	Germany – reinhard solar

Core process

What is the solar irradiance? (W/m²)	1150 kWh/m² year
What is the installed capacity? (KW)	28
Yearly heat production? (kWh / year) (in case)	21.000
What is the conversion efficiency?	55

Decommissioning

Any non-recyclable elements / materials?	If so, please specify

Environmental aspects

Use of harmful or hazardous substances?	Toxic or explosive gases, corrosive liquids
Average lifecycle GHG emissions?	
What are the yearly emissions to air and water?	
CO to air	
CO_2 to air	
SO_2 to air.....	
NO_x to air	
Other to …	
Other to …	
Other to …	

Financial aspects

The costs need be roughly estimated so as to reflect the total annual cost of the plant. The fundamental assumption is that the total annual cost comprises capital costs + O&M costs but if there is anything more important, please add that under the heading "Other costs" so as to make up 100 %.

What are the overall investment costs and interest rate?	**30000 €**
What are the operational and maintenance costs?	**0**
Other costs?	**0**
What is the life time of the ST facility?	**Min. 20 years**

Summary

on building site – setting up solar thermal collectors

on building site – lifting storage tank on it place, finished tank in house