

Solar district heating plants in Austria

SDHtake-off, National workshop for Czech Republic
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SOLID Group - What we do

Large scale solar plants:

- district heating nets
- hospitals, dorms, prisons,...
- Resorts and hotels
- Swimming pools & sporting facilities
- Solar cooling

Existing References:

- > 250 large plants
- > 15 commercial solar cooling systems

SOLID's scope of supply:

- Project Development
- Engineering
- Construction
- Supervision
- Operating & Maintenance

R&D activities for Solar Thermal

Financing:

- Third Party Financing models
- Guarantee contracts
- ESCo arrangements



Experience in SDH projects for 15 years



- **Sweden**
Orust
- **Germany**
Crailsheim
- **Austria:**

• <u>Deutsch Tschantschendorf</u>	1994	• Knittelfeld	1999
• <u>Bildein</u>	1995	• Salzburg-Börling	2000
• Deutsch-Feistritz	1995	• Lienz	2001
• <u>Urbersdorf</u>	1996	• Graz-Liebenau	2002
• Glashütten	1995/96	• Graz-Berliner Ring	2003
• <u>Orust</u> (Schweden)	1996/97	• AEVG	2007
• <u>Fibiswald</u>	1996/97	• <u>Gleinstätten</u>	2007
• Kroatisch Minihof	1997/98	• <u>Obertrum</u>	2008
• <u>Schwanberg</u>	1998	• Wasserwerk Andritz	2009
• <u>Stadt/ Mur</u>	1998	• Eugendorf	2009
• <u>Schalkeham</u>	1998	• <u>Mattsee</u>	2009
• Judendorf/ Straßengel	1998/99		
• <u>Soboth</u>	1999		



More than 50 plants with > 50 MW since 1994



Solar district heating projects in Graz

Stadion Liebenau – First large scale solar plant in Graz



- **Collector array:** 1.407 m²
- **Solar yield:** 540 MWh/ year
- **Thermal load:** approx. 845 kW
- **Start up:** 2002

AEVG, Sturzgasse

Biggest solar plant in Austria



- **Collector array, actually:** 4.960 m²
- **Solar yield:** approx. 2.000 MWh/ year
- **Thermal load:** approx. 2.500 kW
- **Start up:** 2008
- **After overall completion**
approx. 6.900 m² collector array

AEVG, Sturzgasse

Biggest solar plant in Austria



Housing estate „Berliner Ring“

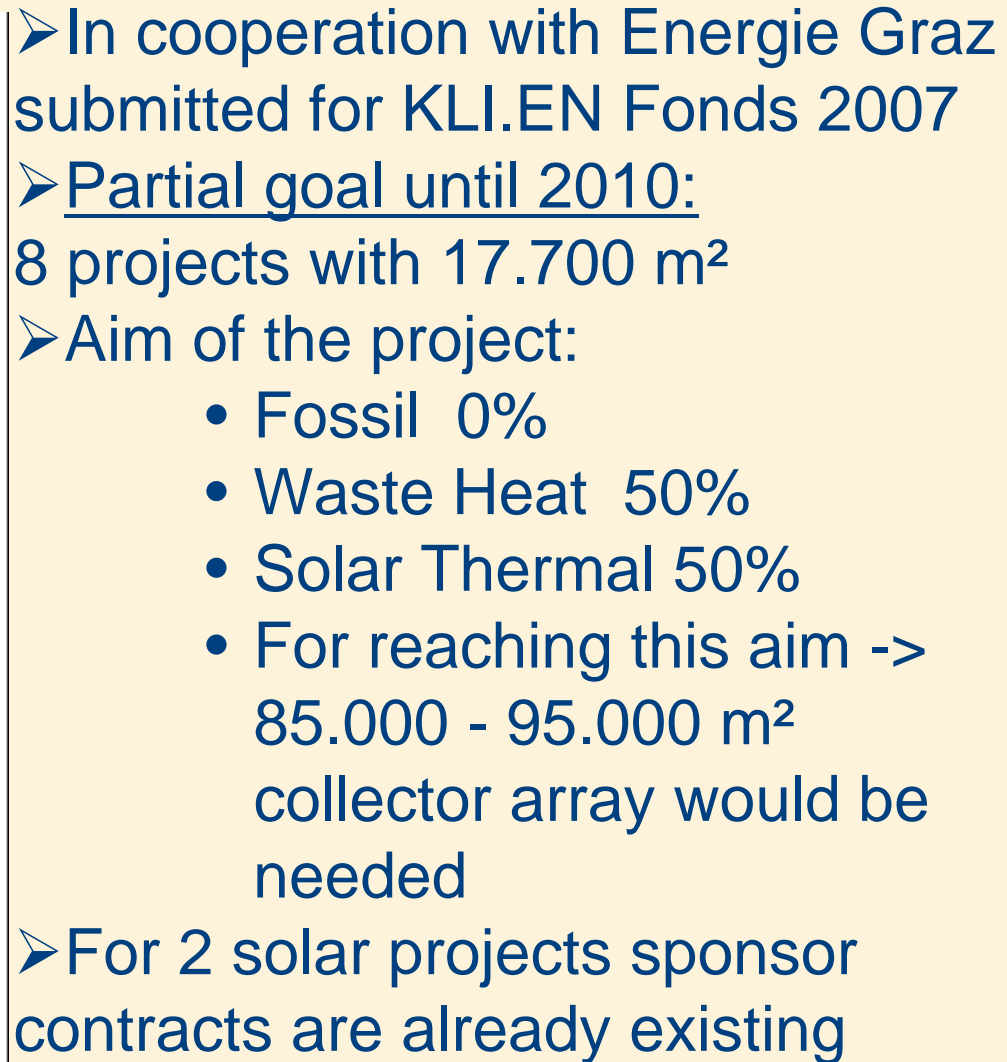


- **27 houses**
- **756 flats**
- **Collector array:** 2.480 m²
- **Solar yield:** approx. 1000 MWh/ year
- **Thermal load:** approx. 1500 kW
- **Storage tank:** 2 x 30 m³
- **Start up:** 2007

100 % solar fraction in summer time!!!

Housing estate „Berliner Ring“





Wasserwerk Andritz



- **Collector array:** 3.855 m²
- **Solar yield expected:** 1.620 MWh/ year
 - Supply for objects: 1.220 MWh/year
 - Supply for DHN: 400 MWh/year
- **Thermal load:** approx. 2.400 kW
- **Storage tank:** 64 m³
- **Start up:** June 2009

Further examples of SDH



Nahwärme Eibiswald, Austria



Salzburg, Austria, 1085 m², 2001



Lienz, Austria, 630 m², 2001

Thank you!

