

Handout of presentation on Best SE Practices in Europe by Gunnar Boye Olesen, INFORSE-Europe

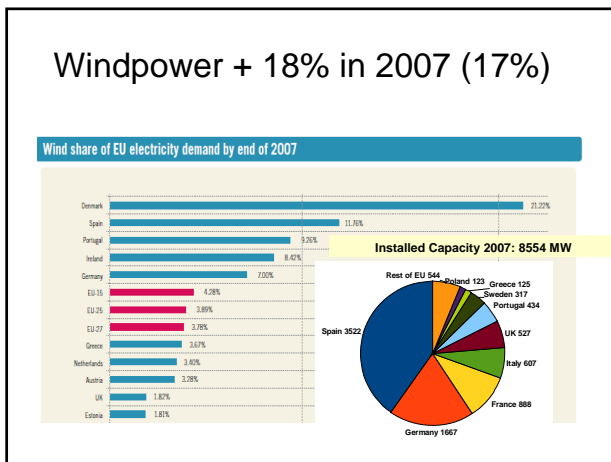
Best Practices from Around Europe: An overview from local scale examples to massive changes in energy supply and demand

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www.inforse.org/europe

Energy 21 – ‘Community Energy Transition’ Seminar
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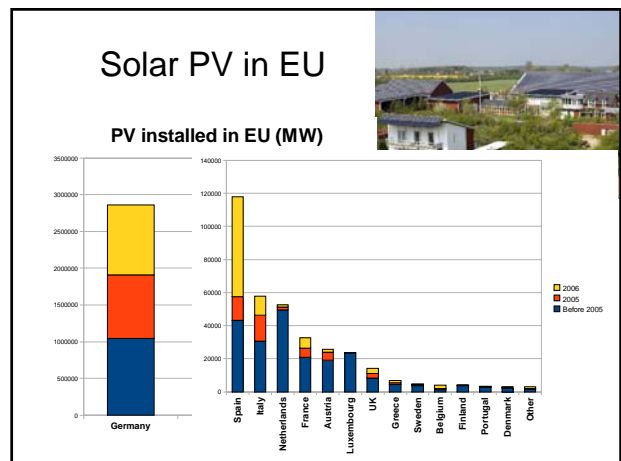
August 16-18, 2008, CAT, Wales, UK

- ### Massive changes on their ways
- Windpower fastest growing power source
 - PV fastest in relative terms
 - Solar heating – steady growth
 - Biomass catching up
 - Biogas in steady growth
 - Passive houses into mainstream
 - Heat and electricity savings in focus
 - Sustainability criteria coming
 - Integrated & community projects




- ### Windpower
- Success when population benefits:
- In Germany with small investors
 - In Sweden (& DK) with some cooperatives (20%)
 - In Spain (and France) with tax for local community – a few poor got rich
 - Ideal: municipal/non-profit local investor with profits to local energy transition (Samseo)
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- ### Solar PV = Growth
- Largest growth in Germany
 - Projects are bankable
 - "rush for roofs", development of "roof market"
 - Germany reduces feed-in tariff 5%/year but about 10% this year.
 - Many actors, communities play smaller part
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PV feed-in, Germany



2007: 0.38 €/kWh for modules on open land
 2008: 0.36 €/kWh for modules on open land
 2009: 0.32 €/kWh for modules on open land

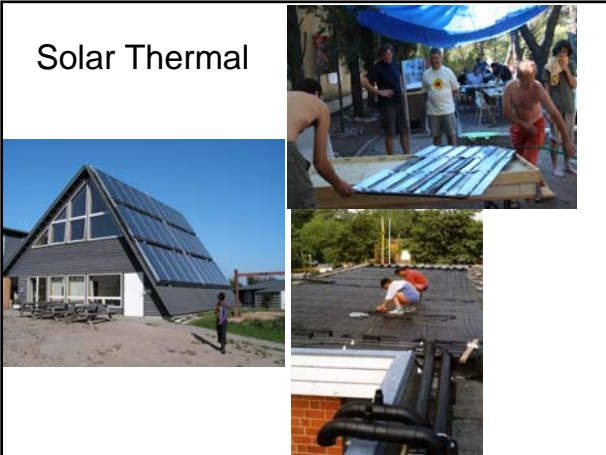
	<30 kW	30-100 kW	> 100 kW
Roofs	+0.112	+0.088	+0.083 €/kWh
Facades	+0.162	+0.138	+0.133 €/kWh

Solar Thermal



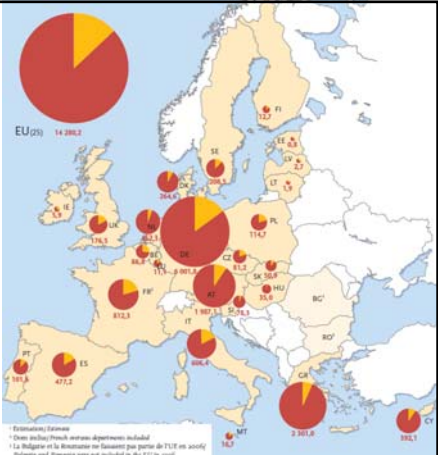
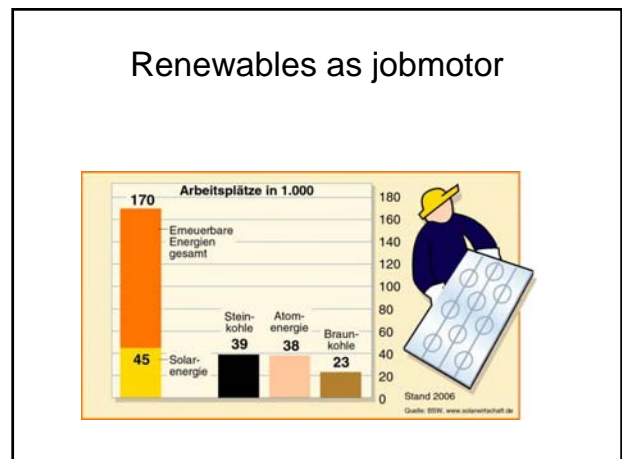
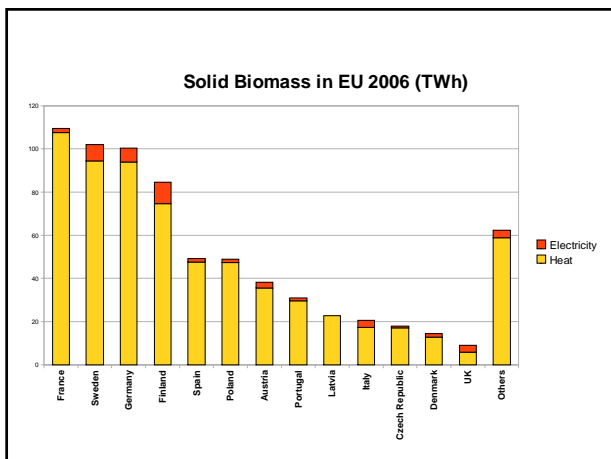
- Germany in front, Austria and Greece next
- Crowded out by PV in Germany in 2007
- Growth in other countries
- Support by subsidies, loans, building codes
- Increasingly cost-effective
- Self-build is an option, feasible cost reduction
- Larger (community) systems cheaper

Solar Thermal

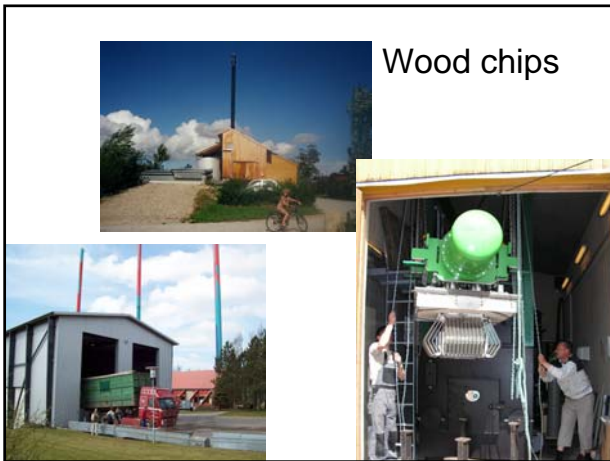


Solar thermal in EU:

Total & growth 2006 (in MWth)

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Biogas (in ktoe)

	2005				2006*			
	Décharges Landfill gas	Station ¹ d'épuration ¹ Sewage ¹ sludge gas	Autres biogaz ² Other biogas ²	Total	Décharges Landfill gas	Station ¹ d'épuration ¹ Sewage ¹ sludge gas	Autres biogaz ² Other biogas ²	Total
Germany	573,2	369,8	651,4	1 594,4	573,2	369,8	980,2	1 923,2
United Kingdom	1 279,1	161,2		1 440,3	1318,5	180,0		1 498,5
Italy	301,7	0,9	40,9	343,5	310,8	0,9	42,1	353,8
Spain	236,5	56,8	23,6	316,9	251,6	56,8	25,8	334,3
France	141,0	75,0	4,0	220,0	148,0	75,0	4,0	227,0
Netherlands	38,8	50,8	29,4	119,0	38,8	50,8	29,4	119,0
Austria	8,3	2,7	19,8	30,8	11,2	3,5	103,4	118,1
Denmark	15,3	21,8	54,3	91,5	14,3	21,0	58,3	93,6
Poland	25,1	25,3	0,3	50,7	27,5	65,8	0,5	93,8
Total	2805	882	860	4547	2918	942	1282	5142 ktoe

Heat Pumps

[2] Quantity and installed capacity of geothermal heat pumps¹ in the European Union countries in 2005 and 2006.

	Parc 2005		Parc 2006	
	Nombre Number	Puissance (MWth) Capacity (MWth)	Nombre Number	Puissance (MWth) Capacity (MWth)
Sweden	230 094	2 070,8	270 111	2 431,0
Germany	61 912	681,0	90 517	995,7
France	63 830	702,1	83 856	922,4
Denmark	43 252	821,2	43 252	821,2
Finland	29 106	624,3	33 612	721,9
Austria	32 916	570,2	40 151	664,5
Netherlands	1 600	253,5	1 600	253,5
Italy	6 000	120,0	7 500	150,0
Poland	8 100	104,6	8 300	106,6
Czech Republic	3 727	61,0	5 173	83,0
Belgium	6 000	64,5	7 000	69,0

