

Advantages of generating
process-heat in industry and
trade
with the E-Cat

The E-Cat, a chance for the global environment



The ratio of heat in the overall energy consumption

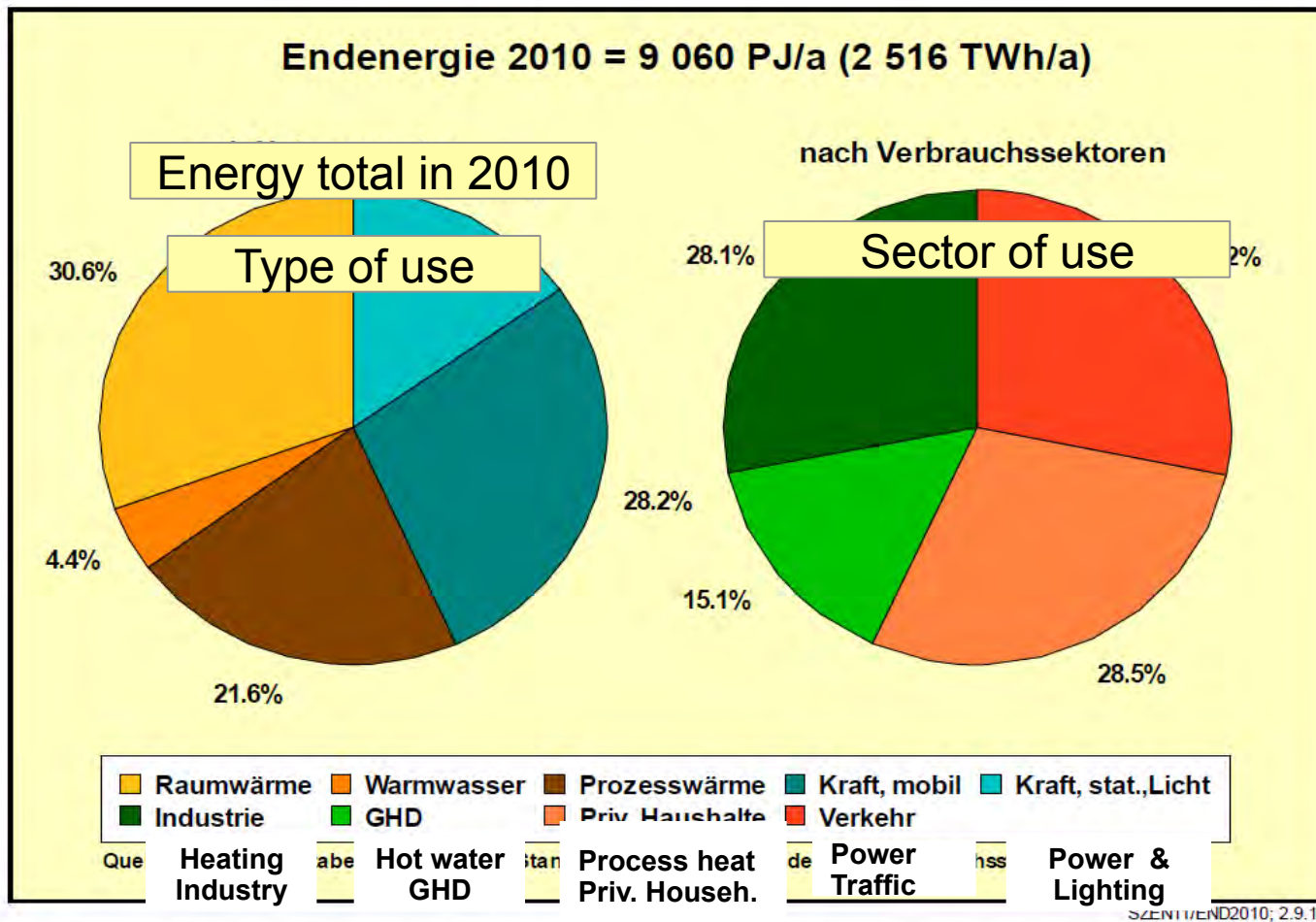
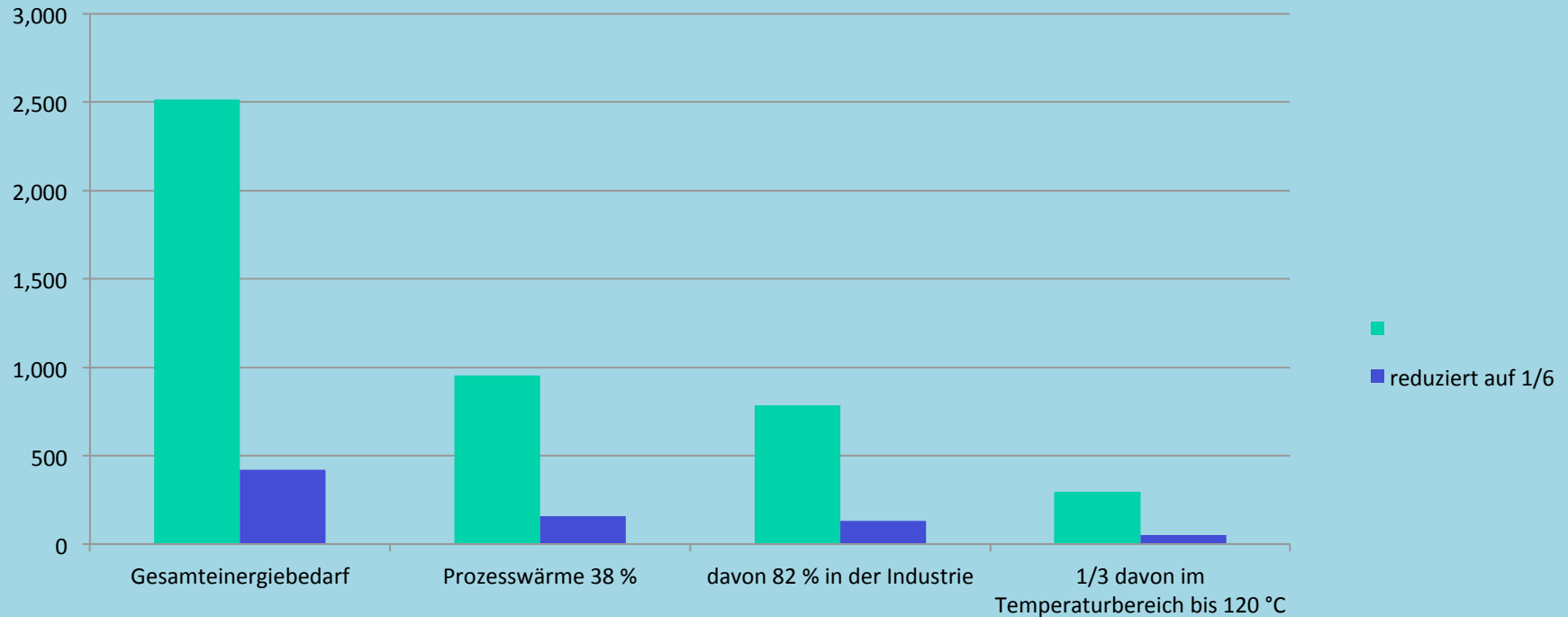


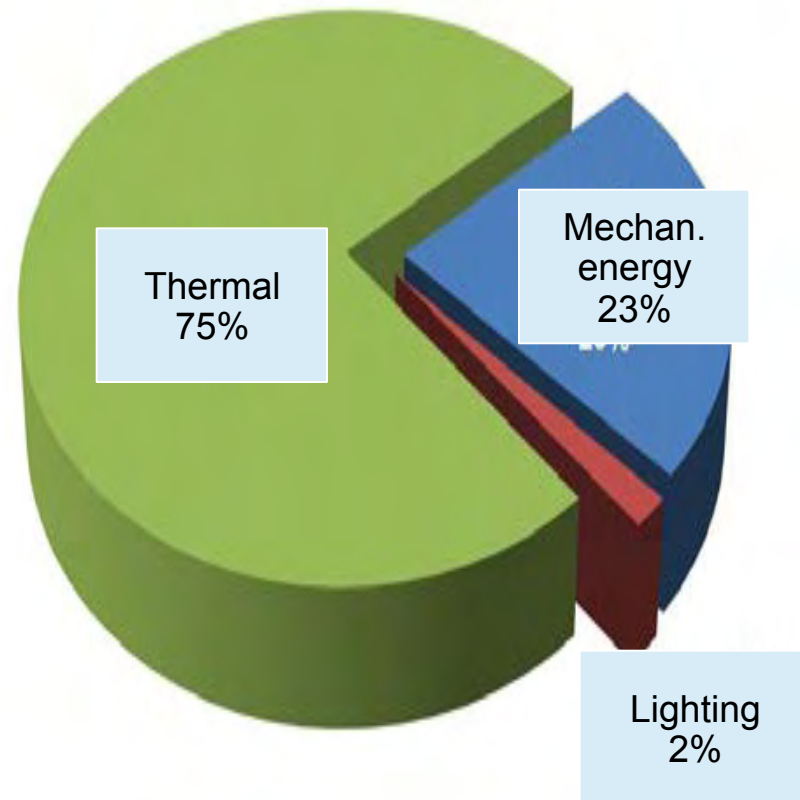
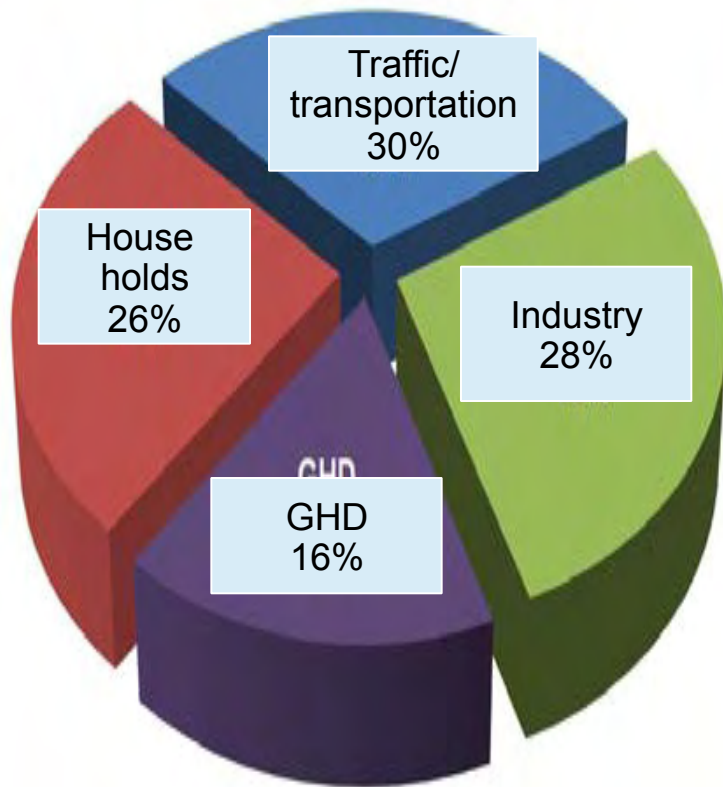
Abbildung 2.2: Struktur des Endenergieverbrauchs 2010 nach Nutzungsarten und nach Ver-
Structure of total energy consumption in 2010 ---
Regarding type of use and sectors of use

Potential energy savings with the E-Cat

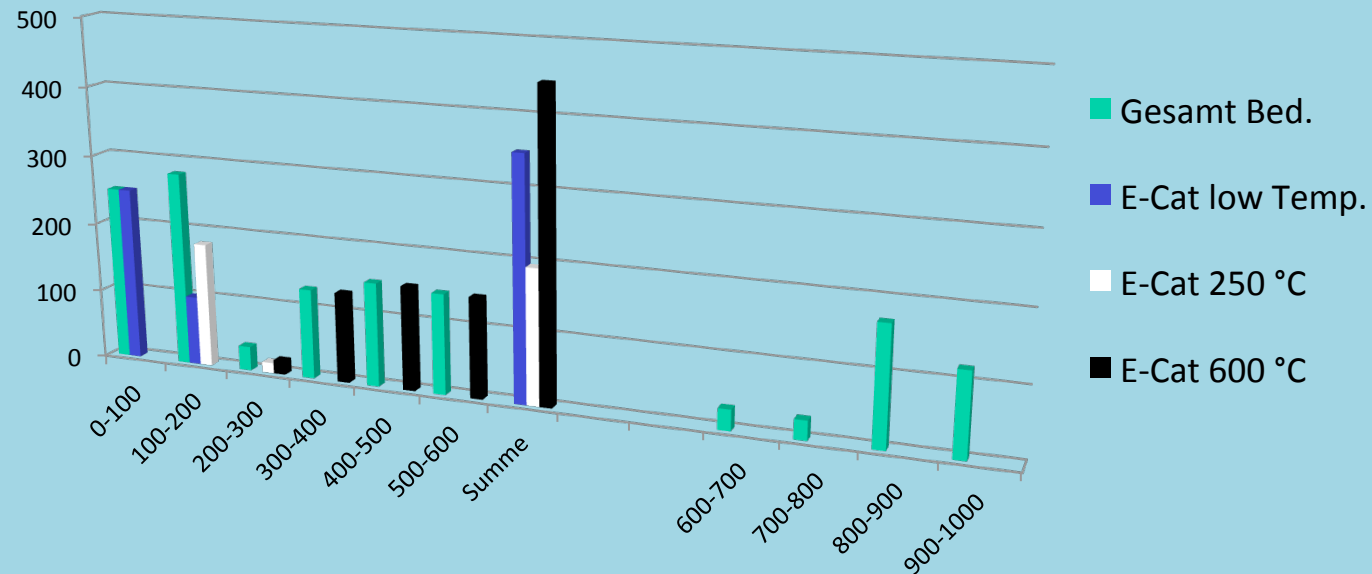


Thermal Energy consumption, total TWh/a		Reduction: 1/6	Saving
Gesamtenergiebedarf	2.516	420	
Process heat 38 %	956	160	
82 % of that in industry	784	130	
1/3 of that in the range up to 120 °C	294	49	245

This corresponds **36.750** 1 MW-ECATS (when 8000 hours active a year)



Temperature sectors of process heat

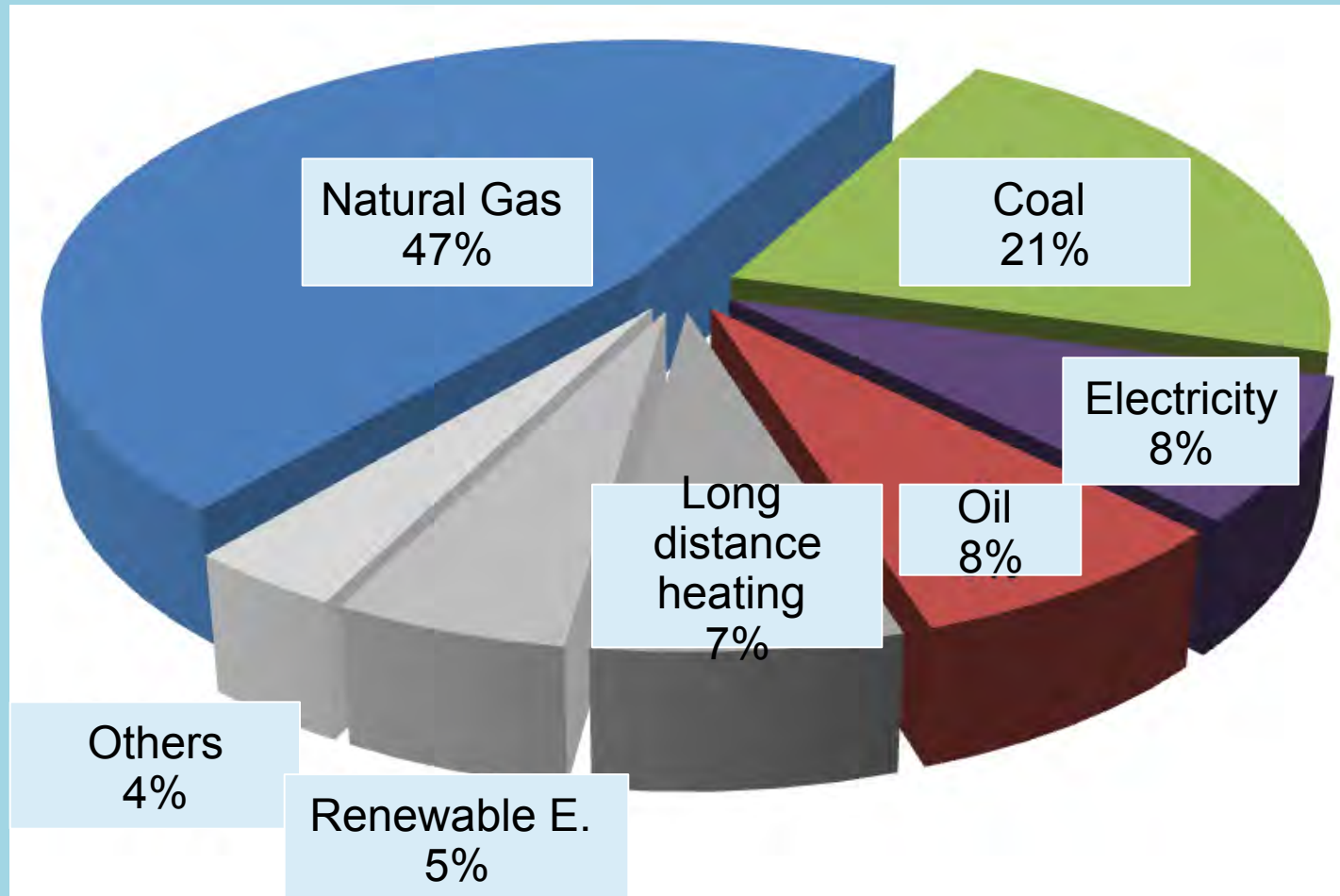


PJ-Consumpt.	Demand tot.	E-Cat low Temp.	E-Cat 250 °C	E-Cat 600 °C
0-100	250	250		
100-200	280	100	180	
200-300	35		15	20
300-400	130			130
400-500	150			150
500-600	145			145

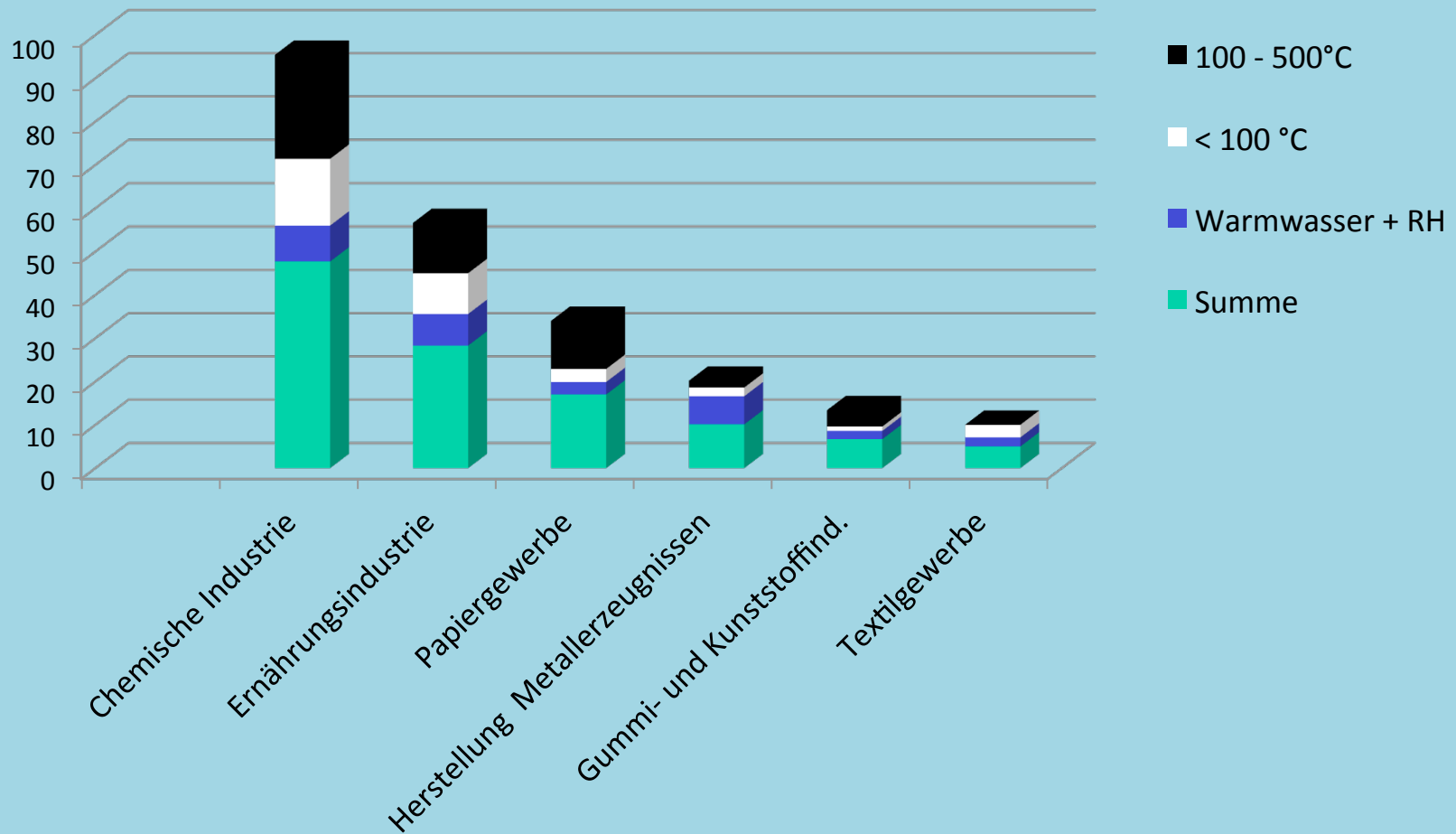
1 PJ = 1 Petajoule = 10^{15} Joule

= 1'000 Terajoule = 278 GWh

Energy sources



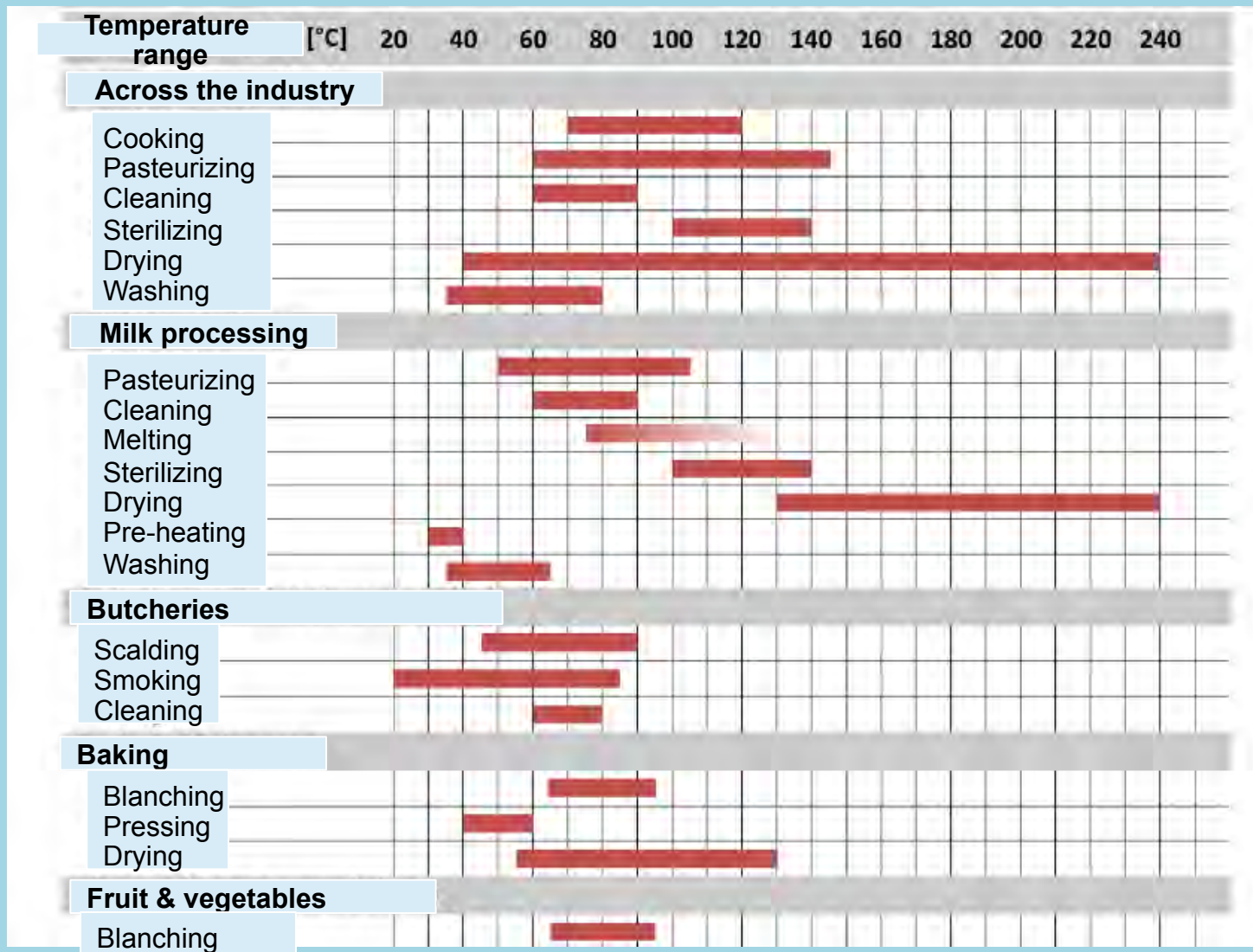
The important industries subdivided in temperature sectors



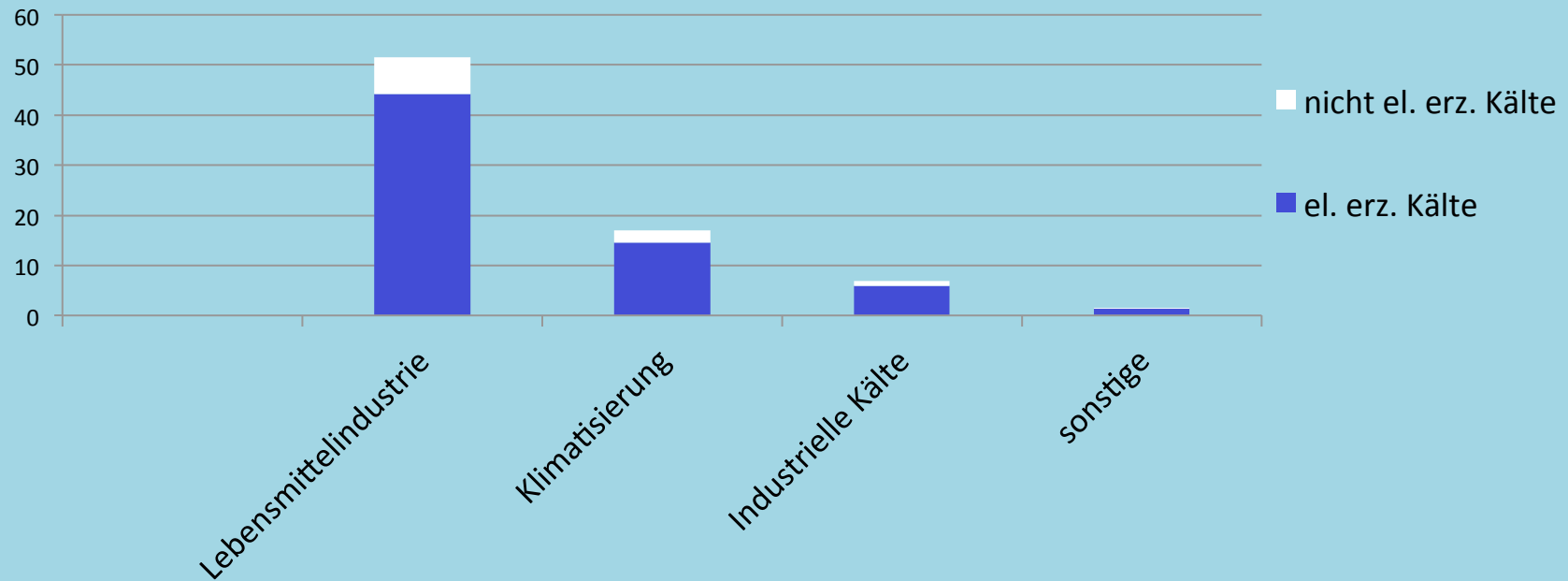
The important industries subdivided in temperature sectors

TWh/a (2007)	Sum	Hot water + RH	< 100 °C	100 - 500°C
Chemical Industry	47,7	8,3	15,4	24
Food Industry	28,3	7,3	9,4	11,6
Pulp & Paper	17	2,9	3	11,1
Metal manufacturing	10,1	6,5	2	1,6
Rubber & plastics	6,7	1,9	1	3,8
Textiles	5	2,1	2,9	0

Thermal energy demand of various processes in the Food industry

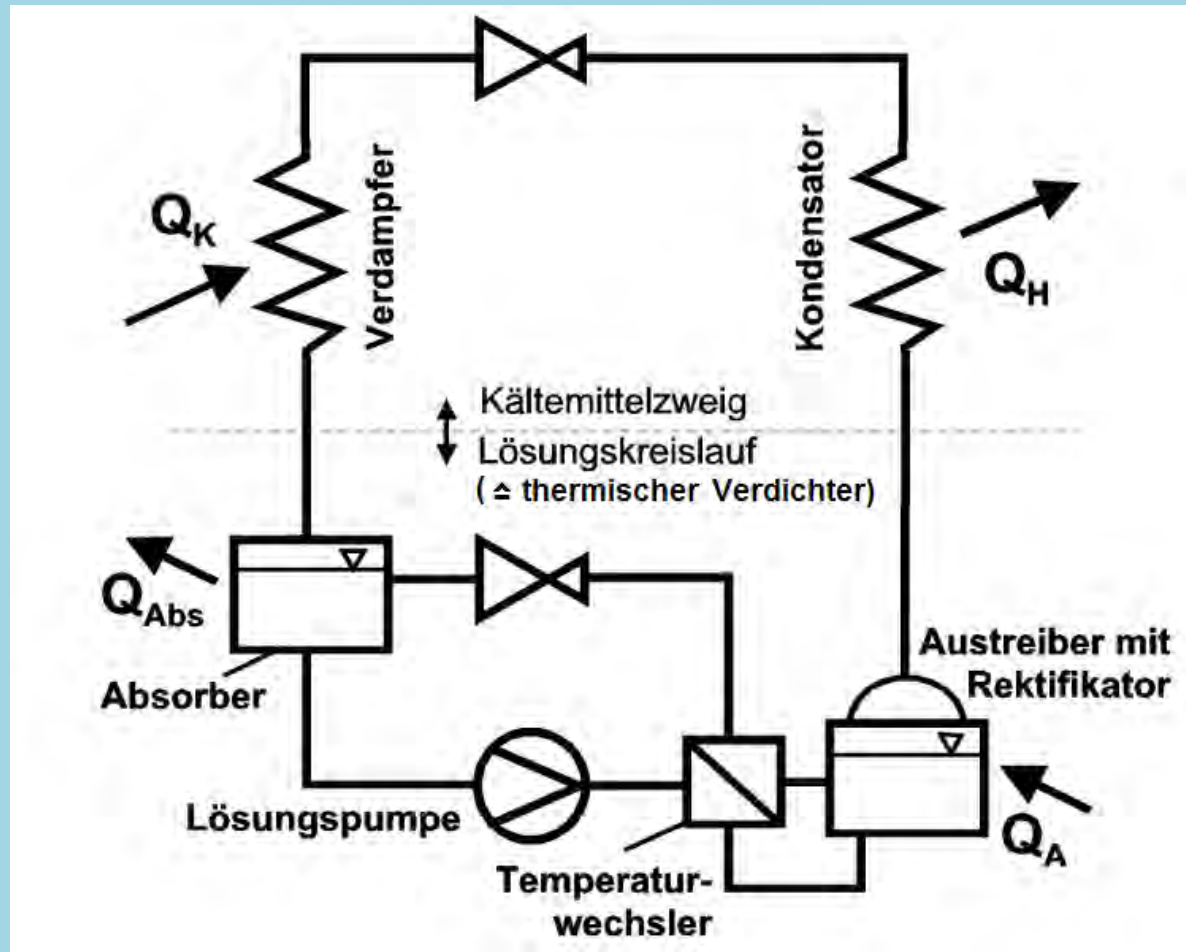


Energy demand for cooling (GWh)

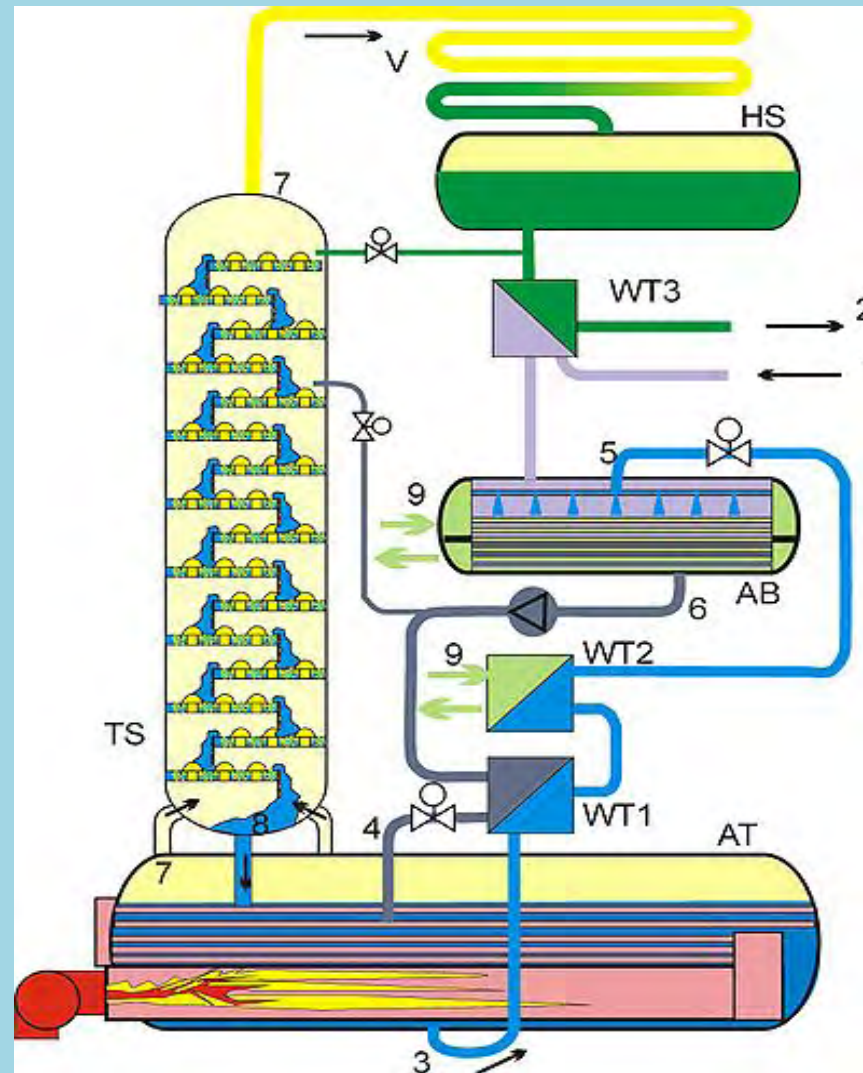


Energy demand GWh	Electric.prod.cooling	non el. prod. cooling	%
Food industry	44,22	7,37	67
Air conditioning	14,52	2,42	22
Industr. cooling	5,94	0,99	9
Other	1,32	0,22	2
Total	66	11	100

Operating mode of a AKM



Industrial absorption-refrigeration plant



Give the E-Cat a chance

- Full sale-or-return agreement
- 2-year warranty
- And, of utmost importance, considering Mr. Rossi's speed of constant improvements:
upgrade costs are very modest: 10 -15%

Feel free to contact me

For a individual needs analysis, a calculation or a exact offer

- Personally or
- At: www.ecat-vertrieb.de



- Thanks a lot for your attention.