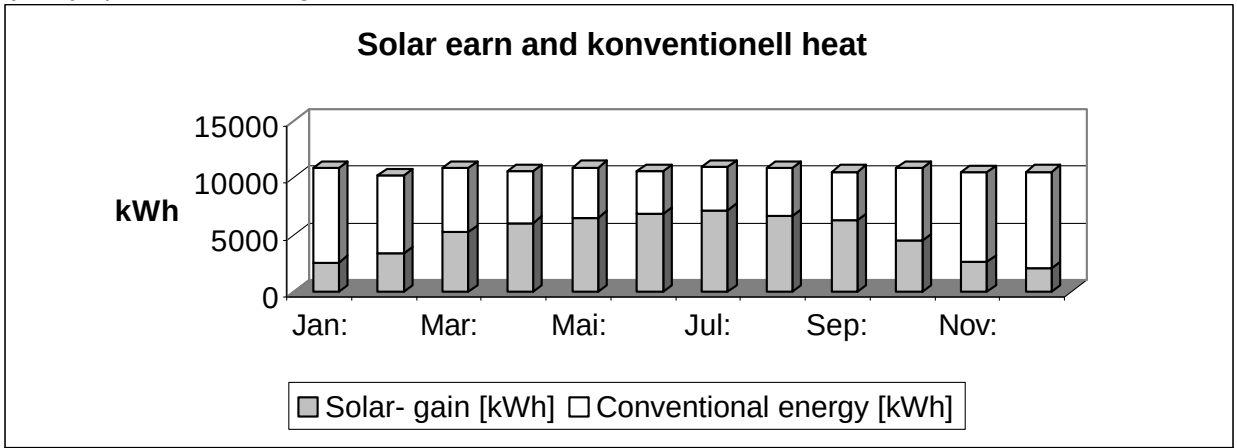
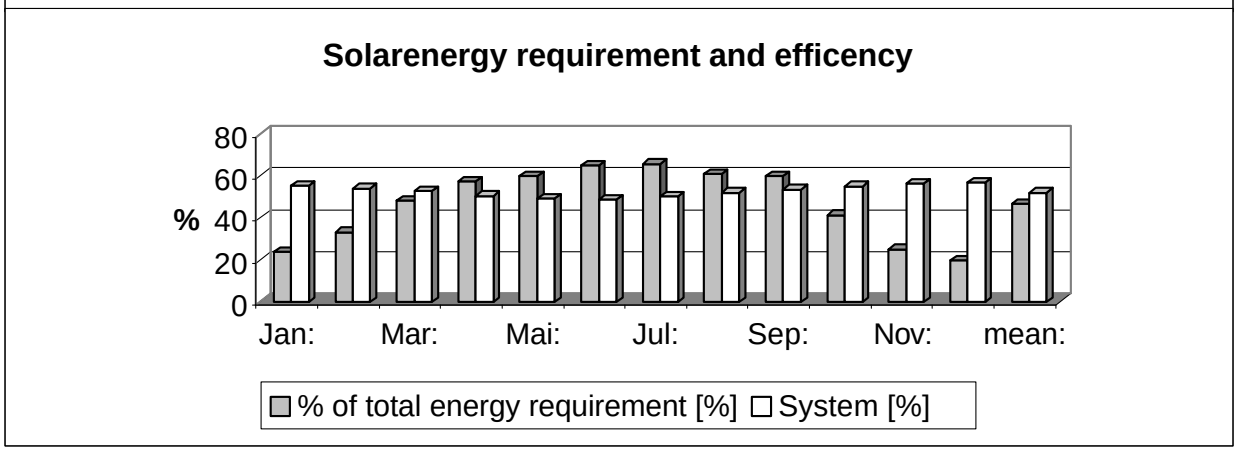
GetSolar 6.0 -Solarkollektorsimulation - © 2000 A. Horn

Projekt: **NHS**
Place: Portsmouth Latitude: 51,0°
Kollektor: **87,50 m²** ARCON HT
Linie: c0 = 0,780 c1 = 3,500 W/(m²K) c2 = 0,002 W/(m²K²)
Degrees: 45,0° from south: 0,0°
Systemtype: Warmwaterheating
Boiler: 5000 l Temperature: min. 42°C / max. 75°C
Heat Requirement: 348,90 kWh/d (6000 Liter/day from 10°C to 60°C)

month	Solar-gain [kWh]	Solar Radiation [kWh]	Conventional energy [kWh]	% of total energy requirement [%]	System efficency [%]
Jan:	2586,9	4694,1	8278,4	23,8	55,1
Feb:	3369,1	6244,8	6825,5	33,1	54
Mar:	5251,8	9962,7	5645,3	48,2	52,7
Apr:	6044,6	11988,9	4542,6	57,2	50,4
Mai:	6527,3	13295,2	4383,2	59,8	49,1
Jun:	6856,9	14042,1	3715,6	64,9	48,8
Jul:	7174,4	14343,6	3757,7	65,7	50
Aug:	6654,6	12789,4	4247,4	61	52
Sep:	6308,6	11795,1	4238,5	59,7	53,5
Okt:	4497,7	8172,5	6389,7	41,3	55
Nov:	2630,3	4663,9	7882,8	25	56,4
Dec:	2082,4	3677,3	8468,5	19,8	56,6
total:	**59984,6**	**115669,6**	**68375**	**46,7**	**51,9**

yearly specific kollektor gain: **686 kWh/m²**





yearly

spared konventionell heat:		59984,6	kWh	
price of konventionell heat:		0,05	pound / kWh	
yearly spared pounds:		**2999,23**	pound	
Systems kosts:		peaces	total	
Kollektors	600	7	4200	
mountingpeaces	100	7	700	
Pipeline (m)	12	30	360	
Boiler	1	3000	3000	0,00029
pumpstation	1	600	600	2,9
elektronics	1	1000	1000	2000
			0	1,5
mounting	200	15	3000	1333,333333
			0	
surprises:	1000	5	5000	
			0	
			17860	
		paybacktime in years:	**6,0**	

month	% of total ϵ	System requirement
	[%]	[%]
Jan:	23,8	55,1
Feb:	33,1	54
Mar:	48,2	52,7
Apr:	57,2	50,4
Mai:	59,8	49,1
Jun:	64,9	48,8
Jul:	65,7	50
Aug:	61	52
Sep:	59,7	53,5
Okt:	41,3	55
Nov:	25	56,4
Dec:	19,8	56,6
mean:	46,7	51,9

59984,6 173955,3