

Deliverable 4.1.

Key figures and saving results

Saving results

The table below shows the results of 100 companies in the benchmark; for the generic and the specific. The last column shows the amount of primary energy. The only difference with the other column is the efficiency of the electricity production of 40%.

Generic Benchmark		Primary energy
Energy consumption	GJ	GJ
Gas	174.730	174.730
Electricity	311.090	777.725
Total yearly energy consumption of 100 companies	485.820	952.455
Estimation savings 10%		
Gas	17.473	17.473
Electricity	31.109	77.773
Total yearly savings of 100 companies	48.582	95.246
Specific Benchmark		
Energy consumption	GJ	GJ
Gas	174.730	174.730
Electricity	311.090	777.725
Total yearly energy consumption of 100 companies	485.820	952.455
Savings by consultancy		
Energy	GJ/a	105.815
CO2	ton/a	6.866
Euros	€/a	1.670.851

Table:
Energy saving results of 100 companies

Nr.	Description	Unit	Sheed-fed offset print.		Web offset print.	
			Best value	Average value	Best value	Average value
Generic						
1	Total energy consumption for print production per hour and m2	MJ/m2*h	0,01	0,35	0	0,45
2	Total energy consumption per kg product	MJ/kg	0	2,87	0	2,88
3	Water use per kg product	MJ/kg	0	0	0	0
4	Fuel use per building volume	MJ/m3	0,19	103,06	0	157,2
5	Energy costs per floor area	€/m2	3	61,53	0	50,2
6	CO2 emission per MJ	kgCO2/MJ	0,05	0,13	0,05	0,12
Specific						
7	Airhandling ventilation	MJ/a/m3	0,49	329,28	0,66	8,94
8	Space heating	MJ/a/m3 HDD	0,01	0,03	0,01	0,05
9	Space cooling	MJ/a/m3 CDD	0,01	0,05	0,01	0,07
10	Space humidifying	MJ/a/m3	0,37	5,64	0,34	4,73
11	Lighting	MJ/a/m2	18	105,4	31,48	138,23
12	Office equipment	MJ/a/m2	6,29	67,26	6,29	57,23
13	Production	MJ/kg	0,06	1,4	0,46	1,09
14	Internal transport	MJ/kg	0,01	0,01	0,01	0,02
15	Drying production (substrate)	MJ/kg	0,01	0,31	0,04	0,39
16	Independent cooling system (production)	MJ/kg	0,02	0,1	0,01	0,08
17	Compressed air and vacuum	MJ/kg	0,01	0,19	0,06	0,26
18	Schredder	MJ/kg	0,01	0,01	0,02	0,03

Nr.	Description	Unit	Flexography print.		Book binding	
			Best value	Average value	Best value	Average value
Generic						
1	Total energy consumption for print production per hour and m2	MJ/m2*h	0,05	0,22	0,33	0,37
2	Total energy consumption per kg product	MJ/kg	1,44	1582,37	0,44	1,17
3	Water use per kg product	MJ/kg	0	1,13	0	0
4	Fuel use per building volume	MJ/m3	1,59	13,48	25,51	47,6
5	Energy costs per floor area	€/m2	4,17	39,86	36,99	46,26
6	CO2 emission per MJ	kgCO2/MJ	0,13	0,15	0,13	0,15
Specific						
7	Airhandling ventilation	MJ/a/m3	x	x	0,97	0,97
8	Space heating	MJ/a/m3 HDD	0,01	0,01	0,01	0,02
9	Space cooling	MJ/a/m3 CDD	0,01	0,03	0,01	0,01
10	Space humidifying	MJ/a/m3	x	x	0,71	0,71
11	Lighting	MJ/a/m2	14	27,44	37,73	73,61
12	Office equipment	MJ/a/m2	6,29	32,5	4,06	5,18
13	Production	MJ/kg	0,72	1774,6	1,35	58,62
14	Internal transport	MJ/kg	0,02	52,19	0,02	1,76
15	Drying production (substrate)	MJ/kg	0,06	0,06	x	x
16	Independent cooling system (production)	MJ/kg	x	x	1,22	1,22
17	Compressed air and vacuum	MJ/kg	0,66	313,38	0,66	9,93
18	Schredder	MJ/kg	x	x	x	x

Nr.	Description	Unit	Gravure		Screen printing	
			Best value	Average value	Best value	Average value
Generic						
1	Total energy consumption for print production per hour and m2	MJ/m2*h	0,32	30,34	0,21	0,3
2	Total energy consumption per kg product	MJ/kg	1,13	>	1,9	16,16
3	Water use per kg product	MJ/kg	0	>	0	0,02
4	Fuel use per building volume	MJ/m3	25,51	78,35	22,78	37,43
5	Energy costs per floor area	€/m2	14,37	34,95	18,28	30,72
6	CO2 emission per MJ	kgCO2/MJ	0,14	0,15	0,15	7,27
Specific						
7	Airhandling ventilation	MJ/a/m3	x	x	1,15	16,18
8	Space heating	MJ/a/m3 HDD	0,01	0,01	0,01	0,01
9	Space cooling	MJ/a/m3 CDD	x	x	0,01	0,01
10	Space humidifying	MJ/a/m3	x	x	0,14	0,14
11	Lighting	MJ/a/m2	37,73	37,73	31,2	51,81
12	Office equipment	MJ/a/m2	6,29	6,29	6,29	26,39
13	Production	MJ/kg	1,35	1,35	1,35	10,46
14	Internal transport	MJ/kg	0,02	0,02	0,02	0,02
15	Drying production (substrate)	MJ/kg	x	x	x	x
16	Independent cooling system (production)	MJ/kg	x	x	x	x
17	Compressed air and vacuum	MJ/kg	0,66	0,66	0,46	0,56
18	Schredder	MJ/kg	x	x	x	x

Nr.	Description	Unit	Digital printing	
			Best value	Average value
Generic				
1	Total energy consumption for print production per hour and m2	MJ/m2*h	0,1	0,43
2	Total energy consumption per kg product	MJ/kg	0,62	9
3	Water use per kg product	MJ/kg	0	0,02
4	Fuel use per building volume	MJ/m3	25,51	144,85
5	Energy costs per floor area	€/m2	9,01	26,52
6	CO2 emission per MJ	kgCO2/MJ	0,07	0,12
Specific				
7	Airhandling ventilation	MJ/a/m3	1,85	2,87
8	Space heating	MJ/a/m3 HDD	0,01	0,04
9	Space cooling	MJ/a/m3 CDD	0,01	0,06
10	Space humidifying	MJ/a/m3	x	x
11	Lighting	MJ/a/m2	23,14	99,34
12	Office equipment	MJ/a/m2	6,29	103,44
13	Production	MJ/kg	0,18	0,82
14	Internal transport	MJ/kg	0,02	0,02
15	Drying production (substrate)	MJ/kg	0,09	0,16
16	Independent cooling system (production)	MJ/kg	x	x
17	Compressed air and vacuum	MJ/kg	0,05	0,25
18	Schredder	MJ/kg	x	x