Input B_H_REFv1.3_demand_tab_supply.txt — The EnergyPLAN model 16.1

Electricity demand (TWh/year):		Flexible demand	0,00
Fixed demand	7,52	Fixed imp/exp.	3,57
Electric heating + HP	2,93	Transportation	0,06
Electric cooling	0,22	Total	14,30

District heating (TWh/year)	Gr.1	Gr.2	Gr.3	Sum
District heating demand	1,13	0,00	0,50	1,62
Solar Thermal	0,00	0,00	0,00	0,00
Industrial CHP (CSHP)	0,00	0,00	0,00	0,00
Demand after solar and CSHP	1,13	0,00	0,50	1,62

Wind	87	MW	0,16	TWh/year	0,00	Grid
Photo Voltaic	35	MW	0,08	TWh/year	0,00	stabili-
River Hydro	172	MW	0,44	TWh/year	0,00	sation
River Hydro	0	MW	0	TWh/year	0,00	share
Hydro Power	2105	MW	4,21	TWh/year		
Geothermal/Nuclear	0	MW	0	TWh/year		

	Capacities MW-e	MJ/s	Efficiencies elec.	Ther	COP
Group 2:					
CHP	0	1500	0,40	0,50	
Heat Pump	0	0			3,00
Boiler		0		0,90	
Group 3:					
CHP	1017	82	0,21	0,47	
Heat Pump	0	0			3,00
Boiler		0		0,90	
Condensing	1099		0,30		

Heatstorage:	gr.2: 0	GWh	gr.30	GWh
Fixed Boiler:	gr.2:0,0	Per cent	gr.0,0	Per cent

Electricity prod. from	CSHP	Waste	(TWh/year)
Gr.1:	0,00	0,00	
Gr.2:	0,00	0,00	
Gr.3:	0,00	0,00	

Regulation Strate	Technical regulation no. 1		
CEEP regulation	000000000		
Minimum Stabilisation share	0,00		
Stabilisation share of CHP	0,00		
Minimum CHP gr 3 load	0	MW	
Minimum PP	0	MW	
Heat Pump maximum share	1,00		
Maximum import/export	1800	MW	

Distr. Name :	Hour_nordpool.txt		
Addition factor	0,00	DKK/MWh	
Multiplication factor	2,00		
Dependency factor	0,00	DKK/MWh pr. MW	
Average Market Price	227	DKK/MWh	
Gas Storage	0	GWh	
Syngas capacity	0	MW	
Biogas max to grid	0	MW	

Fuel Price level:

	Capacities MW-e	Storage GWh	Efficiencies Elec.	Ther.
Elec. Storage				
Charge 1:	0	0	0,80	
Discharge 1:	0		0,90	
Charge 2:	0	0	0,80	
Discharge 2:	0		0,90	
Electrolysers:	0	0	0,80	0,00
Rockbed Storage:	0	0	1,00	
CAES fuel ratio:	0,000			

(TWh/year)	Coal	Oil	Ngas	Biomass
Transport	0,00	13,43	0,01	0,00
Household	1,15	0,41	0,71	13,47
Industry	2,47	1,32	0,89	0,20
Various	0,18	0,39	1,07	0,00

Output

	District Heating										Electricity															Exchange	
	Demand	Production									Consumption						Production							Balance					Payment	
	Distr. heating	Solar	Waste CSHP	DHP	CHP	HP	ELT	Boiler	EH	Balance	Elec. demand	Flex.& Transp	HP	Elec-trolyser	EH	Hydro Pump	Tur-bine	RES	Hy-dro	Geo-thermal	Waste CSHP	CHP	PP	Stab-Load	Imp	Exp	CEEP	EEP	Imp	Exp
	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	MW	%	MW	MW	MW	MW	Million DKK	
January	391	0	0	271	81	0	0	0	0	39	737	7	4	0	701	0	0	100	482	0	0	999	500	100	13	0	0	0	3	0
February	307	0	0	213	75	0	0	0	0	18	769	7	3	0	550	0	0	84	443	0	0	935	294	100	0	1	0	1	0	0
March	283	0	0	197	72	0	0	0	0	14	712	7	3	0	508	0	0	108	456	0	0	894	391	100	5	3	0	3	1	0
April	190	0	0	132	53	0	0	0	0	5	762	7	2	0	341	0	0	61	452	0	0	661	217	100	0	0	0	0	0	0
May	114	0	0	79	35	0	0	0	0	0	833	7	1	0	204	0	0	50	452	0	0	430	300	100	0	7	0	7	0	1
June	70	0	0	49	21	0	0	0	0	0	966	7	1	0	126	0	0	59	486	0	0	267	414	100	0	0	0	0	0	0
July	48	0	0	33	15	0	0	0	0	0	1074	7	1	0	86	0	0	62	515	0	0	182	741	100	0	0	0	0	0	0
August	41	0	0	28	12	0	0	0	0	0	1035	7	0	0	73	0	0	58	522	0	0	153	871	100	0	0	0	0	0	0
September	62	0	0	43	19	0	0	0	0	0	1013	7	1	0	111	0	0	67	505	0	0	234	626	100	0	0	0	0	0	0
October	147	0	0	102	45	0	0	0	0	0	936	7	2	0	263	0	0	81	493	0	0	553	424	100	0	0	0	0	0	0
November	256	0	0	178	67	0	0	0	0	11	864	7	3	0	459	0	0	85	488	0	0	829	503	100	0	0	0	0	0	0
December	315	0	0	219	76	0	0	0	0	20	866	7	4	0	565	0	0	109	450	0	0	945	482	100	14	6	0	6	3	1
Average	185	0	0	129	48	0	0	0	0	9	881	7	2	0	332	0	0	77	479	0	0	589	482	100	3	1	0	1	Average price	
Maximum	610	0	0	424	82	0	0	0	0	104	1514	13	7	0	1094	0	0	233	556	0	0	1017	1600	100	312	492	0	492	(DKK/MWh)	
Minimum	9	0	0	6	3	0	0	0	0	0	22	0	0	0	17	0	0	0	0	0	0	35	0	100	0	0	0	0	295	195
TWh/year	1,62	0,00	0,00	1,13	0,42	0,00	0,00	0,00	0,00	0,08	7,74	0,06	0,02	0,00	2,91	0,00	0,00	0,68	4,21	0,00	0,00	5,18	4,23		0,02	0,01	0,00	0,01	7	2

FUEL BALANCE (TWh/year):	DHP	CHP2	CHP3	Boiler2	Boiler3	PP	Geo/Nu.	Hydro	Waste/ HTL	CAES Elc.ly.	BioCon-version	Electro-Fuel	Wind	PV and Wind off CSP	Wave	Hydro	Solar.Th	Transp.	household	Industry Various	Total	Imp/Exp Corrected Imp/Exp	Net	CO2 emission (Mt): Total	Net
Coal	0,65	-	0,88	-	-	11,00	-	-	-	-	-	-	-	-	-	-	-	-	1,15	2,64	12,33	0,00	12,33	4,22	4,22
Oil	0,08	-	-	-	-	2,34	-	-	-	-	-	-	-	-	-	-	-	13,43	0,41	1,71	17,97	0,00	17,97	4,79	4,79
N.Gas	0,48	-	-	-	-	2,34	-	-	-	-	-	-	-	-	-	-	-	0,82	0,71	1,96	6,32	0,00	6,32	1,30	1,46
Biomass	0,04	-	-	-	-	2,34	-	-	-	-	-	-	-	-	-	-	-	-	13,47	0,20	16,06	0,00	16,06	0,00	0,00
Renewable	-	-	-	-	-	-	-	4,21	-	-	-	-	0,16	0,08	-	4,64	-	-	-	-	4,89	0,00	4,89	0,00	0,00
H2 etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,00	0,00	0,00	0,00	0,00
Biofuel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,00	0,00	0,00	0,00	0,00
Nuclear/CCS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0,00	0,00	0,00	0,00	0,00
Total	1,25	-	0,88	-	-	14,04	-	4,21	-	-	-	-	0,16	0,08	-	4,64	-	14,25	15,74	6,51	57,56	0,04	57,60	10,30	10,47

District Heating Production

	Gr.1				Gr.2										Gr.3										RES specification				
	District heating MW	Solar MW	CSHP MW	DHP MW	District heating MW	Solar MW	CSHP MW	CHP MW	HP MW	ELT MW	Boiler MW	EH MW	Stor-age MW	Ba-lance MW	District heating MW	Solar MW	CSHP MW	CHP MW	HP MW	ELT MW	Boiler MW	EH MW	Stor-age MW	Ba-lance MW	RES1 Wind MW	RES2 Photo MW	RES3 River MW	RES 4-7 MW	Total MW
January	271	0	0	271	0	0	0	0	0	0	0	0	0	0	119	0	0	81	0	0	0	0	0	39	18	7	75	0	100
February	213	0	0	213	0	0	0	0	0	0	0	0	0	0	94	0	0	75	0	0	0	0	0	18	23	8	54	0	84
March	197	0	0	197	0	0	0	0	0	0	0	0	0	0	86	0	0	72	0	0	0	0	0	14	29	8	71	0	108
April	132	0	0	132	0	0	0	0	0	0	0	0	0	0	58	0	0	53	0	0	0	0	0	5	19	11	31	0	61
May	79	0	0	79	0	0	0	0	0	0	0	0	0	0	35	0	0	35	0	0	0	0	0	0	21	10	20	0	50
June	49	0	0	49	0	0	0	0	0	0	0	0	0	0	21	0	0	21	0	0	0	0	0	0	12	12	35	0	59
July	33	0	0	33	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	10	13	38	0	62
August	28	0	0	28	0	0	0	0	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	12	12	34	0	58
September	43	0	0	43	0	0	0	0	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	15	10	42	0	67
October	102	0	0	102	0	0	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0	16	8	57	0	81
November	178	0	0	178	0	0	0	0	0	0	0	0	0	0	78	0	0	67	0	0	0	0	0	11	17	7	61	0	85
December	219	0	0	219	0	0	0	0	0	0	0	0	0	0	96	0	0	76	0	0	0	0	0	20	27	3	79	0	109
Average	129	0	0	129	0	0	0	0	0	0	0	0	0	0	56	0	0	48	0	0	0	0	0	9	18	9	50	0	77
Maximum	424	0	0	424	0	0	0	0	0	0	0	0	0	0	186	0	0	82	0	0	0	0	0	104	87	35	172	0	233
Minimum	6	0	0	6	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Total for the whole year TWh/year	1,13	0,00	0,00	1,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00	0,50	0,00	0,00	0,42	0,00	0,00	0,00	0,00		0,08	0,16	0,08	0,44	0,00	0,68

Own use of heat from industrial CH0,00 TWh/year

NATURAL GAS EXCHANGE

	DHP & Boilers MW	CHP2 CHP3 MW	PP CAES MW	Indi-vidual MW	Trans port MW	Indu. Var. MW	Demand Sum MW	Bio-gas MW	Syn-gas MW	CO2Hy gas MW	SynHy gas MW	SynHy gas MW	Stor-age MW	Sum MW	Im-port MW	Ex-port MW
January	116	0	64	171	1	236	589	0	0	0	0	0	0	589	589	0
February	91	0	66	134	1	256	548	0	0	0	0	0	0	548	548	0
March	84	0	107	124	1	238	555	0	0	0	0	0	0	555	555	0
April	57	0	139	83	1	190	471	0	0	0	0	0	0	471	471	0
May	34	0	241	50	1	170	496	0	0	0	0	0	0	496	496	0
June	21	0	333	31	1	138	524	0	0	0	0	0	0	524	524	0
July	14	0	575	21	1	157	768	0	0	0	0	0	0	768	768	0
August	12	0	656	18	1	111	798	0	0	0	0	0	0	798	798	0
September	18	0	488	27	1	154	689	0	0	0	0	0	0	689	689	0
October	44	0	272	64	1	378	759	0	0	0	0	0	0	759	759	0
November	76	0	168	112	1	263	620	0	0	0	0	0	0	620	620	0
December	94	0	84	138	1	386	703	0	0	0	0	0	0	703	703	0
Average	55	0	267	81	1	223	628	0	0	0	0	0	0	628	628	0
Maximum	182	0	834	268	1	728	1178	0	0	0	0	0	0	1178	1178	0
Minimum	3	0	0	4	1	0	22	0	0	0	0	0	0	22	22	0
Total for the whole year TWh/year	0,48	0,00	2,34	0,71	0,01	1,96	5,51	0,00	0,00	0,00	0,00	0,00	0,00	5,51	5,51	0,00

ANNUAL COSTS (Million DKK)

Total Fuel ex Ngas exchange =	0
Uranium =	0
Coal =	0
FuelOil =	0
Gasoil/Diesel=	0
Petrol/JP =	0
Gas handling =	0
Biomass =	0
Food income =	0
Waste =	0
Total Ngas Exchange costs =	0
Marginal operation costs =	0
Total Electricity exchange =	-826
Import =	7
Export =	-2
Bottleneck =	0
Fixed imp/ex=	-830
Total CO2 emission costs =	0
Total variable costs =	-826
Fixed operation costs =	0
Annual Investment costs =	0
TOTAL ANNUAL COSTS =	-826

RES Share: 36,4 Percent of Primary Energy 51,0 Percent of Electricity 5,4 TWh electricity from RES