

**STATISTICAL OFFICE
OF THE EUROPEAN COMMUNITIES**

LUXEMBOURG, december 1972

DIRECTORATE ENERGY STATISTICS

ELECTRICAL ENERGY STATISTICS

OF THE THREE NEW MEMBER-COUNTRIES:

UNITED KINGDOM — IRELAND — DENMARK

YEARS:

1969 — 1970 — 1971

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CHARACTERISTIC FEATURES OF THE ELECTRICAL ENERGY
IN 1971

		EUR-9	EUR-6	United Kingdom	Ireland	Denmark
GLOBAL FIGURES						
PRODUCTION GENERATED	GWh	902.607	620.867	256.709	6.407	18.624
GROSS INLAND CONSUMPTION	"	907.790	627.893	256.856	6.377	16.664
CONSUMPTION OF INTERNAL MARKET	"	788.457	550.613	218.637	5.307	13.900
of which: Industry	"	424.648	326.770	92.094	1.884	3.900
Transport	"	22.320	19.458	2.765	-	97
Households	"	} 341.489	108.178	80.944	} 3.423	} 9.903
Other uses	"		96.207	42.834		

CONSUMPTION PER CAPITA :						
Total internal market	kWh	3.115	2.889	3.935	1.782	2.800
Households and other uses	"	1.349	1.073	2.228	1.149	2.075

PRODUCTION SENT OUT :						
Total	GWh	850.472	588.255	238.599	6.078	17.540
of which: hydro electric	"	108.332	103.554	4.294	460	24
geothermal	"	2.483	2.483	-	-	-
nuclear	"	41.797	17.784	24.013	-	-
conventional thermal	"	697.860	464.434	210.292	5.618	17.516

INCREASE 1971/70 in %

Gross national product (in volume)	+ 3,0	+ 3,4	+ 1,6	+ 3,1	+ 3,7
Indice of industrial production	+ 2,2	+ 2,8	+ 0,6	+ 4,5	+ 2,1
Consumption of primary energy	+ 1,0	+ 1,9	- 1,4	.	.

ELECTRICAL ENERGY :					
Gross inland consumption	+ 5,0	+ 5,8	+ 2,8	+ 10,1	+ 5,3
Consumption of internal market	+ 4,9	+ 5,7	+ 2,6	+ 8,5	+11,0
of which: Industry	+ 2,4	+ 2,9	+ 0,3	+ 11,2	+ 5,4
Transport	+ 1,9	+ 2,0	+ 1,1	-	- 6,2
Households	} + 8,3	+11,0	+ 4,4	+ 7,1	+ 6,5
Other uses					

SUMMARIZED BALANCE - SHEET OF ELECTRICAL ENERGY

GWh (millions of kWh)

	1969	1970	1971	Increase	
				1970/69	1971/70
- BALANCE - SHEET -					
TOTAL PRODUCTION GENERATED	804.441	855.401	902.607	+ 6,3 %	+ 5,5 %
Importations (*)	23.061	28.664	27.649	+ 24,3 %	- 3,6 %
Exportations (*)	17.220	19.517	22.466	+ 13,3 %	+ 15,1 %
GROSS INLAND CONSUMPTION	810.282	864.548	907.790	+ 6,7 %	+ 5,0 %
Consumption of auxiliary services	46.385	48.868	52.135	+ 5,3 %	+ 6,7 %
Consumption of pumped storage power stations	6.091	6.226	6.791	+ 2,2 %	+ 9,1 %
AVAILABLE FOR INTERNAL MARKET	757.806	809.454	848.864	+ 6,8 %	+ 4,8 %
Distribution losses	54.987	57.794	60.407	+ 5,1 %	+ 4,5 %
CONSUMPTION OF INTERNAL MARKET	702.819	571.660	788.457	+ 6,9 %	+ 4,9 %
by industry	393.120	414.625	424.648	+ 5,5 %	+ 2,4 %
by transportation	20.642	21.911	22.320	+ 6,1 %	+ 1,8 %
by domestic uses and assimilated ones	289.057	315.124	341.489	+ 9,0 %	+ 8,4 %
- PRODUCTION SENT OUT -					
TOTAL	758.057	806.533	850.472	+ 6,4 %	+ 5,4 %
of which: Hydro	115.005	122.734	108.332	+ 6,7 %	- 11,8 %
Geothermal	2.578	2.546	2.483	- 1,3 %	- 2,5 %
Nuclear	36.749	37.017	41.797	+ 0,7 %	+ 12,9 %
Conventional thermal	603.725	644.236	697.860	+ 6,7 %	+ 8,3 %
from: hard coal and coke	327.315	306.334	306.857	- 6,4 %	+ 0,2 %
brown coal	57.251	58.180	60.032	+ 1,6 %	+ 3,2 %
non-gaseous petroleum products	163.238	206.343	243.122	+ 26,4 %	+ 17,8 %
natural gas	32.501	47.341	61.822	+ 45,6 %	+ 30,6 %
derivated gases and miscellaneous	23.420	26.038	26.027	+ 11,7 %	0,0
of which: Public supply	600.053	640.988	676.149	+ 6,8 %	+ 5,5 %
Self producers	158.004	165.545	174.323	+ 4,8 %	+ 5,3 %

(*) including intra EUR-9 exchanges

SUMMARIZED BALANCE - SHEET OF ELECTRICAL ENERGY

	1969	1970	1971	GWh (millions of kWh)	
				Increase	
				1970/69	1971/70
- BALANCE - SHEET -					
TOTAL PRODUCTION GENERATED	542.507	580.393	620.867	+ 7,0 %	+ 7,0 %
Importations (*)	21.890	27.537	26.770	+ 25,8 %	- 2,8 %
Exportations (*)	13.305	14.747	19.744	+ 10,8 %	+ 33,9 %
GROSS INLAND CONSUMPTION	551.092	593.183	627.893	+ 7,6 %	+ 5,8 %
Consumption of auxiliary services	28.642	30.015	32.612	+ 4,8 %	+ 8,6 %
Consumption of pumped storage power stations	4.578	4.739	5.582	+ 3,5 %	+ 17,8 %
AVAILABLE FOR INTERNAL MARKET	517.872	558.429	589.699	+ 7,8 %	+ 5,6 %
Distribution losses	35.452	37.812	39.086	+ 6,7 %	+ 3,4 %
CONSUMPTION OF INTERNAL MARKET	482.420	520.617	550.613	+ 7,9 %	+ 5,8 %
by industry	298.299	317.441	326.770	+ 6,4 %	+ 2,9 %
by transportation	17.824	19.074	19.458	+ 7,0 %	+ 2,0 %
by domestic uses and assimilated ones	166.297	184.102	204.385	+ 10,7 %	+ 11,0 %
- PRODUCTION SENT OUT -					
TOTAL	513.866	550.378	588.255	+ 7,1 %	+ 6,9 %
of which: Hydro	110.043	116.270	103.554	+ 5,7 %	- 10,8 %
Geothermal	2.578	2.546	2.483	+ 0,2 %	- 2,5 %
Nuclear	10.978	14.212	17.784	+ 29,5 %	+ 25,1 %
Conventional thermal	390.267	417.350	464.434	+ 6,9 %	+ 11,3 %
from: hard coal and coke	162.706	143.747	152.998	- 11,6 %	+ 6,4 %
brown coal	55.096	56.413	58.314	+ 2,4 %	+ 3,4 %
non-gaseous petroleum products	118.076	145.731	168.793	+ 23,4 %	+ 15,8 %
natural gas	32.182	46.572	59.538	+ 44,7 %	+ 27,8 %
derivated gases and miscellaneous	22.207	24.887	24.791	+ 12,1 %	- 0,4 %
of which: Public supply	375.557	404.789	433.871	+ 7,8 %	+ 7,2 %
Self producers	138.309	145.589	154.384	+ 5,3 %	+ 6,0 %

(*) including intra EUR-6 exchanges

SUMMARIZED BALANCE - SHEET OF ELECTRICAL ENERGY

GWh (millions of kWh)

	1969	1970	1971	Increase	
				1970/69	1971/70
- BALANCE - SHEET -					
TOTAL PRODUCTION GENERATED	239.077	249.193	256.709	+ 4,2 %	+ 3,0 %
Importations	581	557	148	- 4,1 %	
Exportations	2	6	1		
GROSS INLAND CONSUMPTION	239.656	249.744	256.856	+ 4,2 %	+ 2,8 %
Consumption of auxiliary services	16.449	17.404	18.110	+ 5,8 %	+ 4,1 %
Consumption of pumped storage power stations	1.513	1.487	1.209	- 1,7 %	- 1,3 %
AVAILABLE FOR INTERNAL MARKET	221.694	230.853	237.537	+ 4,1 %	+ 2,9 %
Distribution losses	17.538	17.799	18.900	+ 1,5 %	+ 6,0 %
CONSUMPTION OF INTERNAL MARKET	204.156	213.054	218.637	+ 4,4 %	+ 2,6 %
by industry	89.868	91.790	92.094	+ 2,1 %	+ 0,3 %
by transportation	2.713	2.734	2.765	+ 0,8 %	+ 1,1 %
by domestic uses and assimilated ones	111.575	118.530	123.778	+ 6,2 %	+ 4,4 %
- PRODUCTION SENT OUT -					
TOTAL	222.628	231.789	238.599	+ 6,2 %	+ 2,9 %
of which: Hydro	4.365	5.647	4.294	+ 29,4 %	- 31,5 %
Nuclear	25.771	22.805	24.013	- 13,0 %	+ 5,3 %
Conventional thermal	192.492	203.337	210.292	+ 5,6 %	+ 3,4 %
from: hard coal and coke	158.478	156.778	150.558	- 1,1 %	- 4,1 %
brown coal	-	-	-	-	-
non-gaseous petroleum products	32.482	44.639	56.214	+ 37,4 %	+ 26,0 %
natural gas	319	769	2.284	+ 141 %	+ 197 %
derivated gases and miscellaneous	1.213	1.151	1.236	- 5,4 %	+ 7,4 %
of which: Public supply	203.483	212.391	219.209	+ 4,4 %	+ 3,2 %
Self producers	19.145	19.398	19.390	+ 1,3 %	- 0,0 %

ELECTRICAL ENERGY PRODUCTION
YEAR 1969

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %			
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers	
TOTAL PRODUCTION	239.077	218.402	20.675	222.628	203.483	19.145	100	100	100	
HYDROELECTRIC	Total	4.384	3.929	455	4.365	3.914	451	1,8	1,8	2,2
from : natural flow		3.262	2.807	455	3.245	2.794	451	1,4	1,3	2,2
pumped-storage water		1.122	1.122	-	1.120	1.120	-	0,4	0,5	-
NUCLEAR		29.125	25.271	3.854	25.771	22.460	3.311	12,2	11,6	18,6
CONVENTIONAL THERMAL	Total	205.568	189.202	16.366	192.492	177.109	15.383	86,0	86,6	79,2
from : hard coal and coke		169.817	161.256	8.561	158.478	150.436	8.042	71,0	73,8	41,4
brown coal		-	-	-	-	-	-	-	-	-
non-gaseous petroleum prod.		34.121	27.606	6.515	32.482	26.354	6.128	14,3	12,6	31,5
natural gas		340	340	-	319	319	-	0,1	0,2	-
derivated gases		1.290	-	1.290	1.213	-	1.213	0,5	-	6,2
other fuels		-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %			
		Total	Hydro	Thermal (1)	Total	Hydro	Thermal (1)	
TOTAL	239.077	222.628	4.365	218.263	100	100	100	
PUBLIC SUPPLY	218.402	203.483	3.914	199.569	91,4	89,7	91,4	
SELF PRODUCERS	Total	20.675	19.145	451	18.694	8,6	10,3	8,6
of which: hard coal mines		585	550	-	550	0,3	-	0,3
refineries		1.746	1.641	-	1.641	0,8	-	0,8
iron and steel		2.833	2.665	-	2.665	1,3	-	1,2
chemistry		8.916	8.069	-	8.069	4,0	-	3,7
non-ferrous metals		673	656	451	205	0,3	10,3	0,1
food, drink and tobacco		383	360	-	360	0,2	-	0,2
paper		2.970	2.792	-	2.792	1,3	-	1,3
textiles		584	549	-	549	0,3	-	0,3
other industries		1.298	1.220	-	1.220	0,6	-	0,6
railways		685	643	-	643	0,3	-	0,3

(1) Nuclear and conventional thermal

ELECTRICAL ENERGY PRODUCTION
YEAR 1970

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %			
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers	
TOTAL PRODUCTION	249.193	228.236	20.957	231.789	212.391	19.398	100	100	100	
HYDROELECTRIC	Total	5.666	4.981	685	5.647	4.969	678	2,3	2,2	3,3
from : natural flow		4.541	3.856	685	4.524	3.846	678	1,8	1,7	3,3
pumped-storage water		1.125	1.125	-	1.123	1.123	-	0,5	0,5	-

NUCLEAR		26.012	21.870	4.142	22.805	19.247	3.558	10,4	9,6	19,7

CONVENTIONAL THERMAL	Total	217.515	201.385	16.130	203.337	188.175	15.162	87,3	88,2	77,0
from : hard coal and coke		169.423	161.718	7.705	156.778	149.540	7.238	68,0	70,9	36,8
brown coal		-	-	-	-	-	-	-	-	-
non-gaseous petroleum prod.		46.046	38.945	7.101	44.639	37.961	6.678	18,5	17,1	33,9
natural gas		822	722	100	769	674	95	0,3	0,3	0,5
derivated gases		1.224	-	1.224	1.151	-	1.151	0,5	-	5,8
other fuels		-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %			
		Total	Hydro	Thermal (1)	Total	Hydro	Thermal (1)	
TOTAL	249.193	231.789	5.647	226.142	100	100	100	
PUBLIC SUPPLY	228.236	212.391	4.969	207.422	91,6	88,0	91,7	

SELF PRODUCERS	Total	20.957	19.398	678	18.720	8,4	12,0	8,3
of which: hard coal mines		478	449	-	449	0,2	-	0,2
refineries		2.011	1.890	-	1.890	0,8	-	0,8
iron and steel		2.700	2.538	-	2.538	1,1	-	1,1
chemistry		9.016	8.140	-	8.140	3,5	-	3,6
non-ferrous metals		908	888	678	210	0,4	12,0	0,1
food, drink and tobacco		375	352	-	352	0,2	-	0,2
paper		2.965	2.787	-	2.787	1,2	-	1,2
textiles		603	567	-	567	0,2	-	0,3
other industries		1.237	1.163	-	1.163	0,5	-	0,5
railways		664	624	-	624	0,3	-	0,3

(1) Nuclear and conventional thermal

ELECTRICAL ENERGY PRODUCTION
YEAR 1971

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %		
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers
TOTAL PRODUCTION	256.709	235.740	20.969	238.599	219.209	19.390	100	100	100
HYDROELECTRIC Total	4.311	3.754	557	4.294	3.743	551	1,7	1,6	2,7
from : natural flow	3.401	2.844	557	3.386	2.835	551	1,3	0,1	2,7
pumped-storage water	910	910	-	908	908	-	0,4	0,4	-
NUCLEAR	27.548	23.209	4.339	24.013	20.285	3.728	10,7	9,8	20,7
CONVENTIONAL THERMAL Total	224.850	208.777	16.073	210.292	195.181	15.111	87,6	88,6	76,7
from : hard coal and coke	162.208	154.735	7.473	150.558	143.536	7.022	63,2	65,6	35,6
brown coal	-	-	-	-	-	-	-	-	-
non-gaseous petroleum prod.	58.884	51.799	7.085	56.214	49.549	6.665	22,9	22,0	33,8
natural gas	2.443	2.243	200	2.284	2.096	188	1,0	1,0	1,0
derivated gases	1.315	-	1.315	1.236	-	1.236	0,5	-	6,3
other fuels	-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal ⁽¹⁾	Total	Hydro	Thermal ⁽¹⁾
TOTAL	256.709	238.599	4.294	234.305	100	100	100
PUBLIC SUPPLY	235.740	219.209	3.743	215.466	91,8	87,2	92,0
SELF PRODUCERS Total	20.969	19.390	551	18.839	8,2	12,8	8,0
of which:: hard coal mines	411	386	-	386	0,2	-	0,2
refineries	2.137	2.009	-	2.009	0,8	-	0,8
iron and steel	2.888	2.715	-	2.715	1,1	-	1,2
chemistry	9.228	8.323	-	8.323	3,5	-	3,5
non-ferrous metals	768	749	551	198	0,3	12,8	0,1
food, drink and tobacco	410	385	-	385	0,2	-	0,2
paper	2.671	2.511	-	2.511	1,0	-	1,0
textiles	574	540	-	540	0,2	-	0,2
other industries	1.205	1.133	-	1.133	0,5	-	0,5
railways	677	639	-	639	0,3	-	0,3

(1) Nuclear and conventional thermal

CONSUMPTION OF ELECTRICAL ENERGY

GLOBAL FIGURES

Consumption's sector	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INTERNAL MARKET	204.156	213.054	218.637	100	+ 4,4 %	+ 2,6 %
INDUSTRY (1) Total	89.868	91.790	92.094	42	+ 2,1 %	+ 0,3 %
of which: Energy	1.073	8.899	8.901	4	- 2,0 %	+ 0,0 %
Industries (except the Energy sector)	80.795	82.891	83.193	38	+ 2,6 %	+ 0,4 %

TRANSPORT Total	2.713	2.734	2.765	1	+ 0,8 %	+ 1,1 %
of which: Railways	2.693	2.720	2.758	1	+ 1,0 %	+ 1,4 %
Urban transport systems	20	14	7	0	- 43,0 %	-

HOUSEHOLDS, COMMERCE, HANDICRAFTS, ETC Total	111.575	118.530	123.778	57	+ 6,2 %	+ 4,4 %
of which: Households	72.185	77.213	80.944	37	+ 7,0 %	+ 4,8 %
Public lighting	1.605	1.718	1.800	1	+ 7,0 %	+ 4,8 %
Irrigation and soil improvement	-	-	-	-	-	-
Agricult.,commerce,handicrafts and public utilities	37.785	39.599	41.034	19	+ 4,8 %	+ 3,6 %

(1) excluding the consumption by station-auxiliaries

FIGURES RELATED TO THE POPULATION

Consumption's sector	1969	1970	1971	Increase	
	kWh/capita	kWh/capita	kWh/capita	1970/69	1971/70
TOTAL INTERNAL MARKET	3.698	3.847	3.935	+ 4,0 %	+ 2,3 %
of which: Industry	1.627	1.657	1.657	+ 1,8 %	0,0 %
Transport	49	49	49	0,0 %	0,0 %
Households	1.307	1.394	1.457	+ 6,6 %	+ 4,5 %
Other uses	713	746	771	+ 4,6 %	+ 3,4 %

ELECTRICAL ENERGY CONSUMPTION
BY INDUSTRY

Industrial sectors	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INDUSTRY (1)	89.868	91.790	92.094	100	+ 2,1 %	+ 0,3 %
A. ENERGY (1)	9.073	8.899	8.901	9,7	- 2,0 %	+ 0,0 %
Coal mines and lignite mines, patent fuel plants	5.100	4.947	4.992	5,4	- 3,1 %	+ 0,9 %
Coal mines and patent fuel plants	5.100	4.947	4.992	5,4	- 3,1 %	+ 0,9 %
Lignite mines and briquetting plants	-	-	-	-	-	-
Gasworks and coke oven plants	1.451	1.274	1.138	1,2	- 13,9 %	- 12,0 %
Coke oven plants	300	295	276	0,3	- 1,7 %	- 6,9 %
Gasworks	1.151	979	862	0,9	- 17,6 %	- 13,6 %
Extraction and refinement of hydrocarb.	2.522	2.678	2.771	3,0	+ 6,2 %	+ 3,5 %
Petroleum and natural gas extraction	-	-	-	-	-	-
Petroleum refineries	2.522	2.678	2.771	3,0	+ 6,2 %	+ 3,5 %
B. INDUSTRY	80.795	82.891	83.193	90,3	+ 2,6 %	+ 0,4 %
Iron and steel	13.443	13.605	12.939	14,0	+ 1,2 %	- 5,1 %
Non-ferrous metals	2.608	2.785	4.286	4,7	+ 6,9 %	+ 53,9 %
Ore extraction (except fuels)	1.562	1.621	1.585	1,7	+ 3,8 %	- 2,3 %
Food, drinks and tobacco	5.211	5.431	5.615	6,1	+ 4,2 %	+ 3,4 %
Textiles, leather and clothing	5.655	5.743	5.402	5,9	+ 1,6 %	- 6,3 %
Textile and clothing	5.384	5.467	5.143	5,6	+ 1,5 %	- 6,3 %
Leather and footwear	271	276	259	0,3	+ 1,8 %	- 6,6 %
Paper, printing and publishing	5.734	5.818	5.478	5,9	+ 1,5 %	- 6,2 %
Pulp and paper	4.834	4.850	4.528	4,9	+ 0,3 %	- 7,1 %
Printing and publishing	900	968	950	1,0	+ 7,6 %	- 1,9 %
Chemistry	17.550	18.119	18.370	19,9	+ 3,2 %	+ 1,4 %
Glass, pottery and building material	4.718	4.667	4.852	5,3	- 1,1 %	+ 4,0 %
Engineering and other metal trades	17.354	17.728	17.071	18,5	+ 2,2 %	- 3,8 %
Electro-mechanical products	7.640	7.840	7.523	8,2	+ 2,6 %	- 4,0 %
Shipbuilding	1.055	1.050	990	1,1	- 0,5 %	- 5,7 %
Motor-vehicles and bicycles	5.280	5.382	5.163	5,6	+ 1,9 %	- 4,1 %
Other fabricated metal products	3.379	3.456	3.395	3,7	+ 2,3 %	- 1,8 %
Other non-classified	6.960	7.374	7.595	8,2	+ 5,9 %	+ 3,0 %
Rubber	1.447	1.468	1.458	1,6	+ 1,5 %	- 0,7 %
Wood	700	710	728	0,8	+ 1,4 %	+ 2,5 %
Construction	605	631	584	0,6	+ 4,3 %	- 7,4 %
Others	4.208	4.565	4.825	5,2	+ 8,5 %	+ 5,7 %

(1) non-included the consumption of the auxiliary services of the electrical power plants

BALANCE - SHEETS OF TRANSFORMATIONS
IN CONVENTIONAL THERMAL POWER PLANTS

		Public supply			Self-producers			TOTAL		
		1969	1970	1971	1969	1970	1971	1969	1970	1971
CONSUMPTION OF FUELS FOR GENERATION OF ELECTRICITY ONLY										
Hard coal	10 ³ metric tons	76.965	77.200	72.720	3.950	3.600	3.485	80.915	80.800	76.205
Coke	"	170	125	70	185	150	130	355	275	200
Brown coal	"	-	-	-	-	-	-	-	-	-
Petroleum products (non gaseous)	"	8.240	12.420	14.580	1.695	1.870	1.850	9.935	14.290	16.430
Natural gas (incl. mine gas)	Tcal (PCS) 1)	995	1.530	6.725	-	275	605	995	1.805	7.330
Blast furnace gas	"	-	-	-	3.955	3.805	4.110	3.955	3.805	4.110
Refinery gas	"	-	-	-	-	-	-	-	-	-
CALORIFIC EQUIVALENT										
Hard coal	Tcal (PCI) 2)	429.643	421.886	399.898	24.192	22.061	21.408	453.835	443.947	421.306
Coke	"	883	696	418	1.186	946	821	2.069	1.642	1.239
Brown coal	"	-	-	-	-	-	-	-	-	-
Petroleum products	"	80.760	122.259	142.912	16.741	18.432	18.243	97.500	140.692	161.156
Natural gas	"	896	1.377	6.053	-	248	545	896	1.625	6.597
Blast furnace gas	"	-	-	-	3.955	3.805	4.110	3.955	3.805	4.110
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
T O T A L	"	512.182	546.218	549.281	46.074	45.492	45.127	558.255	591.711	594.408
CORRESPONDING NET PRODUCTION OF ELECTRICITY										
Hard coal	GWh	150.116	149.310	143.401	7.640	6.931	6.759	157.756	156.241	150.160
Coke	"	320	230	135	402	301	263	722	537	398
Brown coal	"	-	-	-	-	-	-	-	-	-
Petroleum products	"	26.354	37.961	49.549	6.128	6.678	6.665	32.482	44.639	56.214
Natural gas	"	319	674	2.096	-	95	188	319	769	2.284
Blast furnace gas	"	-	-	-	1.213	1.151	1.236	1.213	1.151	1.236
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
T O T A L	"	177.109	188.175	195.181	15.383	15.162	15.111	192.492	203.337	210.292
RESULTING AVERAGE SPECIFIC CONSUMPTION										
kcal (PCI) / kWh net		2.892	2.904	2.814	2.995	3.001	2.987	2.900	2.910	2.827

1) PCS = Gross calorific value

2) PCI = Net calorific value

S U M M A R I Z E D B A L A N C E - S H E E T O F E L E C T R I C A L E N E R G Y

	GWh (millions of kWh)				
	1969	1970	1971	Increase	
				1970/69	1971/70
- B A L A N C E - S H E E T -					
TOTAL PRODUCTION GENERATED	5.265	5.791	6.407	+ 10,0 %	+ 10,6 %
Importations	-	-	-	-	-
Exportations	-	-	30	-	-
GROSS INLAND CONSUMPTION	5.265	5.791	6.377	+ 10,0 %	+ 10,1 %
Consumption of auxiliary services	275	289	329	+ 5,1 %	+ 13,8 %
Consumption of pumped storage power stations	-	-	-	-	-
AVAILABLE FOR INTERNAL MARKET	4.990	5.502	6.048	+ 10,3 %	+ 9,9 %
Distribution losses	547	613	741	+ 12,0 %	+ 20,9 %
CONSUMPTION OF INTERNAL MARKET	4.443	4.889	5.307	+ 10,0 %	+ 8,5 %
by industry	1.553	1.694	1.884	+ 9,1 %	+ 11,2 %
by transportation	-	-	-	-	-
by domestic uses and assimilated ones	2.890	3.195	3.423	+ 10,6 %	+ 7,1 %
- P R O D U C T I O N S E N T O U T -					
TOTAL	4.990	5.502	6.078	+ 10,3 %	+ 10,5 %
of which: Hydro	575	793	460	+ 37,9 %	- 72,3 %
Nuclear	-	-	-	-	-
Conventional thermal	4.415	4.709	5.618	+ 6,7 %	+ 19,3 %
from: hard coal	70	81	80	+ 15,7 %	- 1,2 %
brown coal	1.874	1.684	1.718	- 11,3 %	+ 2,0 %
non-gaseous petroleum products	2.471	2.944	3.820	+ 19,1 %	+ 29,8 %
natural gas	-	-	-	-	-
derivated gases and miscellaneous	-	-	-	-	-
of which: Public supply	4.825	5.331	5.904	+ 10,5 %	+ 10,7 %
Self producers	165	171	174	+ 3,6 %	+ 1,7 %

ELECTRICAL ENERGY PRODUCTION
YEAR 1969

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %			
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers	
TOTAL PRODUCTION	5.265	5.100	165	4.990	4.825	165	100	100	100	
HYDROELECTRIC	Total	583	579	4	575	571	4	12	12	2
from : natural flow		583	579	4	575	571	4	12	12	2
pumped-storage water		-	-	-	-	-	-	-	-	-
NUCLEAR		-	-	-	-	-	-	-	-	-
CONVENTIONAL THERMAL	Total	4.682	4.521	161	4.415	4.254	161	88	88	98
from : hard coal		74	74	-	70	70	-	1	1	-
peat		1.992	1.992	-	1.874	1.874	-	38	39	-
non-gaseous petroleum prod.		2.616	2.455	161	2.471	2.310	161	49	48	98
natural gas		-	-	-	-	-	-	-	-	-
derivated gases		-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %			
		Total	Hydro	Thermal	Total	Hydro	Thermal	
TOTAL	5.265	4.990	575	4.415	100	100	100	
PUBLIC SUPPLY	5.100	4.825	571	4.254	97	99	96	
SELF PRODUCERS	Total	165	165	4	161	3	1	4
of which: hard coal mines		-	-	-	-	-	-	-
refineries		-	-	-	-	-	-	-
iron and steel		-	-	-	-	-	-	-
chemistry		34	34	1	33	1	0	1
non-ferrous metals		-	-	-	-	-	-	-
food, drink and tobacco		56	56	-	56	1	-	1
paper		31	31	-	31	1	-	1
textiles		3	3	-	3	0	-	0
other industries		41	41	3	38	1	1	1
railways		-	-	-	-	-	-	-

ELECTRICAL ENERGY PRODUCTION
YEAR 1970

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %		
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers
TOTAL PRODUCTION	5.791	5.620	171	5.502	5.331	171	100	100	100
HYDROELECTRIC	802	798	4	793	789	4	14	15	2
Total	802	798	4	793	789	4	14	15	2
from : natural flow	-	-	-	-	-	-	-	-	-
pumped-storage water	-	-	-	-	-	-	-	-	-
NUCLEAR	-	-	-	-	-	-	-	-	-
CONVENTIONAL THERMAL	4.989	4.822	167	4.709	4.542	167	86	85	98
Total	4.989	4.822	167	4.709	4.542	167	86	85	98
from : hard coal	86	86	-	81	81	-	1	2	-
peat	1.788	1.788	-	1.684	1.684	-	31	32	-
non-gaseous petroleum prod.	3.115	2.948	167	2.944	2.777	167	54	52	98
natural gas	-	-	-	-	-	-	-	-	-
derivated gases	-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal	Total	Hydro	Thermal
TOTAL	5.791	5.502	793	4.709	100	100	100
PUBLIC SUPPLY	5.620	5.331	789	4.542	97	99	97
SELF PRODUCERS	171	171	4	167	3	1	3
of which:: hard coal mines	-	-	-	-	-	-	-
refineries	5	5	-	5	0	-	0
iron and steel	-	-	-	-	-	-	-
chemistry	37	37	1	36	0	-	0
non-ferrous metals	-	-	-	-	-	-	-
food, drink and tobacco	57	57	-	57	1	-	1
paper	26	26	-	26	0	-	0
textiles	4	4	-	4	0	-	0
other industries	42	42	3	39	1	0	1
railways	-	-	-	-	-	-	-

ELECTRICAL ENERGY PRODUCTION
YEAR 1971

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %		
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers
TOTAL PRODUCTION	6.407	6.233	174	6.078	5.904	174	100	100	100
HYDROELECTRIC	466	463	3	460	457	3	8	8	2
from : natural flow	466	463	3	460	457	3	8	8	2
pumped-storage water	-	-	-	-	-	-	-	-	-
NUCLEAR	-	-	-	-	-	-	-	-	-
CONVENTIONAL THERMAL	5.941	5.770	171	5.618	5.447	171	92	92	98
from : hard coal and coke	85	85	-	80	80	-	1	1	-
peat	1.820	1.820	-	1.718	1.718	-	28	29	-
non-gaseous petroleum prod.	4.036	3.865	171	3.820	3.649	171	63	62	98
natural gas	-	-	-	-	-	-	-	-	-
derivated gases	-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal	Total	Hydro	Thermal
TOTAL	6.407	6.078	460	5.618	100	100	100
PUBLIC SUPPLY	6.233	5.904	457	5.447	97	99	97
SELF PRODUCERS	174	174	3	171	3	1	3
of which:: hard coal mines	-	-	-	-	-	-	-
refineries	10	10	-	10	0	-	0
iron and steel	-	-	-	-	-	-	-
chemistry	31	31	1	30	1	0	1
non-ferrous metals	-	-	-	-	-	-	-
food, drink and tobacco	58	58	-	58	1	-	1
paper	29	29	-	29	0	-	1
textiles	5	5	-	5	0	-	0
other industries	41	41	2	39	1	0	1
railways	-	-	-	-	-	-	-

CONSUMPTION OF ELECTRICAL ENERGY

GLOBAL FIGURES

Consumption's sector	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INTERNAL MARKET	4.443	4.889	5.307	100	+ 10,0 %	+ 8,5 %
INDUSTRY (1) T o t a l	1.553	1.694	1.884	36	+ 9,1 %	+ 11,2 %
of which: Energy	84	89	93	2	+ 6,0 %	+ 4,5 %
Industries (except the Energy sector)	1.469	1.605	1.791	34	+ 9,3 %	+ 11,6 %
TRANSPORT T o t a l	-	-	-	-	-	-
of which: Railways	-	-	-	-	-	-
Urban transport systems	-	-	-	-	-	-
HOUSEHOLDS, COMMERCE, HANDICRAFTS, ETC T o t a l	2.890	3.195	3.423	64	+ 10,6 %	+ 7,1 %
of which: Households and agriculture	1.904	2.127	2.291	43	+ 11,7 %	+ 7,7 %
Public lighting	46	50	55	1	+ 8,7 %	+ 10,0 %
Irrigation and soil improvement	-	-	-	-	-	-
Commerce, handicrafts and public utilities	940	1.018	1.077	20	+ 8,3 %	+ 5,8 %

(1) excluding the consumption by station-auxiliaries

FIGURES RELATED TO THE POPULATION

Consumption's sector	1969	1970	1971	Increase	
	kWh/capita	kWh/capita	kWh/capita	1970/69	1971/70
TOTAL INTERNAL MARKET	1.518	1.657	1.782	+ 9,2 %	+ 7,5 %
of which: Industry	530	574	632	+ 8,3 %	+ 10,1 %
Transport	-	-	-	-	-
Households and agriculture	650	721	769	+ 10,9 %	+ 6,7 %
Other uses	337	362	380	+ 7,4 %	+ 4,9 %

ELECTRICAL ENERGY CONSUMPTION
BY INDUSTRY

Industrial sectors	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INDUSTRY (1)	1.553	1.694	1.884	100	+ 9,1 %	+ 11,2 %
A. ENERGY (1)	84	89	93	5	+ 6,0 %	+ 4,5 %
Coal mines and lignite mines, patent fuel plants	8	8	5	0		
Coal mines and patent fuel plants	8	8	5	0		
Lignite mines and briquetting plants	-	-	-	-		
Gasworks and coke oven plants	34	34	36	2		
Coke oven plants	-	-	-	-		
Gasworks	34	34	36	2		
Extraction and refinement of hydrocarb.	42	47	52	3		
Petroleum and naturel gas extraction	-	-	-	-		
Petroleum refineries	42	47	52	3		
B. INDUSTRY	1.469	1.605	1.791	95	+ 9,3 %	+ 11,6 %
Iron and steel						
Non-ferrous metals						
Ore extraction (except fuels)						
Food, drinks and tobacco						
Textiles, leather and clothing						
Textile and clothing						
Leather and footwear						
Paper, printing and publishing						
Pulp and paper						
Printing and publishing						
Chemistry						
Glass, pottery and building material						
Engineering and other metal trades						
Electro-mechanical products						
Shipbuilding						
Motor-vehicles and bicycles						
Other fabricated metal products						
Other non-classified						
Rubber						
Wood						
Construction						
Others						

(1) non-included the consumption of the auxiliary services of the electrical power plants

BALANCE - SHEETS OF TRANSFORMATIONS
IN CONVENTIONAL THERMAL POWER PLANTS

		Public supply			Self-producers			TOTAL		
		1969	1970	1971	1969	1970	1971	1969	1970	1971
CONSUMPTION OF FUELS FOR GENERATION OF ELECTRICITY ONLY										
Hard coal	10 ³ metric tons	44	51	52	-	-	-	44	51	52
Coke	"	-	-	-	-	-	-	-	-	-
Peat	"	2.801	2.494	2.681	-	-	-	2.801	2.494	2.681
Petroleum products (non gaseous)	"	634	765	1.001	47	49	50	681	814	1.051
Natural gas (incl. mine gas)	Tcal (PCS) 1)	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
CALORIFIC EQUIVALENT										
Hard coal	Tcal (PCI) 2)	243	278	279	-	-	-	243	278	279
Coke	"	-	-	-	-	-	-	-	-	-
Peat	"	6.368	5.265	6.000	-	-	-	6.368	5.265	6.000
Petroleum products	"	6.150	7.443	9.727	483	501	513	6.633	7.944	10.240
Natural gas	"	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
T O T A L	"	12.761	12.986	16.006	483	501	513	13.244	13.487	16.519
CORRESPONDING NET PRODUCTION OF ELECTRICITY										
Hard coal	GWh	70	81	80	-	-	-	70	81	80
Coke	"	-	-	-	-	-	-	-	-	-
Peat	"	1.874	1.684	1.718	-	-	-	1.874	1.684	1.718
Petroleum products	"	2.310	2.777	3.649	161	167	171	2.471	2.944	3.820
Natural gas	"	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
T O T A L	"	4.254	4.542	5.447	161	167	171	4.415	4.709	5.618
RESULTING AVERAGE SPECIFIC CONSUMPTION										
keal (PCI) / kWh net		3.000	2.859	2.938	3.000	3.000	3.000	3.000	2.864	2.940

1) PCS = Gross calorific value

2) PCI = Net calorific value

SUMMARIZED BALANCE-SHEET OF ELECTRICAL ENERGY

GWh (millions of kWh)

	1969	1970	1971	Increase	
				1970/69	1971/70
- BALANCE-SHEET -					
TOTAL PRODUCTION GENERATED	17.592	20.024	18.624	+ 13,8 %	- 7,5 %
Importations	590	570	731	- 3,5 %	+ 28,2 %
Exportations	3.913	4.764	2.691	+ 21,7 %	- 77,0 %
GROSS INLAND CONSUMPTION	14.269	15.830	16.664	+ 10,9 %	+ 5,3 %
Consumption of auxiliary services	1.019	1.160	1.084	+ 13,8 %	- 7,0 %
Consumption of pumped storage power stations	-	-	-	-	-
AVAILABLE FOR INTERNAL MARKET	13.250	14.670	15.580	+ 17,6 %	+ 6,2 %
Distribution losses	1.450	1.570	1.680	+ 8,3 %	+ 7,0 %
CONSUMPTION OF INTERNAL MARKET	11.800	13.100	13.900	+ 11,0 %	+ 6,1 %
by industry	3.400	3.700	3.900	+ 8,8 %	+ 5,4 %
by transportation	105	103	97	- 1,9 %	- 6,2 %
by domestic uses and assimilated ones	8.295	9.297	9.903	+ 12,1 %	+ 6,5 %
- PRODUCTION SENT OUT -					
TOTAL	16.573	18.864	17.540	+ 13,8 %	- 7,5 %
of which: Hydro	22	24	24	+ 9,0 %	-
Nuclear	-	-	-	-	-
Conventional thermal	16.551	18.840	17.516	+ 13,8 %	- 7,6 %
from: hard coal and coke	6.061	5.728	3.221	- 5,8 %	- 77,8 %
brown coal	281	83	-	-	-
non-gaseous petroleum products	10.209	13.029	14.295	+ 27,6 %	+ 9,7 %
natural gas	-	-	-	-	-
derivated gases and miscellaneous	-	-	-	-	-
of which: Public supply	16.188	18.477	17.165	+ 14,1 %	- 7,1 %
Self producers	385	387	375	+ 0,5 %	- 3,2 %

ELECTRICAL ENERGY PRODUCTION
YEAR 1969

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %		
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers
TOTAL PRODUCTION	17.592	17.182	410	16.573	16.188	385	100	100	100
HYDROELECTRIC	22	22	-	22	22	-	0,1	0,1	-
from : natural flow	22	22	-	22	22	-	0,1	0,1	-
pumped-storage water	-	-	-	-	-	-	-	-	-
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NUCLEAR	-	-	-	-	-	-	-	-	-
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CONVENTIONAL THERMAL	17.570	17.160	410	16.551	16.166	385	99,9	99,9	100,0
from : hard coal and coke	6.517	6.490	27	6.061	6.036	25	36,6	37,3	6,5
brown coal	305	305	-	281	281	-	1,7	1,7	-
non-gaseous petroleum prod.	10.748	10.365	383	10.209	9.849	360	61,6	60,9	93,5
natural gas	-	-	-	-	-	-	-	-	-
derivated gases	-	-	-	-	-	-	-	-	-
other fuels	-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal	Total	Hydro	Thermal
TOTAL	17.592	16.573	22	16.551	100	100	100
PUBLIC SUPPLY	17.182	16.188	22	16.166	97,7	100	97,6
-----	-----	-----	-----	-----	-----	-----	-----
SELF PRODUCERS	410	385	-	385	2,3	-	2,4
of which:: hard coal mines	-	-	-	-	-	-	-
refineries	.	.	.	.	.	.	.
iron and steel	.	.	.	.	.	.	.
chemistry	.	.	.	.	.	.	.
non-ferrous metals	.	.	.	.	.	.	.
food, drink and tobacco	.	.	.	.	.	.	.
paper	.	.	.	.	.	.	.
textiles	.	.	.	.	.	.	.
other industries	.	.	.	.	.	.	.
railways	.	.	.	.	.	.	.

ELECTRICAL ENERGY PRODUCTION
YEAR 1970

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %			
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers	
TOTAL PRODUCTION	20.024	19.614	410	18.864	18.477	387	100	100	100	
HYDROELECTRIC	Total	24	24	-	24	24	-	0,1	0,1	-
from : natural flow		24	24	-	24	24	-	0,1	0,1	-
pumped-storage water		-	-	-	-	-	-	-	-	-

NUCLEAR		-	-	-	-	-	-	-	-	-

CONVENTIONAL THERMAL	Total	20.000	19.590	410	18.840	18.453	387	99,9	99,9	100
from : hard coal and coke		6.159	6.137	22	5.728	5.708	20	30,4	31,9	5,2
brown coal		90	90	-	83	83	-	0,4	0,4	-
non-gaseous petroleum prod.		13.751	13.363	388	13.029	12.662	367	69,1	68,5	94,8
natural gas		-	-	-	-	-	-	-	-	-
derivated gases		-	-	-	-	-	-	-	-	-
other fuels		-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal	Total	Hydro	Thermal
TOTAL	20.024	18.864	24	18.840	100	100	100
PUBLIC SUPPLY	19.614	18.477	24	18.453	97,9	100	97,9

SELF PRODUCERS	Total	410		387	2,1	-	2,1
of which:: hard coal mines		-		-	-	-	-
refineries		17		16	0,1	-	0,1
iron and steel		11		10	0,0	-	0,0
chemistry		91		86	0,4	-	0,4
non-ferrous metals		.		.	.	-	.
food, drink and tobacco		126		120	1,0	-	1,0
paper		89		85	0,4	-	0,4
textiles		4		4	0,0	-	0,0
other industries		72		66	0,2	-	0,2
railways		-		-	-	-	-

ELECTRICAL ENERGY PRODUCTION
YEAR 1971

BREAKDOWN BY ENERGY SOURCES

Type of production	Production generated in GWh			Production sent out in GWh			Breakdown in %			
	Total	Public supply	Self producers	Total	Public supply	Self producers	Total	Public supply	Self producers	
TOTAL PRODUCTION	18.624	18.224	400	17.540	17.165	375	100	100	100	
HYDROELECTRIC	Total	24	24	-	24	24	-	0,1	0,1	-
from : natural flow		24	24	-	24	24	-	0,1	0,1	-
pumped-storage water		-	-	-	-	-	-	-	-	-

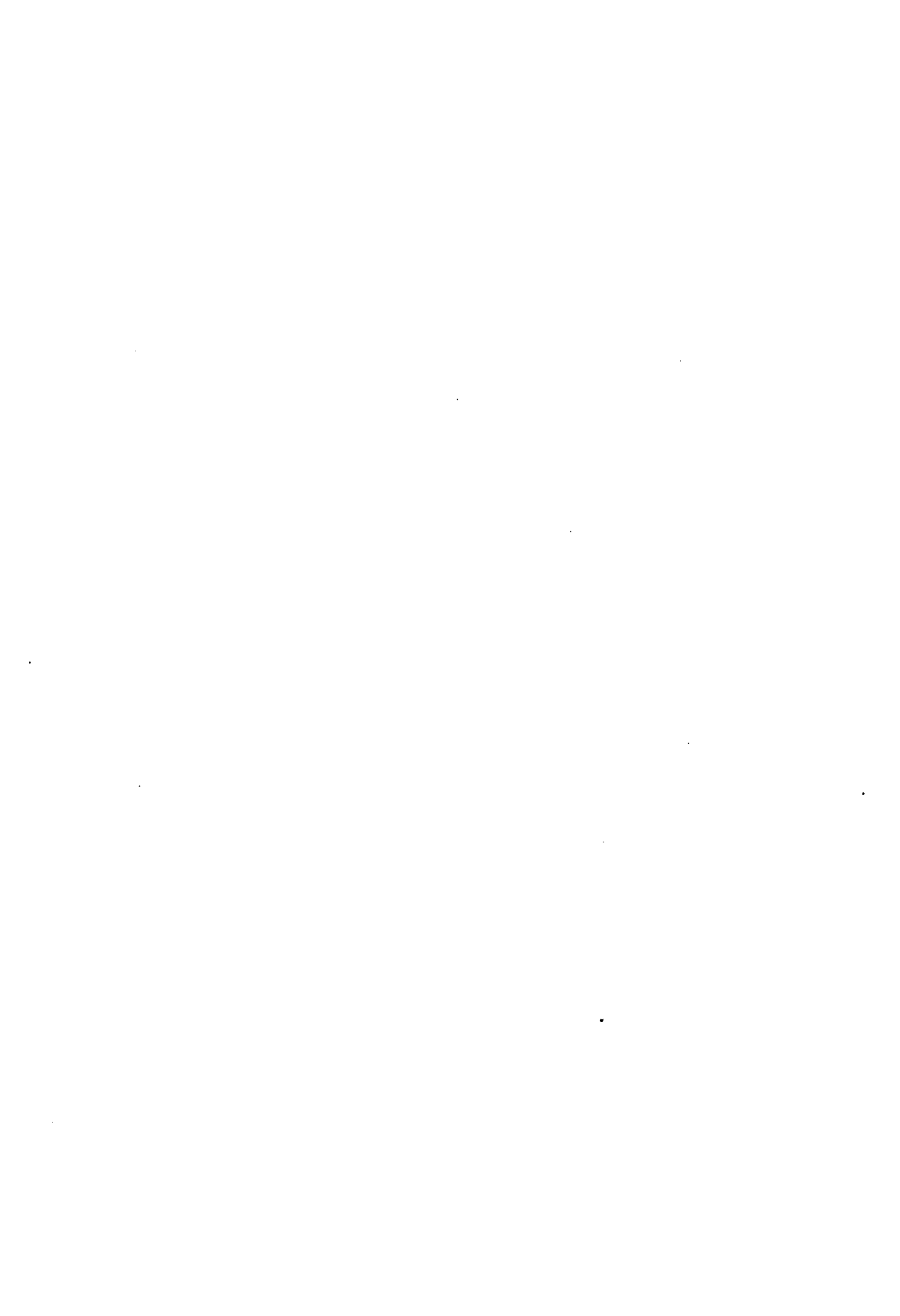
NUCLEAR		-	-	-	-	-	-	-	-	-

CONVENTIONAL THERMAL	Total	18.600	18.200	400	17.516	17.141	375	99,9	99,9	100
from : hard coal and coke		3.463	3.458	5	3.221	3.216	5	18,4	18,7	1,3
brown coal		-	-	-	-	-	-	-	-	-
non-gaseous petroleum prod.		15.137	14.742	395	14.295	13.925	370	81,5	81,2	98,7
natural gas		-	-	-	-	-	-	-	-	-
derivated gases		-	-	-	-	-	-	-	-	-
other fuels		-	-	-	-	-	-	-	-	-

BREAKDOWN BY PRODUCERS' CATEGORIES

Type of producers	Total production generated in GWh	Production sent out in GWh			Breakdown in %		
		Total	Hydro	Thermal	Total	Hydro	Thermal
TOTAL	18.624	17.540	24	17.516	100	100	100
PUBLIC SUPPLY	18.224	17.165	24	17.141	97,9	100	97,9

SELF PRODUCERS	Total	400		375	2,1	-	2,1
of which: hard coal mines		-	-	-	-	-	-
refineries		.	.	.	.	.	.
iron and steel		.	.	.	.	.	.
chemistry		.	.	.	.	.	.
non-ferrous metals		.	.	.	.	.	.
food, drink and tobacco		.	.	.	.	.	.
paper		.	.	.	.	.	.
textiles		.	.	.	.	.	.
other industries		.	.	.	.	.	.
railways		-	-	-	-	-	-



CONSUMPTION OF ELECTRICAL ENERGY

GLOBAL FIGURES

Consumption's sector	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INTERNAL MARKET	11.800	13.100	13.900	100	+ 11,0 %	+ 6,1 %
INDUSTRY (1) T o t a l	3.400	3.700	3.900	28	+ 8,8 %	+ 5,4 %
of which: Energy	175	200	207	2	+ 14,3 %	+ 3,5 %
Industries (except the Energy sector)	3.225	3.500	3.693	26	+ 8,5 %	+ 5,5 %
TRANSPORT T o t a l	105	103	97	1	- 1,9 %	- 6,2 %
of which: Railways	105	103	97	1	- 1,9 %	- 6,2 %
Urban transport systems	-	-	-	-	-	-
HOUSEHOLDS, COMMERCE, HANDICRAFTS, ETC T o t a l	8.295	9.297	9.903	71	+ 12,1 %	+ 6,5 %
of which: Households	.	.	.			
Public lighting	.	.	.			
Irrigation and soil improvement	.	.	.			
Agricult., commerce, handicrafts and public utilities	.	.	.			

(1) excluding the consumption by station-auxiliaries

FIGURES RELATED TO THE POPULATION

Consumption's sector	1969	1970	1971	Increase	
	kWh/capita	kWh/capita	kWh/capita	1970/69	1971/70
TOTAL INTERNAL MARKET	2.412	2.657	2.800	+ 10,2 %	+ 5,4 %
of which: Industry	695	750	785	+ 7,9 %	+ 4,7 %
Transport	21	21	20	-	-
Households	1.696	1.886	2.075	+ 11,2 %	+ 10,0 %
Other uses					

ELECTRICAL ENERGY CONSUMPTION
BY INDUSTRY

Industrial sectors	1969	1970	1971		Increase	
	GWh	GWh	GWh	%	1970/69	1971/70
TOTAL INDUSTRY (1)	3.400	3.700	3.900	100	+ 8,8 %	+ 5,4 %
A. ENERGY (1)	175	200	210	5	+ 14,3 %	+ 5,0 %
Coal mines and lignite mines, patent fuel plants	-	-	-			
Coal mines and patent fuel plants	-	-	-			
Lignite mines and briquetting plants	-	-	-			
Gasworks and coke oven plants	.	.	.			
Coke oven plants	-	-	-			
Gasworks	.	.	.			
Extraction and refinement of hydrocarb.	175	200	210			
Petroleum and naturel gas extraction	-	-	-			
Petroleum refineries	175	200	210			
B. INDUSTRY	3.225	3.500	3.690	95	+ 8,5 %	+ 5,5 %
Iron and steel	.	150	.			
Non-ferrous metals	.	50	.			
Ore extraction (except fuels)	.	30	.			
Food, drinks and tobacco	.	640	.			
Textiles, leather and clothing	.	195	.			
Textile and clothing	.		.			
Leather and footwear	.		.			
Paper, printing and publishing	.	300	.			
Pulp and paper	.		.			
Printing and publishing	.		.			
Chemistry	.	500	.			
Glass, pottery and building material	.	635	.			
Engineering and other metal trades	.	650	.			
Electro-mechanical products	.		.			
Shipbuilding	.		.			
Motor-vehicles and bicycles	.		.			
Other fabricated metal products	.		.			
Other non-classified	.	350	.			
Rubber	.		.			
Wood	.		.			
Construction	.		.			
Others	.		.			

(1) non-included the consumption of the auxiliary services of the electrical power plants

BALANCE - SHEETS OF TRANSFORMATIONS
IN CONVENTIONAL THERMAL POWER PLANTS

	Public supply			Self-producers			TOTAL			
	1969	1970	1971	1969	1970	1971	1969	1970	1971	
CONSUMPTION OF FUELS FOR GENERATION OF ELECTRICITY ONLY										
Hard coal	10 ³ metric tons	2.442	2.343	1.301	7	6	1	2.449	2.349	1.302
Coke	"	-	11	4	-	-	-	-	11	4
Brown coal	"	369	113	-	-	-	-	369	113	-
Petroleum products (non gaseous)	"	2.489	3.116	3.306	58	60	61	2.547	3.176	3.367
Natural gas (incl. mine gas)	Tcal (PCS) ¹⁾	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
CALORIFIC EQUIVALENT										
Hard coal	Tcal (PCI) ²⁾	15.045	14.177	7.882	41	31	8	15.086	14.208	7.890
Coke	"	-	40	7	-	-	-	-	40	7
Brown coal	"	760	235	-	-	-	-	760	235	-
Petroleum products	"	24.293	30.463	32.268	587	600	605	24.880	31.063	32.873
Natural gas	"	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
TOTAL	"	40.098	44.915	40.157	628	633	613	40.726	45.546	40.770
CORRESPONDING NET PRODUCTION OF ELECTRICITY										
Hard coal	GWh	6.030	5.693	3.213	(25)	20	(5)	6.061	5.713	3.218
Coke	"	-	15	3	-	-	-	-	15	3
Brown coal	"	287	83	-	-	-	-	281	83	-
Petroleum products	"	9.849	12.662	13.925	(360)	367	(370)	10.209	13.029	14.295
Natural gas	"	-	-	-	-	-	-	-	-	-
Blast furnace gas	"	-	-	-	-	-	-	-	-	-
Refinery gas	"	-	-	-	-	-	-	-	-	-
Other fuels	"	-	-	-	-	-	-	-	-	-
TOTAL	"	16.166	18.453	17.141	385	387	375	16.551	18.840	17.516
RESULTING AVERAGE SPECIFIC CONSUMPTION										
kcal (PCI) / kWh net		2.480	2.430	2.340	1.631	1.630	1.635	2.461	2.418	2.328

1) PCS = Gross calorific value

2) PCI = Net calorific value

BALANCE - SHEETS OF TRANSFORMATIONS IN
THE COMBINED HEAT AND POWER PLANTS OF
PUBLIC SUPPLY

		1969	1970	1971
CONSUMPTION OF FUELS FOR THE PRODUCTION OF HEAT				
Hard coal	10 ³ metric tons	448	416	369
Brown coal	"	64	20	-
Petroleum products (non gaseous)	"	153	198	210
CALORIFIC EQUIVALENT				
Hard coal	Tcal (PCI) ¹⁾	2 740	2 500	2 230
Brown coal	"	130	40	-
Petroleum products	"	1 500	1 935	2 050
T O T A L	"	4 370	4 475	4 280
CORRESPONDING PRODUCTION OF HEAT ²⁾				
T O T A L	Tcal	5 049	5 273	5 180

1) PCI = net calorific value

2) Regarding the combined heat and power plants the portion of the fuel consumption that is attributed to the electricity production has been estimated considering the expected equivalent production of a merely electricity producing plant.

Accordingly the efficiency gain due to combined heat and power production is fully accounted for on the heat balance-sheet : for this reason the output heat data appear higher than the input heat data.

