

EESTI ENERGEETIKA  
1994-1996  
ESTONIAN ENERGY

**EESSÕNA**

Käesolevasse väljaandesse "**Eesti Energeetika 1994-1996**" on koostatud Eesti energiasektorit ja selle arengutendentse iseloomustavad statistilised andmed aastatest 1994 kuni 1996. Andmete põhiliseks allikaks on Eesti Statistikaameti väljaanded "**Energiabilanss 1994**", "**Energiabilanss 1995**" ja "**Energiabilanss 1996**".

Kui üheksakümnendate aastate alguses toimusid energiasektoris hüppelised muutused, siis siin käsitletaval ajaperioodil võime täheldada nii energia tootmise kui tarbimise stabiliseerumist. Võrreldes varasemate aastatega on vähenenud primaarenergia vajadus. Alates 1994-ndast aastast algas turba- ja puitkütuste tarbimise nii absoluutne kui suhteline suurenemine. Samast aastast alates on alanud ka gaasi kasutamise uus tõus.

Primaarenergia vajaduse stabiliseerumine madalamal tasemel ja muutused primaarenergia ressursside struktuuris on tunduvalt leevendanud ka Eesti energiasectori koormust looduskeskkonnale.

Loodame, et käesolev Eesti energiasectori ülevaade on kasulik nii energeetikaspetsialistidele kui ka laiemale huviliste ringile.

**PREFACE**

*In the present issue of "**Estonian Energy**" 1994-1996" the statistical data from the years 1994 to 1996 describing the Estonian energy sector and its development trends is summarised. The publications of the Estonian Statistical Office "**Energiabilanss 1994**", "**Energiabilanss 1995**" and "**Energiabilanss 1996**" serve the main data source.*

*While in the beginning of nineties the changes in the energy sector were rather rapid, the stabilisation both in energy generation and consumption can be seen at the considered time period. Compared to the earlier years the demand of primary energy has decreased. Since 1994 both the absolute and the relative growth in the consumption of peat and fuel wood can be seen. From the same year the use of natural gas took the swing again.*

*The stabilisation in the demand of primary energy at the lower level and changes in the structure of the primary energy resources have mitigated the load of the Estonian energy sector on the environment.*

*We'll hope that the present review of the Estonian energy sector is useful both for energy specialists and for the wider circle of interested people.*

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**Geograafiline asend**

Pindala: 45 227 km<sup>2</sup>

Metsamaa pindala: 21 573 km<sup>2</sup>

**Kliima**

Keskmine õhutemperatuur  
jaanuaris 1996: -7.0 °C

Keskmine õhutemperatuur  
juulis 1996: 15.0 °C

Keskmine kraadpäevade arv 18°C siseõhu  
temperatuuri korral: 4505

**Rahvastik**

Rahvaarv (1.jaan. 1996) 1 462 130

Rahvastiku tihedus: 32 in/km<sup>2</sup>

Haldusjaotus: 15 maakonda,  
207 valda,  
47 linna

**Rahaühik**

Eesti kroon = 100 senti  
1 EEK = 0.125 DEM

**Geography**

*Total area: 45 227 km<sup>2</sup>*

*Forest area: 21 573 km<sup>2</sup>*

**Climate**

*Average temperature,  
January 1996: -7.0 °C*

*Average temperature,  
July 1996: 15.0 °C*

*Degree days on average (indoor temperature  
18°C): 4505*

**Population**

*Population (Jan. 1, 1997): 1 462 130*

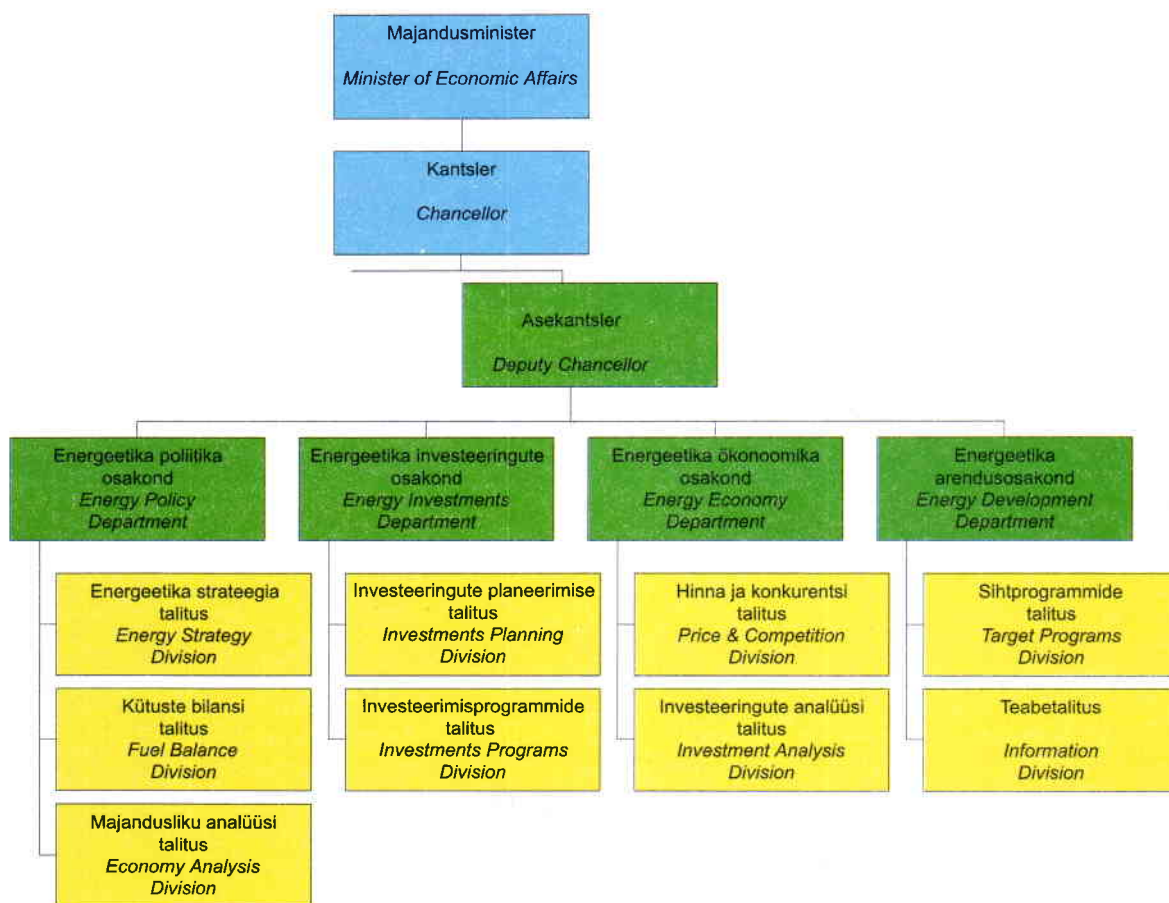
*Population density: 32 per km<sup>2</sup>*

*Administrative units: 15 counties,  
207 municipalities,  
47 towns*

**Currency**

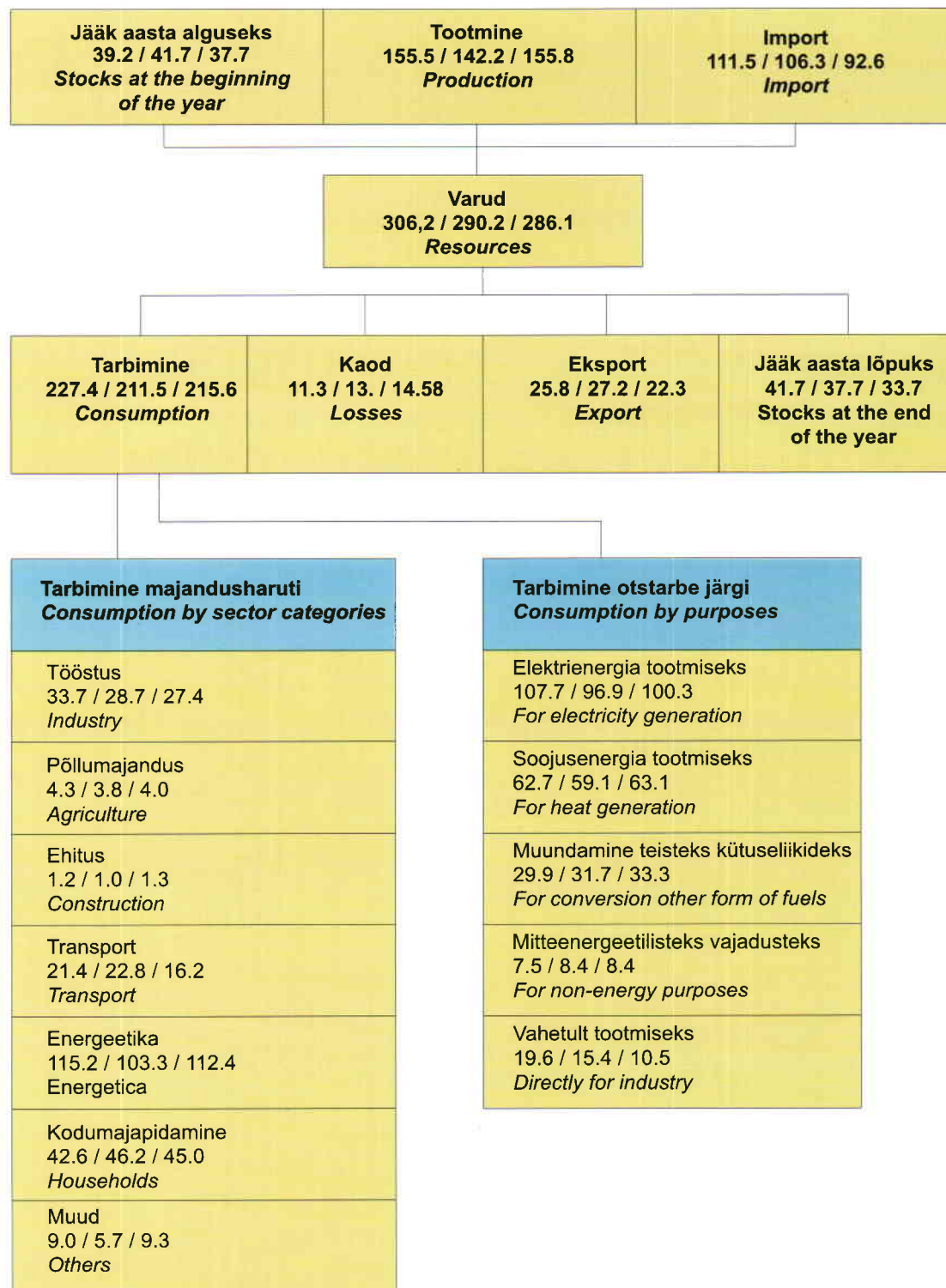
*Estonian kroon = 100 sents  
EEK = 0.125 DEM*

## ENERGEETIKA JUHTIMISE STRUKTUUR ENERGY MANAGEMENT STRUCTURE



**ENERGIA VOOD      ENERGY FLOWS**  
1994 / 1995 / 1996

PJ



**PRIMAARENERGIAGA VARUSTATUS, TJ**  
**SUPPLY OF PRIMARY ENERGY, TJ**

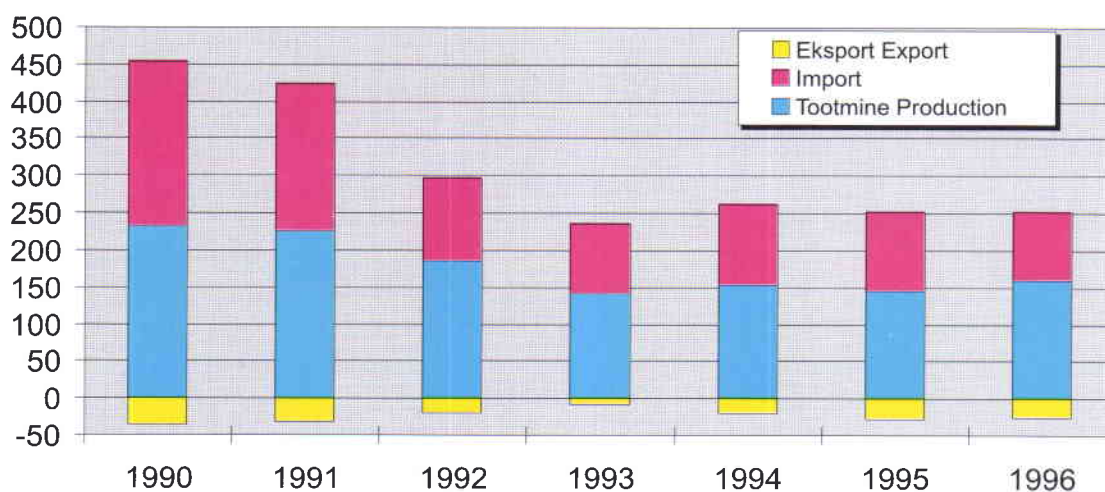
TJ (Tera joule)

	1994	1995	1996	
Kütteõlid	23289	12872	10363	Fuel oils
Mootorikütused	29197	30211	25720	Motor fuels
Gaas	21892	24812	27178	Gas
Kivisüsi ja koks	1110	940	1136	Coal and coke
Põlevkivi	151742	140840	145331	Oil shale
Puit	12000	13458	15018	Wood
Kütteturvas	3769	4923	4609	Peat
Elektrienergia	-4279	-2726	-3087	Electricity
<b>Kokku</b>	<b>238720</b>	<b>225330</b>	<b>226268</b>	<b>Total</b>

**PRIMAARENERGIAGA VARUSTATUS 1990-1996**  
**PRIMARY ENERGY SUPPLY 1990-1996**

PJ (Peta joule)

PJ

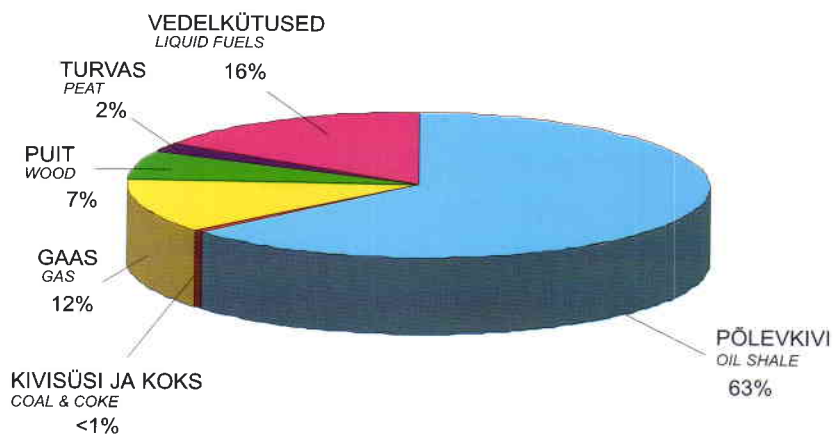


\* Tootmine+(varu aasta alguses - varu aasta lõpus)

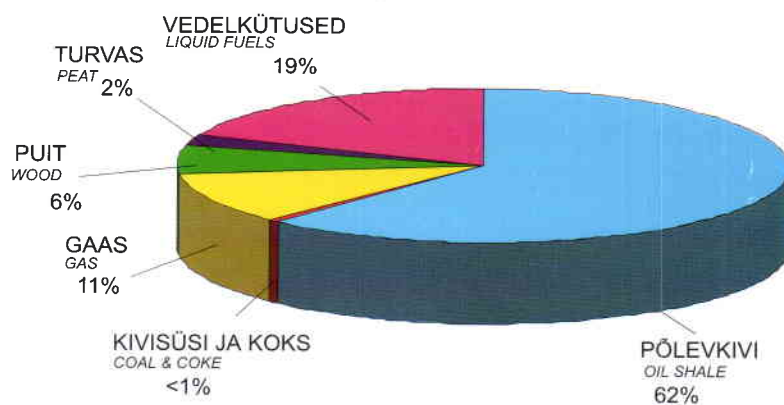
\* Production+(in stocks at the beginning of the year - in stocks at the end of the year)

**KÜTUSEVARUSTUS, PJ**  
**FUEL SUPPLY**

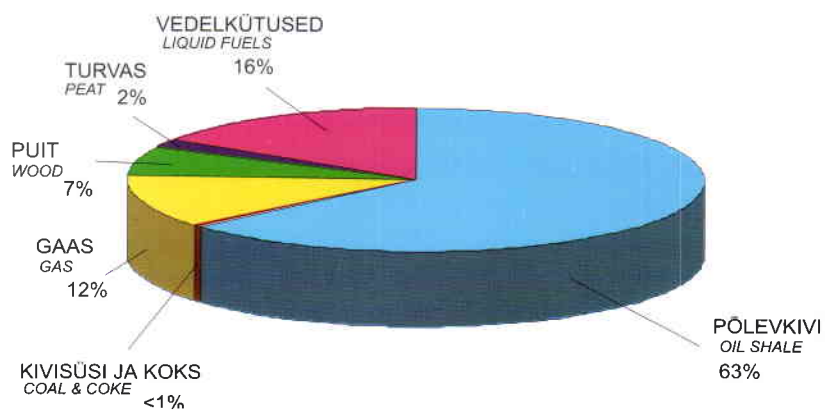
**1994:243 PJ**



**1995:228 PJ**



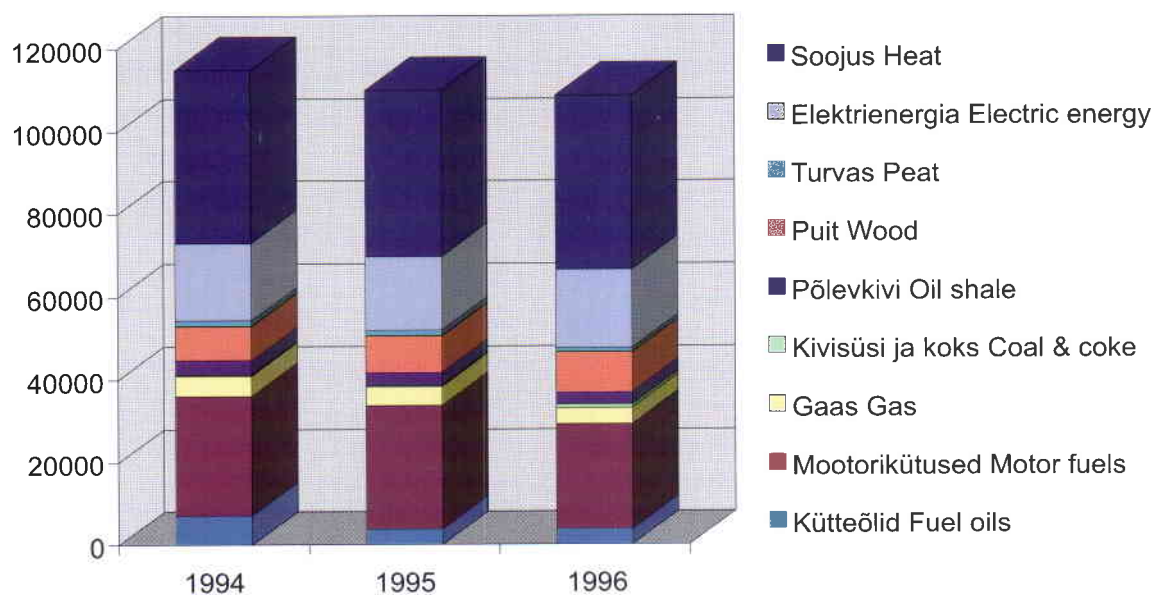
**1996:229 PJ**



**ENERGIA LÕPPTARBIMINE ENERGIAKANDJATE KAUPA, TJ**  
**FINAL ENERGY CONSUMPTION BY CARRIER CATEGORIES, TJ**

	1994	1995	1996	
Kütteõlid	7107	3727	3696	Fuel oils
Mootorikütused	28966	29987	25550	Motor fuels
Gaas	4910	4586	3891	Gas
Kivisüsi ja koks	261	304	828	Coal and coke
Põlevkivi	3442	3102	2923	Oil shale
Puit	8294	8866	9669	Wood
Turvas	1376	1377	1045	Peat
Elektrienergia	18594	17785	19022	Electricity
Soojus	41981	40309	42168	Heat
<b>Kokku</b>	<b>114931</b>	<b>110043</b>	<b>108192</b>	<b>Total</b>

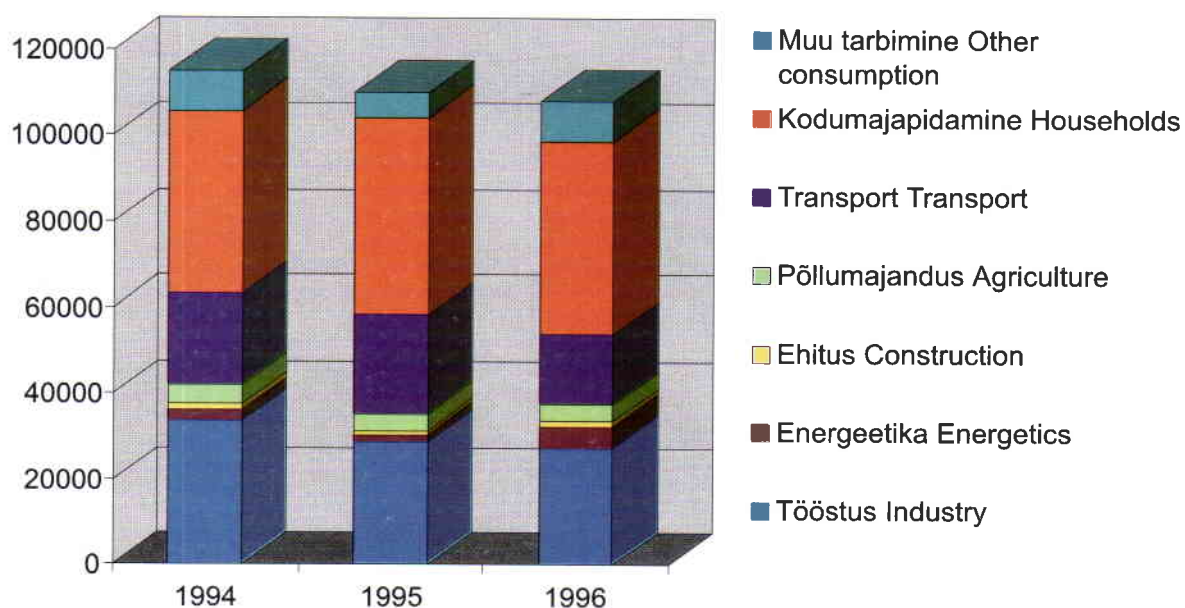
TJ



**ENERGIA LÕPPTARBIMINE MAJANDUSHARUDES, TJ**  
**FINAL ENERGY CONSUMPTION BY SECTOR CATEGORIES, TJ**

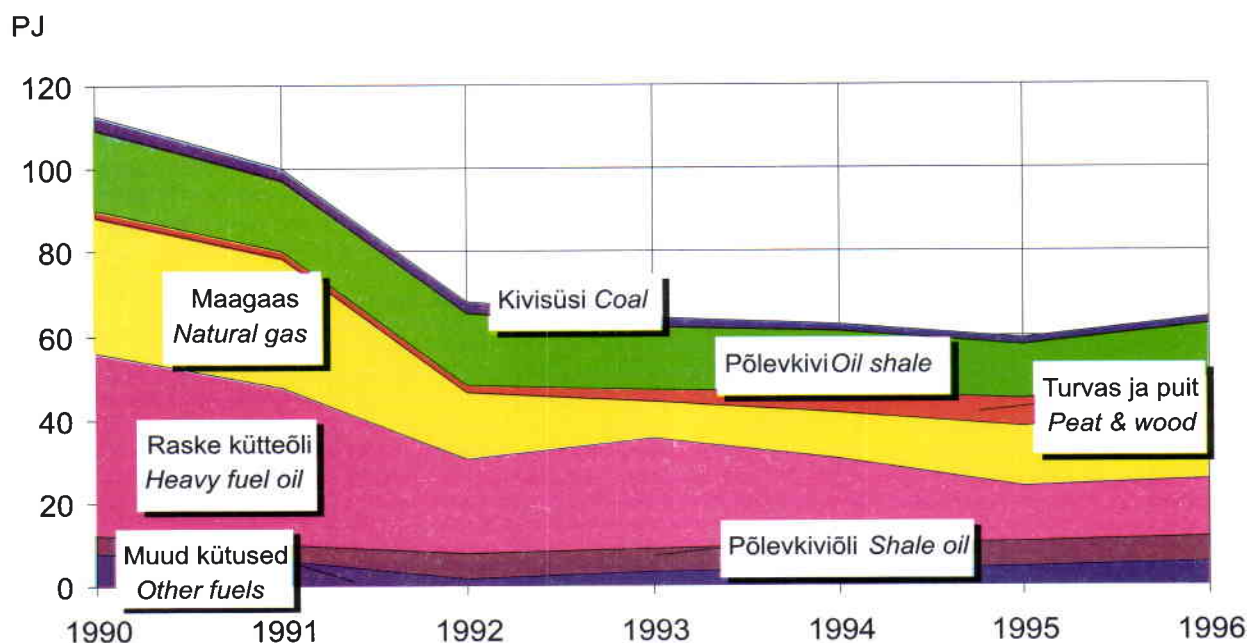
	<b>1994</b>	<b>1995</b>	<b>1996</b>	
Tööstus	33783	28672	27512	<i>Industry</i>
Energeetika	2489	1768	4907	<i>Energetics</i>
Ehitus	1256	1045	1262	<i>Construction</i>
Põllumajandus	4338	3841	3974	<i>Agriculture</i>
Transport	21431	22810	16183	<i>Transport</i>
Elamumajandus	42582	46230	45000	<i>Households</i>
Muu tarbimine	9052	5677	9354	<i>Other consumption</i>
<b>Kokku</b>	<b>114931</b>	<b>110043</b>	<b>108192</b>	<b><i>Total</i></b>

TJ



**SOOJUSE TOOTMISEKS KASUTATUD KÜTUSED, PJ**  
**FUEL CONSUMPTION FOR HEAT PRODUCTION, PJ**

	1990	1991	1992	1993	1994	1995	1996	
Muud kütused	7.8	6.1	1.6	3.4	3.6	4.2	5.7	<i>Other fuels</i>
Põlevkiviõli	4.4	3.8	6.1	5.6	6.2	6.1	3.8	<i>Shale oil</i>
Raske kütteõli	43.9	37.8	23.0	26.2	20.7	13.7	14.8	<i>Heavy fuel oil</i>
Maagaas	32.6	31.0	15.7	8.7	10.8	14.2	16.8	<i>Natural gas</i>
Turvas ja biokütused	1.4	1.5	1.6	3.1	5.1	6.5	7.4	<i>Peat &amp; biofuels</i>
Põlevkivi	19.4	17.3	17.1	14.7	14.4	12.6	13.0	<i>Oil shale</i>
Kivisüsi	3.3	2.8	2.9	2.2	2.0	1.8	1.6	<i>Coal</i>
<b>Kokku</b>	<b>112.8</b>	<b>100.2</b>	<b>67.9</b>	<b>64.0</b>	<b>62.7</b>	<b>59.1</b>	<b>63.1</b>	<b>Total</b>

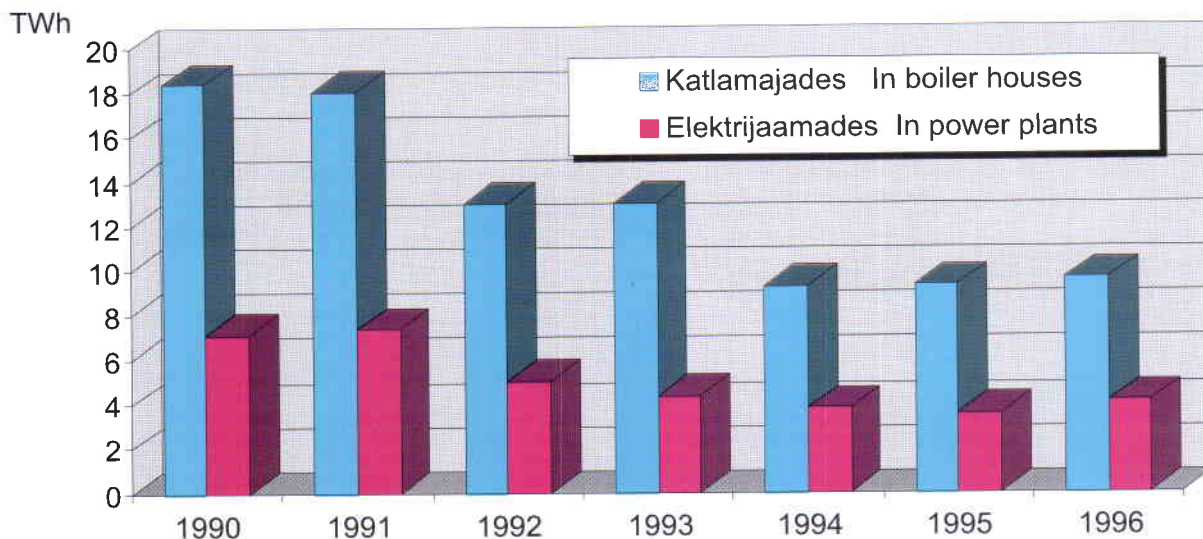


**KATELDE ARV, VÕIMSUS JA TOODETUD SOOJUS**  
**NUMBER OF BOILERS, CAPACITY AND GENERATED HEAT**

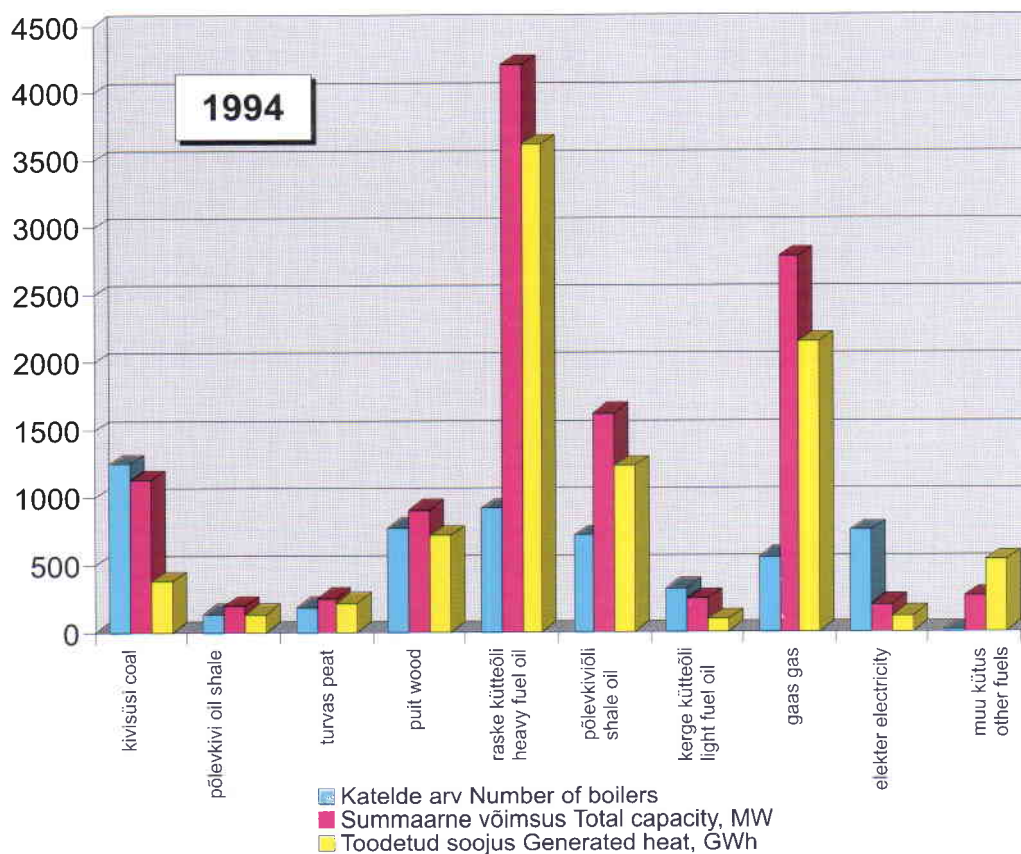
	<i>Katelde arv</i>			<i>Koguvõimsus,</i>			<i>Toodetud soojus,</i>			
	<i>Number of boilers</i>			<i>Total capacity,</i>			<i>Generated heat.</i>			
	1994	1995	1996	<i>MW</i>			<i>GWh</i>			
kuni 1 MW	4271	4427	4051	2794	2591	2304	1745	1620	1521	<i>up to 1 MW</i>
15 MW	853	816	815	2231	2098	2003	1877	1559	1694	<i>15 MW</i>
520 MW	392	374	340	3799	3570	3250	2597	2912	3074	<i>520 MW</i>
2060 MW	59	54	44	1802	1809	1570	1507	1499	1292	<i>2060 MW</i>
üle 60 MW	11	11	17	1184	1184	1647	1480	1658	1980	<i>over 60 MW</i>
<b>Katlad kokku</b>	<b>5586</b>	<b>5682</b>	<b>5267</b>	<b>11810</b>	<b>11252</b>	<b>10774</b>	<b>9206</b>	<b>9248</b>	<b>9561</b>	<b><i>Boilers total</i></b>

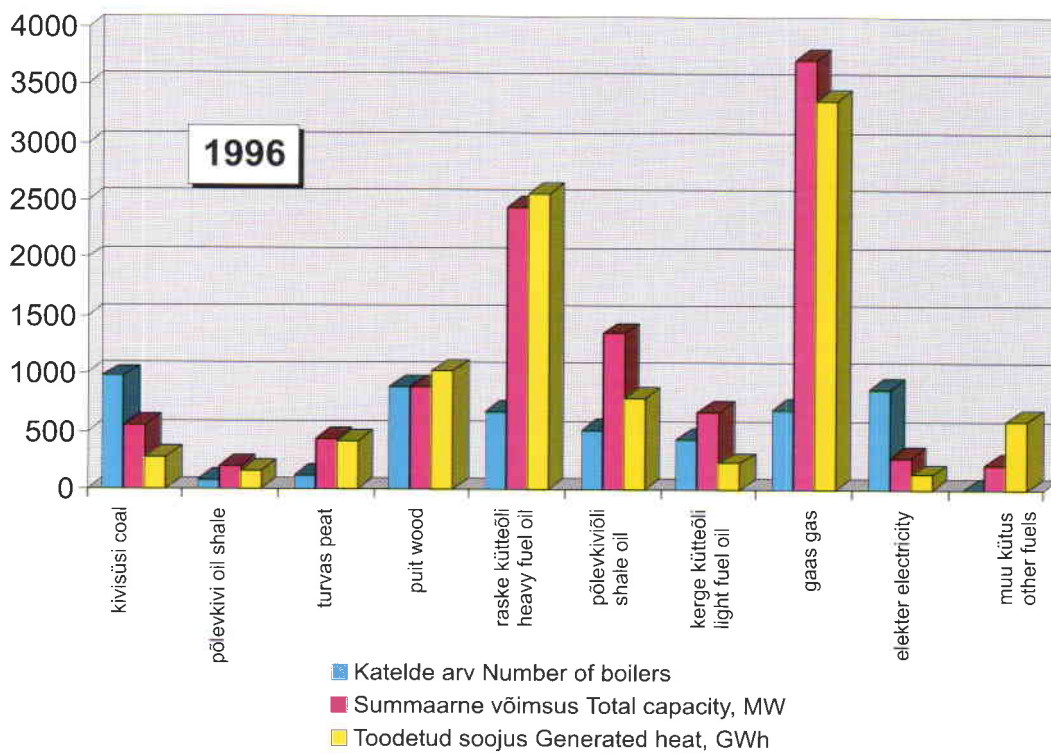
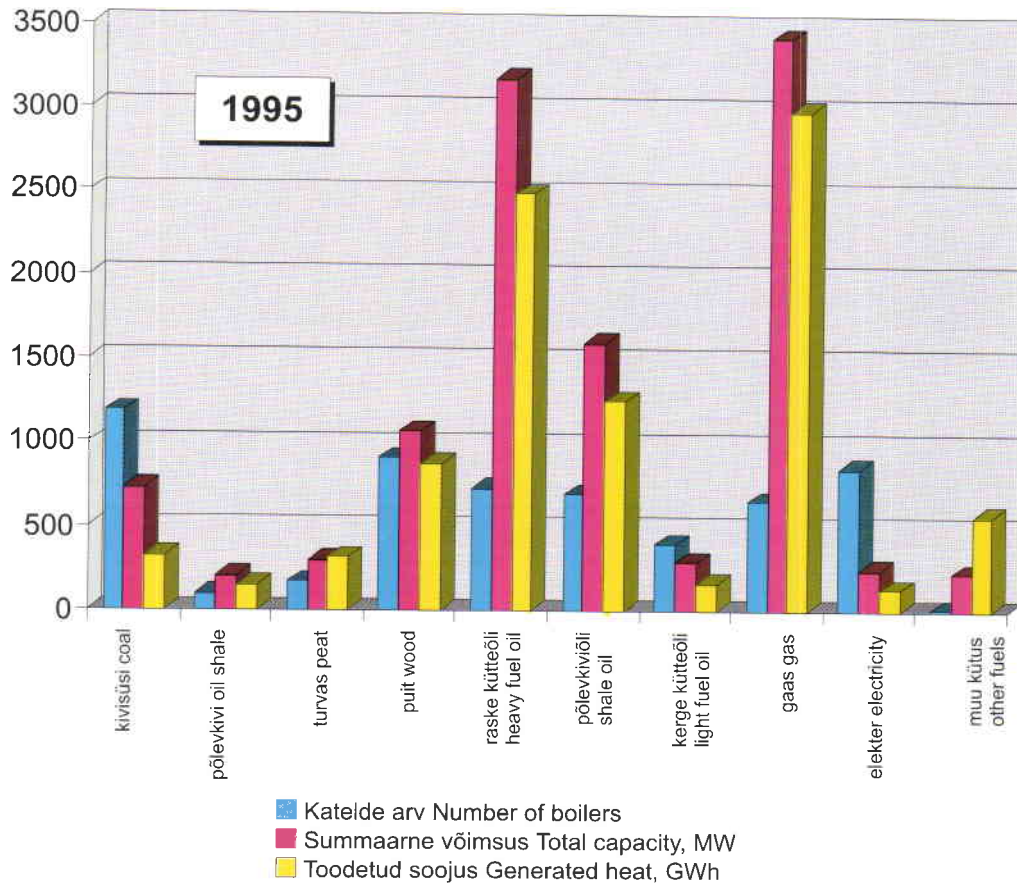
	<i>Katelde arv</i>			<i>Koguvõimsus,</i>			<i>Toodetud soojus,</i>			
	<i>Number of boilers</i>			<i>Total capacity,</i>			<i>Generated heat.</i>			
	1994	1995	1996	<i>MW</i>			<i>GWh</i>			
kivisüsi	1245	1186	977	1133	725	555	383	325	285	<i>coal</i>
põlevkivi	133	100	86	198	205	200	135	151	164	<i>oil shale</i>
turvas	184	172	121	254	301	439	223	319	410	<i>peat</i>
puit	769	908	885	902	1065	888	713	872	1032	<i>wood</i>
raske kütteõli	912	723	676	4204	3178	2449	3620	2485	2561	<i>heavy oil</i>
põlevkiviõli	711	692	513	1628	1593	1351	1234	1255	784	<i>shale oil</i>
kerge kütteõli	322	396	441	243	289	666	96	162	232	<i>light oil</i>
gaas	553	652	694	2785	3423	3722	2147	2985	3372	<i>gas</i>
elekter	746	843	865	201	247	279	123	131	130	<i>electricity</i>
muu kütus	11	10	9	262	226	225	532	563	591	<i>other fuels</i>

**SOOJUSE TOOTMINE KATLAMAJADES JA ELEKTRIJAAMADES**  
**HEAT PRODUCTION IN BOILER HOUSES AND POWER PLANTS**



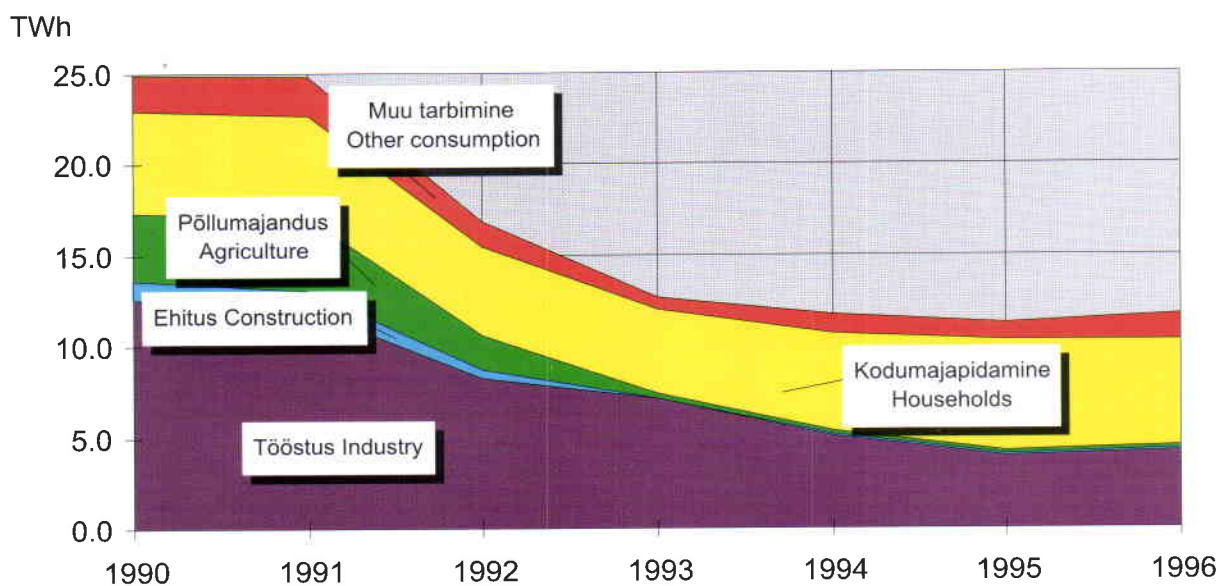
**KATELDE ARV, VÕIMSUS JA TOODETUD SOOJUS**  
**NUMBER OF BOILERS, CAPACITY AND GENERATED HEAT**





**SOOJUSE TARBIMINE MAJANDUSHARUDE KAUPA, TWh**  
**HEAT CONSUMPTION BY SECTOR CATEGORIES, TWh**

	1990	1991	1992	1993	1994	1995	1996	
Tööstus	12.6	12.0	8.3	7.1	5.0	3.9	4.2	Industry
Ehitus	1.0	1.1	0.5	0.1	0.1	0.1	0.1	Construction
Põllumajandus	3.7	4.1	1.8	0.3	0.2	0.2	0.2	Agriculture
Elamumajandus	5.6	5.6	4.9	4.6	5.3	6.1	5.8	Households
Muu tarbimine	2.0	2.1	1.4	0.7	1.0	0.9	1.4	Other consumption
<b>Kokku</b>	<b>25.0</b>	<b>24.7</b>	<b>16.8</b>	<b>12.7</b>	<b>11.7</b>	<b>11.2</b>	<b>11.7</b>	<b>Total</b>



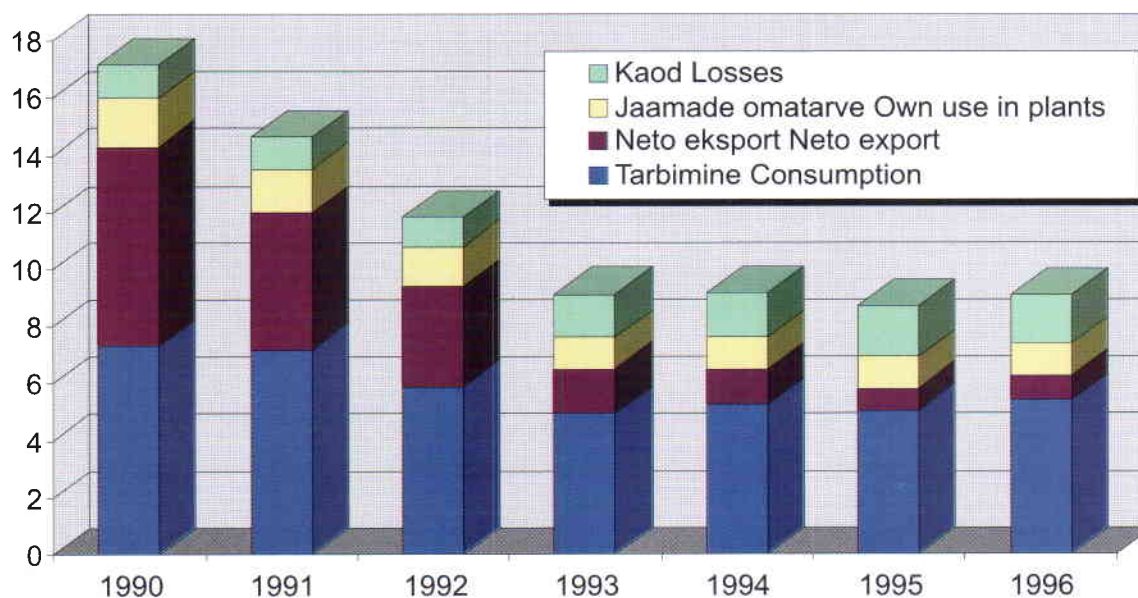
**ÜLESSEATUD TOOTMISVÕIMSUSED, MW**  
**INSTALLED GENERATING CAPACITY, MW**

<b>Elektrijaam</b>	<b>Elekter</b>	<b>Soojus</b>	<b>Kütus</b>	<b>Käikuandmise aastad</b>
<b>Power plants</b>	<b>Electricity</b>	<b>Heat</b>	<b>Fuel</b>	<b>Comissioned in years</b>
Eesti EJ <i>Eesti PP</i>	1610	84	põlevkivi <i>oil shale</i>	1969-73
Balti EJ <i>Balti PP</i>	1390	690	põlevkivi <i>oil shale</i>	1959-65
Iru EJ <i>Iru PP</i>	190	825	gaas/raske kütteõli <i>gas/heavy oil</i>	1980-82
Kohtla-Järve EJ <i>Kohtla-Järve PP</i>	39	534	põlevkivi/masuut <i>oil shale/heavy oil</i>	1948-58
Ahtme EJ <i>Ahtme PP</i>	20	335	põlevkivi <i>oil shale</i>	1951-53
Diiseli EJ-d <i>Diesel plants</i>	8	0	diislikütus <i>diesel oil</i>	
<b>Kokku Total</b>	1647	2384		

**ELEKTRIENERGIA BILANSS, TWh**  
**ELECTRICITY BALANCE, TWh**

	<b>1994</b>	<b>1995</b>	<b>1996</b>	
Tootmine	9.152	8.693	9.103	<i>Production</i>
Import	0.315	0.245	0.240	<i>Import</i>
Tarbimine	5.288	5.075	5.417	<i>Consumption</i>
Eksport	1.506	1.004	1.100	<i>Export</i>
Jaamade omatarve	1.146	1.086	1.116	<i>Own use in plants</i>
Kaod	1.527	1.773	1.710	<i>Losses</i>

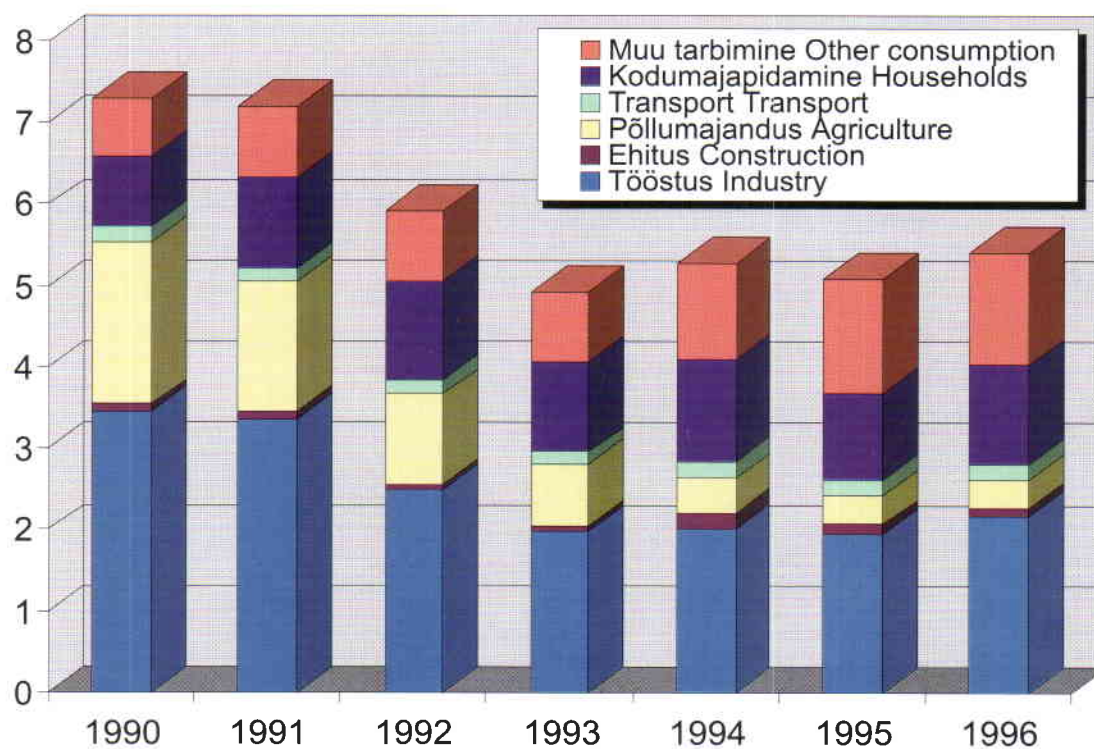
TWh



**ELEKTRIENERGIA TARBIMINE MAJANDUSHARUTI, TWh**  
**ELECTRICITY CONSUMPTION BY SECTOR CATEGORIES, TWh**

	1994	1995	1996	
Tööstus	2.021	1.943	2.167	<i>Industry</i>
Ehitus	0.188	0.12	0.119	<i>Construction</i>
Põllumajandus	0.434	0.366	0.341	<i>Agriculture</i>
Transport	0.194	0.191	0.183	<i>Transport</i>
Kodumajapidamine	1.27	1.067	1.234	<i>Households</i>
Muu tarbimine	1.181	1.388	1.373	<i>Other consumption</i>
<b>Kokku</b>	<b>5.288</b>	<b>5.075</b>	<b>5.417</b>	<b>Total</b>

TWh



**PÕLEVKIVI TOOTMINE JA TARBIMINE, PJ**  
**PRODUCTION AND CONSUMPTION OF OIL SHALE, PJ**

	1994	1995	1996	
Tootmine	136.992	122.370	133.854	<i>Production</i>
Import	15.993	12.507	6.907	<i>Import</i>
Eksport	0.069	0.064	0.029	<i>Export</i>
Varude muutus	1.174	-6.027	4.599	<i>Changes in stocks</i>
<b>Primaarenergiaga varustatus</b>	<b>151.742</b>	<b>140.840</b>	<b>145.331</b>	<b><i>Supply of primary energy</i></b>
Elektrienergia tootmiseks	105.472	95.181	97.93	<i>For electricity generation</i>
Soojuse tootmiseks	14.376	12.607	13.04	<i>For heat generation</i>
Põlevkiviõli ja koksi tootmiseks	27.692	28.698	30.286	<i>For shale oil and coke production</i>
Kadu	0.008	0.168	0.008	<i>Losses</i>
Tarbitud keemiatööstuses	0.752	1.084	1.144	<i>Consumption in chemical industry</i>
Lõpptarbimine	3.442	3.102	2.923	<i>Final consumption</i>
<b>Tarbimine kokku</b>	<b>151.742</b>	<b>140.84</b>	<b>145.331</b>	<b><i>Total consumption</i></b>

**PÕLEVKIVI TOOTMINE**  
**PRODUCTION OF OIL SHALE**

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