

Energy Taxation in Western Europe as of 1st January 2003

MAY 2003

Table of contents

INTRODUCTION	.....	3
COMMENT	.....	4
DEFINITIONS	.....	6
PART ONE: Comparison of Country Data and Figures on Energy Taxation	.....	7
TABLES: Energy Taxation - Residential Sector, 1 January 2003	.....	8
Energy Taxation - Commercial Sector, 1 January 2003	.....	9
Energy Taxation - Industrial Sector (process), 1 January 2003	...	10
Energy Taxation - Power Generating Sector, 1 January 2003	...	11
GRAPHS: VAT Rates, 1 January 2003	.....	12
Energy Taxation - Residential Sector, 1 January 2003	.....	13
Energy Taxation - Commercial Sector, 1 January 2003	.....	14
Energy Taxation - Industrial Sector (process), 1 January 2003	...	15
Energy Taxation - Power Generating Sector, 1 January 2003	....	16
PART TWO: Descriptions of National Energy Taxation Systems	.....	17
Austria	.....	18
Belgium	.....	20
Denmark	.....	22
Finland	.....	24
France	.....	29
Germany	.....	32
Greece	.....	35
Ireland	.....	37
Italy	.....	39
Spain	.....	44
Sweden	.....	45
Switzerland	.....	50
The Netherlands	.....	52
United Kingdom	.....	56
ANNEX: January 2003 EURO Rates used in the Energy Taxation Survey	.....	58

Introduction

This report is issued each year with the intention to provide an up-to-date overview on the national energy taxation systems and the latest fiscal developments in energy in the 14 West European member countries of EUROGAS. It has been prepared by the EUROGAS Taxation Task Force, based on the EUROGAS members' inputs.

The present report provides a factual description of national energy tax systems and taxes in the residential, commercial, industrial and power generating sectors as of 1 January 2003. It consists of two parts. The first part provides an overview and a comparison in tables and graphs of the aggregated factual data on energy taxes applied for the six most important sources of energy in the four main energy sectors in the EUROGAS member countries. The second part contains detailed descriptions of each of the individual national energy taxation systems.

All types of energy taxes (directly levied on the energy sold/consumed) are covered, regardless of their labels and professed objectives, except taxes on motor fuels.

Due to the complexity of the energy fiscality, and limits to available up-to-date statistics, it is difficult to provide a full detailed up-to-date picture of the fiscal situation of each country's energy sector. Therefore, the report contains some relevant information concerning the fiscality applied on undertakings in the different energy sectors, and having an impact on energy prices, such as levies in the form of royalties (charged to oil and gas exploration and production activities) or concession fees (charged to natural gas, electricity and district heat supply undertakings in some countries).

Comment

As stated in previous reports, the level of energy taxation greatly differs from one country to another. When looking at the energy consumption in the residential sector, Italy, Denmark, Sweden and the Netherlands are the countries with the highest energy taxes, whereas Switzerland, Belgium, Spain, France, Ireland, Greece and the UK choose to raise relatively low energy taxes. In contrast, considering the industrial sector, Italy levies energy taxes of average level, and Sweden, Finland, Germany, Denmark are joined by Austria in the top league. In the power sector, the highest taxes on natural gas are applied by Austria, Germany and France. The highest taxes for oil, used in the power generation sector, are levied by UK and Austria.

Behind this are differing national energy tax systems that have been devised according to each country's specific circumstances such as the structural characteristics of natural gas final markets (per-capita consumption, infrastructures, etc.) and specific political choices, such as revenue raising, protection/promotion of national energy production (e.g. domestic coal), protection of the international competitiveness of industry (energy taxes applied in the residential sector are typically higher than energy taxes applied in the commercial and industrial sectors), environment and/or climate protection.

Consequently, not only the taxation levels on the different fuels differ, but so does also the relative tax treatment of competing fuels in every country's energy market.

Natural gas can be substituted by or replace at least one form of energy supply in every market sector. In practice, this creates strong inter-fuel competition, particularly in the industrial and power generation sectors. Thus, for natural gas suppliers, the relative taxation of natural gas against competing energies in the different outlet sectors matters almost more than the absolute level of taxation.

Directive on Energy Taxation

The European Union's Council has been discussing the Commission's proposal from 1997 for a Directive on Taxation of Energy Products for several years. Under pressure of the EU enlargement an extraordinary meeting of the ECOFIN Council was held on 20th March 2003 in which a political agreement was reached. Before the Directive can be formally adopted it must be submitted to the European Parliament for its opinion again because the proposal has been substantially modified.

The Directive is based on minimum taxation levels. Unfortunately the minimum rates do not reflect environmental aspects and favour less environmental energy sources. The Council's Directive on the taxation of energy products shows the wide variation of the existing national energy taxation levels in Europe and it is not sure if tax harmonisation can be achieved.

The Eurogas comments on the Council's common position on the taxation of energy products can be downloaded from the Eurogas web-site: www.eurogas.org

Definitions

- **VAT** (Value Added Tax) is the most general type of tax. VAT does not only apply to energy but to most consumer goods. In principle, VAT applies in most countries to all consumer categories. In practice, however, VAT on energy is recoverable in all Eurogas member countries when used for commercial or industrial purposes. VAT is therefore mainly a tax on energy in the residential sector.
- **Excise Duty** is a general tax charged on energy consumption as such. In most countries (like Finland, Germany, Ireland, Spain, The Netherlands and the UK) excise duties apply across all consumer categories. In other countries (like Belgium and France) some excise taxes are differentiated between different consumer categories whereas industry, in some countries (like Denmark and Sweden), is exempt from excise taxes on energy.
- **Environmental Levies** are tax elements directly related to environmental aspects of energy consumption such as emissions of SO₂ or CO₂.

Other tax elements include, often less significant, fees or charges related to energy supply, storage, clean up etc. Examples of such charges are emergency stock fees, and oil pollution fees. In some cases, these fees are not being charged directly to the end-users but for example to oil suppliers as an extra cost element. In the end, however, these costs are borne by the consumers.

PART ONE

**COMPARISON OF COUNTRY DATA AND FIGURES
ON ENERGY TAXATION AS OF 1 JANUARY 2003**

NATIONAL ENERGY TAXES AS OF 1st JANUARY 2003

RESIDENTIAL SECTOR

EURO/GJ (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	0.89	not rel.	0.0670	-	8.17	0.348	0.44	1.468		1.57	0.348	not rel.	8.79	1.05
HFO (+1% S)	0.89	not rel.	0.0670	-	not rel.	0.374	0.44			3.19	0.348	not rel.	not rel.	1.05
Gas oil	1.92	0.37	0.0670	1.72	7.93	2.334	1.59	1.411	6.868 [GR1] 0,505	[I5] 11.31	1.302	5.6484 [NL1]	8.85	1.20
LPG	0.93	0.37	0.0336	1.31	7.74	no tax	no tax	no tax	0.282	[I5] 4.12 [I1] 0,41	0.747	3.8717 [NL1]	5.74	-
Natural gas	1.09	0.37	0.0307	1.69	7.60	no tax	0 [F3]	1.904	0.0 [GR2]	[I2] 4,92 [I7] +0,52 [I3] 1,16	-	4.4076 [NL1]	5.21	-
Coal	no tax	no tax	no tax	no tax	8.73	no tax	no tax	1.750	no tax	-	-	0.4091	9.48	-
Electricity	4.17	0.37	-	5.69	22.40	5.113%	2.18 [F2]	2.064	0.0	6.44	-	17.7500 [NL1]	6.87	-
non-deductible VAT (%)	20.00	21.00 [B1]	7.60	16.00	25.00	16.00	19.60 [F1] 5.5	22.00	18.00 [GR3] 8%	20.00	12.50	19.00	25.00	5.00

EURO/MWh (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	3.20	not rel.	0.2412	-	29.40	1.253	1.59	5.28		5.64	1.254	not rel.	31.66	3.78
HFO (+1% S)	3.20	not rel.	0.2412	-	not rel.	1.346	1.59			11.49	1.254	not rel.	not rel.	3.78
Gas oil	6.93	1.35	0.02412	6.21	28.50	8.40	5.73	5.08	24.726 [GR1] 1,817	[I5] 40.71	4.686	20.3342 [NL1]	31.84	4.32
LPG	3.34	1.35	0.121	4.73	27.90	no tax	no tax	no tax	1.016	[I5] 14.85 [I1] 1,49	2.691	13.9383 [NL1]	20.65	-
Natural gas	3.94	1.35	0.11	6.09	27.4	no tax	0 [F3]	1.904	0.0 [GR2]	[I2] 17,72 [I3] 4,17	-	15.87 [NL1]	18.77	-
Coal	no tax	no tax	no tax	no tax	31.40	no tax	no tax	6.30	no tax	-	-	1.4727	34.12	-
Electricity	15.00	1.35	-	20.50	80.8	5.113%	7.84 [F2]	7.43 [FIN1]	0.0	23.18	-	63.9 [NL1]	24.73	-
non-deductible VAT (%)	20.00	21.00 [B1]	7.60	16.00	25.00	16.00	19.60 [F1] 5.5	22.00	18.00 [GR3] 8%	20.00	12.50	19.00	25.00	5.00

[B1] VAT for coal 12%.

[DK1] Tax includes excise tax, CO₂ tax and SO₂ tax. SO₂ tax is indicated for common commercial fuel qualities

[F1] Subscription

[F2] Local taxes (average)

[F3] For district heating 0.37 Euro/GJ

[FIN1] Tax is paid by the owner of the electricity network or power producer who sells the electricity. Tax is not paid for wind power or very small power plants.

In CHP it is assumed that the heat is produced by 100% efficiency.

[GR1] During the heating period from October to April and for heating use only.

[GR2] Exemption by law up to 2010

[GR3] VAT: 18% for oil products, 8% for natural gas and electricity

[I1] For industries using cylinders bigger than 10m³

[I2] For cooking and water heating above 250m³ and individual heating in the northern and central regions. Southern region: 3,60 EURO/GJ

[I3] For the first 250m³ of cooking and water heating in the northern and central regions. Southern regions: 1,12 EURO/GJ.

[I5] Considering LPG and gasoil taxation in the residential and commercial sectors there is a different regime in northern provinces and in the mountain areas.

[I7] Additional regional tax can vary between 0,15 and 0,9 EURO/GJ. (0,52 used for calculation)

[NL1] The given figures are not exact, but refer to a typical consumption level for this sector.

[NL2] Due to a change of the Ecotax all consumers with an electricity connection get a refund of Euro 142/connection/yr irrespective the annual consumption of electricity (or gas).

NATIONAL ENERGY TAXES AS OF 1st JANUARY 2003

COMMERCIAL SECTOR

EURO/GJ (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	0.89	0.32	0.0670	0.61	1.28	0.348	0.44	1.468		1.57	0.348	not rel.	8.79	1.05
HFO (+1% S)	0.89	0.46	0.0670	0.61	-	0.374	0.44			3.19	0.348	not rel.	not rel.	1.05
Gas oil	1.92	0.37	0.0670	1.72	0.92	2.334	1.59	1.411	6.868 [GR1] 0,505	[I5] 11.31	1.302	5.6484 [NL1]	8.85	1.20
LPG	0.93	0.37	0.0336	1.31	0.79	no tax	no tax	no tax	0.282	[I5] 4.12 [I1] 0,41	0.747	3.8717 [NL1]	5.74	0.29
Natural gas	1.09	0.37	0.0307	1.69	0.67	no tax	0.37 [F4]	1.904	0.0 [GR2]	[I2] 4,92 [I7] +0,52 [I3] 1,16	-	2.2433 [NL1]	5.21	0.64
Coal	no tax	no tax	no tax	no tax	1.75	no tax	no tax	1.750	no tax	-	-	0.4091	9.48	0.64
Electricity	4.17	0.37	-	5.69	3.40	5.113%	0.15 [F2]	2.064	0.0	6.44	-	5.7500 [NL1]	6.87	1.84
non-deductible VAT (%)	0.00	0.00	7.60	16.00	25.00	0.00	19.60 [F1] 5.5	0.00	0.00	20.00	0.00	19.00	25.00	0.00

EURO/MWh (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	3.20	1.15	0.2412	2.19	4.60	1.253	1.59	5.28		5.64	1.254	not rel.	31.66	3.78
HFO (+1% S)	3.20	1.67	0.2412	2.19	-	1.346	1.59			11.49	1.254	not rel.	not rel.	3.78
Gas oil	6.93	1.35	0.02412	6.21	3.30	8.401	5.73	5.08	24.726 [GR1] 1,817	[I5] 40.71	4.686	20.3342 [NL1]	31.84	4.32
LPG	3.34	1.35	0.121	4.73	2.80	no tax	no tax	no tax	1.016	[I5] 14.85 [I1] 1,49	2.691	13.9383 [NL1]	20.65	1.05
Natural gas	3.94	1.35	0.11	6.09	2.4	no tax	1.32 [F4]	1.904	0.0 [GR2]	[I2] 17,72 [I3] 4,17	-	8.08 [NL1]	18.77	2.28
Coal	no tax	no tax	no tax	no tax	6.30	no tax	no tax	6.30	no tax	-	-	1.4727	34.12	2.28
Electricity	15.00	1.35	-	20.50	12.1	5.113%	0.55 [F2]	7.43 [FIN1]	0.0	23.18	-	20.7 [NL1]	24.73	6.65
non-deductible VAT (%)	0.00	0.00	7.60	16.00	25.00	0.00	19.60 [F1] 5.5	0.00	0.00	20.00	0.00	19.00	25.00	0.00

[DK1] Tax includes CO₂ tax and SO₂ tax. SO₂ tax is indicated for common commercial fuel qualities

[F1] Subscription

[F2] Local taxes (average)

[F3] For district heating 0.37 Euro/GJ

[F4] For consumption above 5GWh

[FIN1] Tax is paid by the owner of the electricity network or power producer who sells the electricity. Tax is not paid for wind power or very small power plants.

In CHP it is assumed that the heat is produced by 100% efficiency.

[GR1] During the heating period from October to April and for heating use only.

[GR2] Exemption by law up to 2010

[I1] For industries using cylinders bigger than 10m³

[I2] For cooking and water heating above 250m³ and individual heating in the northern and central regions. Southern region: 3,60 EURO/GJ

[I3] For the first 250m³ of cooking and water heating in the northern and central regions. Southern regions: 1,12 EURO/GJ.

[I5] Considering LPG and gasoil taxation in the residential and commercial sectors there is a different regime in northern provinces and in the mountain areas.

[I7] Additional regional tax can vary between 0,15 and 0,9 EURO/GJ. (0,52 used for calculation)

[NL1] The given figures are not exact, but refer to a typical consumption level for this sector.

[NL2] Due to a change of the Ecotax all consumers with an electricity connection get a refund of Euro 142/connection/yr irrespective the annual consumption of electricity (or gas).

The first 800 m³ or 800 kWh invoiced in 2001.

NATIONAL ENERGY TAXES AS OF 1st JANUARY 2003

INDUSTRIAL SECTOR

EURO/GJ (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	0.89	0.32	0.0670	0.61	1.28	0.348	0.44	1.468	0.461	0.77	0.348	0.7747	2.15	1.05
HFO (+1% S)	0.89	0.46	0.0670	0.61	-	0.374	0.44		[GR4] 0,475	1.59	0.348	not rel	not rel.	1.05
Gas oil	1.92	0.37	0.0670	1.72	0.92	2.334	1.59	1.411	6.868 [GR1] 0,505	11.31	1.302	1.8555 [NL1]	1.66	1.20
LPG	0.93	0.37	0.0336	1.31	0.79	no tax	no tax	no tax	0.006	4.12 [I1] 0,41	0.747	0.3683 [NL1]	1.35	0.29
Natural gas	1.09	-	0.0307	1.69	0.67	no tax	0.37 [F4]	1.904	0.0 [GR2]	0.36 [I4] +0,15	-	0.6983 [NL1]	1.14	0.64
Coal	no tax	-	no tax	no tax	1.75	no tax	no tax	1.750	0.0	-	-	0.4091	2.51	0.64
Electricity	4.17	-	-	5.69	3.40	5.113%	0.15 [F2]	1.258	0.0	6.44	-	1.7500 [NL1]	-	1.84
non-deductible VAT (%)	0.00	0.00	7.60	16.00	0.00	0.00	19.60 [F1] 5.5	0.00	0.00	0.00	0.00	19.00	0.00	0.00

EURO/MWh (NCV)	A	B	CH	D	DK [DK1]	E	F	FIN	GR	I	IRL	NL [NL2]	S	UK
HFO (-1% S)	3.20	1.15	0.2412	2.19	4.60	1.253	1.59	5.28	1.659	2.75	1.254	2.7888	7.73	3.78
HFO (+1% S)	3.20	1.67	0.2412	2.19	-	1.346	1.59		[GR4] 1,71	5.71	1.254	not rel.	not rel.	3.78
Gas oil	6.93	1.35	0.02412	6.21	3.30	8.401	5.73	5.08	24.726 [GR1] 1,817	40.71	4.686	6.6798 [NL1]	5.98	4.32
LPG	3.34	1.35	0.121	4.73	2.80	no tax	no tax	no tax	0.023	14.85 [I1] 1,49	2.691	1.3257 [NL1]	4.86	1.05
Natural gas	3.94	-	0.11	6.09	2.4	no tax	1.32 [F4]	1.904	0.0 [GR2]	1.30 [I4] +0,54	-	2.51 [NL1]	4.11	2.28
Coal	no tax	-	no tax	no tax	6.30	no tax	no tax	6.30	no tax	-	-	1.4727	9.05	2.28
Electricity	15.00	-	-	20.50	12.1	5.113%	0.55 [F2]	4.53 [FIN1]	0.0	45.10	-	6.3 [NL1]	-	6.65
non-deductible VAT (%)	0.00	0.00	7.60	16.00	0.00	0.00	19.60 [F1] 5.5	0.00	0.00	0.00	0.00	19.00	0.00	0.00

[DK1] Tax includes CO₂ tax and SO₂ tax. SO₂ tax is indicated for common commercial fuel qualities

[F1] Subscription

[F2] Local taxes (average)

[F4] For consumption above 5GWh

[FIN1] Tax is paid by the owner of the electricity network or power producer who sells the electricity. Tax is not paid for wind power or very small power plants. In CHP it is assumed that the heat is produced by 100% of

[GR1] During the heating period from October to April and for heating use only.

[GR2] Exemption by law up to 2010

[GR4] Usage prohibited in the Athens region

[I1] For industries using cylinders bigger than 10m³

[I4] Additional regional tax of 0,15 EURO/GJ to 0,18 EURO/GJ.

[NL1] The given figures are not exact, but refer to a typical consumption level for this sector.

[NL2] Due to a change of the Ecotax all consumers with an electricity connection get a refund of Euro 142/connection/yr irrespective the annual consumption of electricity (or gas). The first 800 m³ or 800 kWh invoiced

NATIONAL ENERGY TAXES AS OF 1st JANUARY 2003

POWER GENERATION														
EURO/GJ (NCV)	A	B	CH	D	DK	E	F	FIN	GR	I [I6]	IRL	NL	S [S1]	UK
HFO (-1% S)	0.89	0.32	0.0670	0.61	-	-	0.44	no tax	0.461	0.37	0.348	0.3749	0.61	1.05
HFO (+1% S)	0.89	0.46	0.0670	0.61	-	-	0.44	no tax	GR4] 0,475	0.38	0.348	not rel	not rel.	1.05
Gas oil	1.92	0.51	0.0670	-	-	-	1.59	no tax	3.364	0.36	1.302	not rel	no tax	1.20
LPG	0.93	0.37	0.0335	-	-	-	no tax	no tax	0.006	0.01	0.747	not rel	no tax	-
Natural gas	1.09	-	0.0307	0.57 [D1]	-	-	0.37	no tax	0.0 [GR2]	0.01	-	0.0	no tax	-
Coal	no tax	-	no tax	-	-	-	no tax	no tax	0.0	0.10	-	0.0	0.61	-
non-deductible VAT (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

EURO/MWh (NCV)	A	B	CH	D	DK	E	F	FIN	GR	I [I6]	IRL	NL	S [S1]	UK
HFO (-1% S)	3.20	1.15	0.2412	2.19	-	-	1.59	no tax	1.659	1.35	1.254	1.3497	2.2	3.78
HFO (+1% S)	3.20	1.67	0.2412	2.19	-	-	1.59	no tax	GR4] 1,711	1.37	1.254	not rel.	not rel.	3.78
Gas oil	6.93	1.84	0.02412	-	-	-	5.73	no tax	12.110	1.28	4.686	not rel.	no tax	4.32
LPG	3.34	1.35	0.121	-	-	-	no tax	no tax	0.023	0.05	2.691	not rel.	no tax	-
Natural gas	3.94	-	0.11	2.04 [D1]	-	-	1.32	no tax	0.0 [GR2]	0.05	-	0.0	no tax	-
Coal	no tax	-	no tax	-	-	-	no tax	no tax	no tax	0.36	-	0.0	2.18	-
non-deductible VAT (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

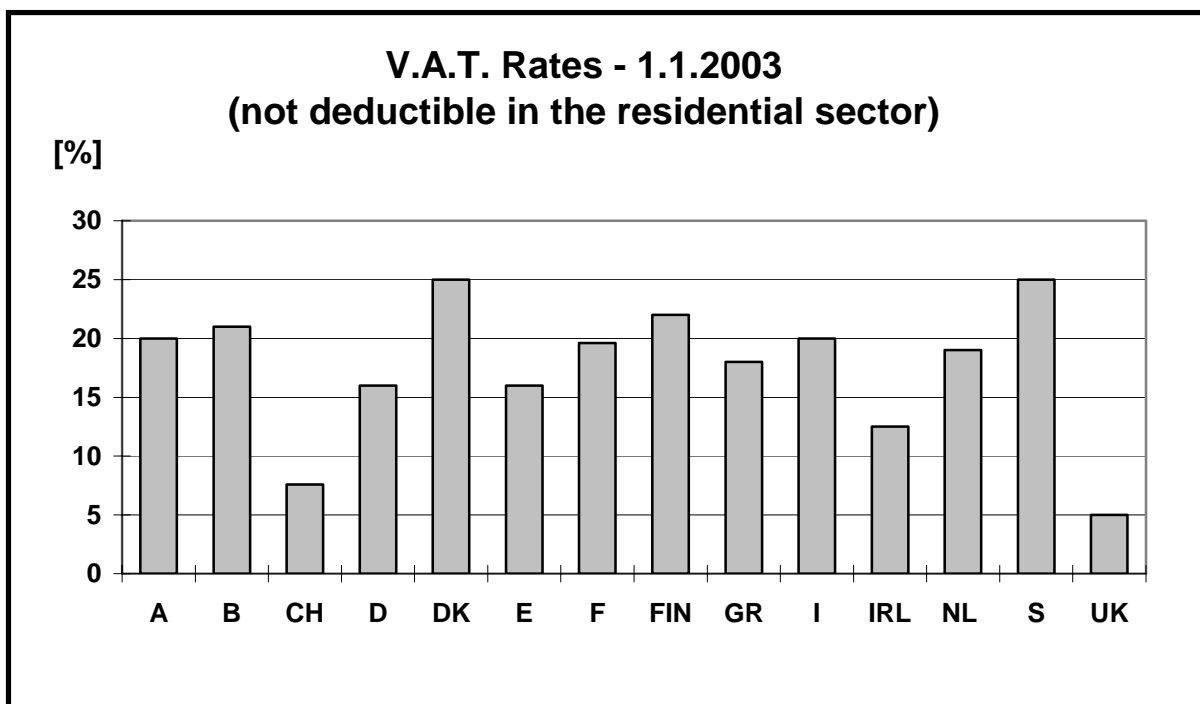
[D1] no taxation of fuel input to CHP plants with an annual utilisation rate of 70% or more

[GR2] Exemption by law up to 2010

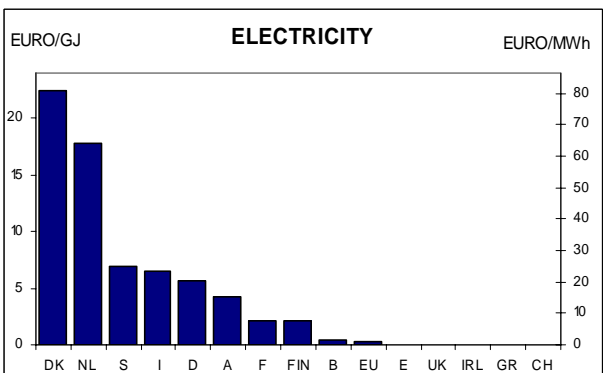
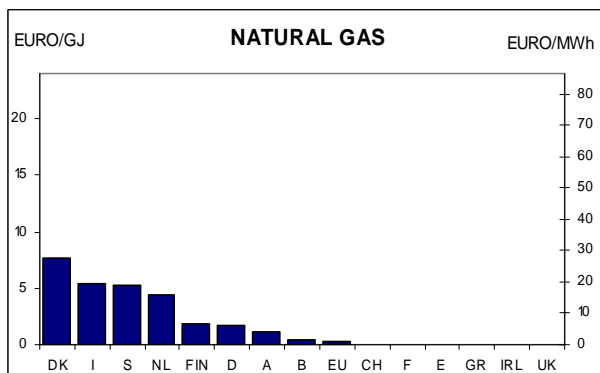
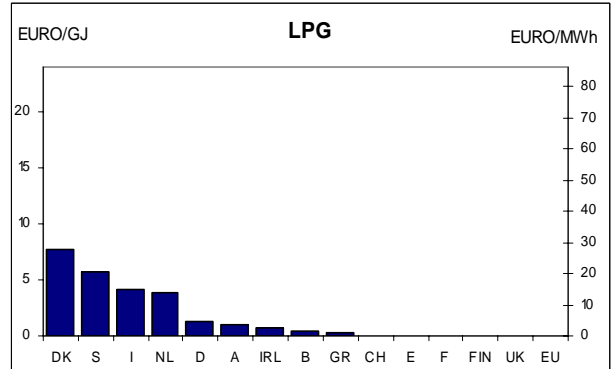
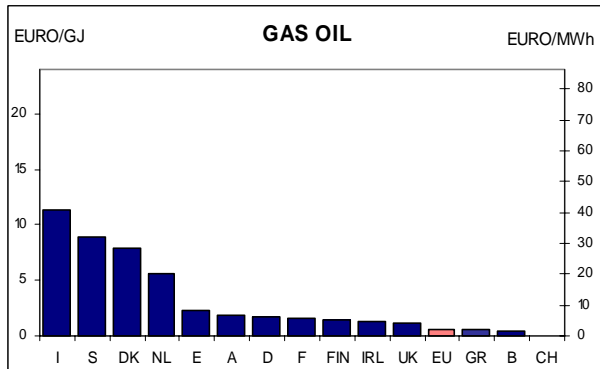
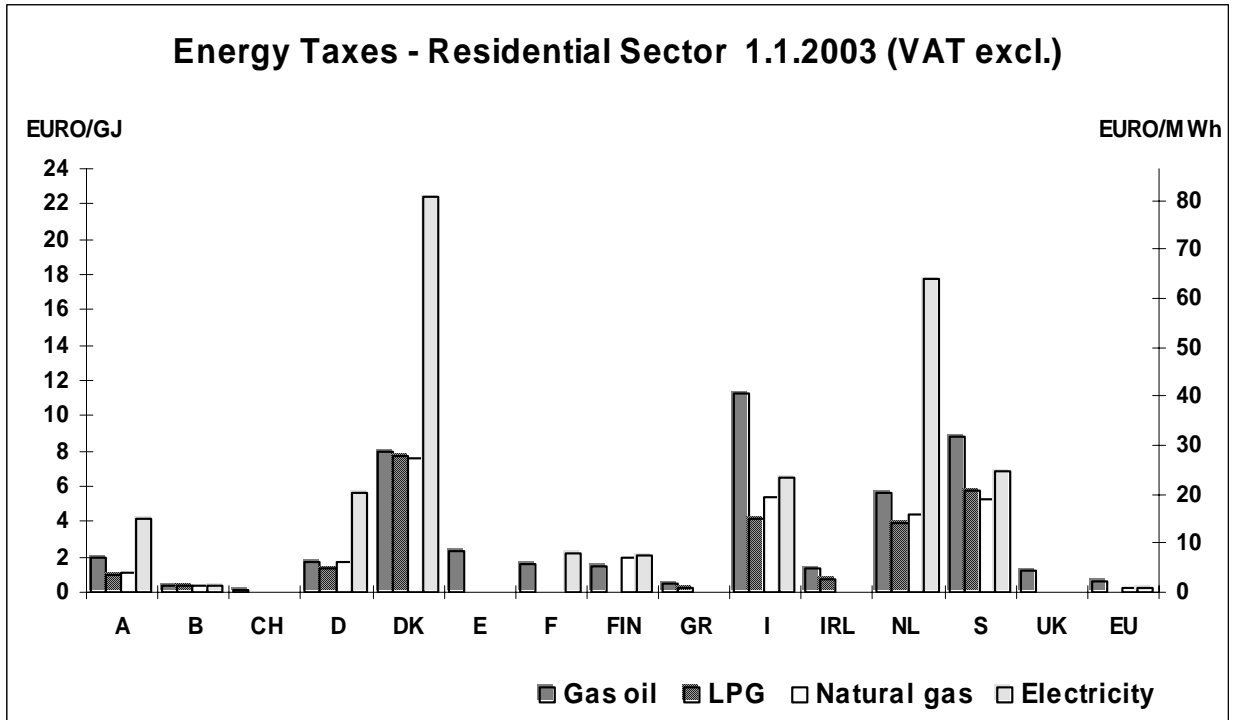
[GR4] Usage prohibited in the Athens region

[I6] applied to fuels used by public utilities and by electricity producers that sell electricity to public utilities.

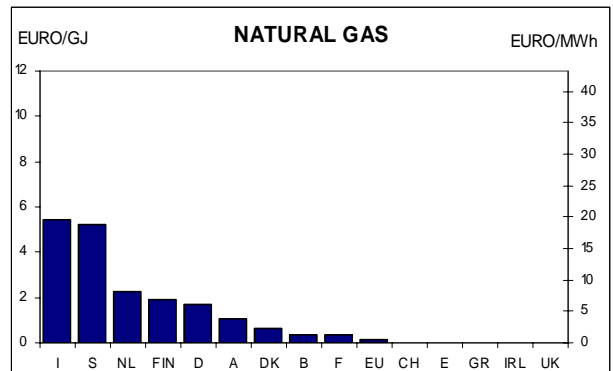
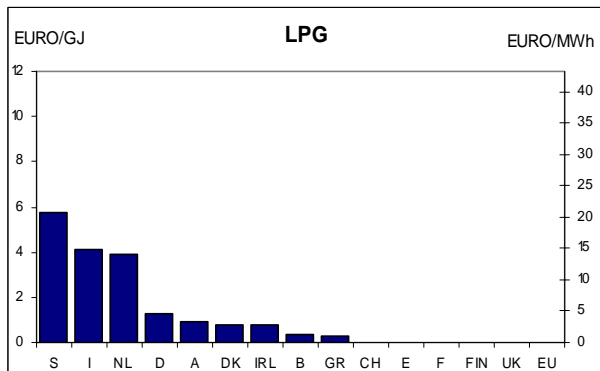
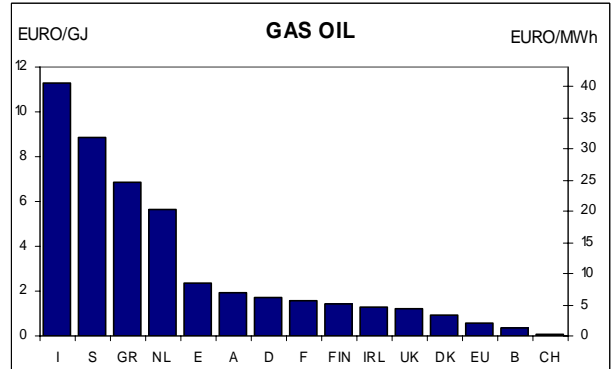
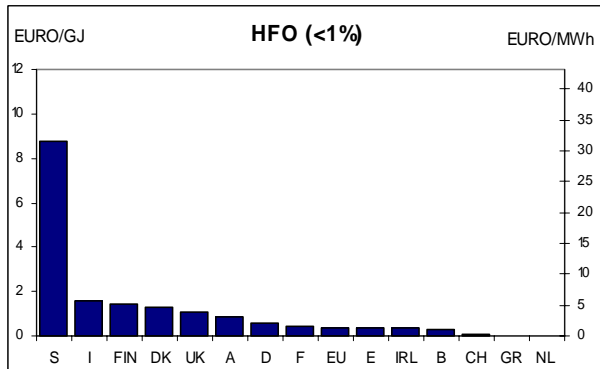
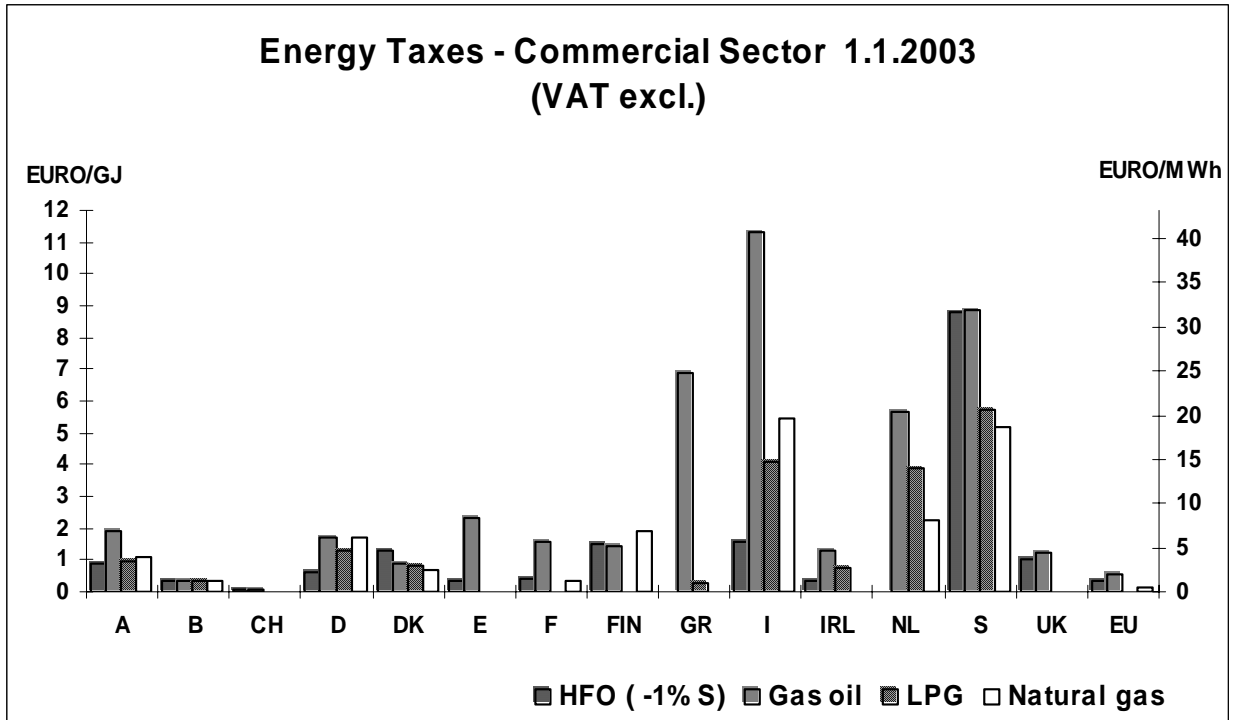
[S1] also from CHP, taxes for district heating and heat from CHP see main description



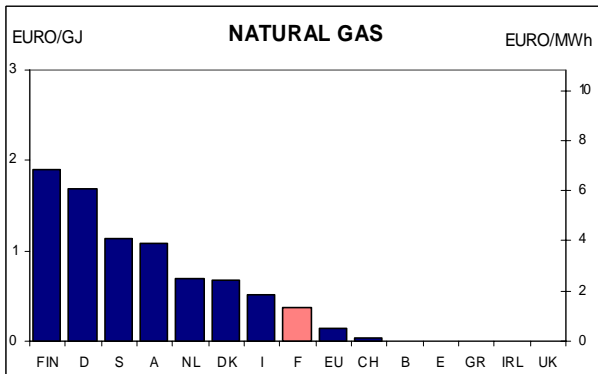
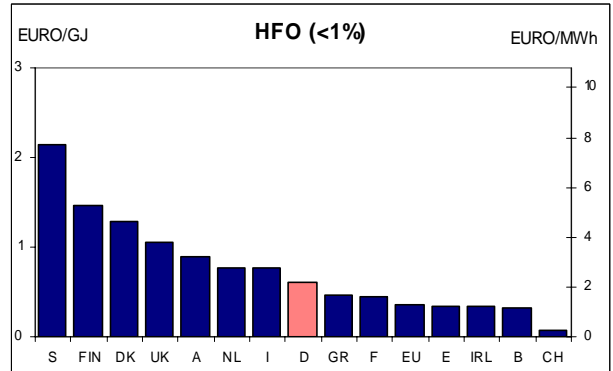
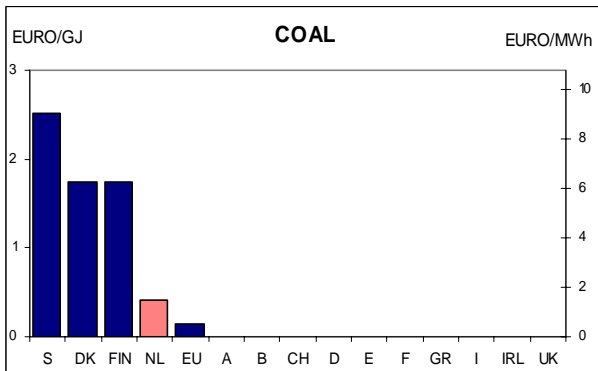
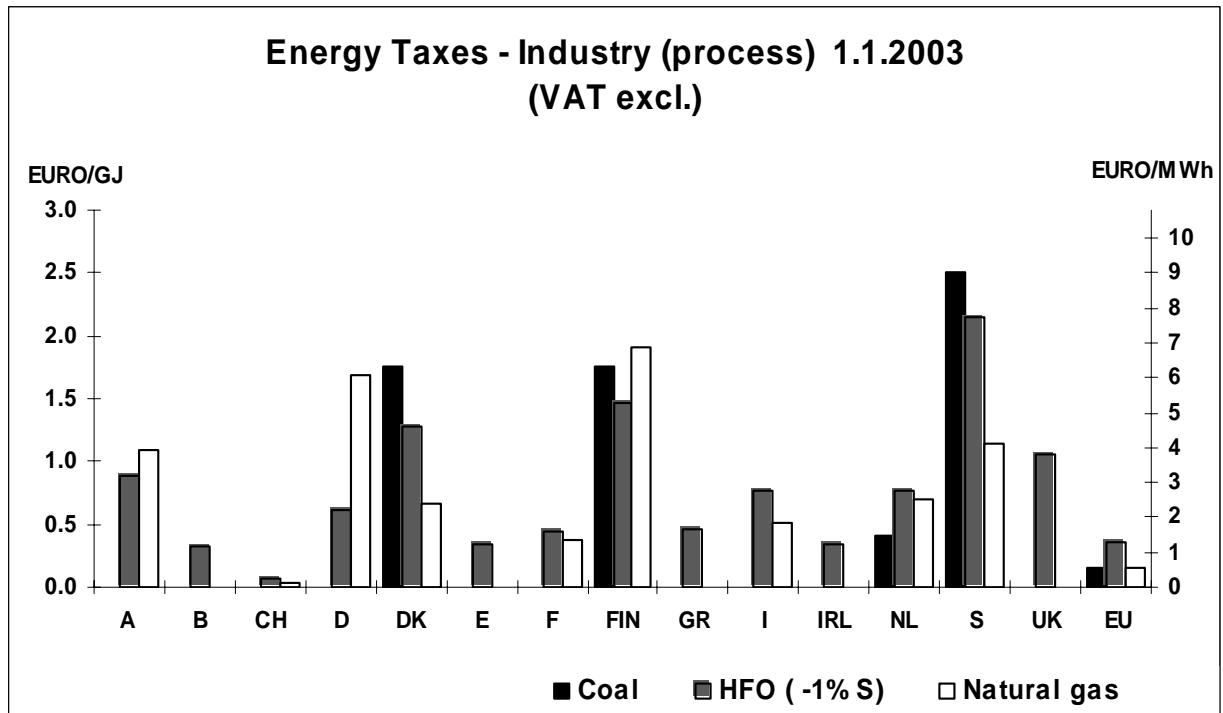
GR: 8% for natural gas and electricity



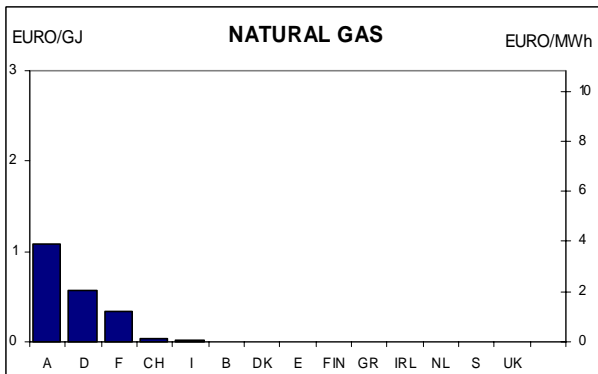
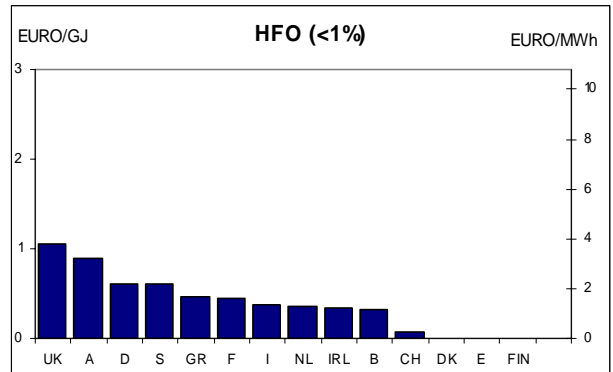
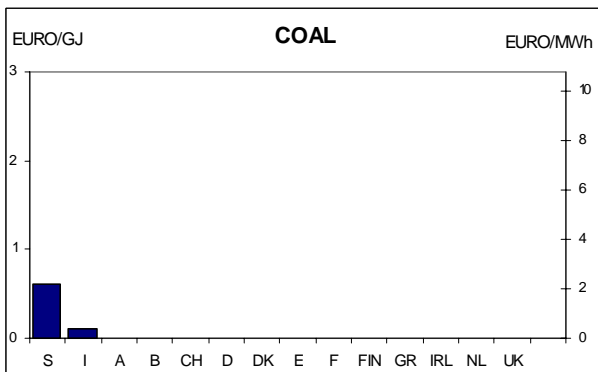
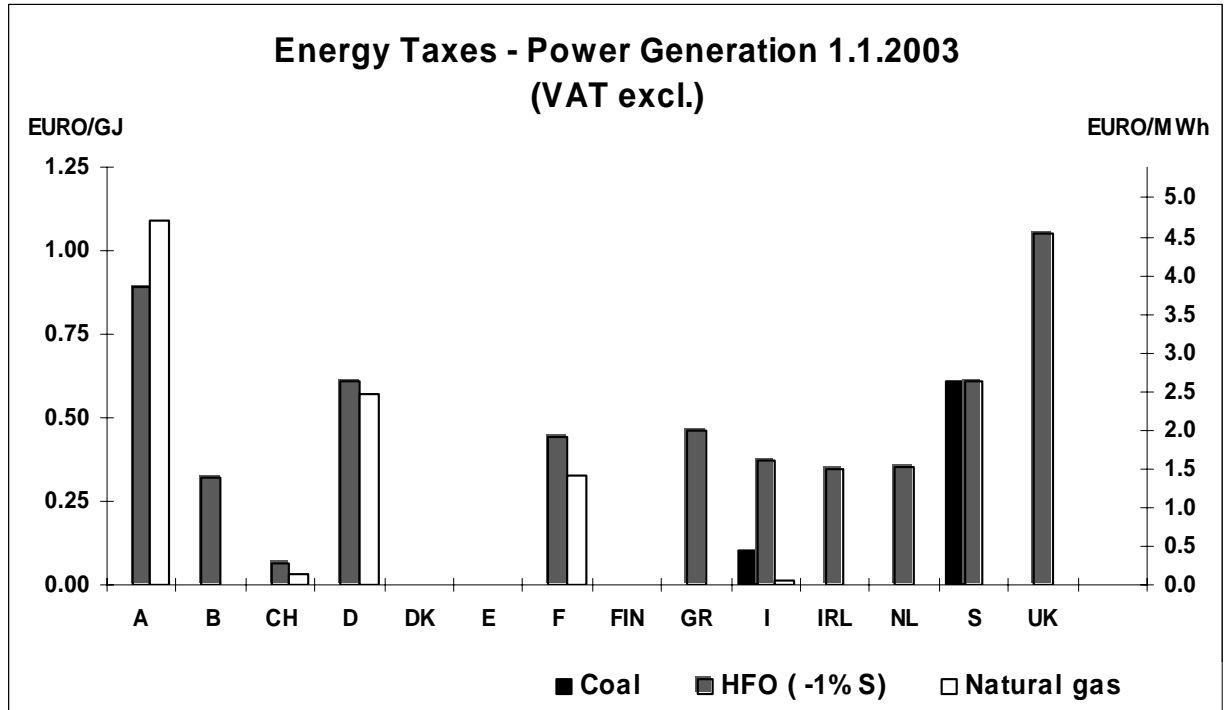
[EU] The values shown for EU are the proposed minimum levels by the European Commission



[EU] The values shown for EU are the proposed minimum levels by the European Commission



[EU] The values shown for EU are the proposed minimum levels by the European Commission



PART TWO

**DESCRIPTION OF NATIONAL ENERGY TAXATION SYSTEMS
IN EUROGAS MEMBER COUNTRIES AS OF 1st JANUARY 2003**

AUSTRIA

On 1st June 1996 the electricity and natural gas taxation system was introduced and was in general maintained since then. With effectiveness of 1st June 2000 the tax-rate for electricity was more than doubled whereas the tax-rate for natural gas was maintained.

Furthermore, the process of tax-collection was changed due to the liberalisation of the energy markets. It is now effected by the grid operators. This means that the electricity tax as well as the natural gas tax is paid by the consumers but levied and administrated by the respective grid company in the way of a separated item on the electricity or gas bill.

The tax system applies to all sectors (residential, commercial, industrial and power generation), although, with some relief provisions for industry and power generation:

However with respect to the consumption tax on electricity and gas there is a refund system for industrial customers: producers of tangible goods benefit from a special refund system on gas and electricity. Whenever the amount of the taxes on electricity consumption exceeds 0.35% of the so called net production value "Nettoproduktionswert" (defined by turnover minus input costs), this percentage effectively represents a tax ceiling on gas and electricity.

On 8th November 2001, the European Court of Justice decided that this refund system for the taxation of the use of natural gas and electricity for large production companies has the character of a hidden subsidy. To avoid any negative consequences in future the refund system is expected to be changed in order to comply with EU-regulations. At the moment further changes are unlikely.

In her letter, dated 22nd May 2002, the European Commission has subsequently notified the Austrian energy tax refund system until 31st December 2001. Therefore, service companies stay precluded from a remuneration until 31st December 2001. On 20th September 2002, the Austrian Parliament decided that all companies no matter who can participate in the energy tax refund system. But it must be mentioned that this regulation will be only applied for 2002. There are still negotiations with the European Union to find the final regulation as of 2003.

Due to the general output-taxation system there is an input tax exemption for HFO and natural gas as far as electricity production is concerned. For the input of gas oil there is a partial tax-refund in case of electricity production and co-generation of electricity and heat.

All taxes are a lump sum without specified elements, especially there is no environmental

background. The taxes on gas (and electricity), which have become effective on 1st June 1996, have clearly shifted the balance to the favour of mineral oil products and coal. The present system is definitely not ecologically-driven and represents a contradiction to the official Austrian energy policy favouring environmental-friendly forms of energy and reduction of emissions. Due to the fact that in general there is an output taxation system for energy in Austria, there is no special tax-regime on renewable energy sources.

When the tax on natural gas was introduced natural gas prices were burdened in comparison to competing oil products which were subject to (unchanged) mineral oil tax. Due to market forces meanwhile a certain balance has been reached and therefore currently no major problems are faced.

In Vienna City and some other Austrian municipalities a duty for the usage of public land is charged by the municipality to the local electricity utility; in economic terms this levy is similar and comparable to a concession fee. The tax-rate is e.g. for the City of Vienna 6 % on electricity revenues in the municipal territory.

The VAT-system corresponds to the 6th EU-Directive. The standard VAT-rate is 20%. In principle, VAT is neither an expense nor an income item for most businesses because the input tax paid to suppliers is recoverable from the fiscal authorities.

BELGIUM

The Belgium energy taxation system treats each end-use sector differently. In the residential and commercial sectors an energy tax is charged. In the industrial and power generation sectors, excise duties are applied on HFO and other oil products (the taxes on HFO low sulphur passed from 6,2 EUR/ton to 6,5 EUR/ton on 1 August 2002 and to 13 EUR/ton on 1 January 2003). The agricultural sector, the use of fuels as feedstock and in electrolytic processes are, however, exempted from duties. Concerning the transport sector, it should be noted that natural gas used in Natural Gas Vehicles (NGV) enjoys a temporary exemption from excise duties under the current experimental phase.

There is a specific income related tax levied as a special withholding tax on income earned by gas distribution companies and payments to the municipalities for the granting of distribution rights ("intangible dividends"). As those intangible dividends disappear in the new liberalised gas world, several proposals of taxation have been made with the purpose to allow the municipalities to maintain the same level of income (proposal of tax on kWh consumption in Wallonia). Federal taxes CREG for the functioning of the official gas regulator (of 0.00210 cEUR/kWh in 2003) and PSO for public service obligations (of 0.01050 cEUR/kWh in 2003) are levied.

Specific taxes are levied at municipal level (motor tax, property related taxes, storage tax, tax on employed personnel).

The new electricity decree stipulates that the part of electricity generated based on renewables mounts up to 1 % in 2001, to 3 % in 2004 and to 5 % in 2010. Certificates are attributed to the green electricity producers as proof that the electricity which is generated is green electricity. If the electricity producers aren't in possession of enough certificates, they have to pay a fine which mounts up to 0.05 EUR/kWh in 2001 and to 0,12 EUR/kWh in 2004.

The general VAT rate on energy is 21 %, except for coal which benefits from a reduced VAT rate of 12 %. VAT is recoverable for commercial and industrial purposes.

There are no environmental components in energy taxes in Belgium. There is therefore no premium for natural gas. Renewable energy sources are not taxed in the energy sector.

Belgium tax policy is one of so-called "fiscal neutrality" between energies. Only coal has a preferential tax regime for social reasons. Even from a tax neutrality point of view, the Belgian

system remains far from fair to natural gas which is subject to specific taxes which are not imposed on other energies, namely:

- Specific income related tax as a special withholding tax on income earned by gas distribution companies and payments to the municipalities for the granting of concessions (“intangible dividend”),
- Special local taxes levied by some municipalities (such as storage tax).

Introduction of an energy tax is envisaged in line with the proposal of a EU directive on excise.

DENMARK

Since 1 January 1996 energy taxation in Denmark consists of three elements: Excise tax, CO₂ tax and SO₂ tax. The CO₂ tax has been in force since 1992/93 while the SO₂ tax was introduced in 1996, together with certain increases of the CO₂ taxation, as part of a program to emphasise the environmental profile of taxation.

The general level for each of the three tax elements is now a rate of approx. 51 DKK/GJ for the excise tax, 100 DKK/ton CO₂ and 10 DKK/kg SO₂. Present rates of taxation, however, will differ somewhat both according to fuel and end-use. By 1 January 2001 and 2002 excise tax on natural gas was increased to the same level as of HFO, LPG, Gas oil and Coal.

The general principle for energy taxation is that households are subject to the 25% VAT and the excise tax as well as the full amount of CO₂ and SO₂ tax elements, whereas industrial and commercial energy users can recover VAT and the excise tax.

Energy used for space heating in the commercial and industrial sectors is, since 1996, taxed with rates equal to those applied to the residential sector (i.e. both excise and CO₂/SO₂ tax).

As of 1 July 1998 excise taxes on most products were increased as part of general fiscal and environmental policy. Further increases has taken place each year until 1 January 2002.

The CO₂ tax for energy used in normal industrial production is 90 DKK/ton. For energy intensive production the CO₂ tax rate will only be 25 DKK/ton CO₂. This rate can be further reduced to 3 DKK/ton CO₂ if specific measures are carried out that will reduce energy consumption in these industries. EU minimum rates are, however, to be observed.

The SO₂ tax is levied on all fuels with a content of more than 0.05 % sulphur and the rate of 10 DKK/kg SO₂ is now fully applied. The basis for the tax is the sulphur content of the fuel but the tax can be recovered to the extent that SO₂ emission is reduced. For HFO used in energy intensive production the SO₂ tax is only levied on the sulphur content in excess of 0.55 %.

Fuels used as feed-stock are not taxed.

Fuel used for power generation is not taxed as the tax is levied on the output - i.e. electricity delivered - instead.

In co-generation processes the tax is levied on fuel consumed that is considered to have been used for heat production while the amount of fuel considered to have been used for power generation is not taxed. Two different principles are used in this allocation:

- The principle used in allocation of fuel between power and heat production from large power plants is the so-called "marginal principle". Only the additional fuel necessary for heat production in the co-generation process - compared to the fuel estimated to have been used for power production in a conventional power plant - is taxed. In this way, the main share of fuel used is allocated to power generation and thus not taxed. The effective level of taxation of heat produced is thus much lower than in other modes of production.
- In decentralised CHP production the allocation of fuel between heat and power production is for the purpose of taxation proportional to the ratio between the output of heat and power.

Since 1. July 2002 electricity produced in decentralised CHP production, including industrial co-generation, based on natural gas receives a subsidy of 0.08 DKK/kWh for the first 8.000 MWh/year that is being produced. Direct subsidies for capital expenditures in relation to industrial co-generation projects are granted, but the production subsidy is limited to a period of 6 years. These schemes as well as the taxation of CHP is currently under consideration.

The CO₂ tax and SO₂ tax supports the competitive position of natural gas to a certain degree although it is the political intention that this environmental tax advantage of natural gas is to benefit the consumers through comparative lower gas prices.

In general renewable energy sources are being given high priority through subsidies to projects concerning these and exemption from tax. Renewable energy is being given various subsidies if used in the production of electricity.

Current National Energy Taxes

Residential/Commercial/Industry Space Heating	Local currency (DKK)/ Local energy unit 1)				Euro/GJ	Euro/MWh
	Excise tax	CO2-tax	SO2-tax	Total energy taxes	NCV2)	NCV2)
					Total energy taxes	Total energy taxes
HFO, ton - low sulphur (0,5% S)	2060	320	100	2480	8.17	29.4
LPG, ton	2350	300	0	2650	7.74	27.9
Gas oil, 1000 l (0,05% S)	1830	270	0	2100	7.93	28.5
Natural Gas, 1000 Nm ³	2020	220	0	2240	7.6	27.4
Coal, ton (0,6% S)	1280	242	108	1630	8.73	31.4
Electricity, kWh	0.501	0.10	0	0.601	22.4	80.8
VAT-rate	25%					

Note: SO2-tax is indicated for common commercial fuel qualities.

¹⁾ HFO -low: 40.82 GJ/t, LPG: 46 GJ/ton, Gas oil: 35.59 GJ/1000l, Natural gas: 39.6 GJ/1000m³, Coal: 25.1 GJ/t

²⁾ 1 Euro = 7.44 DKK

Commercial/Industry Process Use	Local currency (DKK)/ Local energy unit 1)				Euro/GJ	Euro/MWh
	Excise tax	CO2-tax	SO2-tax	Total energy taxes	NCV2)	NCV2)
					Total energy taxes	Total energy taxes
HFO, ton - low sulphur (0,5% S)	0	288	100	388	1.28	4.6
LPG, ton	0	270	0	270	0.79	2.8
Gas oil, 1000 l (0,05% S)	0	243	0	243	0.92	3.3
Natural Gas, 1000 Nm ³	0	198	0	198	0.67	2.4
Coal, ton (0,6% S)	0	218	108	326	1.75	6.3
Electricity, kWh	0	0.090	0	0.09	3.4	12.1
VAT-rate	25%					

Note: SO2-tax is indicated for common commercial fuel qualities.

¹⁾ HFO -low: 40.82 GJ/t, LPG: 46 GJ/ton, Gas oil: 35.59 GJ/1000l, Natural gas: 39.6 GJ/1000m³, Coal: 25.1 GJ/t

²⁾ 1 Euro = 7.44 DKK

FINLAND

Market sector: _____ *) _____ 1)	EURO/GJ (NCV) 2) 3)	EURO/MWh (NCV) 2) 3)
HFO – low sulphur (<1% S)	5,96 cent/kg = 1,468	5,28
- high sulphur		
Gas oil	7,06 cent/l = 1,411	5,08
LPG	-	-
Natural Gas	1,904 cent/m ³ = 0,529	1,904
Coal	44,7 EUR/t = 1,750	6,3
Electricity households I **	2,064	7,43
industry II	1,258	4,53
Other– Peat	1,59 EUR/MWh = 0,442	1,59
VAT-rate (%)	22%	

*) Taxes are levied on all market sectors except power generation. Fuels used for power generation are exempted of energy taxes. Taxes are not levied on fuels used as raw materials in industrial processes

** Electricity tax is paid by the owner of the electricity network or the power producer who sells the electricity to the customer. Tax is not paid for wind power or very small power plants. In CHP it is assumed that the heat is produced by 100% efficiency.

Heat content (NCV) of different fuels:

HFO - 40,61 GJ/t

LFO - 42,27 GJ/t, 1000 l = 0,845 t

Natural gas - 36 GJ/1000 m³ (1atm, 0°C)

Coal -25,54 GJ/t

Taxes are not levied on fuels used in power generation, but there is output tax for consumption of electricity. Electricity tax class II is paid by industry and green houses. All other users pay tax class I.

In current tax law applicable since 1.1.2003 there are some tax reliefs for energy intensive industries. Companies can apply reimbursement if paid taxes exceed 3,7% of added value of the company.

Electricity is free of output tax if it is used in transmission of electricity , exported, used in in railways or used in power plants.

If fuel is used in CHP plants, tax base of fuels used in heat production is 90% of produced heat. Fuels used for power generation in CHP plants are free of taxes as mentioned earlier.

If amount of Peat used for Heat Production is less than 25 GWh/a , it is exempted from Tax.

The Finnish energy taxation system consists of three tax components: a basic tax, an additional tax and a security of supply fee. All fossil fuels are being charged with an additional tax, which represents the bulk of the tax burden. All of them, except peat, are subject to security of supply fees. Light fuel oil is charged with a basic tax, which is fiscal.

The additional tax of fossil fuels is based on the CO₂ emissions of the respective fuel, with the exception of peat and natural Gas. They have a lower CO₂ tax rate.

The power generation is subject to an output tax only, consisting mainly of the environmental tax. The environmental tax on electricity is charged to the owner of the electricity network or to the power producer selling its electricity to the customer. Very small hydro, wind, wood or peat power producers do not pay tax. There are two tax classes - I and II - for electricity. Class II is paid by industry and greenhouses, class I by all other users.

Fuel	Basic tax	Additional tax	Security of supply fee
HFO, cent/kg	-	5,68	0,28
LFO, cent /l	1,93	4,78	0,35
Natural Gas, cent/m ³	-	1,82	0,084
Coal, €/tonne	-	43,52	1,18
Peat, €/MWh	-	1,59	-
Electricity, cent/kWh I	-	0,73	0,013
II	-	0,44	0,013

VAT is recoverable for industry and power producers and non-recoverable for households. Energy taxes are mainly non-recoverable for all consumer categories.

The additional tax of fossil fuels is based on CO₂ emissions. There are tax reliefs for natural gas and peat. Wood is considered as green energy with no CO₂ emissions and it has been exempted of energy taxes.

Natural gas has premium due to lower Specific emission of CO₂. CO₂-based additional tax for natural Gas is 50% lower than for other fossil fuel tax.

Very small power plants (40 MVA) which make electricity of wood or peat as well as very small hydro and all wind power plants are free of electricity taxes. Those plants can get also Investment support. Plants using recycled material can also get support.

Natural Gas benefits of lower CO₂-emissions in Taxation of fuels used for Heat Production and this is considered fair. But CO₂-based additional tax for natural gas is 50% lower than for other fossil fuel tax. There has been criticism against this benefit of Natural Gas. On the other hand in Power Generation, there is no advantage of lower emissions of Natural Gas because there are no taxes for fuels.

Natural Gas benefits especially in CHP production of tax differentials, but it is not easy to say who benefits in the Natural Gas chain.

The energy taxation system has changed at the beginning of 1997. The basic idea was to get the competitiveness of indigenous electricity production at the same level as the imported electricity. That is why the production of electricity is not taxed but only the consumption of electricity. After that there has not been any significant changes in taxation system. In the beginning of 1998 taxation level was brought up and then once again in the beginning of September 1998 and in the beginning of 2003.

Finnish Government has committed to Kyoto climate change program to reduce CO₂ emissions. Tools to reach commitments are energy taxation and emission trading. If the new CO₂ Emission Trading directive will be enabled, it is possible that the whole energy taxation system will be changed also. It is possible that energy taxes are based on consumption of heat and electricity and taxes are fiscal. Tool for CO₂ emissions reduction would in that case emission trading.

Current CO₂ –based Energy taxation system and support of renewable energy has been considered as an efficient tool to introduce low emission energy technology. If Energy taxes on fuels used for heat production will be abolished, the competitiveness of natural gas would deteriorate. That would increase use of coal. It is important to see what is the market price of emissions before any decisions concerning emission trading are done.

FRANCE

Taxes on energy consumption

VAT

For all energies and since 1999, the rate of VAT has been at 5.5% on the standing charge and capacity prices. However, it remained at the normal rate (i.e. 19.6% currently) on the part of the bill which is proportional to energy consumption.

Companies and district heating installation can recover VAT. Every three months, they have to repay to the State the difference between their sales cashed VAT and their buying paid VAT. Apart from some export industries, there are no cases of VAT exemption. Final consumers, generally households, can not recover the VAT paid.

Fuel oil and gas oil

In France, the "TIPP" (Taxe Intérieure sur les Produits Pétroliers) are levied on all uses of HFO and LFO.

Once the year, the government establishes the rates for the different taxes (TIPP on petroleum products and TICGN on natural gas).

In 2003, the excise (TIPP factor) on Gas oil corresponds to 5.66 EUROS/hl instead of 4.08 EUROS/hl at the beginning of 2002 (see below). On fuel oil, the level is 18.5 Euros/t regardless of sulphur content. Before this year, the tax levels on high sulphur fuel oil were higher at 24.9 Euros/t. In counterpart, use of high-sulphur fuel oil has been restricted.

At the end of 2000, in order to limit the rise of the consumers' energy bill resulting from the increase of oil prices, tax on gas oil was strongly reduced. The tax on Gas oil was linked to the variation of the VAT component in Gas-oil prices, (the higher the prices, the lower the TIPP). TIPP was revised periodically, with the possibility to adjust its level every 3 months. This last disposition was suppressed in July 2002 but the level of the tax on gas oil remained lower than it was in January 1995.

Tax on fuel oil is a little higher now than in January 1995.

Electricity

A local tax is levied on behalf of the town community and the local district. Users who disposed of more than 250 kVA of power are exempted. The mean level is of 7,8 Euros/MWh for residential user and 0.5 Euros/MWh for companies. This tax has not changed over the last years.

Natural gas

District heating, commercial and industrial uses support a gas tax on the part of their consumption over 5 GWh per year: the TICGN ("taxe intérieure à la consommation de gaz naturel"). As from 1st of January 2002, its rate at 1,19 EUROS/MWh. Residential heating and industries using the gas as raw material are exempt from this tax. CHP plants are also exempt from this tax for the first five operating years.

Coal, LPG, wood and renewable source energies

These energies are not taxed (only VAT).

Renewable energies received subsidies by means other than taxation.

Taxes on emissions

Waste incineration plants and other combustion installations larger than 20 MW are taxed on their emissions of SO₂, HCl and NO_x which is rate in the range of 38.11 to 57.17 EUROS per tonne of pollutants.

CO₂ emissions are not taxed. Other energy taxes are not directly linked to pollution.

Other taxes

There are other "light" taxes on electricity production and distribution such as high-tension pylons and nuclear or hydroelectric installations.

There are no taxes, royalties or concession fees in France relative to gas storage or distribution.

Position on natural gas

Most part of tax revenues is paid to the national authorities. Nevertheless, in exceptional cases, some local Authorities subsidise the construction of a new communal gas network.

Today, GDF anticipates changes as some blueprint relating to new natural gas taxation is being introduced:

- a new tax on natural gas or an extension of the natural gas tax on the consumption under the 5 GWh per year threshold,
- a new tax on all energies which might be proportional with CO2 emissions,
- increase of the taxes on pollutants.

These measures could have a negative impact on the competitiveness of natural gas.

If natural gas is taxed without increasing the taxes on the other energies (electricity, LPG and gas oil), natural gas will loose market shares in residential and commercial sector.

In industrial sector, an increase of taxation on natural gas can reduce the competitiveness of CHP.

GERMANY

The fiscal burden on natural gas (taxation, concession fees, production levy) in 2002 totalled approx. 3.9 billion Euro (1999: 3.1 billion Euro). The rise in the fiscal burden was mainly caused by higher taxes on natural gas following the introduction of the first stage of the ecological tax reform on 1 April 1999.

Act on the Further Development of the Ecological Tax Reform effective 1 January 2003

Changes in taxation levels for natural gas, liquid gas, heavy heating oil and light heating oil

The tax rate for natural gas when used as a heating fuel was unilaterally raised from 3.476 Euro/MWh to 5.50 Euro/MWh despite substantiated, massive reservations from industry and politics as regards economic, ecological and European policy implications. There is no change in the taxation system as a result of the increase in natural gas taxation levels.

The tax rate for heavy heating oil was raised from 17.89 Euro/1000 kg to 25 Euro/1000 kg. The tax rate for liquid gas was raised from 38.34 Euro/1000 kg to 60.60 Euro/1000 kg. There was no rise in the tax rate for light heating oil.

Dismantling of tax breaks for the manufacturing sector

Tax breaks for the manufacturing sector are to be dismantled. While in the past tax relief amounted to 80% of the ecological tax (80 % of the tax increase since 1 April 1999), this has now been reduced to 40%, i.e. for natural gas 40 % of 3.66 Euro/MWh. The figure of 3.66 Euro/MWh comprises the current increased rate of 2.024 Euro/MWh and the previous increased rate of 1.636 Euro/MWh (3.20 DM/MWh) effective since 1 April 1999. Referred to the new tax rate for natural gas (5.50 Euro/MWh), tax relief will amount to 1.464 Euro/MWh. This change affects gas, water, power and district heat suppliers as well as the manufacturing sector. Tax relief for liquid gas and light heating oil has also been adjusted accordingly.

Change in tax relief rates for combined heat and power plants and gas-steam power plants

The tax relief rates for combined heat and power plants with a utilisation rate of 70 % or more, for gas-steam power plants with an electric efficiency factor of at least 57.5%, for combined heat

and power plants with a utilisation rate of between 60 and 70% and for plants solely producing power or heat have also been adjusted. Worthy of note is the fact that there is no fiscal disadvantage for efficient combined heat and power plants, as the reimbursement rates have also been adjusted accordingly. Combined heat and power plants with a utilisation rate of 70 % or more and gas-steam power plants with an electric efficiency factor of at least 57.5% are still entitled to full reimbursement of the natural gas tax, in future amounting to 5.50 Euro/MWh. Combined heat and power plants with a utilisation rate between 60 and 70% and plants solely producing power or heat will also still receive 100% reimbursement of the ecological tax, i.e. 3.66 Euro/MWh.

Extension of the tax reduction for natural gas in the transport sector

Tax reduction for natural gas as an automotive fuel will be extended to 2020. The reduced rate of 12.40 Euro/MWh for natural gas as an automotive fuel is thus guaranteed until 2020, enhancing the attractiveness of natural gas-powered vehicles.

Extension of the tax reduction for mineral oils used to heat greenhouses

The tax reduction for mineral oils used to heat greenhouses and closed growing rooms will be extended until 31 December 2004. The new reduced rate is 3 Euro/MWh. There are no changes in the taxation system.

The electricity tax rate will be increased to 20.50 Euro/MWh. The tax rate for the manufacturing sector will be increased from 3.60 Euro/MWh to 10.20 Euro/MWh. There are no changes in the taxation system.

Increase in the tax rate for night storage heating systems

The tax rate for night storage heating systems will be increased to 12.30 €/MWh. Tax relief has a deadline of 31 December 2006.

Climate protection undertaking of the German gas industry

In 1995, the German gas industry undertook to reduce the level of CO₂ emissions in 2005 by approx. 30 million tonnes CO₂ per year referred to 1990 levels. In November 2000, this commitment was replaced by a new climate protection undertaking. The objective of the new undertaking for 2012 is to achieve a reduction in emissions of climate-relevant gases generated by natural gas used in households, commerce and transport and through modernisation of natural gas pipelines to an amount of approx. 45 million tonnes of CO₂ equivalent per year referred to 1990 levels. In 2001, emissions of climate-relevant gases generated by natural gas used in households, commerce and transport and through modernisation of natural gas pipelines had already been reduced by approx. 34.4 million tonnes CO₂ equivalent per year referred to 1990 levels.

GREECE

There are different energy taxes for different end users as far as Gas oil and LPG are concerned.

Gas oil has three excise taxes :

for heating purposes during the heating period (~ Oct. to Apr.)

for power generation

for automotive usage

LPG has also three excise taxes :

for general purposes

for automotive usage

for industrial usage

Total energy tax consists almost exclusively in general excise duty.

VAT on energy products is recoverable by all users subject to accounting regulation (i.e. excluding private users) with the exception of transportation fuel where VAT of fuel used by personal cars (even owned by companies) may not be recovered.

Energy taxes are not presently linked to pollution.

Natural gas is by law exempted from excise tax in Greece until the end of 2010 (Law 2364, Article 7). The excise tax of competing fuels thus constitutes an indirect subsidy to the project of introduction of natural gas in Greece. The reduction of the heating oil and fuel oil excise tax in the recent years drastically reduced this benefit for natural gas.

Although there are tax incentives for the support of the penetration of natural gas in the residential sector there is no direct relation between the cost of incentives and the tax revenues.

Tax differential between natural gas and competitive fuel benefits to the natural gas distributor. Other differentials benefit to consumers.

Heating Gas oil excise tax was, since Jan. '95, set at the following levels :

Jan. '95	39	GRD/lt
Jan. '96	42	GRD/lt
Oct. '96	33,5	GRD/lt
Nov. '97	28	GRD/lt
Nov. '98	20	GRD/lt
Nov. '99	6,15	GRD/lt

Fuel oil excise tax was, since Jan. '95 set at the following levels :

Jan. '95	12	GRD/kg
Jan. '96	13	GRD/kg
Jan. '02	6,5	GRD/kg

Gas oil excise tax for purposes other then heating or outside the heating period (~ Oct. to Apr.) was, since Jan. '95, set at the following levels.

Jan. '95	72	GRD/lt
Jan. '96	77	GRD/lt
Oct. '96	75,5	GRD/lt
Mar. '97	77	GRD/lt
Dec. '98	83	GRD/lt

At the end of 1999 a new category was introduced for the gas oil used exclusively for power generation and the excise tax was fixed at 41 GRD/lt.

The main change concerns the reduction of the excise tax applied on heating Gas oil since 1996 and on Gas oil used for power generation since end 1999, both for inflation reduction purpose.

Excise tax levels after the introduction of Euro currency in 1/1/2002 are as follows :

Excise Tax as of 01.01.2002

HFO	19	€/MT
Gas oil		
for heating purposes during the heating period (~ Oct. to Apr.)	18	€/1000lt
for power generation	120	€/1000lt
for automotive usage	245	€/1000lt
LPG		
for general purposes	13	€/MT
for automotive usage	100	€/MT
for industrial usage	0,29	€/MT
Natural gas	0	

There is no open discussion on a change in the energy tax system other than the discussion on the draft Directive restructuring the Community framework for the taxation of energy products.

IRELAND

Jan 1 2002		LPG	HFO	Gasoil	Kerosene
		Jan 1	Jan 1	Jan 1	Jan 1
Duty - Cents Per Litre		1.816	1.346	4.736	2.50
Litres Per Tonne		1933	1045	1190	1190
Cents Per Tonne		3510	1406	5636	2975
Therms Per Tonne	GCV	473	403	432	432
Gigajoules Per Tonne	GCV	49.9	42.5	45.6	45.6
kWh Per Tonne	GCV	13,862	11,811	12,661	12,661
Cents Per Therm	GCV	7.42	3.49	13.05	6.89
Cents Per Gigajoule	GCV	70.33	33.08	123.65	65.27
Cents Per kWh	GCV	0.253	0.119	0.445	0.235
kWh/Therm		29.31	29.31	29.31	29.31
Gj/Therm		0.105506	0.105506	0.105506	0.105506
Cents Per Gj	GCV	70.331	33.079	123.654	65.272
Net To Gross Ratio		0.941	0.950	0.950	0.950
Cents Per Gigajoule	NCV	74.740	34.820	130.162	68.707
Euro Per Gigajoule	NCV	0.747	0.348	1.302	0.687
Euro Per MWh	NCV	2.691	1.254	4.686	2.473

Taxation is the same for all end user sections, with the exception of the level of Value Added Tax. This is applied at a reduced rate of 12.5% to the household sector. (v. 20% for the other sectors)

While there has been much discussion and reference to environmental taxes in Ireland (Finance Ministry speeches at Budget Time etc.) differential taxes are only applied in the case of transport fuels. Other fuel taxation adjustments have been related to cross border issues between the Republic of Ireland and Northern Ireland, where differentials encourages criminal behaviour.

VAT is set at 12.5% for the household sector (or rather to certain product categories such as food, medicine and energy products for households) The tax is not recoverable. The general level of VAT is currently 20% and is recoverable by the commercial and industrial sectors.

Other than for road transport fuels, there is no differential applied to fuels in relation to SO₂ or CO₂ content. There are no excise duties applied to natural gas. There are no explicit taxes on renewable energy.

Given that there are no excise duty or other charges on natural gas, it is given favourable treatment. Therefore the regime is favourable from a competitive perspective.

The main tax differences are between the mineral fuel oils and natural gas. These differentials are favourable to the gas industry, which is the beneficiary to the degree that it is in a more favourable competitive market position.

There have been no significant changes to energy taxation since 1995. A reduction in the excise duty on Kerosene was made, but this was motivated by cross border issues and further validated on the basis that kerosene has a lower environmental impact than its closest substitute, gasoil. LPG excise duties have been reduced by 20% since 1995.

Other industry sectors, especially the LPG sector lobby for more favourable treatment relative to natural gas at Budget time. This has been successful in the past as the duty level has been reduced.

There are no taxation changes foreseen in the near term, other than those agreed at EU level. Arguably the favourable treatment of natural gas encourages the growth of the gas industry and has had a positive environmental impact. A change in the relative treatment of natural gas would impact growth in a developing market. There is significant competition in Ireland between heating oil and natural gas, both being successful in displacing solid fuel (coal etc..) in the household sector.

ITALY

Energy taxation differs widely among sectors (residential, industrial, power generation) and among regions: taxes on fuels for industrial uses are lower than taxes in the residential sector, but higher than those for electricity generation. Moreover a tax incentive is given to autoproducers of electricity.

The Government introduced in 2000 a temporary reform for taxation on energy products aimed at reducing the inflationary tendency deriving from the international trend of the oil quotations. This reform stopped the second step provided for 2000 in order to achieve the target tax rate by January the 1st of 2005 introduced by the carbon tax law in 1999.

The temporary reform was extended with some limited variations, consequently excise tax rates on energy products have been extended until November 2001. From November the 1st of 2001 the Government decided to increase excise taxes on fuels used for Residential and Commercial Uses (in particular Natural Gas, Gasoil, LPG, and LSFO), used for Industrial uses (in particular LSFO, Gasoil and GPL). The Government with a decree in march 2002 decided to decrease excise on natural gas used for Residential and Commercial uses in the Northern Regions; the reduction is retroactive from January the 1st of 2002. A decree in July 2002 and The Budget for 2003 (Legge Finanziaria 2003) extend the previous level of the excises on natural gas until June 2003.

		Residential & Commercial uses		Industrial uses	
		EURO/GJ	EURO/MWh	EURO/GJ	EURO/MWh
HSFO					
9600	kcal/kg	3,19	11,49	1,59	5,71
LSFO					
9800	kcal/kg	1,57	5,64	0,77	2,75
Gasoil (***)					
10200	kcal/kg	11,31	40,71	11,31	40,71
LPG (***)					
11000	kcal/kg	4,12	14,85	4,12	14,85
	(**)	0,41	1,49	0,41	1,49

		Power Generation			
		public plants (*)		self consumption	
		EURO/GJ	EURO/MWh	EURO/GJ	EURO/MWh
HSFO					
9600	kcal/kg	0,38	1,37	0,11	0,41
LSFO					
9800	kcal/kg	0,37	1,35	0,11	0,40
Gasoil (***)					
10200	kcal/kg	0,36	1,28	0,11	0,39
LPG (***)					
11000	kcal/kg	0,01	0,05	0,0044	0,0160
	(**)				
Coal		0,10	0,36		

(*) applied to fuels used by public utilities and by electricity producers that sell electricity to public utilities

(**) for industries using cylinders bigger than 10 m³

(***) considering LPG and gasoil taxation in the residential and commercial sectors there is a different regime in some northern provinces (Aosta, Trento, Bolzano and Belluno) and in the mountain areas, which are characterized by rigid climate and by being not reached by the natural gas net: in these areas an allowance is provided on the final price of gasoil of 299 Lit/kg (3,62 EURO/GJ; 13,4 EURO/MWh); and, on the final price of LPG of 308 Lit/kg (3,45 EURO/GJ; 12,44 EURO MWh).

Considering natural gas, taxes differ between sectors, with the lowest taxes in the industrial one where an excise tax amounting to 0,36 EURO/GJ (1,30 EURO/MWh) plus a regional tax of 0,15 EURO/GJ (0,54 EURO/MWh)- 0,18 EURO/GJ (0,65 EURO/MWh) are applied. The reform introduced by the Budget for 2001 (Legge Finanziaria 2001) for excise tax on natural gas for industrial uses that introduced a discount of 40% of the excise tax for the industrial user consuming more than 1.200.000 m³ on an annual basis has been extended with three different Government act until January the 1st of 2002; the Budget 2003 (Legge finanziaria 2003) extended this reform until the end of June 2003.

In this case the excise tax on natural gas for industrial uses is reduced at 0,22 EURO/GJ (0,78 EURO/MWh); the regional tax on natural gas for industrial uses is, in this case, reduced at a maximum rate of 0,15 EURO/GJ (0,54 EURO/MWh).

Gas used for power generation (production) is subjected to an excise tax of 0,01 EURO/GJ (0,05 EURO/MWh); in case of self production natural gas used for power generation is subjected to an excise tax of 0,004 EURO/GJ (0,01 EURO/MWh); in refining processes and gas used as raw material in chemical plants are exempted.

Gas used in the residential sector, which was interested by the temporary changes is subject to different excise taxes, to regional taxes and to value added tax; the level of these taxes differs among uses and regions (northern and central regions versus southern regions known as “Cassa del Mezzogiorno”).

In this sector gas can be sold under three kinds of contract:

- T1 cooking and water heating
- T2 cooking, water heating and individual heating
- T3 all other uses

The following table shows the present level of excise tax for the different contracts:

Excise taxes	Northern and Central regions	Southern Regions
T1 first 250 m3 of T2	1,16 EURO/GJ (4,17 EURO/MWH)	1,12 EURO/GJ (4,03 EURO/MWH)
T3 and the rest of consumption of T2	4,92 EURO/GJ (17,72 EURO/MWH)	3,60 EURO/GJ (12,95 EURO/MWH)

(*) The budget for 2001 (Legge Finanziaria 2001) introduced a reduction to 1,18 EURO/GJ (4,24 EURO/MWh): for some provinces (Aosta, Belluno, Trento e Bolzano).

(**)The budget for 2001 (Legge Finanziaria 2001) introduced a reduction to 3,91 EURO/GJ (14,08 EURO/MWh): for some provinces (Aosta, Belluno, Trento e Bolzano).

Throughout Italy there are furthermore different regional taxes whose level can vary between 0,15 and 0,90 EURO/GJ (0,54 and 3,23 EURO/MWH), but cannot exceed 50% of the level of the corresponding national excise.

The Independent Authority (Autorità per l'energia elettrica e il gas) is going to reform the tariffs for non eligible customers (domestic users); the excise taxes on natural gas for residential uses will be adapted to the new tariff structure not based on different uses.

The VAT regime on natural gas is also differentiated by sectors. VAT rate is now at two different level: 10% and 20% (see table).

For all fuels, VAT is recoverable for industrial and commercial uses.

VAT rates on energy products:

	Power generation	All other uses
<i>HSFO & LSFO</i>	10%	10%
<i>Gasoil</i>	10%	20%
<i>Coal</i>	10%	10%
<i>LPG</i>	10%	20% (*)

(*) 10% for cooking and water heating using cilindres of 10/20 kg.

	Industry	Power generation	
<i>Natural gas</i>	10%	20%	
	Cooking & water heating	Heating	Commercial
<i>Natural gas</i>	10%	20%	20%

Recently the Region Toscana fixed the level of the regional tax above the maximum level allowed (50% of the level of the corresponding national excise) and declared that the Region doesn't accept the discount of 40% of the excise tax on natural gas for industrial users consuming more than 1.200.000 mc on an annual basis (introduced by the Budget 2001, Legge Finanziaria 2001).Consequently the price of natural gas for industrial users consuming more

than 1.200.000 mc is more expensive than 2002 (L 1,63/mc more) and higher than the level fixed by State Law (legislative decree 398/90).

The Region Toscana introduced these changes on the basis of the Constitutional Reform that extended the legislative powers of the Regions, but the consistency of the measure with the limits of regional tax power is doubtful.

Tax differential

The analysis of competitiveness between natural gas and gasoil in the residential and commercial sectors needs to take into account the different situation of the Italian regions as to climate (which is reflected into the specific consumption of each region) and as to the presence of numerous levels of excise tax applied to natural gas.

The combined effect of this two factors is a differentiated level of competitiveness throughout the national territory, and normally natural gas is competitive in comparison with alternative fuels.

Generally speaking, a relevant share of the benefits of tax differential between gasoil and natural gas is transferred to final consumers.

In the industrial sector, tax differentials between natural gas and heavy fuel oils are not substantial; some remarkable exceptions to this set-up are worth noting:

- 1) Power generation, the carbon tax does not change significantly the actual competitiveness ratios between natural gas and fuel oil.
- 2) The Gasoil and LPG allowances for users in some northern provinces (Aosta, Trento, Bolzano and Belluno) and in the mountain areas, which are characterized by rigid climate and by being not reached by the natural gas net have strongly reduced the competitiveness of natural gas in these areas.
- 3) The previous structure of taxation on natural gas for domestic uses shows a reduction in the differences between Northern and Southern regions.

SPAIN

A tax of 6 Euro/1000 l of gas oil and 1Euro/1 ton of fuel oil has been introduced in January 2002.

This new tax represents an increase of 7,5% on the retail price of those oil derivatives.

This tax rate could be increased by the authorities of Autonomous Regions.

All end-users sectors have the same tax rates.

There are not environmental taxes or excise duties linked to pollutant emissions.

Electricity utilities are charged a rate of 5,113% over the official electricity tariffs. There is no taxation on fuels used for power generation.

Electricity and gas utilities pay a levy to local authorities for the use of land for transmission lines.

VAT is the same for all fuels and uses, even for bottled LPG. VAT is a recoverable tax except for residential consumers.

Heat content of local energy units:

- Low sulphur (<1% S): 9902 Kcal/Kg
- High sulphur: 9215 Kcal/Kg
- Gas oil: 8670 Kcal/l

SWEDEN

Energy tax changes 1st of January 2003

The energy taxes and the CO₂ tax were increased with 1,8 % according to the development of the consumer price index.

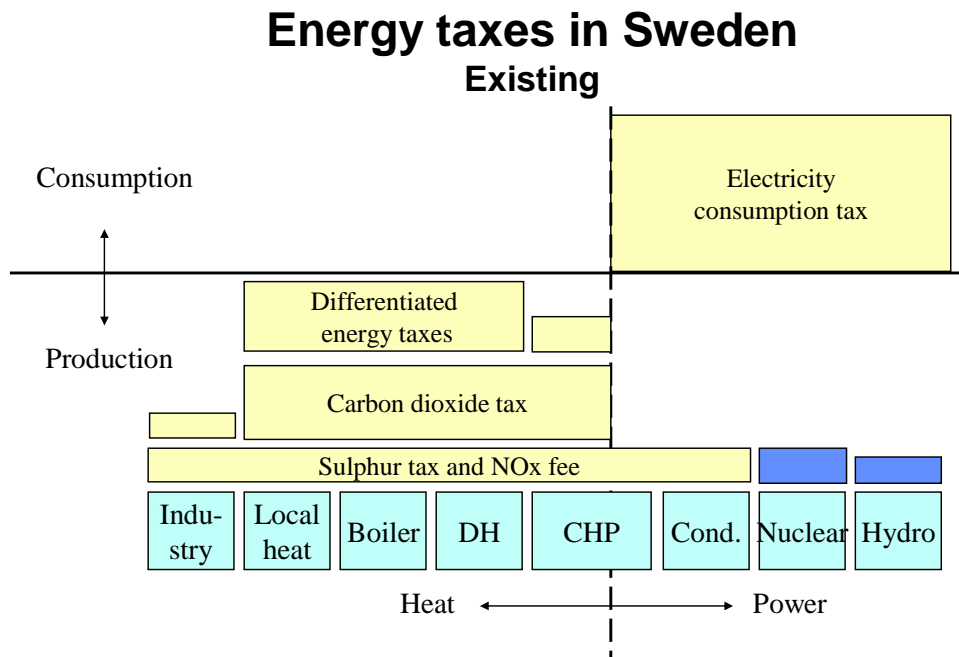
The tax burden on the emission of CO₂ was increased with another 19 % according to the tax change policy resulting in a total increase of 21 %. The industry sector has been compensated by increasing the tax reduction for CO₂ from 70 % to 75 %. Also the transportation sector has been compensated to maintain the tax burden unchanged.

The electricity consumption tax has been raised with 14,6 %.

The exchange rate this year is 9,18 SEK/Euro. (Last year 9,23 SEK/Euro)

Existing energy tax system

The Swedish energy tax system includes fuel taxes, nuclear power production taxes, hydro power property tax, electricity consumption taxes and VAT.



The fuel taxes comprise:

- a fuel related energy tax
- a carbon dioxide tax at a level of 83 Euro/ton CO₂
- a sulphur tax at a level of 3,27 Euro/kg S

The fuel taxes at normal level (100 %) are presented in the following table.

	<u>Energy</u> SEK/MWh	<u>CO₂</u> SEK/MWh	<u>Sulphur</u> SEK/MWh	<u>Total</u> SEK/MWh	<u>Total</u> Euro/GJ	<u>Total</u> Euro/MWh
HFO - low sulphur 0,4% S	67,3	203,2	10,1	280,6	8,49	30,56
HFO - high sulphur 0,8% S	67,3	203,2	20,2	290,7	8,79	31,66
Gas oil - max. 0,05 %	72,7	219,6	0,0	292,3	8,85	31,84
LPG	11,0	178,6	0,0	189,6	5,74	20,65
Natural Gas	21,6	150,7	0,0	172,3	5,21	18,77
Coal 0,5% S	40,9	252,3	20,0	313,2	9,48	34,12
Electricity (consumption)	227,0	0,0	0,0	227,0	6,87	24,73
VAT-rate				25 %	25 %	25 %

The fuel tax levels for different categories of users are:

<u>Sector</u>	<u>Energy tax</u>	<u>CO₂ tax</u>	<u>Sulphur tax</u>
Residential	100 %	100 %	100 %
Commercial	100 %	100 %	100 %
Industry	0	25 %	100 %
Electricity production *)		0	100 %
Heat production in CHP		50 %	100 %
District heating	100 %	100 %	100 %

*) 5 % of the fuel for electricity from condensing power and 1,5 % of the fuel for electricity from CHP production is defined as auxiliary fuel and taxed at normal level.

The transportation sector is taxed with 100 % CO₂ tax and a considerably higher energy tax. To promote the alternative fuel development for vehicles a lower tax level is applied on methane, natural gas and LPG.

VAT is recoverable for tax responsible companies but not for end consumers.

The energy tax and the carbon dioxide tax are revised each year in relation to the development of the consumer's price index.

Apart from specified energy tax, carbon dioxide tax and sulphur tax there is a NO_x fee for units producing useful energy of minimum 25 GWh per year. The NO_x fee (reduced with administration costs) is paid back to the energy producers in relation to the net energy produced. The NO_x fee level is 4,36 Euro/kg NO₂ equivalent.

The carbon dioxide tax, the sulphur tax and the NO_x fee are directly related to the pollution.

Renewable energy is not taxed. Renewable energy plants can apply for investment subsidies and electricity produced from windmills is also receiving an environmental subsidy.

The electricity consumption tax is 0 for industries and reduced to 89 % level for use in district heating plants. CHP producers can use own produced electricity for district heating in for instance electric boilers or heat pumps with either electricity consumption tax or fuel input tax at normal level. This means that electricity produced from bio fuel can be used without tax.

The tax system is fair to natural gas in the residential, commercial and district heating sector where the energy taxes and the environmental taxes are valid to 100 %. The tax system is not fair enough in other sectors.

The continuo increase of the taxation levels on fossil fuels has decreased the competitiveness for CHP compared to purchase of electricity and heat production with fuels without taxes or with lower taxes. This situation has caused some natural gas fired CHP plants to reduce or stop the production even in cases when imports of coal produced condense power is needed.

No tax revenues are used to support natural gas.

The energy-suppliers benefit economically by the tax differentials as the market price for fuels include taxes. The customers benefit by the environmental advantages of the tax system.

Previous tax changes

Since 1 January 1995 the following changes in the fuel tax system has been carried through.

1 July 1997 the CO₂ tax level for industry was raised from 25 % to 50 % of the normal level. This was done mainly for increasing the environmental fuel tax profile of the industry sector.

A tax change policy to increase energy taxes and reduce taxes on labour and employment was decided in year 2000. In 10 years the intention is that 3 billion Euro per year shall be exchanged and the first step was taken in January 2001 when a sharp increase of the CO₂ taxes was introduced. To compensate the industry the CO₂ tax level for this sector was reduced to 35 %. The further CO₂ tax increase in 2002 and 2003 has been compensated for the industry by reducing the CO₂ tax further to 30 % and 25 % respectively.

Proposed changes of the tax system

The subsidy system for renewable electricity production is proposed to be replaced by a "green certificate" quota system. The intention is to increase the electricity production from renewable energy sources with 10 TWh in 2010 by increasing the quota each year. The costs for the certificates are financed by the consumers (except energy intensive industries) by introducing a new law for certificate fees.

The energy bill for 2003 included a proposal to reduce the taxes on fossil fuels used for cogeneration in order to make CHP plants more competitive. A tax level in accordance with the combined heat and power production in the industry sector is suggested. This will increase the possibility to produce more power from existing CHP plants and to invest in new CHP plants. The proposal is still under consideration.

An overview of the entire energy tax system started in 1997 and is still on the agenda. The main intention is to introduce a more stable and reliable taxation framework, to make a clearer split between fiscal taxes and environmental taxes and to promote a stronger environmental profile. A harmonisation with the taxes in other EU countries is also considered important. In January 2001 a report was presented analysing the consequences of a tax change in accordance with this structure where governing environmental taxes are introduced on the production side and fiscal taxes on the consumption side. The work is now focused on the investigation of the consequences for different sectors in a competitive situation to the foreign market, the need for

these sectors to obtain a limited tax burden and how this can be implemented according to the EU rules. The proposal for taxes according to this model is scheduled to spring 2003.

Analyses are also carried out for a trading system for the emissions of CO₂ and for the use of flexible mechanisms. The objective is a market opening for CO₂ trade in 2005.

SWITZERLAND

Market sector: same taxes for all sectors	EURO/GJ (NCV)	EURO/MWh (NCV)
HFO – low sulphur (<1% S)	0.0670	
- high sulphur	0.0670	
Gas oil	0.0670	
LPG	0.0336	
Natural Gas	0.0307	
Coal	-	
Electricity	-	
Other	-	
VAT-rate (%)	7.6	7.6

VAT is recoverable for commercial and industrial users, but non recoverable for households.

In addition to the above tax an **emergency stock fee** is charged to heating oil (0.001 CHF/kWh = 0.210 EURO/GJ) and natural gas (0.0002 CHF/kWh = 0.042 EURO/GJ).

An **SO₂ tax** for 'highly' sulphurous heating oil (S content > 0.1%) has been introduced in July 1998. HFO though, is not subject to the tax. The reason for this is its negligible part in the Swiss energy consumption. As the supply of 'highly' sulphurous heating oil is anyway rapidly drying up, the SO₂ tax is of negligible impact.

The Swiss CO₂ law has been in effect since May 2000. According to it, the CO₂ emissions must be reduced by 10% (compared to 1990) until the year 2010. Voluntary measures can play an important role. In case the goal cannot be met with these measures, a **CO₂ tax** can be introduced in 2004 at the earliest. The gas industry emphasises the benefits of the substitution of heating oil by natural gas. By doing so, the consumers may either prevent the tax or at least be charged the lower rate for natural gas only. The following tax rates could be applied on the heating market:

heating oil: 0.0079 CHF/kWh = 1.659 EURO/GJ (NCV)

natural gas: 0.0059 CHF/kWh = 1.239 EURO/GJ (NCV)

For motor fuels, the tax rates could be as high as:

heating oil: 0.056 CHF/kWh = 11.758 EURO/GJ (NCV)

natural gas: 0.042 CHF/kWh = 8.818 EURO/GJ (NCV)

The CO₂-tax would have to give the correct ecological incentives, not generate public revenue. Thus the revenue would be redistributed to economy and population.

The oil industry and other stakeholders want to prevent the CO₂-tax on motor fuels from being introduced. To that end, political action has been initiated, focusing on the promotion of diesel fuel and CNG by reducing the existing energy taxes.

THE NETHERLANDS

Current National Energy Taxes as of January 1st 2003

Energy:	Euro per energy unit	EURO/GJ (NCV)	EURO/MWh (NCV)
HFO - 1% S)*	0.03211	0.7747	2.7888
Gas Oil**			
0 - 153000 l	0.20289	5.6484	20.3342
>153000 l	0.06665	1.8555	6.6798
LPG**			
0 - 119000 kg	0.17810	3.8717	13.9383
>119000 kg	0.01694	0.3683	1.3257
Natural gas**/**			
0 - 5000 m ³	0.13950	4.4076	15.8673
5001 - 170000 m ³	0.07100	2.2433	8.0758
170001 - 1000000 m ³	0.02210	0.6983	2.5137
1000001 - 10000000 m ³	0.01100	0.3476	1.2512
> 10000000 m ³	0.00730	0.2306	0.8303
Coal	0.01199	0.4091	1.4727
Electricity**/**			
0 - 10000 kWh	0.06390	17.7500	63.9000
10001 - 50000 kWh	0.02070	5.7500	20.7000
50001 - 10000000 kWh	0.00630	1.7500	6.3000
> 10000000 kWh	0.00000	0.0000	0.0000
VAT-rate	19.0%	19.0%	19.0%

* HFO sulphur >1% is no longer in use in the Netherlands.

** Taxes/consumption levels based on annual consumption.

*** All consumers with an electricity connection get a refund of Euro 142.— per connection per year irrespective the annual consumption of electricity (or gas). This refund is given because of the change in the Ecotax system. The first free 800 m³ and 800 kWh have been cancelled in 2001.

Local energy units and calorific values (NCV):

- HFO in terms of florins/kilogram (1 kilogram = 41.45 MJ)
- Gasoil in terms of florins/litre (1 litre = 35.92 MJ)
- LPG in terms of florins/kilogram (1 kilogram = 46 MJ)
- Natural gas in terms of florins/cubic meter (1 cubic meter = 31.65 MJ)
- Coal in terms of florins/kilogram (1 kilogram = 29.31 MJ)

■ Electricity in terms of florins/kWh (1 kWh = 3.6 MJ)

- Description/Break down of the total energy taxes as of January 1st 2003

Energy:	Excise duty	Environmental levy	Storage Tax	Ecotax
HFO - 1% S)	48.4%	51.6%	0.0%	0.0%
Gas Oil				
0 - 153000 l	22.9%	7.0%	2.9%	67.2 %
> 153000 l	69.9%	21.3%	8.9%	0.0%
LPG				
0 - 119000 kg	0.0%	9.5%	0.0%	90.5%
> 119000 kg	0.0%	100.0%	0.0%	0.0%
Natural gas				
0 - 5000 m ³	0.0%	7.9%	0.0%	92.1%
5001 - 170000 m ³	0.0%	15.5%	0.0%	84.5%
170001 - 1000000 m ³	0.0%	49.8%	0.0%	50.2%
1000001 - 10000000 m ³	0.0%	100.0%	0.0%	0.0%
> 10000000 m ³	0.0%	100.0%	0.0%	0.0%
Coal	0.0%	100.0%	0.0%	0.0%
Electricity				
0 - 10000 kWh	0.0%	0.0%	0.0%	100.0%
10001 - 50000 kWh	0.0%	0.0%	0.0%	100.0%
50001 - 10000000 kWh	0.0%	0.0%	0.0%	100.0%
> 10000000 kWh	0.0%	0.0%	0.0%	0.0%

- Different energy taxes for different end-use sectors

Generally spoken there are no different energy taxes for different end-use sectors except for green house horticulture, power- and co-generation.

Natural gas for horticultural use was exempted from the Ecotax up to the end of 1999. Starting from January 1st 2000 the Government also introduced an Ecotax for this sector, but it is much lower than the normal rates. For 2003 the rates are the same as for 2002; see table below:

Natural gas for Horticulture use	Ecotax in Euro/m3
0 - 5000 m ³	0,00165
5001 - 170000 m ³	0,00077
170001 - 1000000 m ³	0,00014
>1000000 m ³	0,00000

Energy used for power- and co-generation is exempted from environmental levy. The energy used is also not taxed with ecotax because the produced kWh's are taxed.

The environmental levy for natural gas is based on used quantity. For consumption's up to 10,000,000 m³ per year the environmental levy is 0.01100 Euro per m³. For the consumption above 10,000,000 m³ the environmental levy is 0.0073 Euro per m³.

- **Description of the VAT-regime; fiscality-regime**

The general VAT-rate for energy is 19%. For horticultural uses the VAT-rate is 6%. In The Netherlands the VAT is recoverable for all the business community.

The fiscality applied on undertakings in the energy sector has no impact on energy prices.

- **Taxes directly linked to pollution**

Energy taxes are not directly linked to pollution.

There is no tax premium for natural gas.

Renewable energy sources are not taxed in The Netherlands.

- **Tax system fair to natural gas/Tax revenues for the promotion of natural gas**

In The Netherlands nearly all energy users are connected to the gas grid so it is of no need to promote natural gas. The tax system also does not really encourages the use of other energy sources.

- **Changes in taxes since 1 January 1995**

Since 1995 the Ecotax has been introduced in The Netherlands and this tax is now the largest part of the total tax on energy. Starting form 1999 the ecotax and environmental levy will yearly (at least) be corrected for the inflation rate.

At January 1st 2001 the Ecotax system on natural gas and electricity changed. Up to the end of 2000 there was a (first) free part of 800 m³ and 800 kWh's per customer/connection per year. At January 1st 2001 these free parts were cancelled and have been replaced by an annual refund of Euro 142.-- per

connection per year. This (fixed) refund has no link with the annual consumption of a customer.

The VAT rate for 2001 went up from 17.5% to 19.0% (January 1st).

At April 1st 2001 the storage tax on HFO has been abolished. This tax for HFO was not a real legal tax, but a tax paid on a voluntary base by the HFO-users.

- **Changes in taxes foreseen in the near future**

For 1st January 2004 the Government has plans to increase the ecotax for all energy sources. If the increase will take place they will have no effect on the market position of natural gas.

UNITED KINGDOM

Excise duties are levied on HFO and gas oil. The duties apply uniformly to all market sectors.

VAT is levied at 5% on supplies of fuel and power sold for domestic use, for charity non-business use, and on small quantities not exceeding prescribed de minimis limits. All other supplies of fuel and power are subject to VAT at 17.5%. In practice most VAT charged in the commercial and industrial sectors can be reclaimed. VAT is levied on top of the duty and the Climate Change Levy.

It is widely accepted that the measure to introduce, as from 1 April 1994, VAT on domestic fuel was taken primarily to raise revenue although the Government did state that higher taxes discourage consumption and were therefore environmentally desirable.

As part of its commitment under Kyoto, the UK introduced a new environmental measure, Climate Change Levy ("CCL"), with effect from 1st April 2001. CCL is chargeable on the industrial and commercial use of certain taxable commodities for lighting, heating and power purposes at the rates overleaf, and is charged to consumers in the following sectors: Industry, Commerce, Agriculture, Public Administration and Other Services. Taxable commodities are Electricity, Natural Gas (as supplied by a gas utility), Petroleum and Hydrocarbon gas in a liquid state, Coke, and semi-coke of coal or lignite, and Petroleum Coke. CCL is a single-stage tax and is non-recoverable by the consumer/user.

CCL does not apply to the domestic use of energy (or on other supplies qualifying for the reduced rate of VAT). In addition, electricity produced in good quality heat and power plants as well as that generated from 'new' forms of renewable sources such as wind and power is exempt from CCL. Certain other types of supplies, such as supplies not used as fuel and supplies used to produce taxable commodities other than electricity are also exempt from CCL. Wholesale supplies fall outside the scope of the levy.

Energy intensive sectors, which have concluded climate change agreements that meet the Government's criteria, are subject to a reduced rate of CCL. This rate is equivalent to 20 per cent of the standard rate (rates shown below). A rate of 50% of the standard rate is also chargeable on certain supplies to eligible horticultural producers.

In order to ensure that domestic consumption of energy is not subject to CCL, the levy is imposed at the time of supply to commercial and industrial consumers.

CCL was designed to be revenue neutral, and, on introduction, was offset by a reduction in employer national insurance contributions. Since its introduction, however, increases to both employer and employee national insurance contributions have been announced (2002 Budget).

Taxable Commodity Supplied	Rate at which levy payable if supply is not a reduced-rate-supply
Electricity	£0.0043 per KWh
Gas supplied by a gas utility or any gas supplied in a gaseous state that is of a kind supplied by a gas utility	£0.0015 per kWh
Any petroleum gas or other gaseous hydrocarbon, supplied in a liquid state	£0.0096 per kilogram
Any other taxable commodity	£0.0117 per kilogram

The rate applied to coal is the same as for gas. This is seen as being anti-competitive given the environmental differences between the two sources of fuel. Natural gas is coming under pressure, although there are no imminent changes expected.

UK oil and gas production is subject to Petroleum Revenue Tax ("PRT") of 50% and ring fence corporation tax ("CT") of 40%. PRT is deductible in computing PRT. There are special rules regarding the valuation of non-arm's length sales.

EURO Rates used in the Energy Taxation Survey

January 2003 monthly average

COUNTRY:	1 EURO =	National Currency Unit:
DENMARK	7,4324	DKK
SWEDEN	9,1733	SEK
SWITZERLAND	1,4621	CHF
UNITED KINGDOM	0,65711	GBP