

# Annex J

## Heat reconciliation

### Introduction

J.1 Heat sold has been separately identified in the energy balances since 1999. It is defined as heat that is produced and sold under the provision of a contract. The introduction of heat sold into the energy and commodity balances did not affect the individual fuel totals, since the energy used to generate the heat has been deducted from the final consumption section of the energy balances and transferred to the transformation section. The tables show the detailed analysis of the heat generation row of the main energy balances, by sector generating the heat.

### Methodology

J.2 The heat data are derived from two sources covering CHP plants and heating schemes without CHP plants. Data for heat sold are supplied by CHP plants to the Combined Heat and Power Quality Assurance Programme and are processed by AEA. Data for heat consumption from other heating schemes were derived from the Building Research Establishment's "National Survey of Community Heating" that was carried out in 1997, a database of community heating schemes in social housing in 2000, and Community Heating Sales Surveys undertaken between 2003 and 2005. The estimates from these sources have been used to derive heat sold figures since 1999; it is recommended that the figures should be treated as indicative of the amount of heat sold.

J.3 To make the heat sold information more transparent, data on the quantity of fuel by consuming sector used to produce heat that is subsequently sold are being made available in the tables that accompany this annex. When producing the energy and commodity balances the quantities of fuel shown in the tables have been deducted from the final consumption section and moved to the transformation section.

Contact: *Julian Prime*  
[julian.prime@decc.gsi.gov.uk](mailto:julian.prime@decc.gsi.gov.uk)  
0300 068 5054

## J.1 Heat sold reallocation 2011

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste and biomass
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-477	-418	-179	-23,672	-52	-5	-5	-84
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	1,483	-	-	5	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	0	-	-
Non-ferrous metals	17	-	-	213	1	0	-	-
Mineral products	-	-	-	237	4	0	-	-
Chemicals	282	-	-	6,980	20	0	-	32
Mechanical engineering etc	1	-	-	234	2	0	-	-
Electrical engineering etc	0	-	-	61	1	0	-	-
Vehicles	7	-	-	474	3	0	-	-
Food, beverages etc	24	-	-	1,324	8	0	-	-
Textiles, leather etc	3	-	-	159	2	0	-	-
Paper, printing etc	7	-	-	1,465	4	0	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	0	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,227	-	0	-	11
Commercial	2	-	-	4,165	-	0	-	41
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2010

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste and biomass
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-477	-418	-179	-23,707	-52	-5	-5	-41
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	1,483	-	-	5	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	0	-	-
Non-ferrous metals	17	-	-	213	1	0	-	-
Mineral products	-	-	-	237	4	0	-	-
Chemicals	284	-	-	6,935	20	0	-	32
Mechanical engineering etc	1	-	-	234	2	0	-	-
Electrical engineering etc	0	-	-	61	1	0	-	-
Vehicles	7	-	-	474	3	0	-	-
Food, beverages etc	24	-	-	1,317	8	0	-	-
Textiles, leather etc	3	-	-	159	2	0	-	-
Paper, printing etc	7	-	-	1,461	4	0	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	0	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,296	-	0	-	2
Commercial	-	-	-	4,186	-	1	-	7
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2009

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste and biomass
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-482	-418	-179	-22,758	-52	-5	-5	-79
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	1,400	-	-	5	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	0	-	-
Non-ferrous metals	17	-	-	213	1	0	-	-
Mineral products	-	-	-	237	4	0	-	-
Chemicals	287	-	-	5,991	20	0	-	31
Mechanical engineering etc	1	-	-	274	2	0	-	-
Electrical engineering etc	0	-	-	61	1	0	-	-
Vehicles	7	-	-	474	3	0	-	-
Food, beverages etc	24	-	-	1,320	8	0	-	-
Textiles, leather etc	3	-	-	159	2	0	-	-
Paper, printing etc	7	-	-	1,441	4	0	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	0	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,456	-	0	-	11
Commercial	2	-	-	4,080	-	0	-	36
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2008

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-503	-418	-179	-25,426	-52	-5	-5	-49
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	804	-	-	5	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	0	-	-
Non-ferrous metals	17	-	-	213	1	0	-	-
Mineral products	-	-	-	237	4	0	-	-
Chemicals	309	-	-	9,159	20	0	-	31
Mechanical engineering etc	1	-	-	285	2	0	-	1
Electrical engineering etc	0	-	-	61	1	0	-	-
Vehicles	7	-	-	474	3	0	-	-
Food, beverages etc	24	-	-	1,400	8	0	-	-
Textiles, leather etc	3	-	-	159	2	0	-	-
Paper, printing etc	7	-	-	1,464	4	0	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	0	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,327	-	0	-	2
Commercial	3	-	-	4,190	-	0	-	14
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2007

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-485	-418	-179	-23,640	-53	-5	-4	-48
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	783	-	-	4	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	31
Iron and steel	-	357	179	395	4	-	-	-
Non-ferrous metals	17	-	-	213	1	-	-	-
Mineral products	-	-	-	237	4	-	-	-
Chemicals	294	-	-	7,485	20	-	-	-
Mechanical engineering etc	1	-	-	277	2	-	-	-
Electrical engineering etc	-	-	-	61	1	-	-	-
Vehicles	7	-	-	474	3	-	-	-
Food, beverages etc	24	-	-	1,329	8	-	-	-
Textiles, leather etc	3	-	-	159	2	-	-	-
Paper, printing etc	7	-	-	1,506	4	-	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	-	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,289	-	-	-	10
Commercial	-	-	-	4,175	-	1	-	6
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2006

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-457	-418	-179	-22,023	-53	-6	-4	-54
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	683	-	-	4	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	-	-	-
Non-ferrous metals	17	-	-	213	1	-	-	-
Mineral products	-	-	-	237	4	-	-	-
Chemicals	266	-	-	5,816	20	-	-	31
Mechanical engineering etc	1	-	-	234	2	-	-	5
Electrical engineering etc	-	-	-	61	1	-	-	-
Vehicles	7	-	-	474	3	-	-	-
Food, beverages etc	24	-	-	1,312	8	-	-	-
Textiles, leather etc	3	-	-	159	2	-	-	-
Paper, printing etc	7	-	-	1,744	4	-	-	-
Other industries	3	-	-	2,258	3	4	-	1
Construction	-	-	-	-	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,270	-	-	-	11
Commercial	-	-	-	4,167	-	1	-	5
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2005

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-459	-418	-179	-22,488	-52	-6	-39	-36
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	810	-	-	4	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	-	-	-
Non-ferrous metals	17	-	-	213	1	-	-	-
Mineral products	-	-	-	237	4	-	-	-
Chemicals	267	-	-	5,850	20	-	34	31
Mechanical engineering etc	1	-	-	246	2	-	-	5
Electrical engineering etc	-	-	-	61	1	-	-	-
Vehicles	7	-	-	474	3	-	-	-
Food, beverages etc	24	-	-	1,313	8	-	-	-
Textiles, leather etc	3	-	-	159	2	-	-	-
Paper, printing etc	7	-	-	1,960	4	-	-	-
Other industries	3	-	-	2,258	3	4	-	-
Construction	-	-	-	-	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,369	-	-	-	-
Commercial	-	-	-	4,145	-	1	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-



## J.1 Heat sold reallocation 2004

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-473	-418	-179	-21,844	-52	-16	-1	-39
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	162	-	-	1	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	62	-	-	-	-	-	-
Iron and steel	-	357	179	395	4	-	-	-
Non-ferrous metals	37	-	-	213	1	-	-	-
Mineral products	-	-	-	237	4	-	-	-
Chemicals	209	-	-	6,080	20	2	-	31
Mechanical engineering etc	1	-	-	269	2	-	-	-
Electrical engineering etc	-	-	-	61	1	-	-	-
Vehicles	7	-	-	474	3	-	-	-
Food, beverages etc	27	-	-	1,314	8	-	-	-
Textiles, leather etc	3	-	-	159	2	-	-	-
Paper, printing etc	17	-	-	1,813	4	-	-	-
Other industries	43	-	-	2,296	3	4	-	-
Construction	-	-	-	-	1	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	130	-	-	4,281	-	8	-	-
Commercial	-	-	-	4,090	-	1	-	7
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2003

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-622	-1,055	-299	-19,830	-133	-18	-1	-64
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	201	-	-	-	-	1	64
Iron and steel	-	854	299	132	7	-	-	-
Non-ferrous metals	58	-	-	-	-	-	-	-
Mineral products	-	-	-	-	-	-	-	-
Chemicals	306	-	-	3,757	14	-	-	-
Mechanical engineering etc	2	-	-	239	6	1	-	-
Electrical engineering etc	1	-	-	-	3	-	-	-
Vehicles	18	-	-	-	2	-	-	-
Food, beverages etc	22	-	-	735	22	1	-	-
Textiles, leather etc	1	-	-	-	-	-	-	-
Paper, printing etc	25	-	-	1,662	6	-	-	-
Other industries	48	-	-	2,380	33	9	-	-
Construction	-	-	-	-	-	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	141	-	-	5,713	34	4	-	-
Commercial	-	-	-	5,212	6	3	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2002

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-717	-1,486	-422	-22,009	-227	-23	-	-63
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	283	-	-	-	-	-	63
Iron and steel	-	1,203	422	185	11	-	-	-
Non-ferrous metals	81	-	-	-	-	-	-	-
Mineral products	-	-	-	-	-	-	-	-
Chemicals	299	-	-	4,817	23	1	-	-
Mechanical engineering etc	2	-	-	268	11	1	-	-
Electrical engineering etc	2	-	-	-	4	-	-	-
Vehicles	25	-	-	-	4	-	-	-
Food, beverages etc	29	-	-	1,035	38	1	-	-
Textiles, leather etc	2	-	-	-	-	-	-	-
Paper, printing etc	45	-	-	2,076	11	-	-	-
Other industries	68	-	-	2,576	57	12	-	-
Construction	-	-	-	-	-	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	163	-	-	6,017	57	5	-	-
Commercial	-	-	-	5,035	10	2	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2001

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-750	-1,875	-532	-23,586	-640	-31	-1	-72
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	357	-	-	-	-	1	72
Iron and steel	-	1,518	532	200	33	-	-	-
Non-ferrous metals	59	-	-	-	-	-	-	-
Mineral products	-	-	-	-	-	-	-	-
Chemicals	298	-	-	3,977	51	1	-	-
Mechanical engineering etc	3	-	-	365	31	2	-	-
Electrical engineering etc	1	-	-	-	12	-	-	-
Vehicles	17	-	-	-	11	-	-	-
Food, beverages etc	58	-	-	923	111	1	-	-
Textiles, leather etc	12	-	-	-	-	-	-	-
Paper, printing etc	44	-	-	1,838	31	-	-	-
Other industries	35	-	-	2,380	165	16	-	-
Construction	-	-	-	-	-	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	223	-	-	7,649	166	7	-	-
Commercial	-	-	-	6,253	29	4	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 2000

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-656	-1,810	-619	-24,891	-659	-33	-17	-95
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	141	-	-	-	-	17	95
Iron and steel	1	1,670	619	141	22	1	-	-
Non-ferrous metals	62	-	-	-	-	-	-	-
Mineral products	-	-	-	-	-	-	-	-
Chemicals	140	-	-	5,652	142	3	-	-
Mechanical engineering etc	5	-	-	211	21	2	-	-
Electrical engineering etc	1	-	-	-	14	-	-	-
Vehicles	34	-	-	-	11	-	-	-
Food, beverages etc	86	-	-	963	83	1	-	-
Textiles, leather etc	20	-	-	-	-	-	-	-
Paper, printing etc	44	-	-	2,525	27	-	-	-
Other industries	46	-	-	1,171	216	15	-	-
Construction	-	-	-	-	-	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	217	-	-	7,898	92	7	-	-
Commercial	-	-	-	6,330	30	3	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-

## J.1 Heat sold reallocation 1999

	ktonnes	GWh	GWh	GWh	ktonnes	ktonnes	ktonnes	ktoe
	Coal	Coke oven gas	Blast furnace gas	Natural gas	Fuel oil	Gas oil	Propane	Solid waste
<b>Supply</b>	-	-	-	-	-	-	-	-
Indigenous production	-	-	-	-	-	-	-	-
Imports	-	-	-	-	-	-	-	-
Exports	-	-	-	-	-	-	-	-
Marine bunkers	-	-	-	-	-	-	-	-
Stock change	-	-	-	-	-	-	-	-
<b>Primary supply</b>	-	-	-	-	-	-	-	-
<b>Statistical difference</b>	-	-	-	-	-	-	-	-
<b>Primary demand</b>	-	-	-	-	-	-	-	-
Transfers	-	-	-	-	-	-	-	-
<b>Transformation</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Major power producers	-	-	-	-	-	-	-	-
Autogenerators	-	-	-	-	-	-	-	-
Heat generation	-649	-1,749	-1,109	-26,185	-657	-33	-16	-104
Petroleum refineries	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Energy industry use</b>	-	-	-	-	-	-	-	-
Electricity generation	-	-	-	-	-	-	-	-
Oil and gas extraction	-	-	-	-	-	-	-	-
Petroleum refineries	-	-	-	-	-	-	-	-
Coal extraction	-	-	-	-	-	-	-	-
Coke manufacture	-	-	-	-	-	-	-	-
Blast furnaces	-	-	-	-	-	-	-	-
Patent fuel manufacture	-	-	-	-	-	-	-	-
Pumped storage	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
<b>Losses</b>	-	-	-	-	-	-	-	-
<b>Final consumption</b>	-	-	-	-	-	-	-	-
<b>Industry</b>	-	-	-	-	-	-	-	-
Unclassified	-	53	-	-	-	-	16	104
Iron and steel	5	1,696	1,109	142	31	-	-	-
Non-ferrous metals	10	-	-	-	-	-	-	-
Mineral products	-	-	-	-	-	-	-	-
Chemicals	297	-	-	4,488	98	3	-	-
Mechanical engineering etc	9	-	-	65	29	2	-	-
Electrical engineering etc	3	-	-	-	10	-	-	-
Vehicles	29	-	-	-	16	-	-	-
Food, beverages etc	85	-	-	1,000	104	1	-	-
Textiles, leather etc	21	-	-	-	-	-	-	-
Paper, printing etc	45	-	-	3,500	34	-	-	-
Other industries	4	-	-	988	149	16	-	-
Construction	-	-	-	-	-	-	-	-
<b>Transport</b>	-	-	-	-	-	-	-	-
Air	-	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-	-
Road	-	-	-	-	-	-	-	-
National navigation	-	-	-	-	-	-	-	-
Pipelines	-	-	-	-	-	-	-	-
<b>Other</b>	-	-	-	-	-	-	-	-
Domestic	-	-	-	-	-	-	-	-
Public administration	142	-	-	8,903	155	7	-	-
Commercial	-	-	-	7,100	32	4	-	-
Agriculture	-	-	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-
<b>Non energy use</b>	-	-	-	-	-	-	-	-