FuelsEurope

REFINING PRODUCTS FOR OUR EVERYDAY LIFE

STATISTICAL REPORT
2014

Editor: Chris Beddoes

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Foreword

On the 1st June 2014, Europia changed its name to FuelsEurope.

2014 brings a new 5 year cycle of EU institutions with Parliamentary elections and new Commissioners being chosen; it is also the 25th anniversary of the formation of Europia. Our members decided that this is an appropriate time to refresh its identity and have chosen the name FuelsEurope to continue development of advocacy for European refining.

Welcome to the FuelsEurope's Statistical Report 2014 published for the first time as a stand-alone report. While the statistics were originally included in EUROPIA's Annual Reports, the 2014 Statistical Report follows the same structure thus ensuring a consistent historical overview for our readers.

The Report aims at providing high-quality data on energy markets in general but also on refining industry specific issues.

Selected charts give our readers a broad overview of energy and environment related data and trends over recent years.

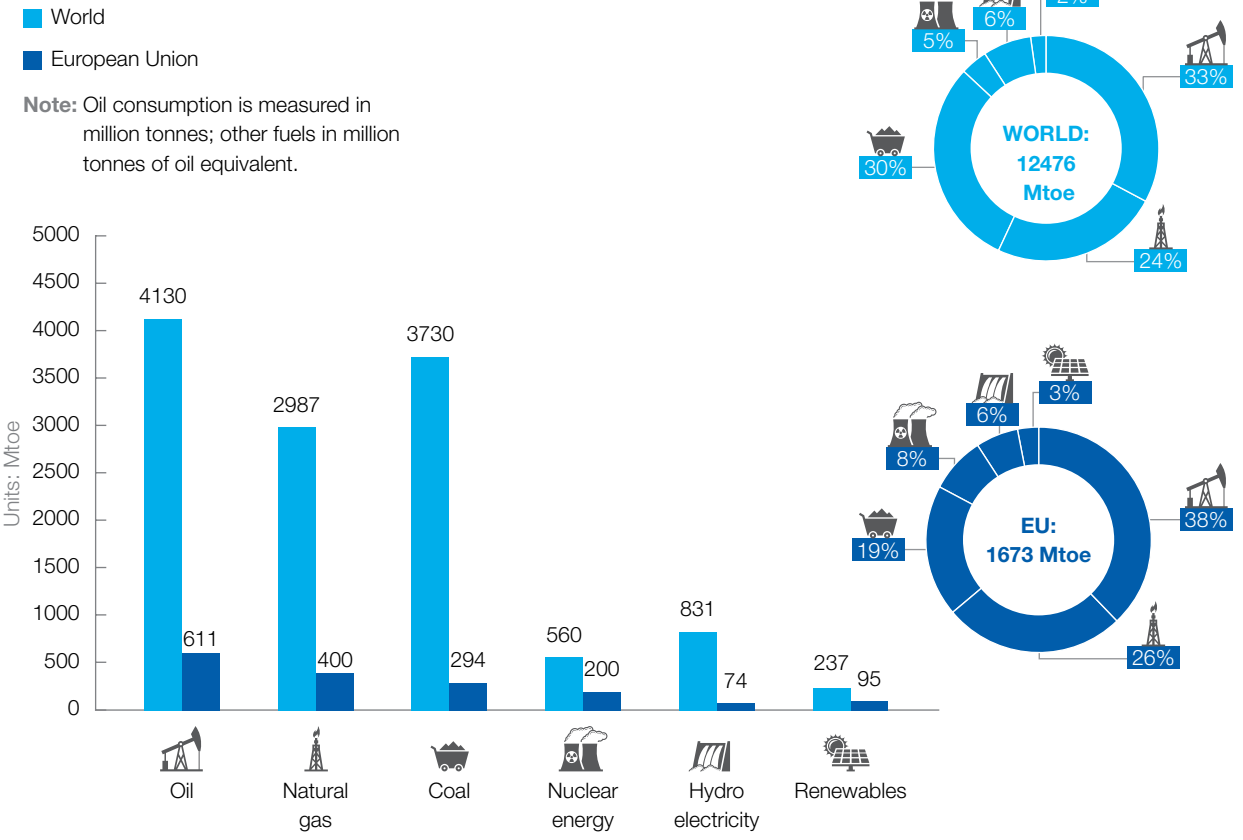
FuelsEurope Statistical Report 2014 uses the following colour coding to help you navigate easily through the document. Each colour corresponds to a specific oil-related theme making browsing between subsections user-friendly.

- **Oil & Energy**
- **Oil Products**
- **Prices and Margins**
- **Refining**
- **Marketing infrastructures**

Chris Beddoes
Director General

FIG.1 WORLDWIDE ENERGY CONSUMPTION BY FUEL TYPE IN 2012

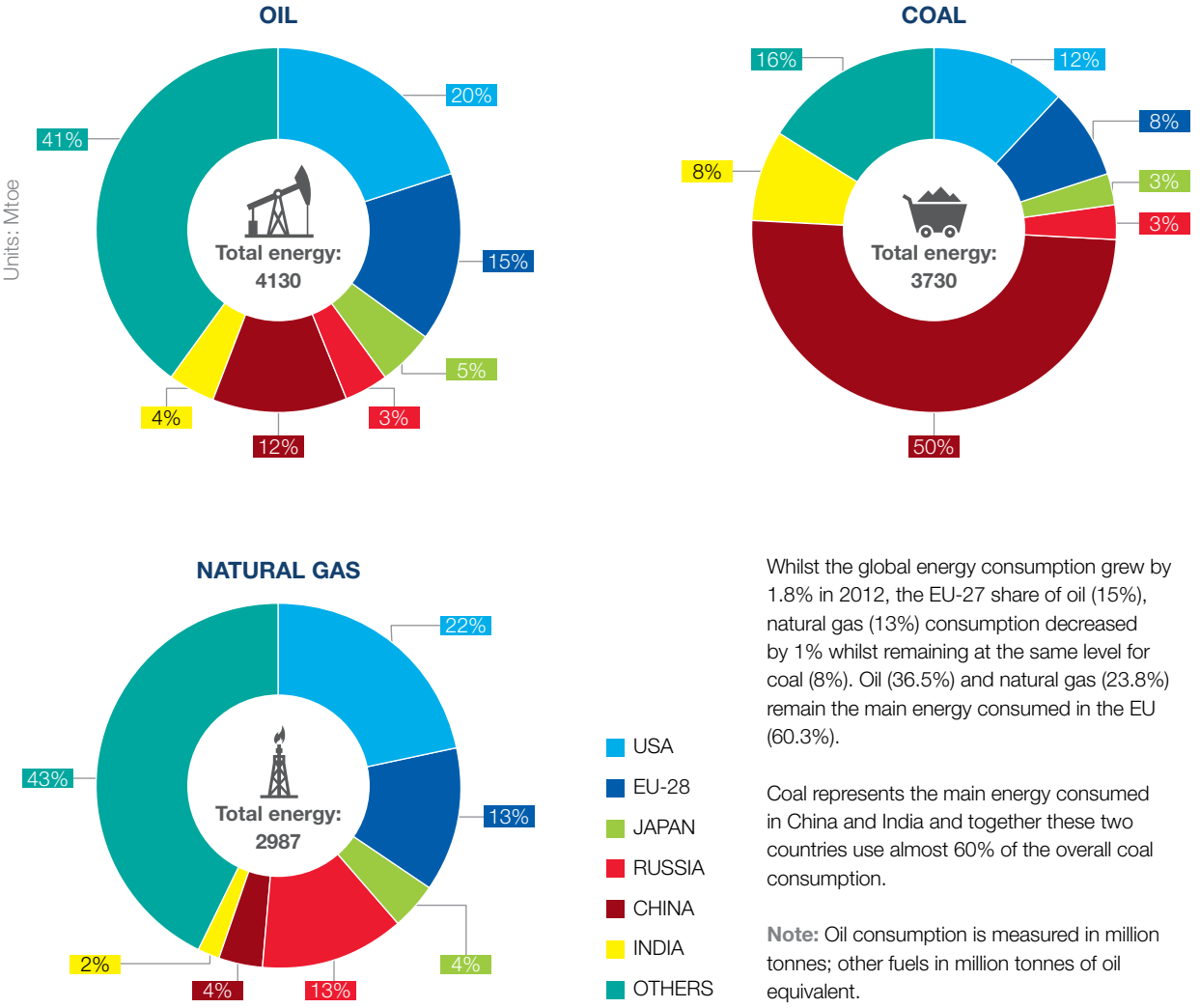
Source: BP Statistical Review of World Energy 2013



Oil, natural gas and coal currently meet the world's energy needs (together 86.8%). The overall share for renewables remains very small (8.5%). The EU, unlike other major economies, has a higher share of nuclear (11.9%) and renewables (10%) in its energy mix.

FIG.2 WORLDWIDE ENERGY CONSUMPTION BY REGION IN 2012

Source: BP Statistical Review of World Energy 2013



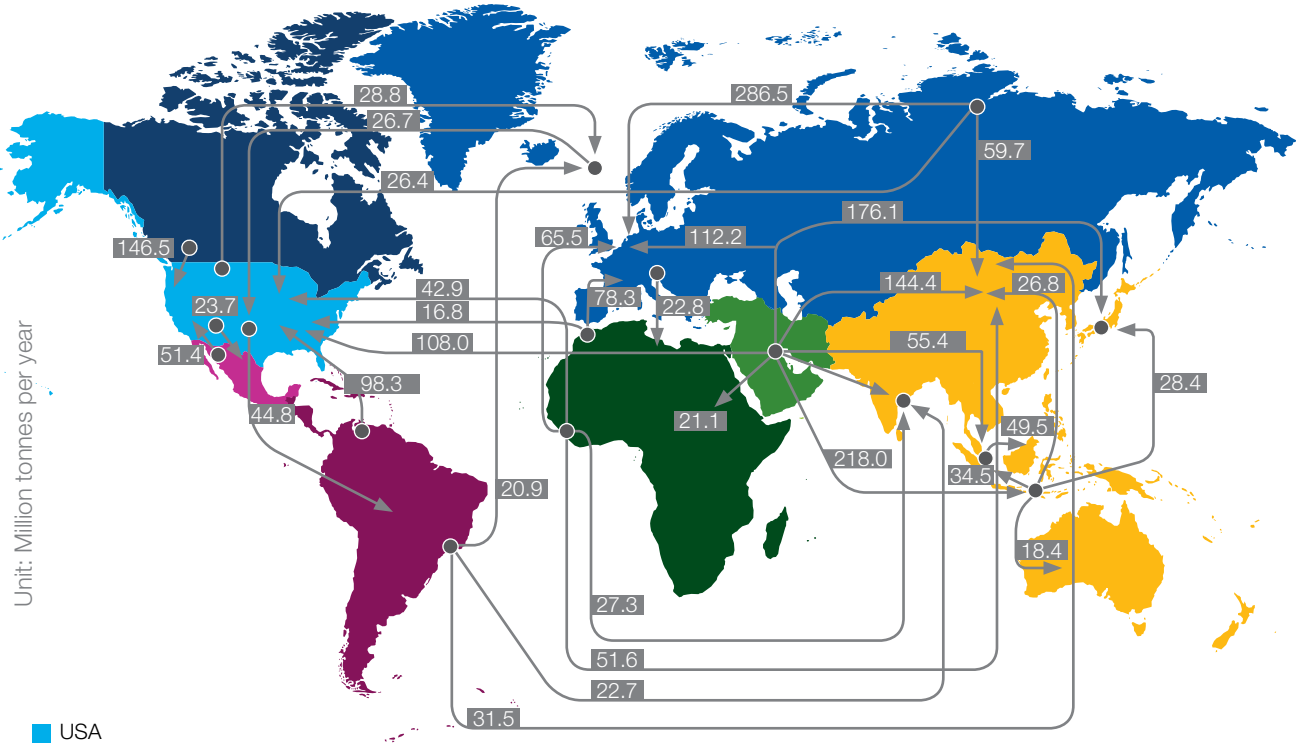
Whilst the global energy consumption grew by 1.8% in 2012, the EU-27 share of oil (15%), natural gas (13%) consumption decreased by 1% whilst remaining at the same level for coal (8%). Oil (36.5%) and natural gas (23.8%) remain the main energy consumed in the EU (60.3%).

Coal represents the main energy consumed in China and India and together these two countries use almost 60% of the overall coal consumption.

Note: Oil consumption is measured in million tonnes; other fuels in million tonnes of oil equivalent.

FIG.3 WORLDWIDE CRUDE OIL MOVEMENT IN 2012

Source: BP Statistical Review of World Energy 2013

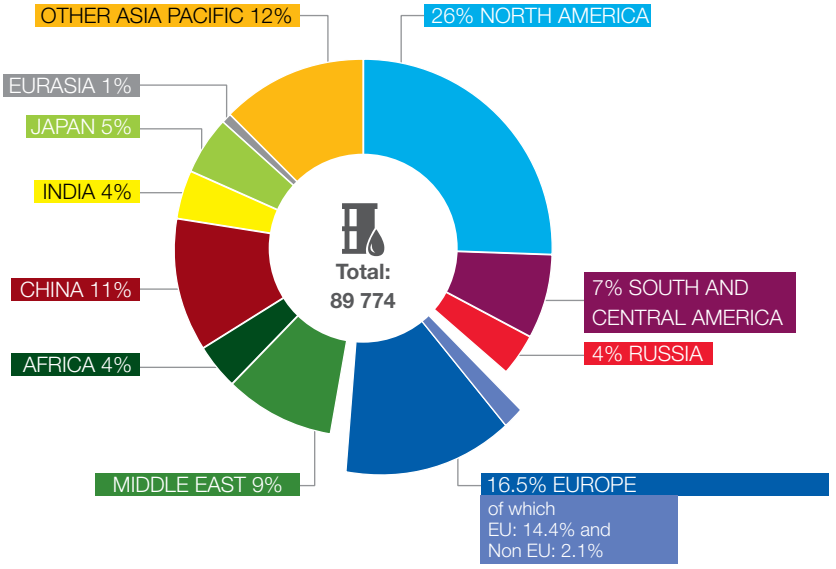


Crude oil is an internationally traded commodity with flows moving all over the world.

There are two open and transparent markets – crude oil and refined products- within which the European refining industry operates. The products are freely traded.

FIG.4 WORLDWIDE REFINED PRODUCT DEMAND AVERAGED 89.77 MILLION BARRELS PER DAY IN 2012, WITH EUROPE ACCOUNTING FOR 17%

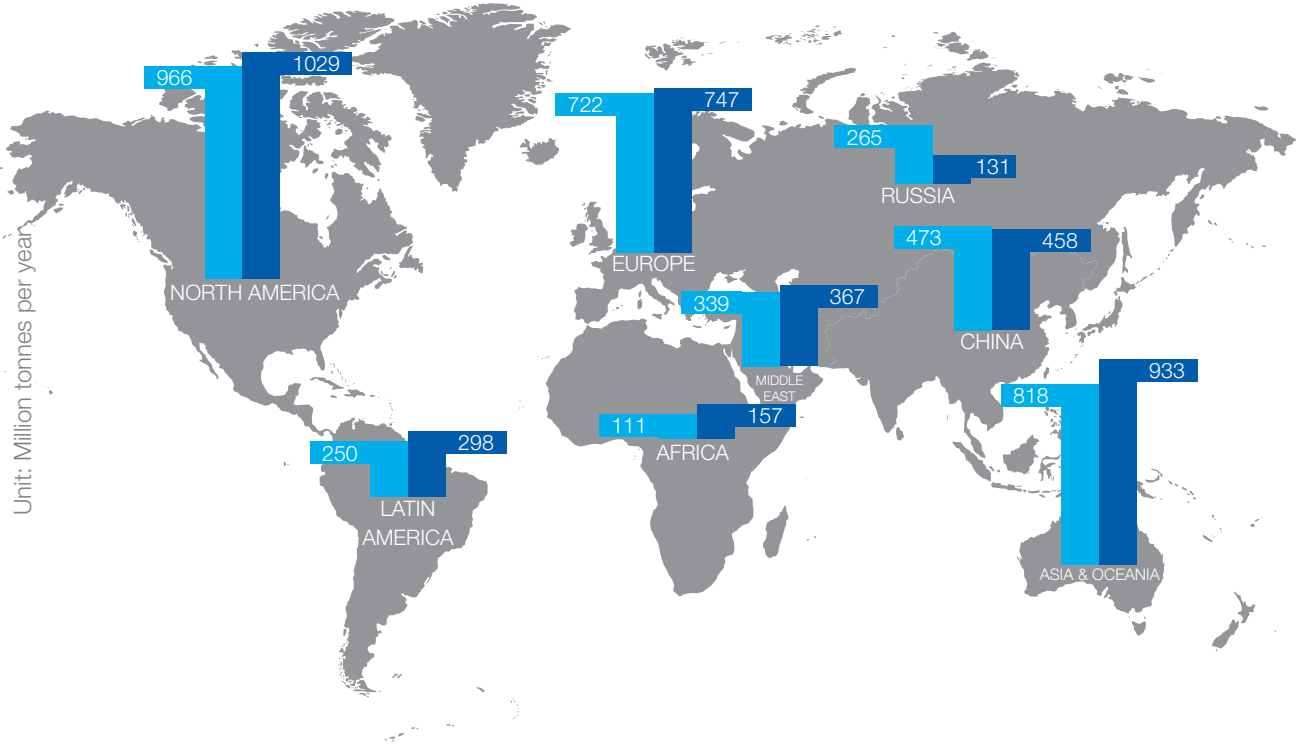
Source: BP Statistical Review of World Energy 2013



Global demand for oil refined products continues to grow from 86.9 million barrels per day in 2011 to 89.77 in 2012. Although the European market is declining it still remains the second largest in the world (17%) behind North-America (27%), but with China, Middle East and Asia catching rapidly.

FIG.5 WORLDWIDE REFINING SUPPLY/MARKET DEMAND BALANCES IN 2012

Source: Wood Mackenzie

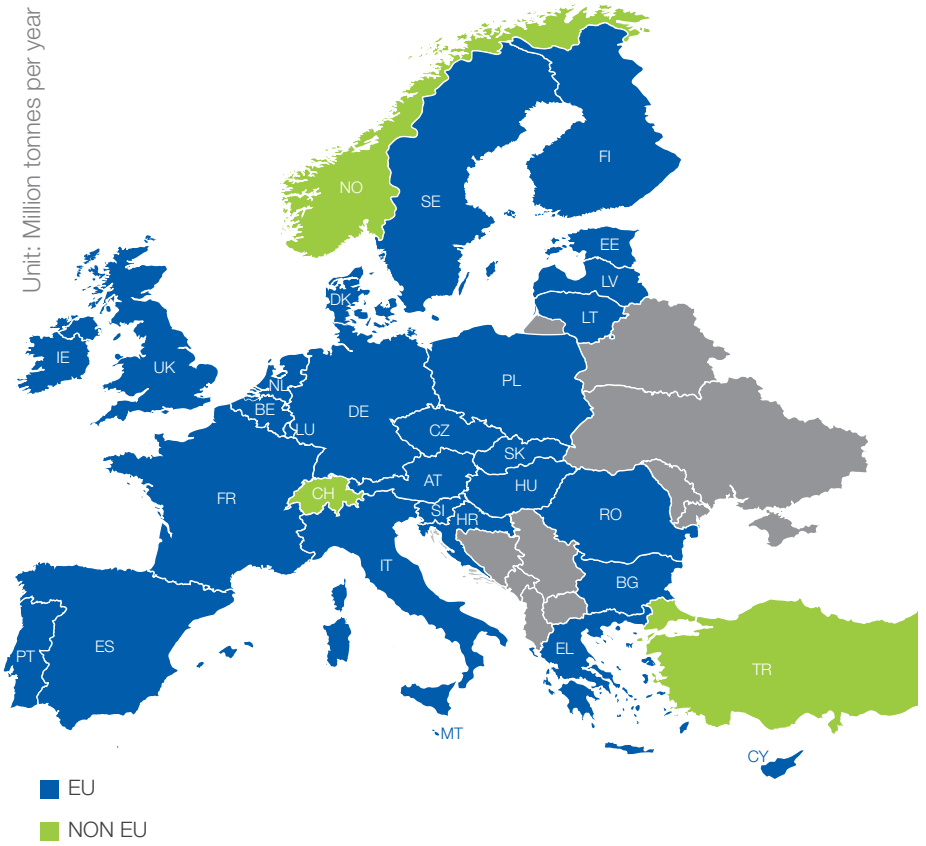


The refining supply/market demand balance shows that most of the regions are dependent on imports to meet market demand. Russia and at a lesser extent China has a positive trade balance which provides Russia in particular a key role in supplying demand from other regions.

Apparently balanced product demand and refinery throughput in the EU hide a large surplus of EU gasoline production and a shortage of diesel and jet production.

FIG.6 EU TOTAL OIL DEMAND AMOUNTED TO 631 MILLION TONNES IN 2013

Source: Wood Mackenzie



EU-27 total oil amounted to 631 MT for 2013, representing a decrease of 3.4% compared to 2012.

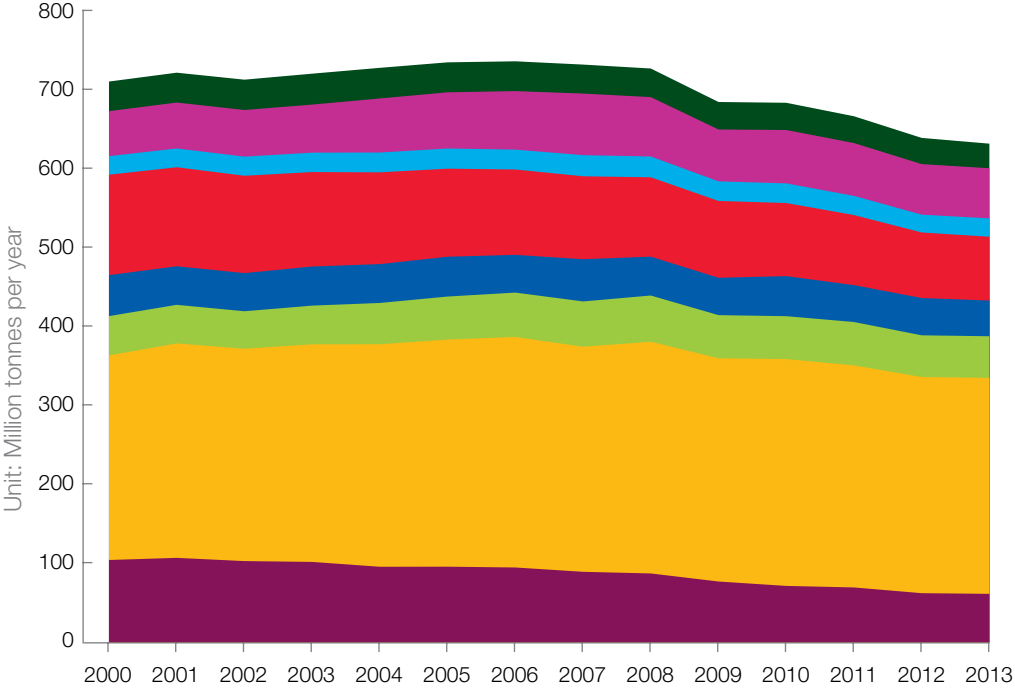
While the bigger Member States such as Germany (-3.3%), France (-3.7%), UK (-4%) witnessed a decrease close to the European average, the Member States hit by the Eurozone crisis recorded a more significant decrease – Greece (-6,7%); Portugal (-9.6%); Italy (-7.1%); Spain (-4.9%).

TOTAL OIL DEMAND

	COUNTRY	Mt/y
AT	Austria	12.301
BE	Belgium	29.794
BG	Bulgaria	4.225
HR	Croatia	3.531
CY	Cyprus	2.809
CZ	Czech Republic	9.443
DK	Denmark	7.596
EE	Estonia	1.388
FI	Finland	9.427
FR	France	82.075
DE	Germany	116.978
EL	Greece	15.237
HU	Hungary	6.391
IE	Ireland	6.483
IT	Italy	64.913
LV	Latvia	1.835
LT	Lithuania	2.633
LU	Luxembourg	2.895
MT	Malta	2.435
NL	Netherlands	48.619
PL	Poland	25.881
PT	Portugal	11.191
RO	Romania	9.149
SK	Slovakia	4.136
SI	Slovenia	2.532
ES	Spain	63.275
SE	Sweden	14.166
UK	United Kingdom	70.369
	EU total	**631.706**
NO	Norway	10.770
CH	Switzerland	12.312
TR	Turkey	34.500
	Total NO+CH+TR	**57.583**
	TOTAL	**689.289**

FIG.7 DEMAND HISTORY OF OIL PRODUCTS IN THE EU

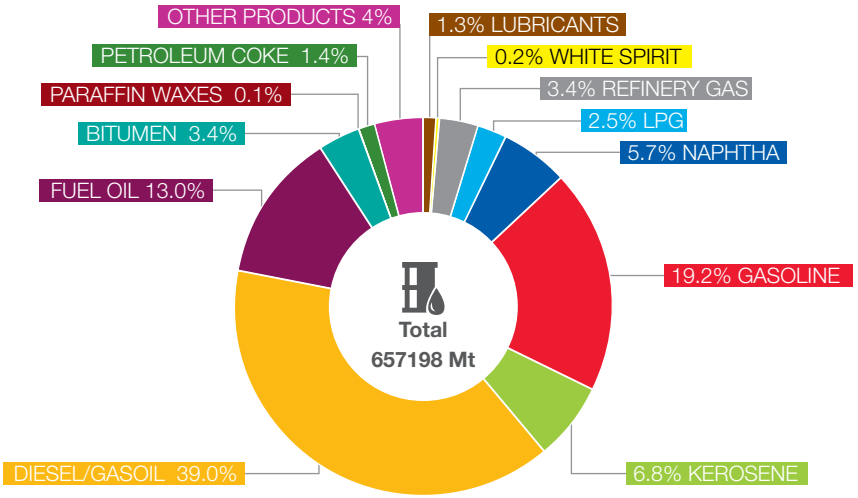
Source: Wood Mackenzie



Since 2008, we can observe a downward trend for oil products demand. Over the past 5 years, the overall demand has declined by 13%. The downward trend is mainly driven by the decrease in gasoline (-20%) whilst middle distillates, gasoil and kerosene, only decreased by 7%.

FIG.8 TYPICAL REFINERY OUTPUT BY PRODUCT TYPE IN 2013

Source: OECD

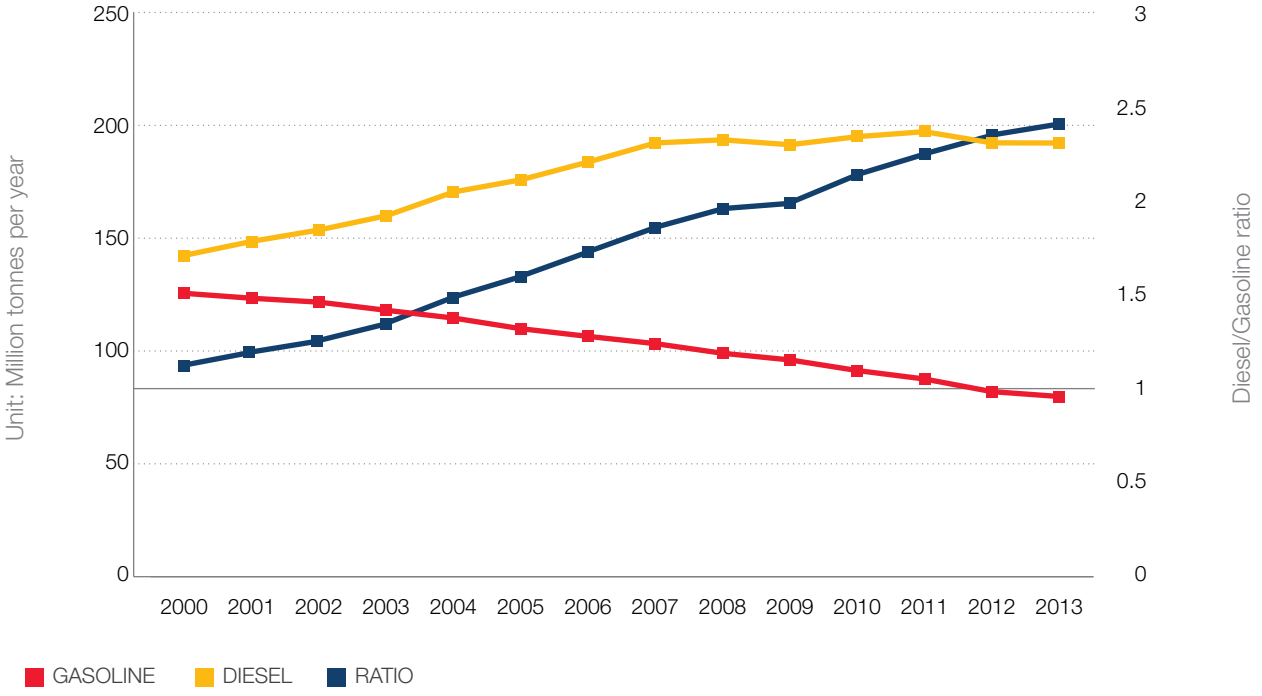


A wide range of products are produced from crude oil, ranging from transportation and industrial fuels to chemical feedstock. EU refineries produce also many specialty products such as bitumen for road construction and roofing, lubricants for transport and industry, petroleum coke for the metal industry and waxes, solvents and other specialised products.

Fuels for transport represent the biggest share of the production.

FIG.9 ROAD FUEL DEMAND IN THE EU IN 2013

Source: Wood Mackenzie

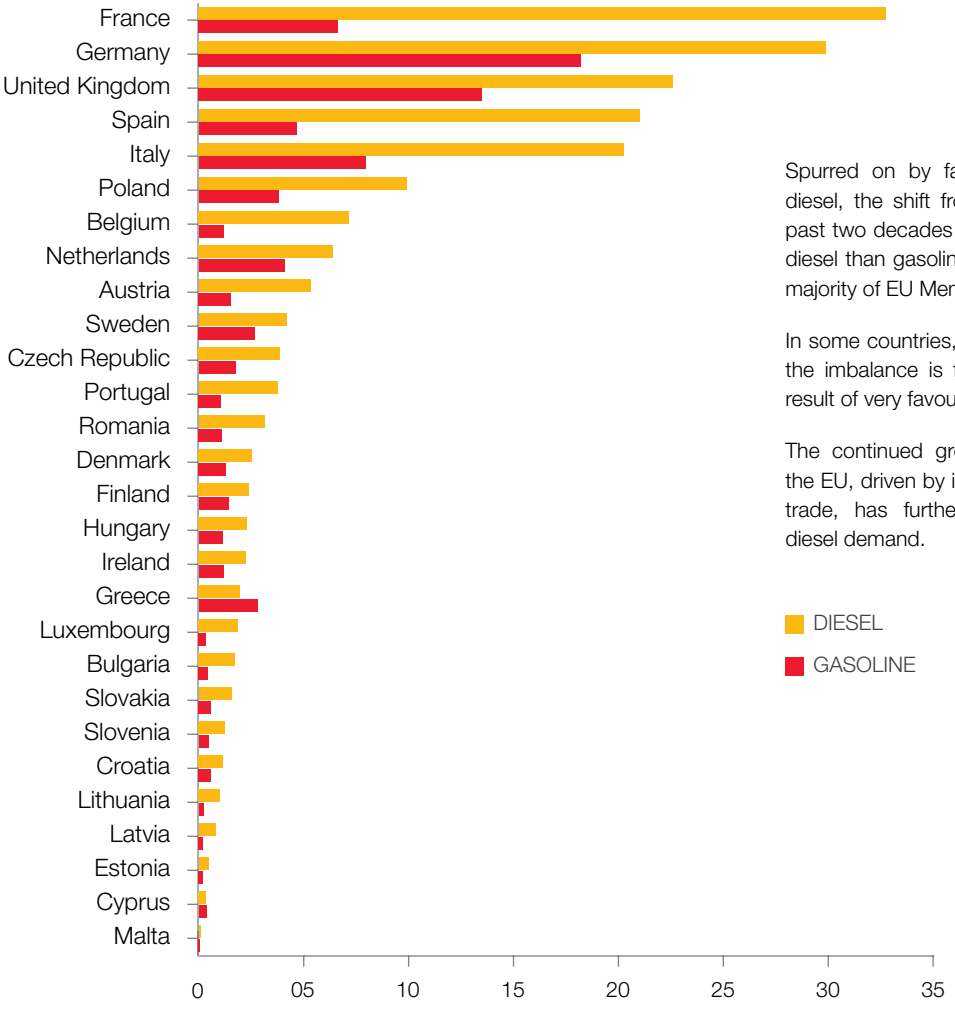


The tax incentivized dieselisation trend has significantly contributed to a fundamental change in the EU road fuel demand structure. The shift from gasoline to diesel began some 25 years ago and led to major gasoline demand decline as well as a shortage of diesel production in the EU.

Gasoline demand continue to decline while diesel demand is on the rise, currently reaching a 2.4 demand ratio in 2013.

FIG.10 ROAD FUEL DEMAND BY COUNTRY IN 2013

Source: Wood Mackenzie



Unit: Million tonnes per year

Spurred on by favourable excise taxes on diesel, the shift from gasoline to diesel over past two decades led to a higher demand for diesel than gasoline as a road fuel in the vast majority of EU Member States.

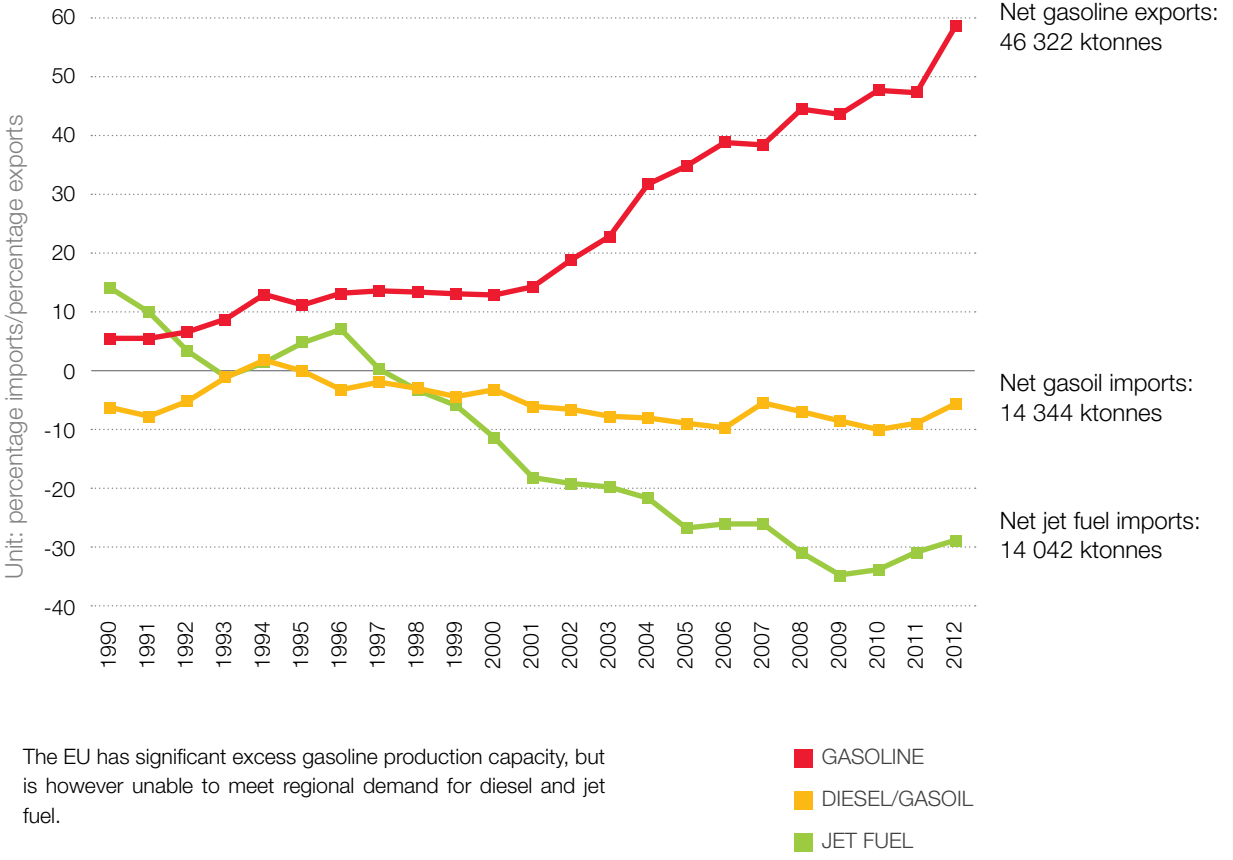
In some countries, such as France and Spain the imbalance is far more pronounced as a result of very favourable tax policies for diesel.

The continued growth in truck transport in the EU, driven by internal market and external trade, has further contributed to spurring diesel demand.

FIG.11 NET TRADE FLOWS FOR REFINED PRODUCTS

DEMONSTRATES THE TREND OF GROWING GASOLINE SURPLUS AND GASOIL/DIESEL/JET DEFICITS

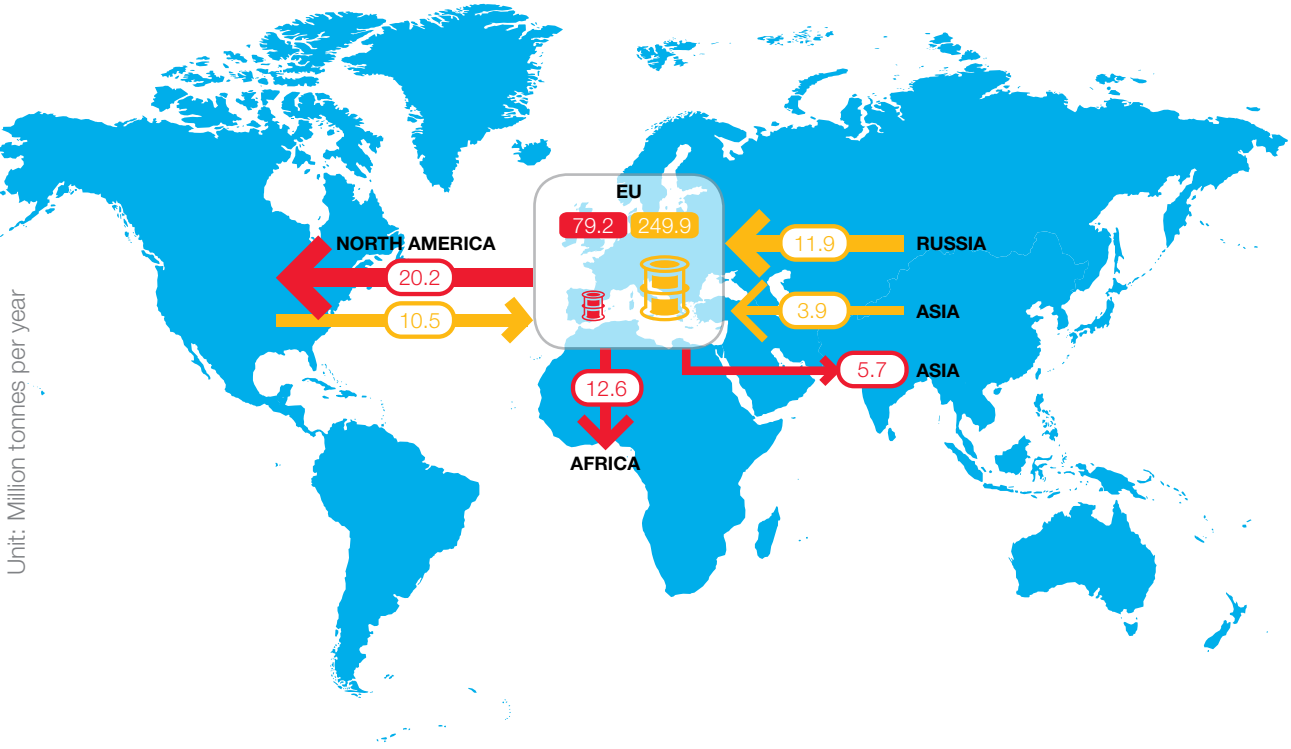
Source: Eurostat



The EU has significant excess gasoline production capacity, but is however unable to meet regional demand for diesel and jet fuel.

FIG.12 MAJOR GASOLINE AND DIESEL TRADE FLOWS TO AND FROM THE EU IN 2012

Source: Eurostat



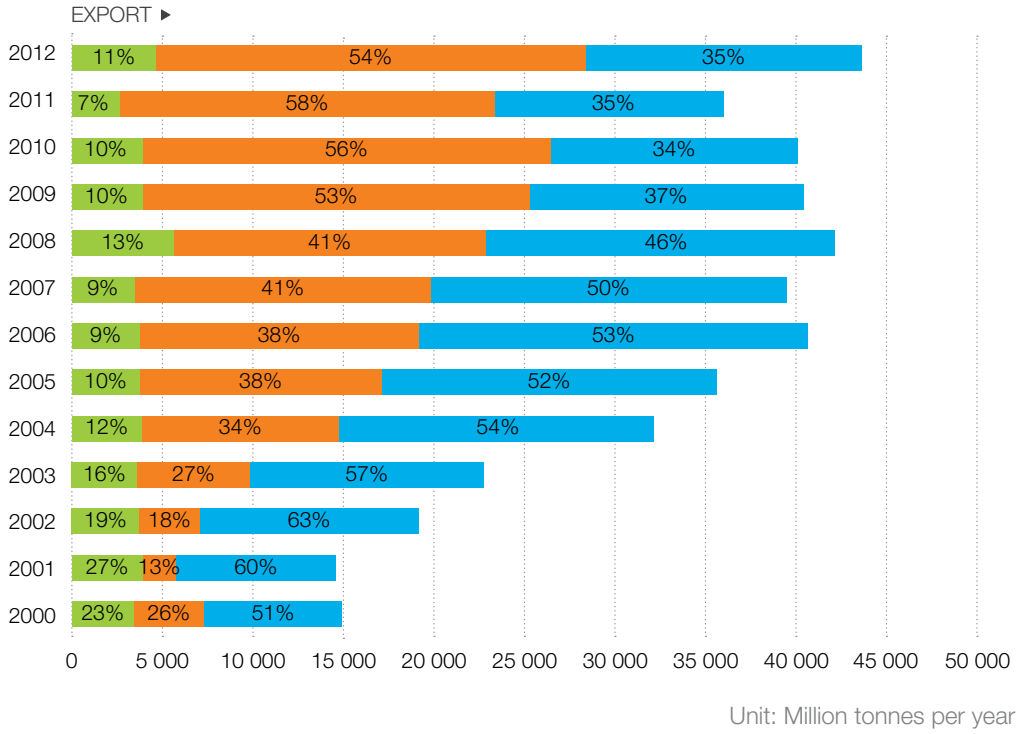
As a result of the gasoline/diesel imbalance demand Europe has significant excess gasoline production capacity that need to be exported, while to meet regional demand for diesel and jet fuel, Europe became heavily reliant on other countries for import, especially from Russia, Middle East & USA.

North America was the traditional market for exporting gasoline surplus but the recent shale oil revolution, cheap energy and reducing demand have enabled US refiners to increase their supplies for the internal market and to compete on other export markets with EU refiners.

- GASOLINE DEMAND IN 2012
- DIESEL/GASOIL DEMAND IN 2012
- GASOLINE TRADE FLOWS IN 2012
- DIESEL/GASOIL TRADE FLOWS IN 2012

FIG.13 EU GASOLINE TRADING BALANCE: USA IS A KEY EXPORT MARKET FOR THE EU

Source: Eurostat



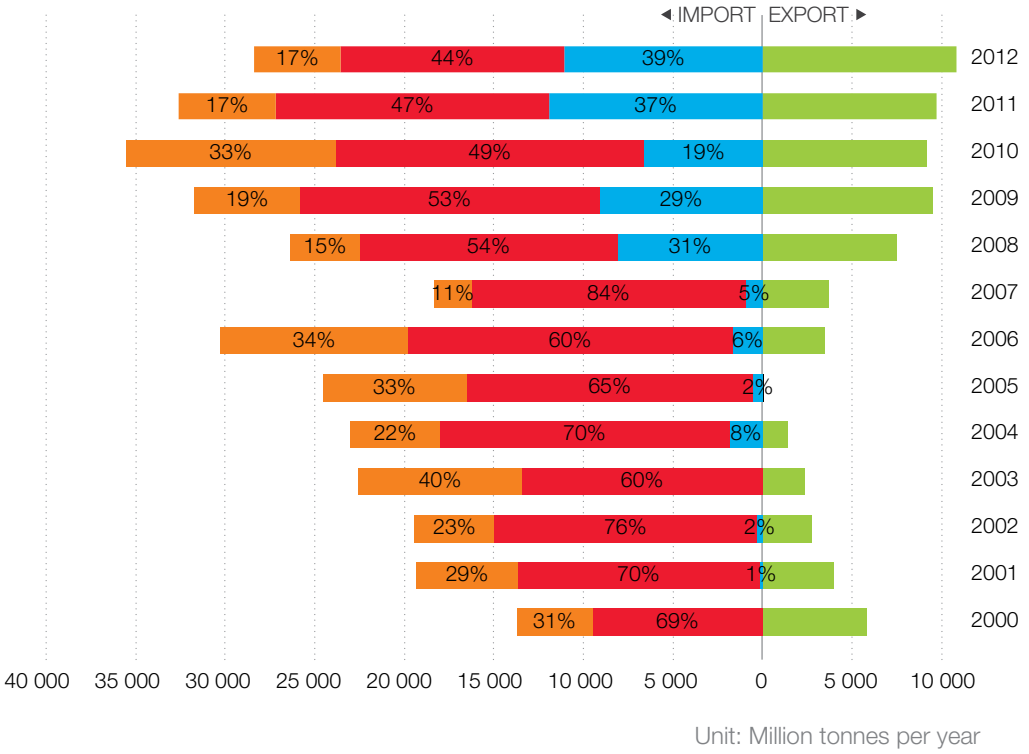
The US was the traditional export market for the structural EU gasoline surplus. The recent shale oil boom has decreased export opportunities to the US and forced EU refiners to find other markets.

The EU gasoline surplus in 2011 grew by 15% compared to 2011, and by 7.2% compared to 2008, the second highest number. Comparatively the share of the US has decreased since 2008 from 46% to 34% in 2012 of the total exports.

FIG.14 EU GASOIL TRADING BALANCE:

RUSSIA IS A LEADING EXPORTER OF GASOIL TO THE EU

Source: Eurostat

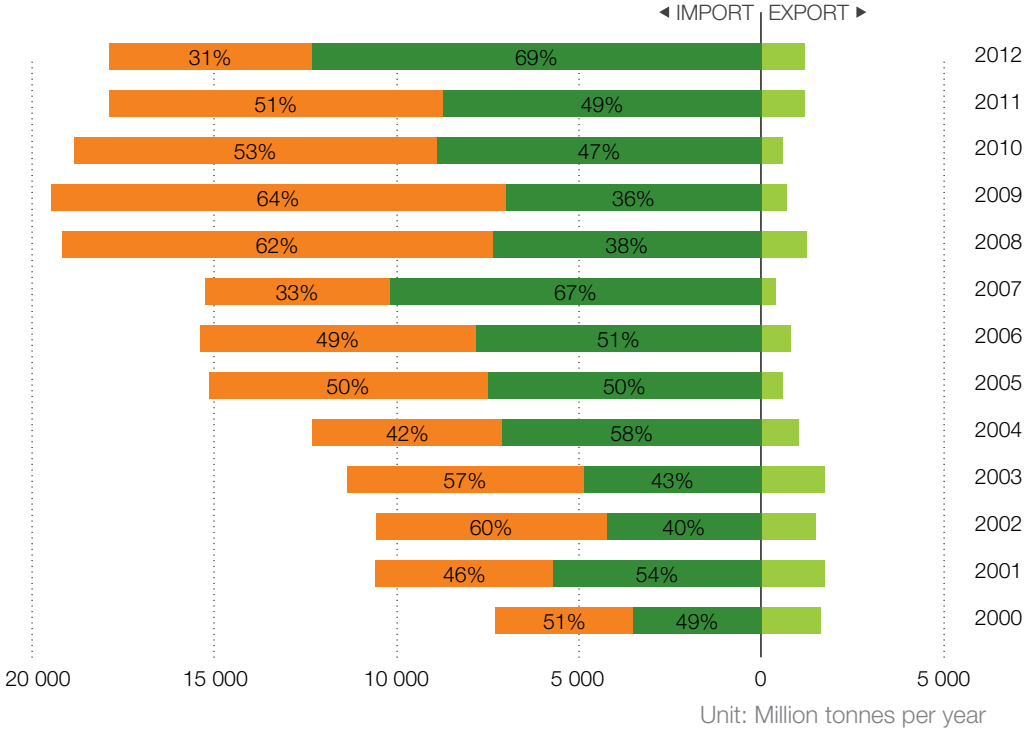


Major growth of US diesel exports to EU. EU increasingly dependent upon imported diesel, exporting lower quality gasoil.

FIG.15 EU JET FUEL TRADING BALANCE:

EU CONTINUOUSLY INCREASES ITS IMPORT OF JET FUEL FROM MIDDLE EAST

Source: Eurostat

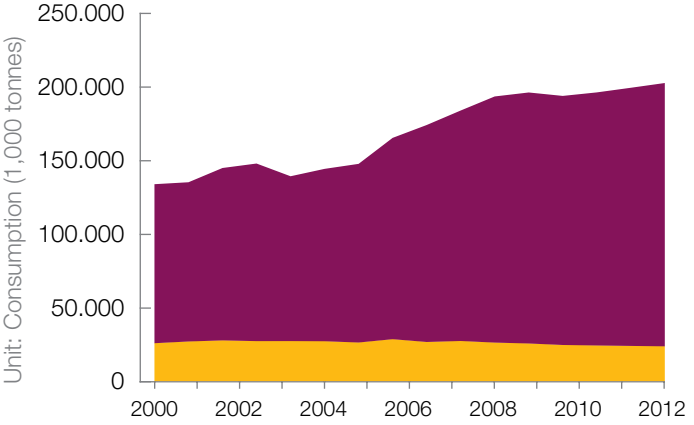


REST OF THE WORLD
MIDDLE EAST
EUROPE NON EU

Growing EU dependence on jet fuel imported mainly from Middle East.

FIG.16a GLOBAL MARINE FUEL CONSUMPTION

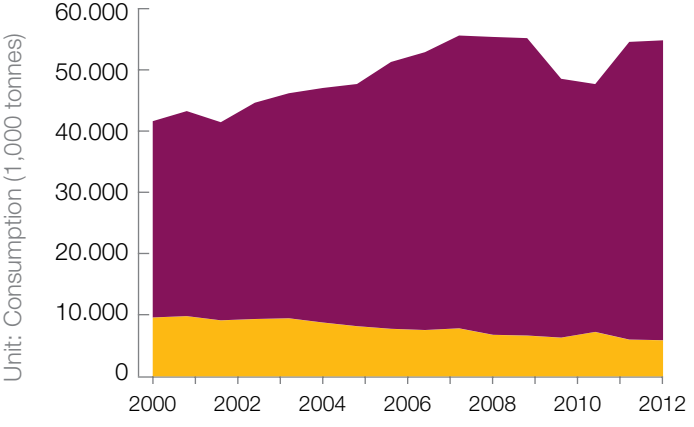
Source: PFC Energy



The global demand for marine fuel is mainly met by fuel oil (88%) while gasoil only represents 12% of the market. The new limits for sulphur content of marine fuels could drastically change the market with a massive demand for low sulphur distillates, requiring major refinery investments.

FIG.16b MARINE FUEL CONSUMPTION IN THE EU

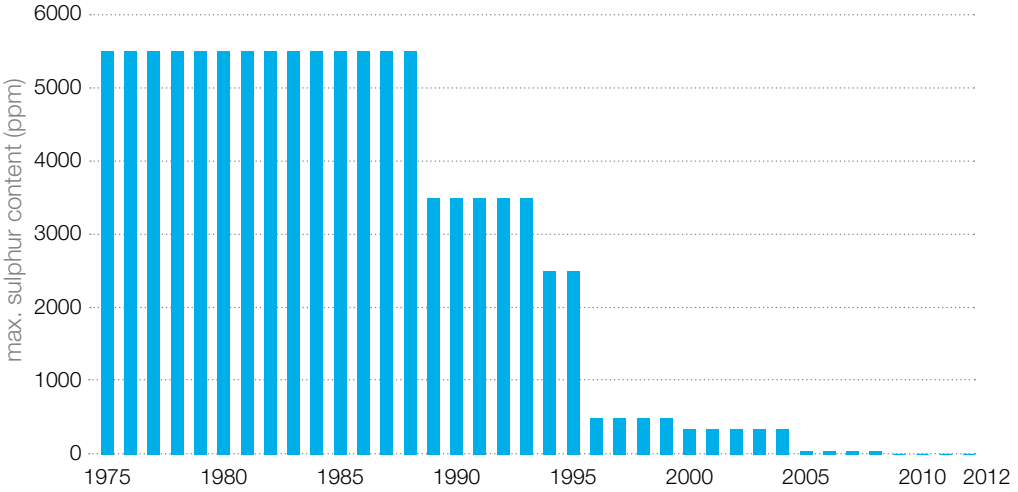
Source: PFC Energy



Switch to LNG or the use of scrubbers are alternatives to new IMO emissions limits in 2020 or 2025.

FIG.17a EU ROAD DIESEL SULPHUR SPECIFICATIONS

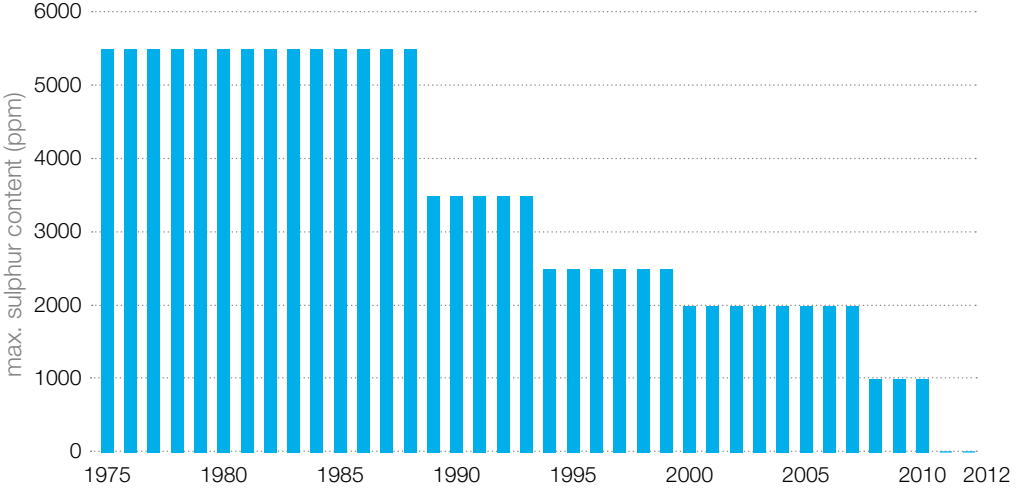
Source: PFC Energy



The sulphur content of road fuels has been reduced from 5500 ppm in 1975 to sulphur free in 2010 allowing use of sophisticated emissions control by vehicles.

FIG.17b EU OFF-ROAD DIESEL SULPHUR SPECIFICATIONS

Source: PFC Energy

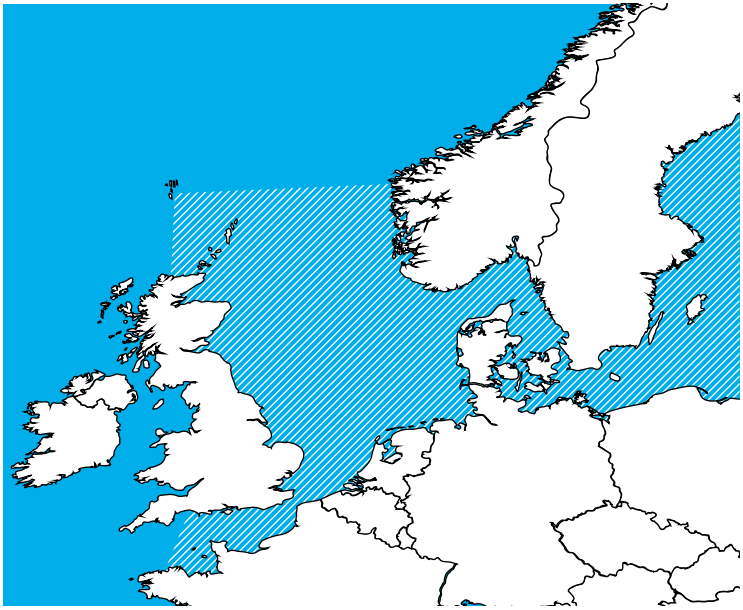


In addition to the environmental benefits arising from reduced sulphur dioxide (SO_2), the use of 10ppm sulphur gas oil is also essential for the effective working of abatement technology in engines fitted in newer non-road mobile machinery, including tractors, which are manufactured to meet stringent new EU emission standards for oxides of nitrogen (NO_x).

FIG.18 GLOBAL MARINE FUEL SULPHUR SPECIFICATIONS

SO_2 EMISSION CONTROL AREAS (SECAs)

Source: European Commission



SECAs cover the Baltic and North Seas and the English Channel

Limits for the sulphur content of marine fuels in SECAs:
1% until 31 December 2014
0.10% as from 1 January 2015

Limits for the sulphur content of marine fuels outside SECAs
in the EU waters by 2020:
0.50% for EU waters by 2020

The following areas impose limits on the sulphur level of fuel in ships travelling within them.

Changes in shipping fuel specifications require large-scale industry investment, by shipping and fuels supply industries.

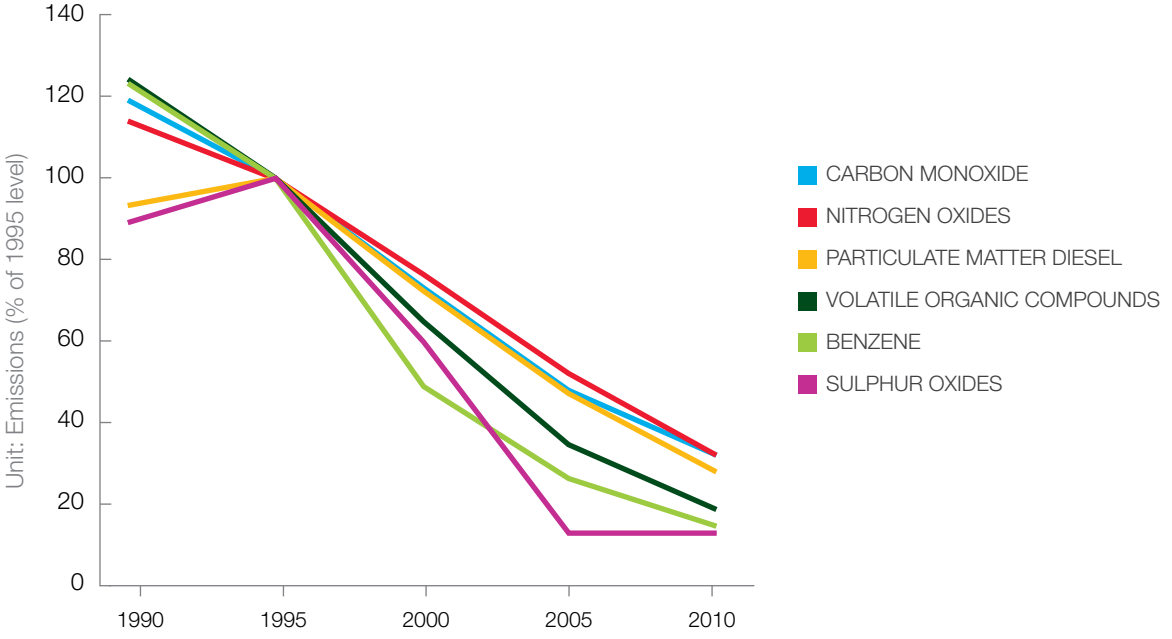
The new of 0.10% will be difficult to produce from fuel oil and be met by marine diesel, a lighter product or potentially by LNG.

Secondary technology such as scrubbers can also be used to meet these sulphur levels but this technology is not suitable for our ships.

FIG.19 SINCE 1990 FUELS ARE GETTING PROGRESSIVELY CLEANER RESULTING IN EXHAUST EMISSIONS

REDUCTION BY OVER 80%

Source: European Commission

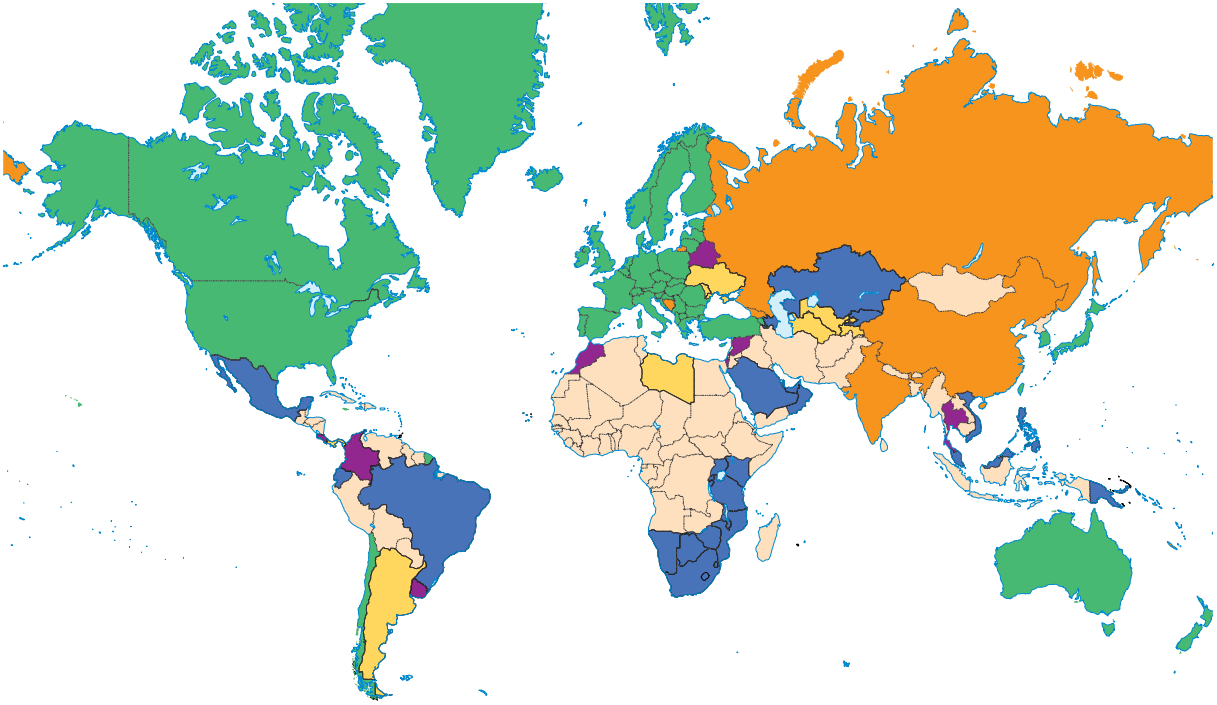


Since 1990 the refining industry has contributed to cleaner exhausts by containing today over 80% lower pollutants.

These significant improvements are the result of the partnerships with the automotive industry aiming at improving the fuel-engine efficiency and leading to multiple environmental benefits.

FIG.20 MAXIMUM ON-ROAD DIESEL SULPHUR LIMITS

Source: Hart Energy Research and Consulting, January 2014

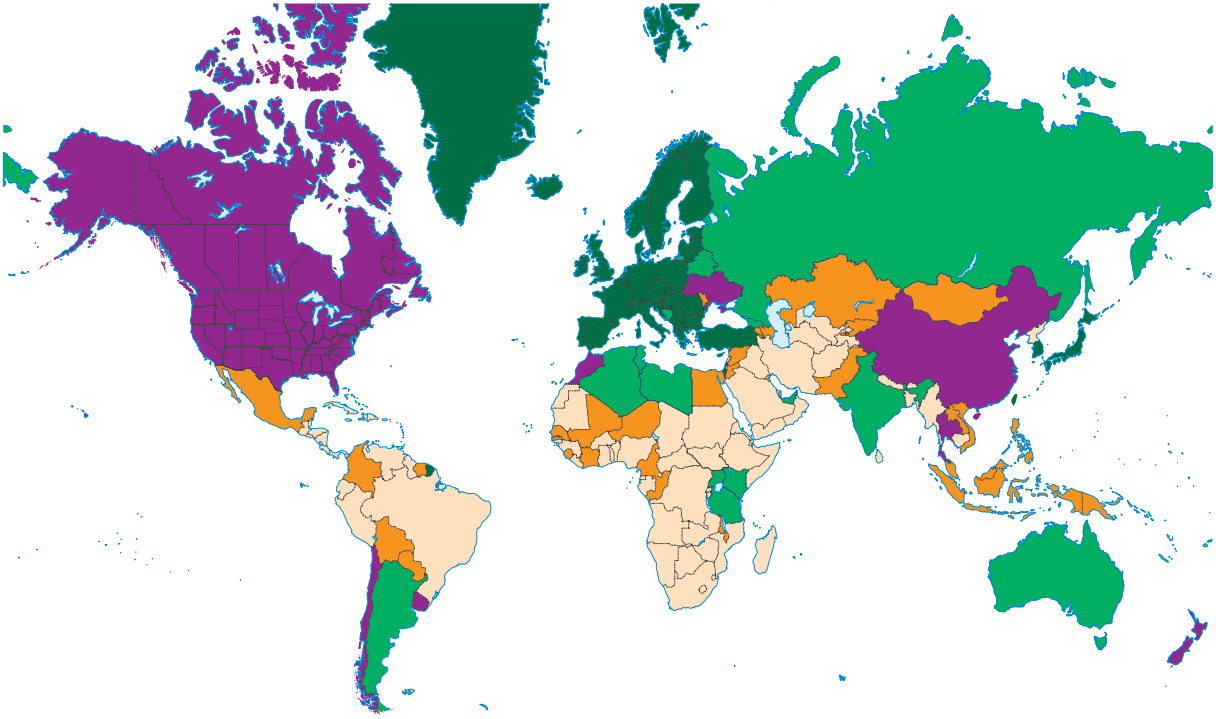


Europe together with USA, Canada, Japan, Australia and Chile apply the lowest (10-15 ppm) on-road diesel sulphur limits in the world.

Countries may apply lower limits for different grades, regions/cities, or based on average content. Detailed information on limits and regulations can be found at www.ifqc.org

FIG.21 MAXIMUM GASOLINE SULPHUR LIMIT

Source: Hart Energy Research and Consulting, January 2014

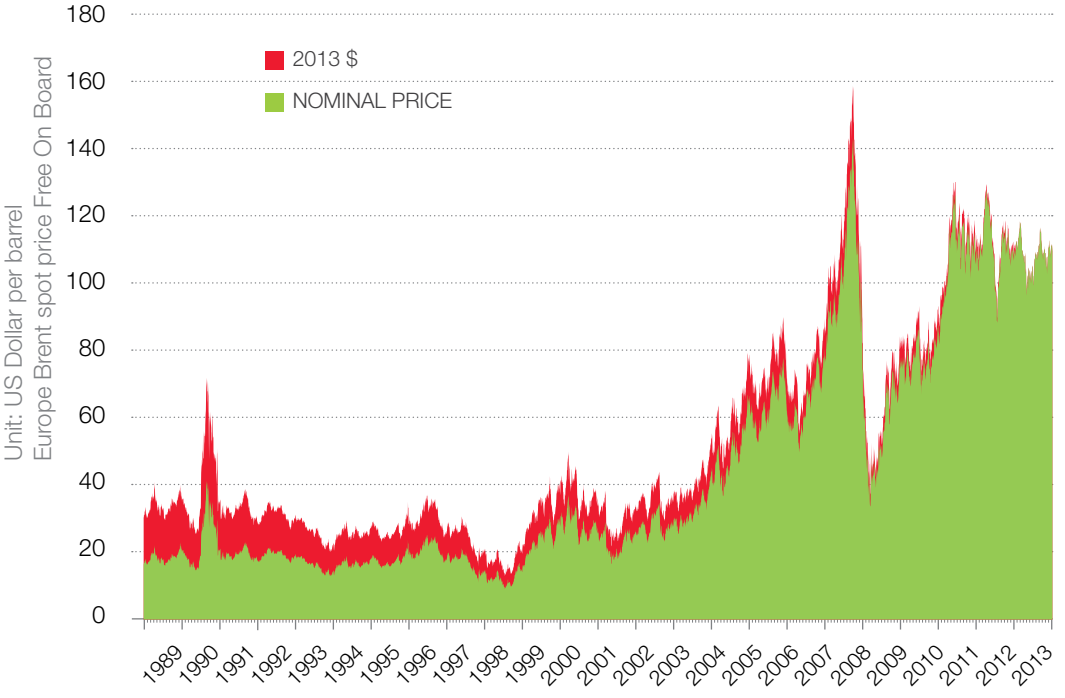


The EU has set the most stringent environmental specifications for sulphur in gasoline worldwide with a maximum level of 10 PPM.

Countries may apply lower limits for different grades, regions/cities, or based on average content. Detailed information on limits and regulations can be found at www.ifqc.org

FIG.22 CRUDE OIL PRICE EVOLUTION SINCE 1989

Source: Energy Information Administration



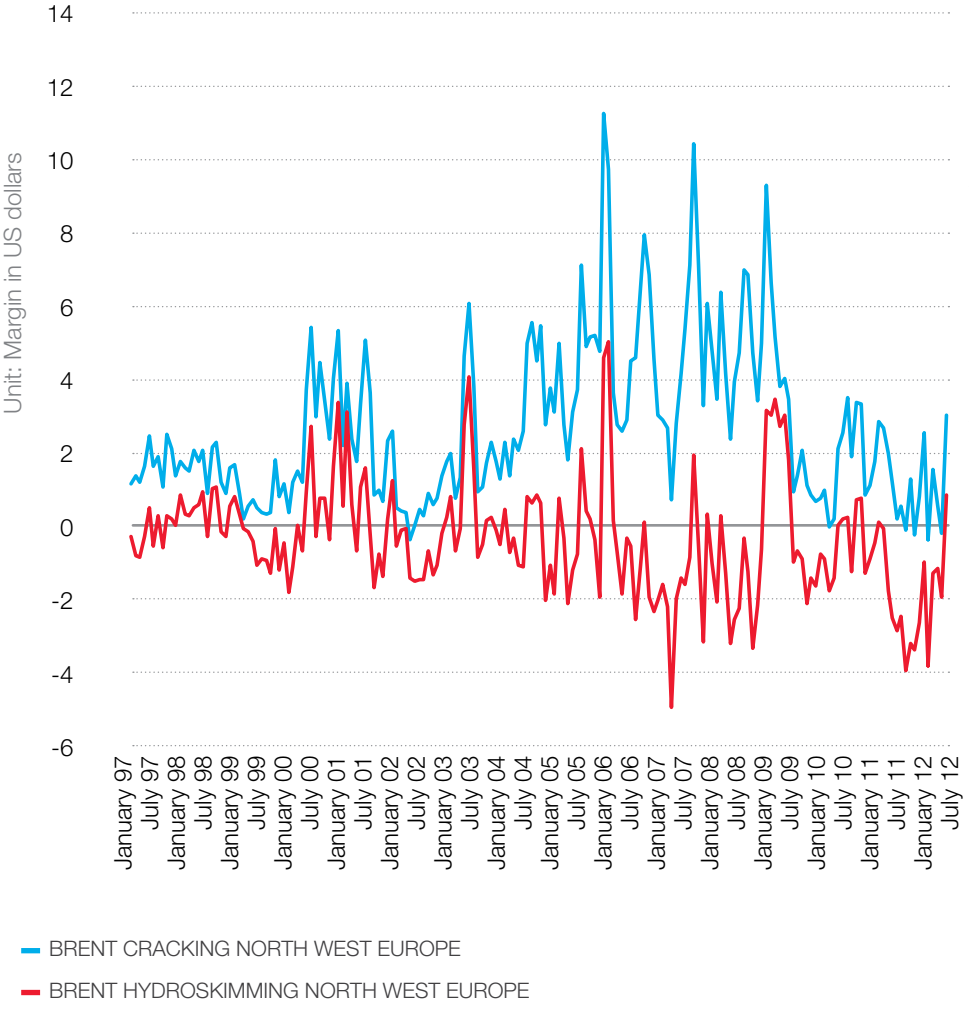
The EU Refining industry operates between two global, open and transparent markets: the market of crude oil and the market of refined products. The main benchmarks are priced in dollars.

The price of crude oil is set on international spot markets and reported by designated agencies. The price of oil is an important marker for the global economy and is closely watched by businesses and policy-makers.

After a decade of relatively low prices, oil started rising last decade, leading to peaks just before the financial crisis in 2008. Since 2010, the oil price varies around 110-120 $.

FIG.23 SIMPLER REFINERIES HAVE CONSISTENTLY LOW OR EVEN NEGATIVE OPERATING MARGINS

Source: Oil market report, International Energy Agency

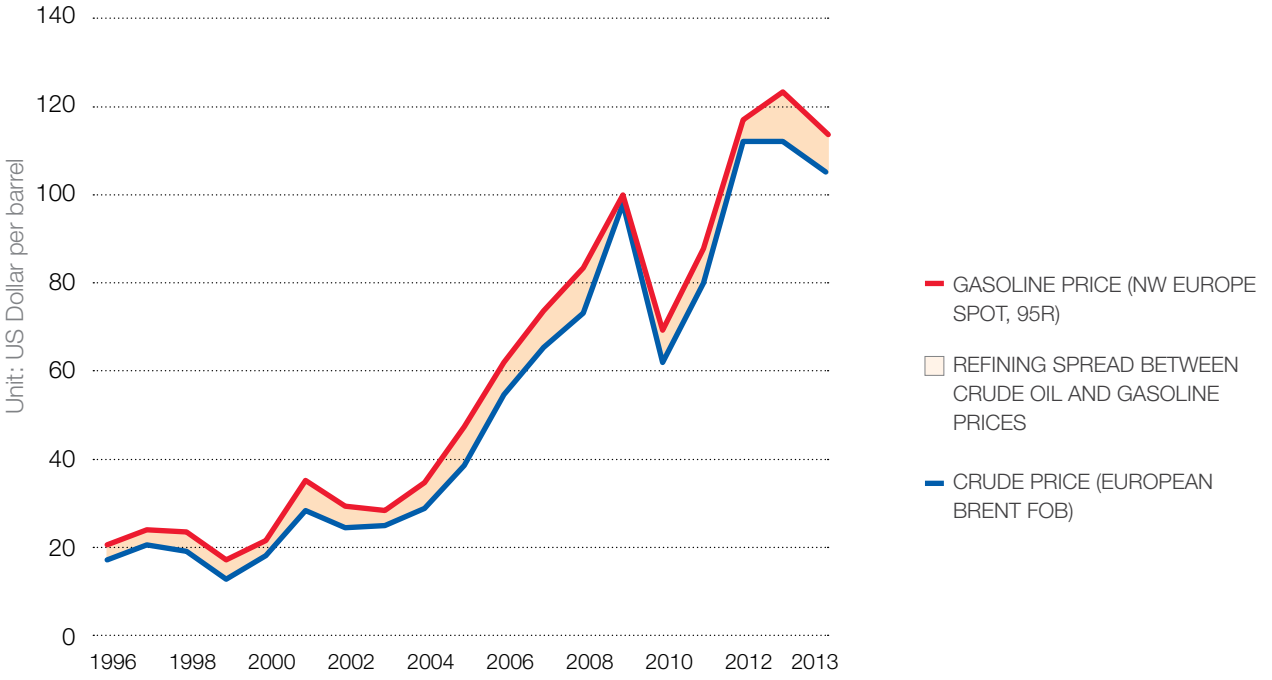


Simple refineries (hydroskimming) have consistently low or even negative margins.

Refineries are often referred to as ‘simple’ if they do not include conversion processes and ‘complex’ if they do. Unlike complex refineries, simpler refineries produce lower value products and as such struggle to break even on their operations after costs.

FIG.24 REFINERS OPERATE BETWEEN TWO GLOBAL COMMODITY MARKETS:
CRUDE MARKET AND REFINED PRODUCTS MARKET

Source: Wood Mackenzie



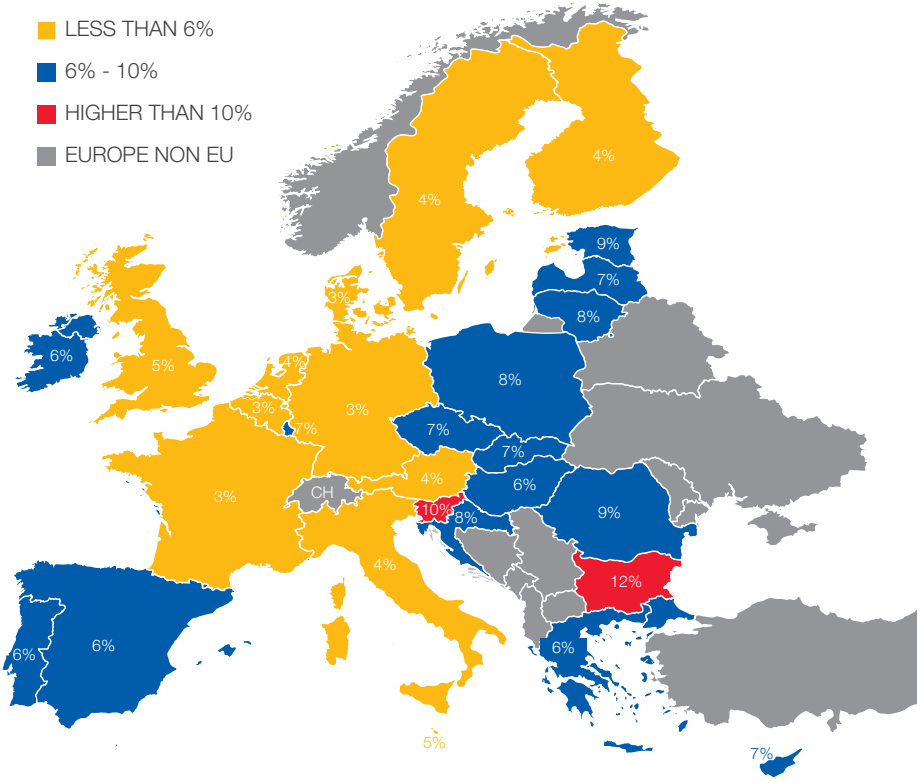
EU refining operates between two global commodity markets, the crude market and the refined product market. The 'crack spread' represents the difference between the cost of crude oil and the market sales price for refined products.

Generally product prices rise with crude prices but the drivers of the difference are many.

In historic terms, the profitability has started to decline in a context of falling demand (2008). Whilst 2012 saw a small improvement for refiners, the spread is generally tight- margins are low and the industry is highly vulnerable to the operating costs that must be deducted from the spread before profitability can be considered.

FIG.25 FUEL TAXES MAKE A SIGNIFICANT CONTRIBUTION TO MEMBER STATE TAX REVENUE

Source: Eurostat and Wood Mackenzie



COUNTRY		SHARE
AT	Austria	4%
BE	Belgium	3%
BG	Bulgaria	12%
HR	Croatia	8%
CY	Cyprus	7%
CZ	Czech Republic	7%
DK	Denmark	3%
EE	Estonia	9%
FI	Finland	4%
FR	France	3%
DE	Germany	3%
EL	Greece	6%
HU	Hungary	6%
IE	Ireland	6%
IT	Italy	4%
LV	Latvia	7%
LT	Lithuania	8%
LU	Luxembourg	7%
MT	Malta	5%
NL	Netherlands	4%
PL	Poland	8%
PT	Portugal	6%
RO	Romania	9%
SK	Slovakia	7%
SI	Slovenia	10%
ES	Spain	6%
SE	Sweden	4%
UK	United Kingdom	5%

Taxes on fuels contribute on average to 7% of Member State tax revenue.

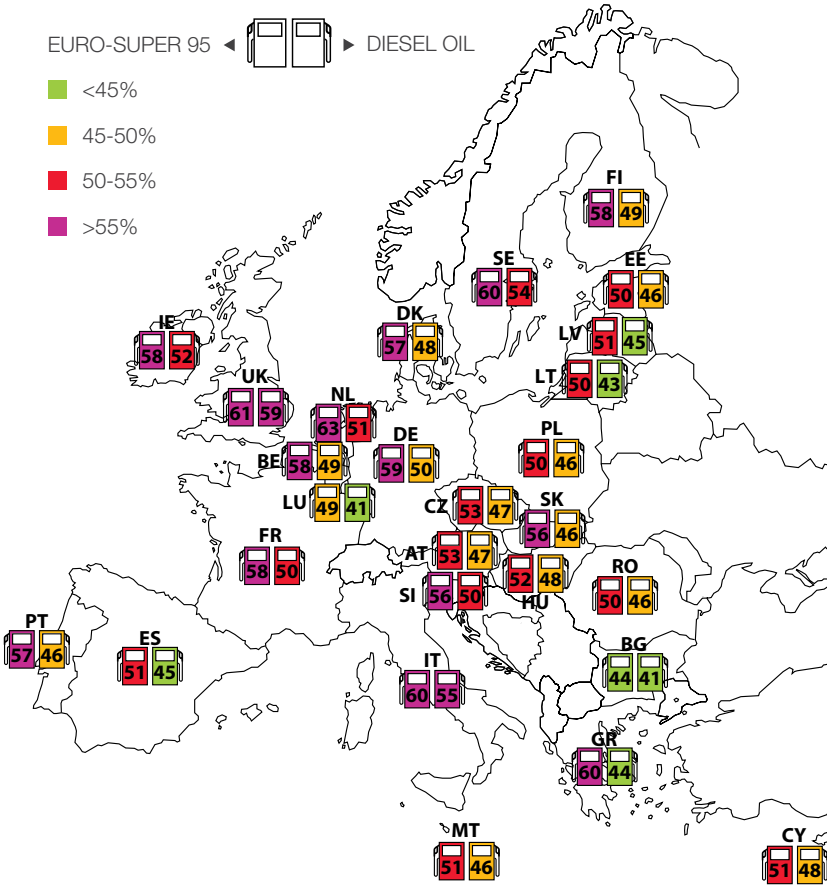
Many competing products are subsidised. Replacing economically viable petroleum products with such alternatives would have large fiscal consequences.

FIG.26 TOTAL TAXATION SHARE IN THE END CONSUMER PRICE

Source: European Commission

Euro-Super 95

COUNTRY	%
Nederlands	63
United Kingdom	61
Sweden	60
Italy	60
Greece	60
Germany	59
Finland	58
Ireland	58
France	58
Belgium	58
Denmark	57
Portugal	57
Slovakia	56
Slovenia	56
Czech Republic	53
Austria	53
Hungary	52
Spain	51
Malta	51
Cyprus	51
Latvia	51
Lithuania	50
Romania	50
Poland	50
Estonia	50
Luxemburg	49
Bulgaria	44



DIESEL OIL

COUNTRY	%
United Kingdom	59
Italy	55
Sweden	54
Ireland	52
Nederlands	51
Germany	50
France	50
Slovenia	50
Finland	49
Belgium	49
Cyprus	48
Hungary	48
Denmark	48
Austria	47
Czech Rep	47
Slovakia	46
Poland	46
Romania	46
Portugal	46
Malta	46
Estonia	46
Spain	45
Latvia	45
Greece	44
Lithuania	43
Bulgaria	41
Luxemburg	41

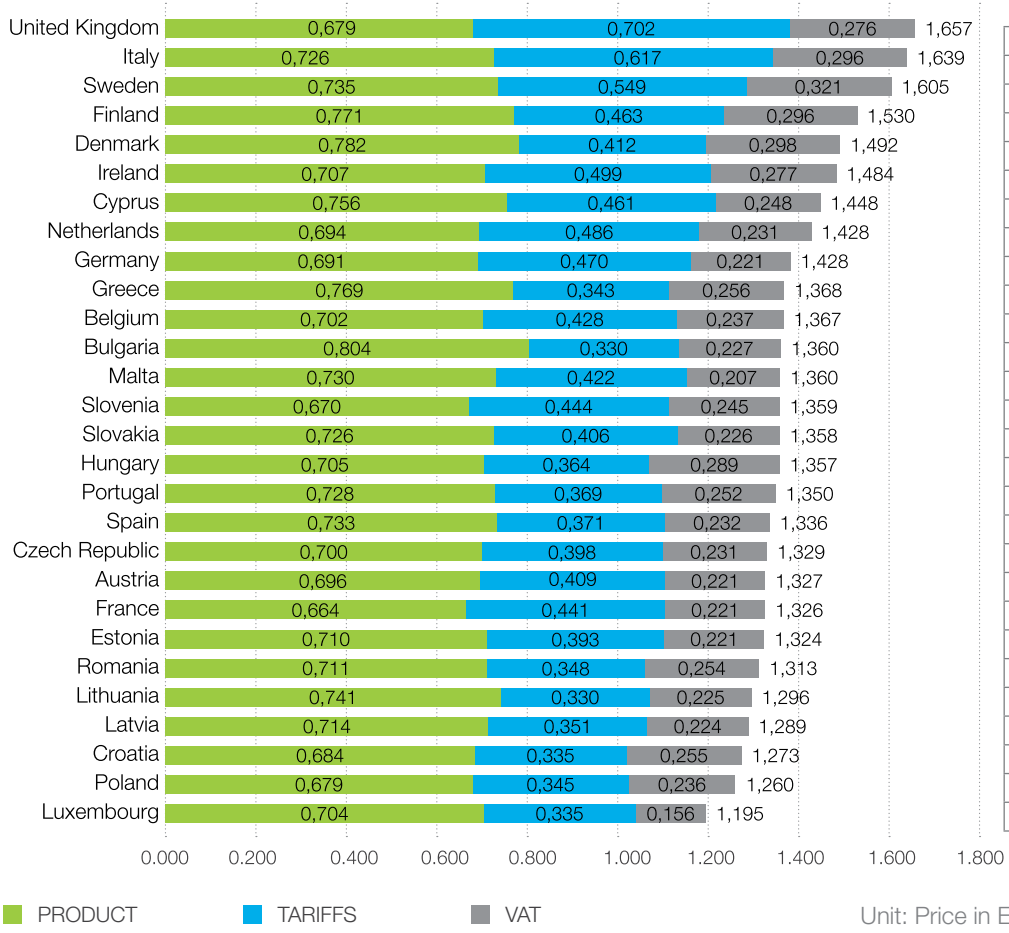
The price at the pump is driven to a large degree by taxes and over half the cost of fuel represents taxes. The taxes on gasoline are generally higher than for diesel. This differential tax treatment has driven a demand shift over the past 10 years.

Fuels Taxes contribute substantially to Member State revenues.

Note: Share at January 2014

FIG.27 BREAKDOWN OF AUTOMOTIVE DIESEL PRICES ACROSS EU (DECEMBER 2013)

Source: European Commission



COUNTRY	% of taxes
United Kingdom	59,01%
Italy	55,69%
Sweden	54,20%
Ireland	52,33%
Netherlands	51,37%
Slovenia	50,73%
Germany	50,00%
France	49,92%
Finland	49,60%
Belgium	48,65%
Hungary	48,09%
Cyprus	47,79%
Denmark	47,59%
Austria	47,52%
Czech Republic	47,29%
Slovakia	46,57%
Estonia	46,34%
Malta	46,31%
Croatia	46,28%
Poland	46,11%
Portugal	46,06%
Romania	45,88%
Spain	45,13%
Latvia	44,59%
Greece	43,77%
Lithuania	42,83%
Luxembourg	41,07%
Bulgaria	40,91%

Unit: Price in Euro per litre

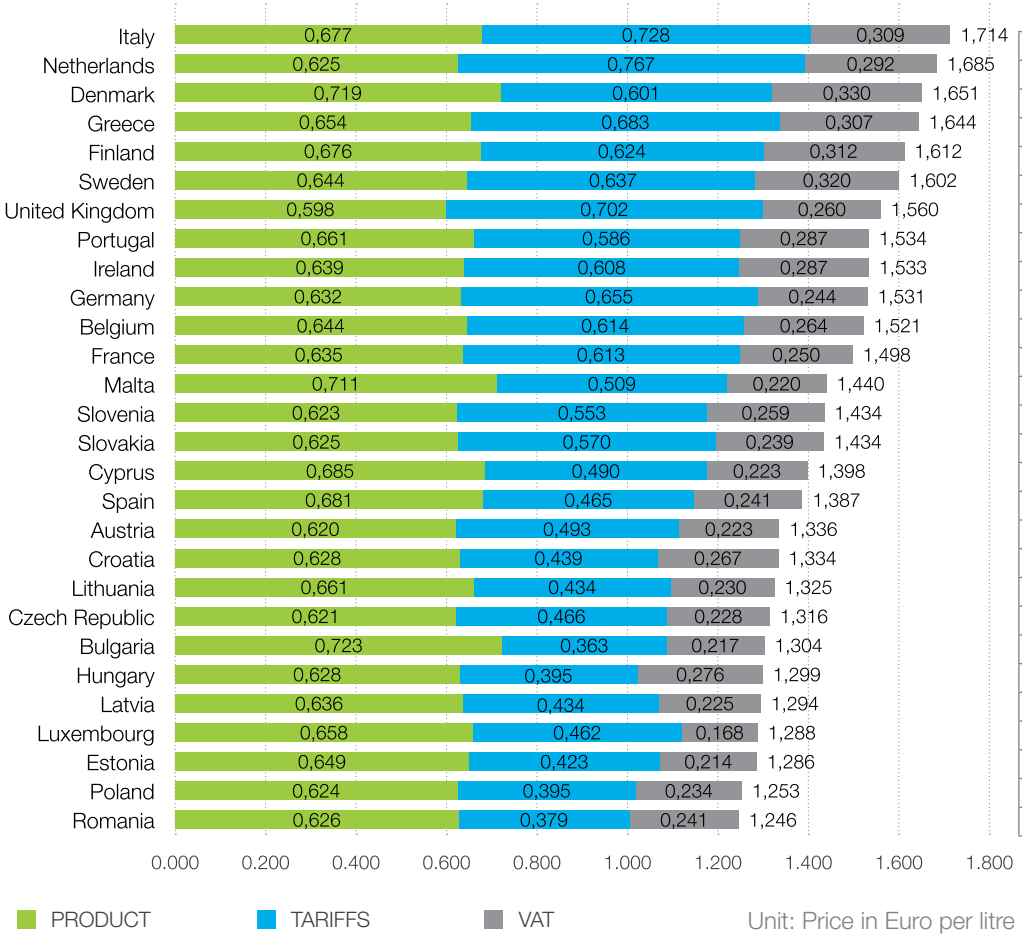
Diesel prices are generally lower than gasoline prices due to the lower tax element, with the notable exception of the United Kingdom.

Only a fraction of the price paid at the pump contributes to the refiners' income, the remainder gain to Member States and to buy the crude oil.

FIG.28 PRICES AND MARGINS

BREAKDOWN OF AUTOMOTIVE GASOLINE PRICES ACROSS EU (DECEMBER 2013)

Source: European Commission



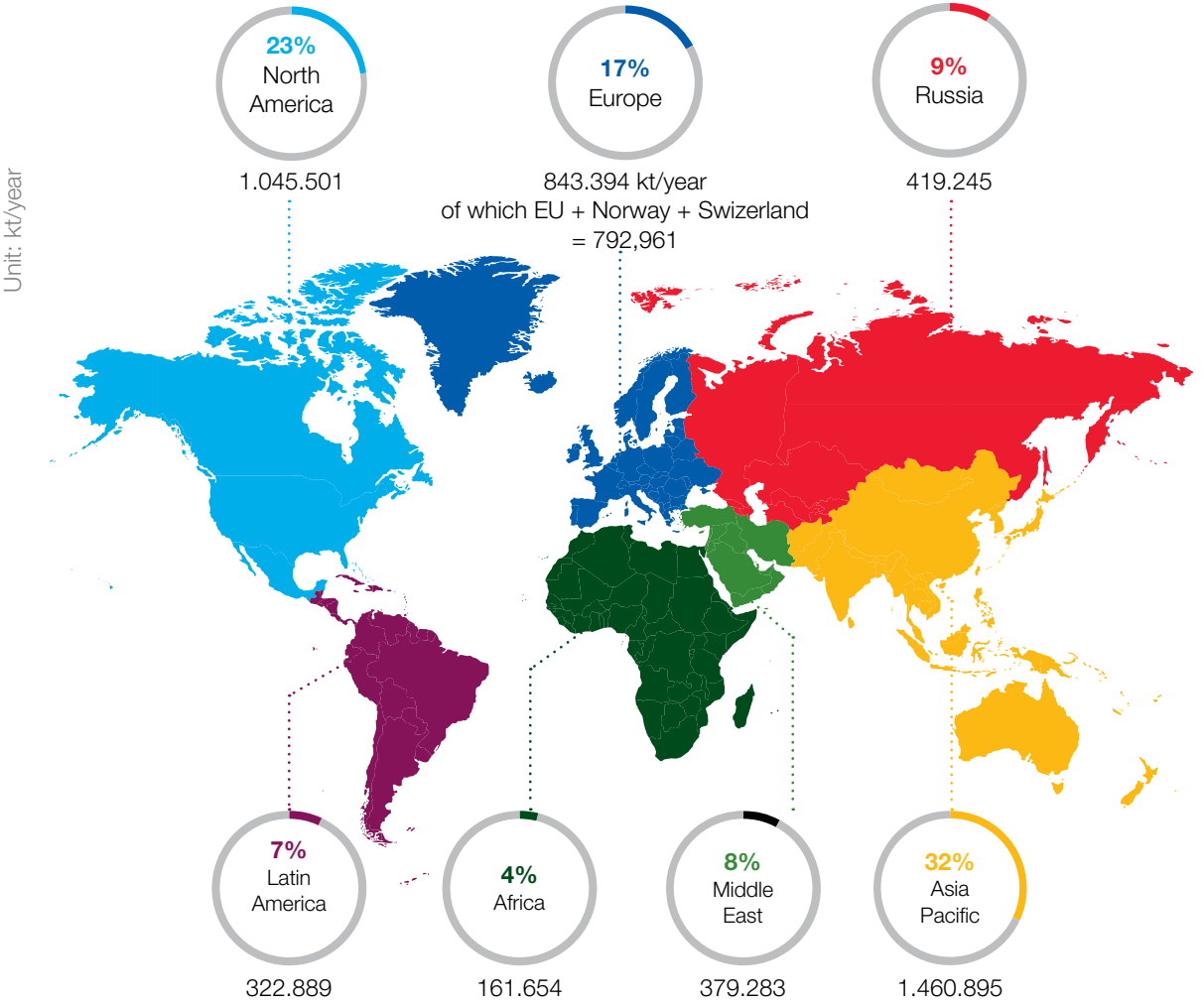
COUNTRY	% of taxes
Netherlands	62,89%
United Kingdom	61,64%
Italy	60,53%
Greece	60,25%
Sweden	59,80%
Germany	58,72%
Ireland	58,33%
Finland	58,05%
Belgium	57,69%
France	57,61%
Portugal	56,90%
Slovenia	56,58%
Denmark	56,43%
Slovakia	56,43%
Austria	53,58%
Croatia	52,93%
Czech Republic	52,80%
Hungary	51,70%
Cyprus	51,01%
Spain	50,88%
Latvia	50,88%
Malta	50,63%
Poland	50,23%
Lithuania	50,13%
Romania	49,78%
Estonia	49,54%
Luxembourg	48,93%
Bulgaria	44,51%

Gasoline prices are generally higher than diesel prices due to the higher tax element.

Only a fraction of the price paid at the pump contributes to the refiners' income, the remainder gain to Member States and to buy the crude oil.

FIG.29 GLOBAL REFINING CAPACITY AS OF 2012

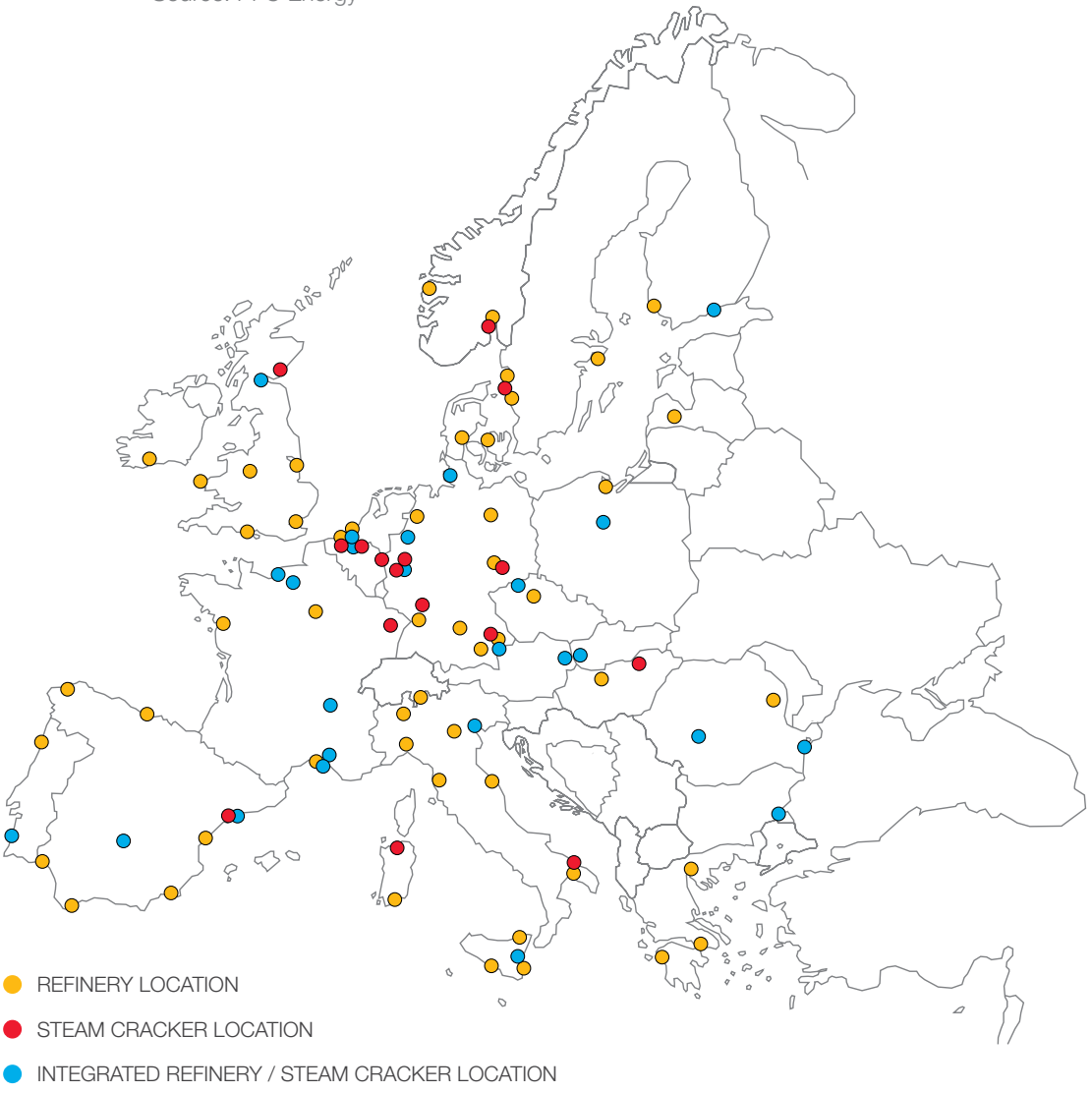
Source: PFC Energy



Refining is spread around the world and is a truly global business. The share of EU refining has decreased from 17% in 2011 to 16% in 2012, but it still remains the third biggest refining region.

FIG.30 REFINERY / STEAM CRACKER SITES IN THE EU

Source: PFC Energy

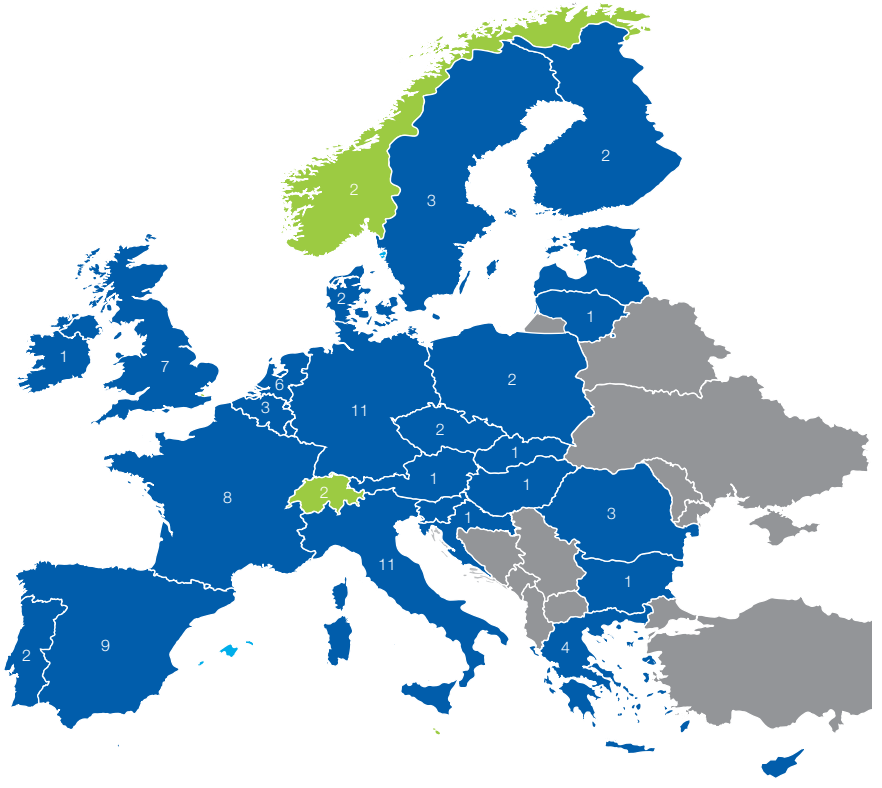


A large number of refineries are integrated with or located very close to steam crackers that produce products for the petrochemicals industry.

Such interconnections show how refining is an intrinsic part of the industrial value chain and provides the basis for highly advance, high value products.

FIG.31 86 MAINSTREAM REFINERIES WERE OPERATING IN THE EU, NORWAY AND SWITZERLAND AT END 2013

Source: Concawe



EU

EFTA

Threshold > 30 kbbl/d or 1.5Mt/a

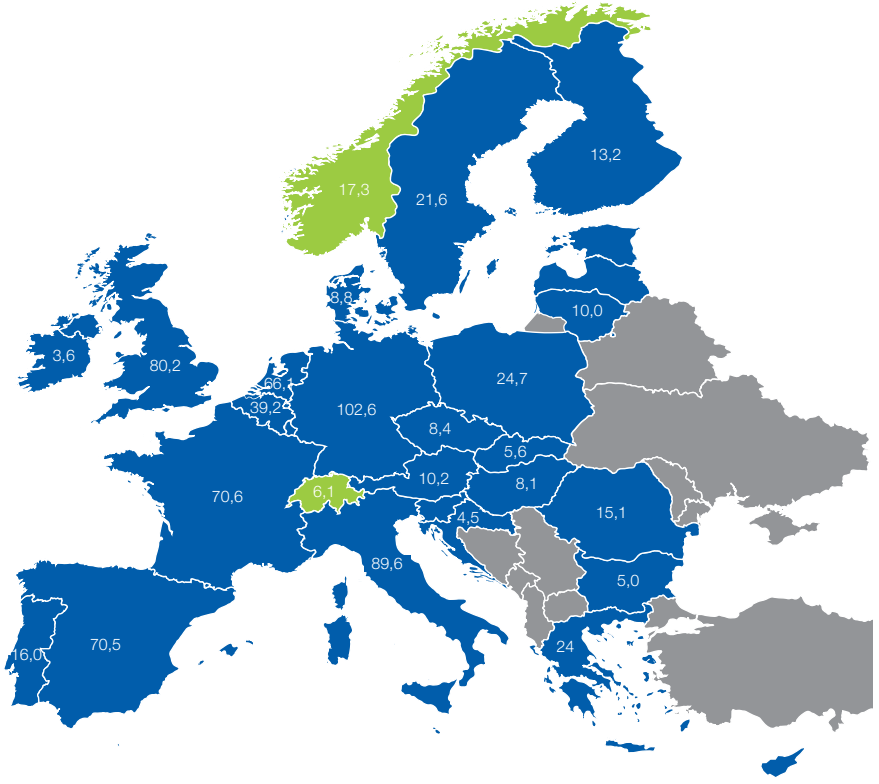
COUNTRY		REFINERIES
DE	Germany	11
IT	Italy	11
ES	Spain	9
FR	France	8
UK	United Kingdom	7
NL	Nederlands	6
EL	Greece	4
SE	Sweden	3
BE	Belgium	3
RO	Romania	3
DK	Denmark	2
FI	Finland	2
PT	Portugal	2
CZ	Czech Republic	2
PL	Poland	2
IE	Ireland	1
AT	Austria	1
HU	Hungary	1
SK	Slovakia	1
LT	Lithuania	1
BG	Bulgaria	1
HR	Croatia	2
EU-28		83
NO	Norway	2
CH	Switzerland	1
NO + CH		3
TOTAL		86

Unit: Number of reneries

At the end of 2013, there are 86 `mainstream` refineries in the EU & EFTA. In addition there were 22 small or speciality sites.

FIG.32 EU, NORWEGIAN AND SWISS FUELS MAINSTREAM REFINERIES HAD 710.4 MILLION TONNES OF PRIMARY REFINING CAPACITY IN 2013

Source: Concawe



EU

EFTA

Threshold > 30 kbbl/d or 1.5Mt/a

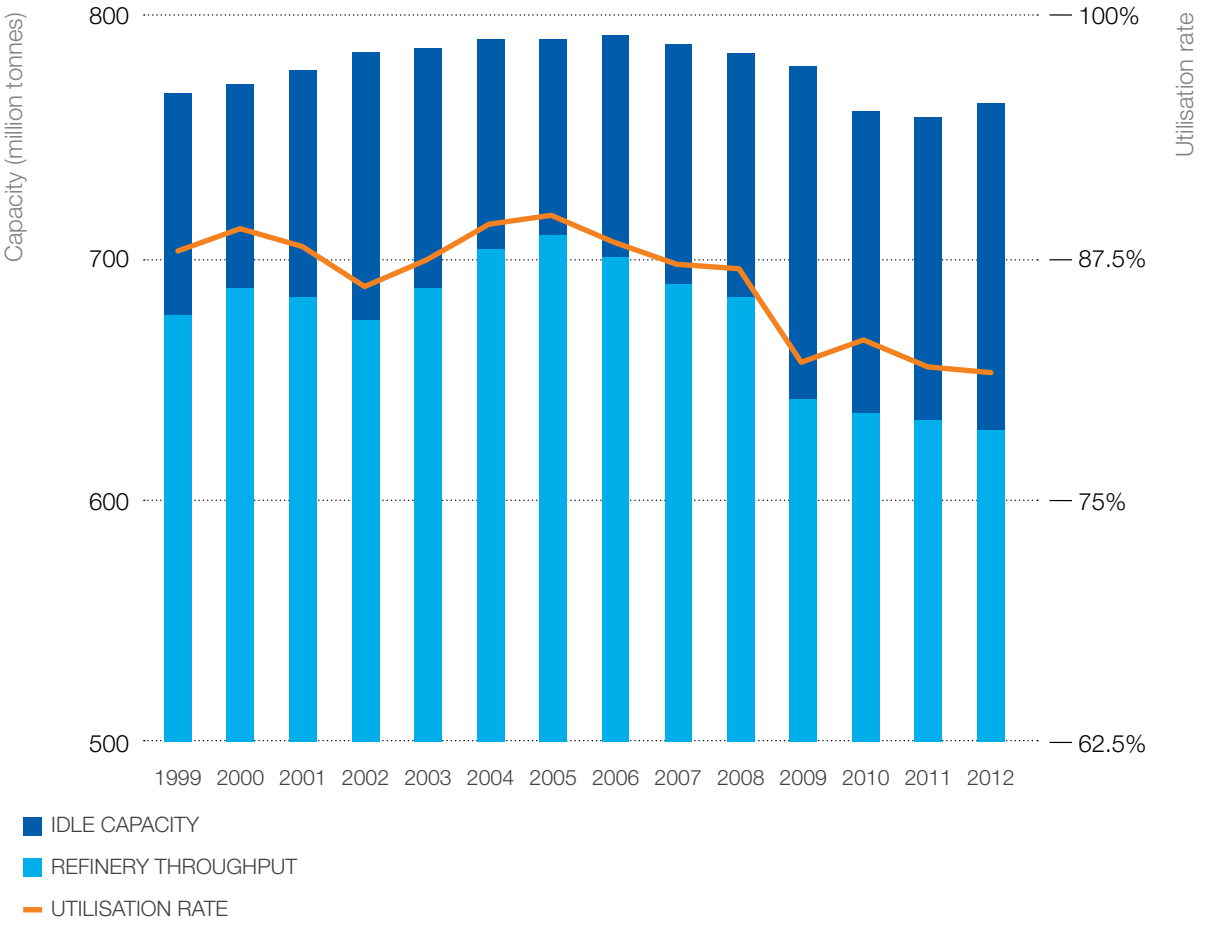
COUNTRY		CAPACITY
DE	Germany	102.0
IT	Italy	88.8
UK	United Kingdom	73.5
FR	France	70.2
ES	Spain	74.1
NL	Nederlands	63.2
BE	Belgium	37.5
PL	Poland	29.2
EL	Greece	24.7
SE	Sweden	19.8
PT	Portugal	15.2
FI	Finland	13.0
RO	Romania	12.4
AT	Austria	9.7
LT	Lithuania	9.5
DK	Denmark	8.7
HR	Croatia	8.5
CZ	Czech Republic	8.2
HU	Hungary	8.1
SK	Slovakia	5.8
BG	Bulgaria	5.8
IE	Ireland	3.6
EU-28		691.1
NO	Norway	16.0
CH	Switzerland	3.4
NO + CH		19.4
TOTAL		710.4

Unit: Million tonnes per year

The 86 refineries have a primary refinery capacity of 710.4 million tonnes. Due to additional closure the capacity has decreased by 1% compared to 2012.

FIG.33 CAPACITY AND UTILISATION OF EUROPEAN REFINERIES

Source: BP Statistical Review of World Energy 2013

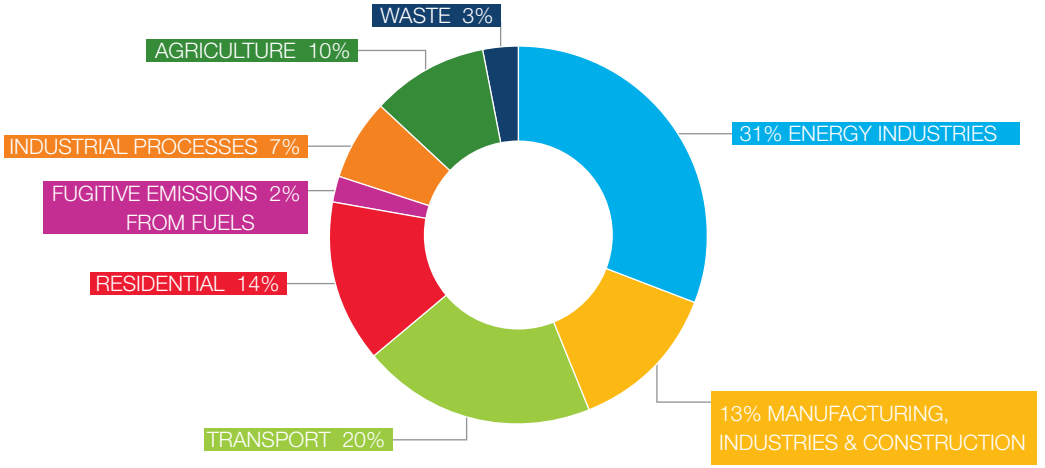


The utilisation rate of EU refineries dropped from the 2012 levels to about 80%. The continued decrease of demand and evolution of market demand (increasing diesel/gasoline imbalance) forces European refiners to adapt these market forces.

A utilisation rate of above 85% is normally required for efficient, economic operations.

FIG.34 GHG EMISSIONS BY SECTOR IN THE EU IN 2011

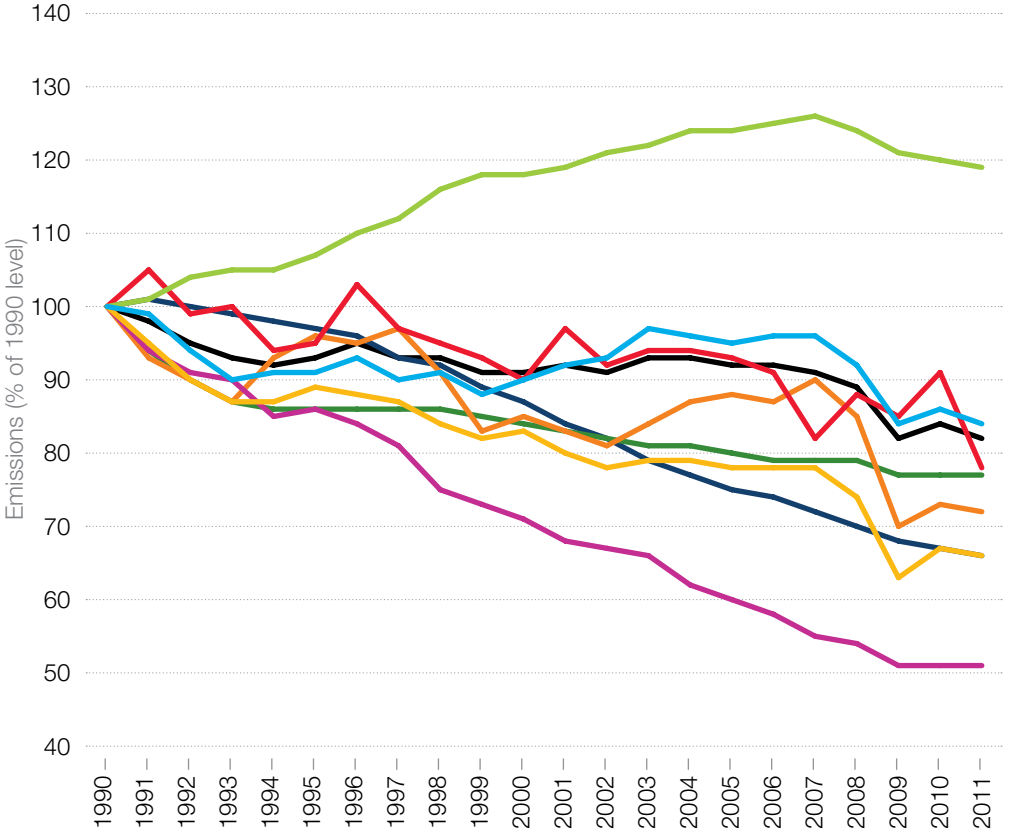
Source: European Environmental Agency, 2013



Industry (energy and manufacturing) accounts for 44% of GHG emissions the EU. Transport, supplied around 90% by oil refined products, generates 20% of EU GHG emissions.

FIG.35 CO_2 EMISSIONS TREND BY SECTOR

Source: European Commission

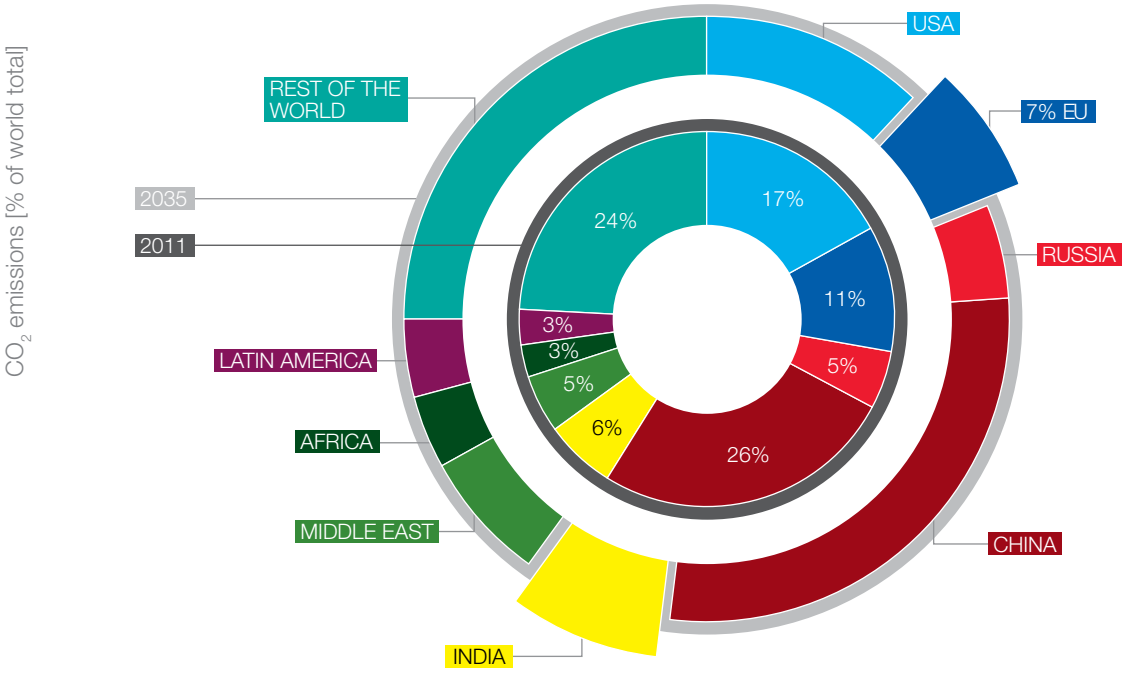


CO_2 emissions per sector are generally all declining since 2007. Industry (processes and manufacturing) CO_2 emissions reduced sharply over the period 2007-2011 and are now between 28 and 34% lower than the 1990 level.

CO_2 emissions from transport are also steadily decreasing since 2007.

FIG.36 DECLINING EU SHARE IN GLOBAL CO_2 EMISSIONS

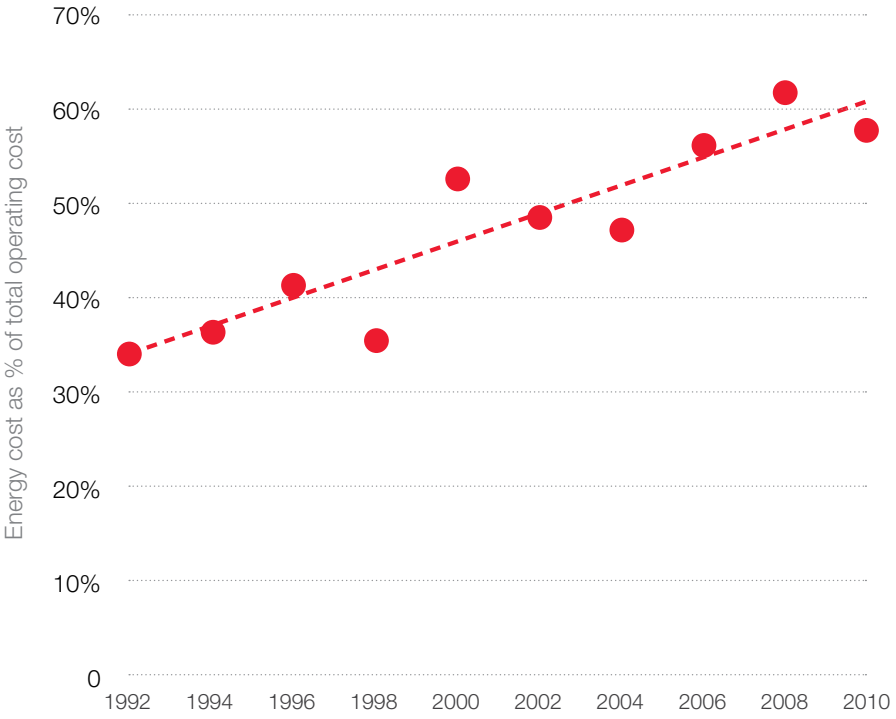
Source: IEA, WEO 2013



In 2011 the EU accounted for 11% of global CO_2 emissions and is expected to account for only 7% by 2035.

FIG.37 EU REFINERIES' ENERGY COST
AS PERCENTEAGE OF TOTAL CASH OPERATING COSTS

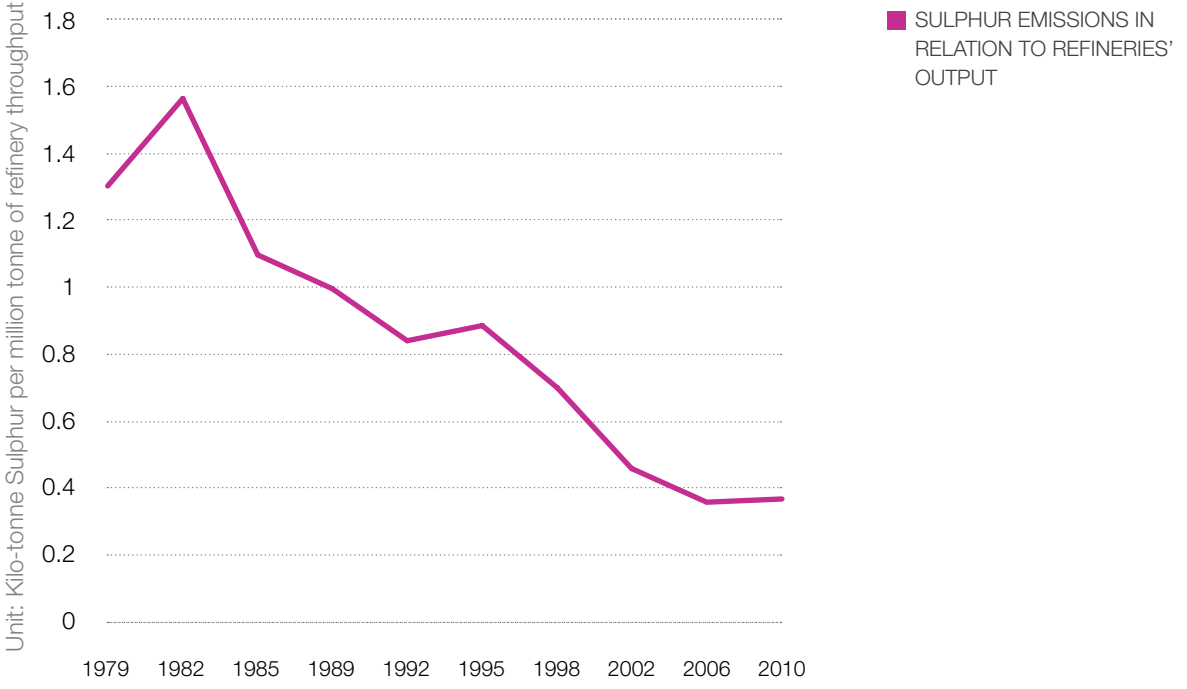
Source: Solomon Associates



The share of energy costs has continuously increased over the past 20 years to reach around 55% of cash operating costs. Despite strong records in energy efficiency gains and a leading position in this field, European refiners suffer a strong competitive disadvantage from these high energy costs.

FIG.38 REFINERY SULPHUR EMISSIONS HAVE BEEN DECLINING OVER THE YEARS

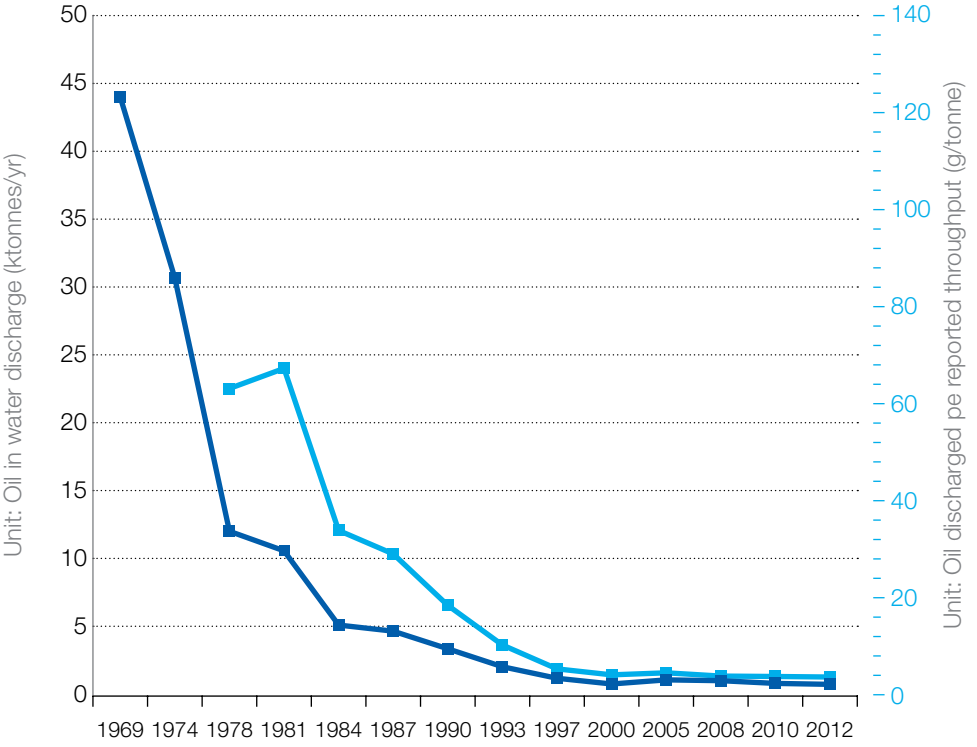
Source: Concawe



The sulphur emissions from refinery operations decreased by 75% over the past 30 years.

FIG.39 QUALITY OF REFINERY WATER EFFLUENT: OIL DISCHARGED IN WATER

Source: Concawe

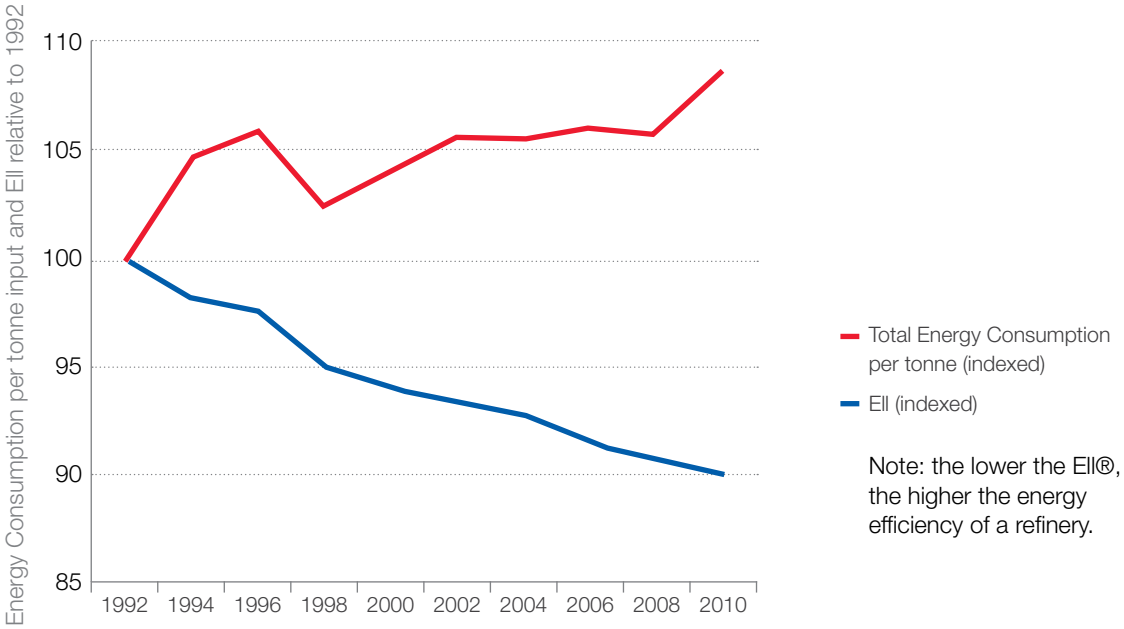


Over the years the EU Refineries have significantly improved the quality of refinery water effluent.

The amount of oil discharged in effluents from reporting installations continued to decrease to extremely low levels - both in terms of the absolute amount discharged and the amount expressed relative to the volume of feedstock processed (throughput) and the refining capacity of the installations.

FIG.40 EU REFINERIES ENERGY CONSUMPTION AND EFFICIENCY TRENDS RELATIVE TO 1992

Source: Solomon Associates

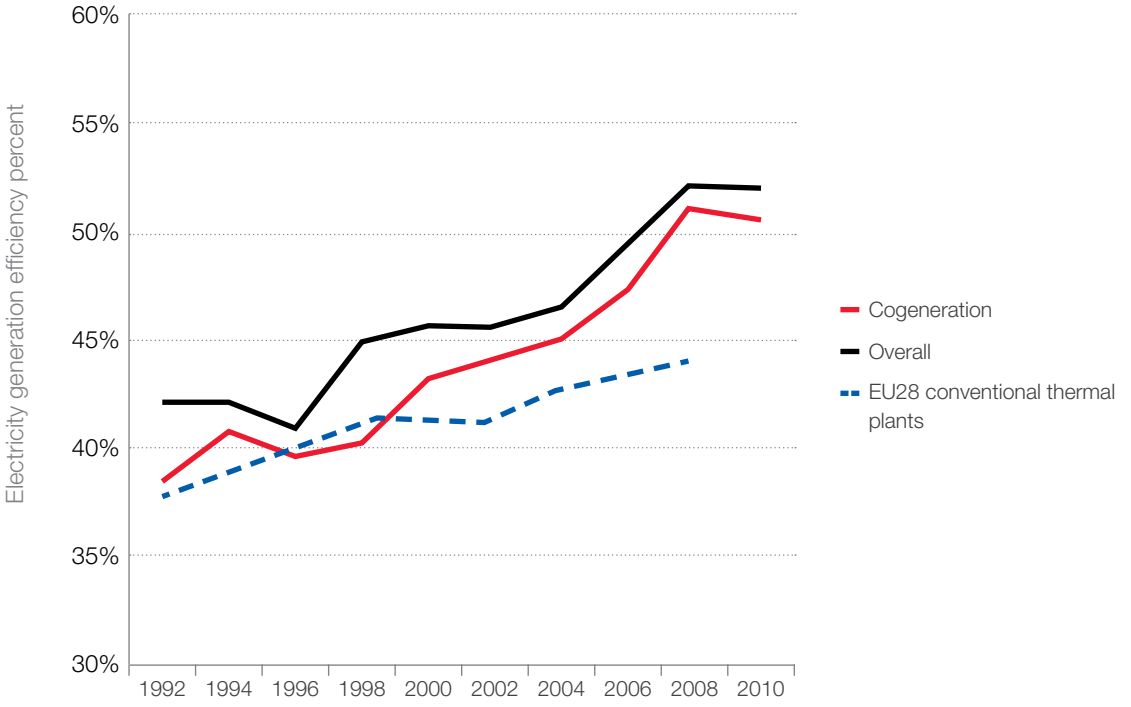


The index shows that EU refineries have improved their energy efficiency by about 10% over the past 18 years. This improvement was achieved despite more energy intensive refinery operations to produce cleaner fuels and meet shifts in market demand.

The corresponding annual energy saving is roughly equivalent to the total annual average energy consumption of four large EU refineries.

FIG.41 ELECTRICITY GENERATION EFFICIENCY

Source: Concawe



Refineries have long recognised the considerable efficiency gains offered by cogeneration, which now accounts for more than 90% of the electricity produced in EU refineries.

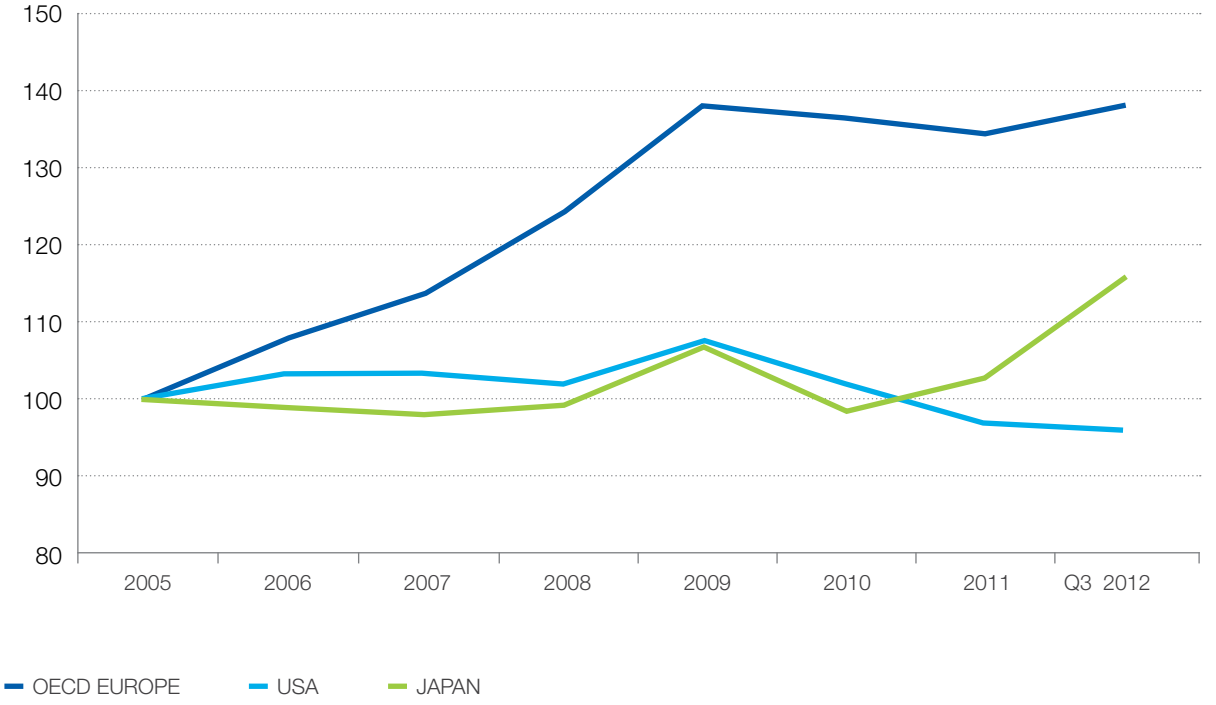
As a result the average efficiency of electricity generation in EU refineries is substantially higher than the EU average efficiency of electricity production from the average of conventional thermal plants of the electricity sector.

FIG.42 ELECTRICITY PRICES FOR INDUSTRY

US INDUSTRY IN COMPETITIVE ADVANTAGE OVER EU INDUSTRY

Source: IEA

Evolution of end-user electricity prices for industry, taxes excluded (2005 = index 100)

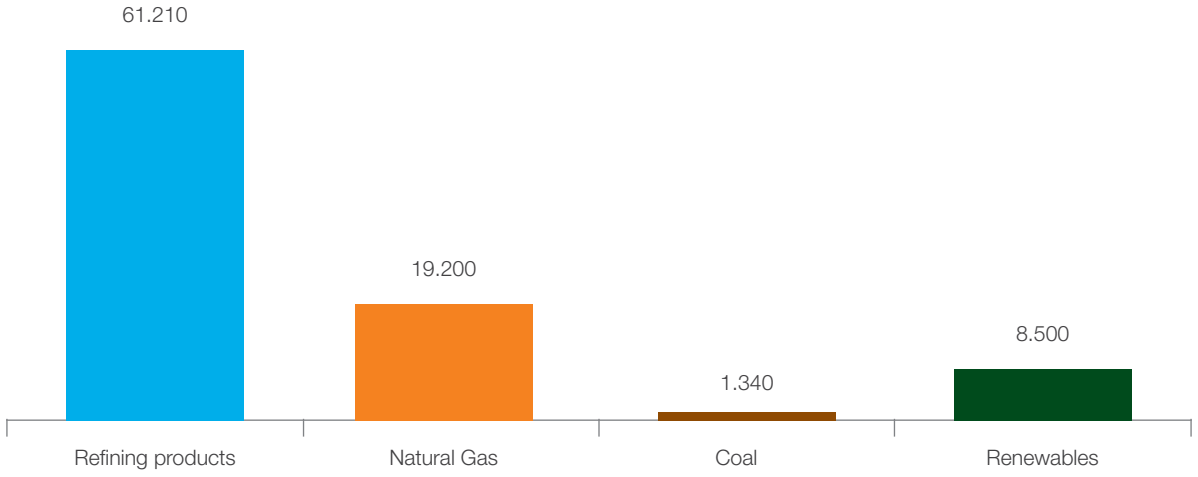


Over the past few years the US industry gained a significant competitive advantage as a result of low electricity prices.

While in the EU industry faced a 40% energy price increase between 2005 and 2012, the price of electricity for US industry decreased by a few percent over the same period.

FIG.43 CHEMICAL INDUSTRY RAW MATERIAL USE IN 2011

Source: CEFIC

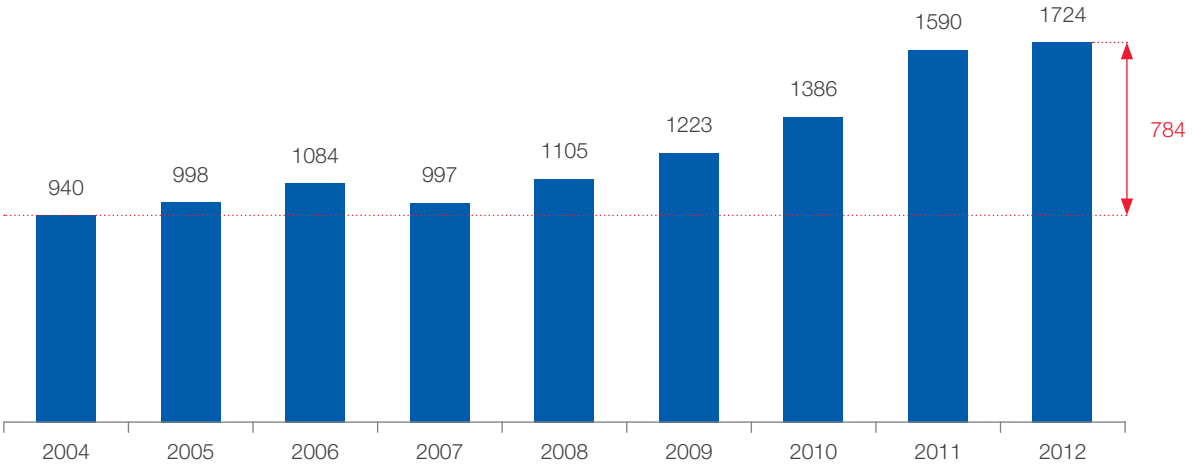


Note: Volume in 1.000 t – material (feedstock) use only

The EU Refining sector is closely integrated with the Petrochemical Sector. 68% of the petrochemical feedstock relies on oil refined products in 2011.

FIG.44 CUMULATED NUMBER OF EU REGULATIONS ON HEALTH, SAFETY AND ENVIRONMENT

Source: EU, Directory of EU legislation in force

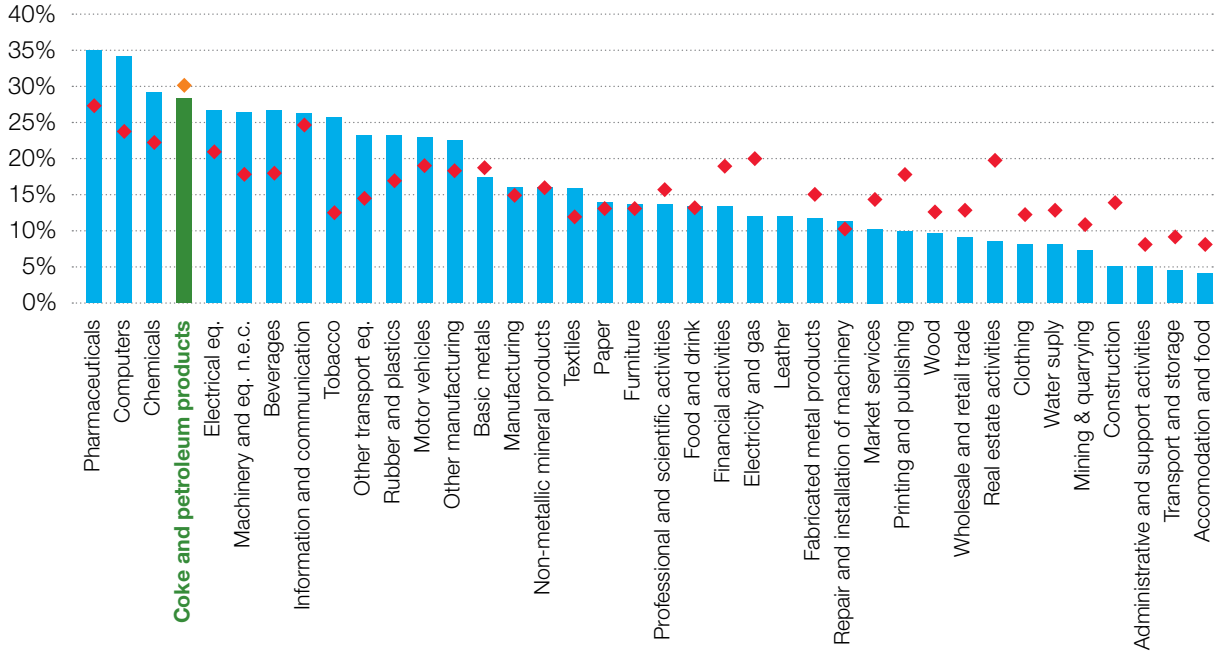


The number EU health, safety and environmental regulations has almost doubled between 2004-2012. Whilst benefiting Europe's citizens multiple regulations add considerable complexity to industry.

In October 2013, the European Commission announced "REFIT - Fit for growth", a step in ensuring that EU legislation is fit for purpose. It aims at simplifying or withdrawing EU laws, easing the burden on businesses and facilitating implementation.

FIG.45 EU REFINING INDUSTRY # 1 PROCESS INNOVATION AND AMONG MOST INNOVATIVE INDUSTRIES FOR PRODUCTS

Source: European Competitiveness Report 2013



PRODUCT INNOVATION

PROCESS INNOVATION

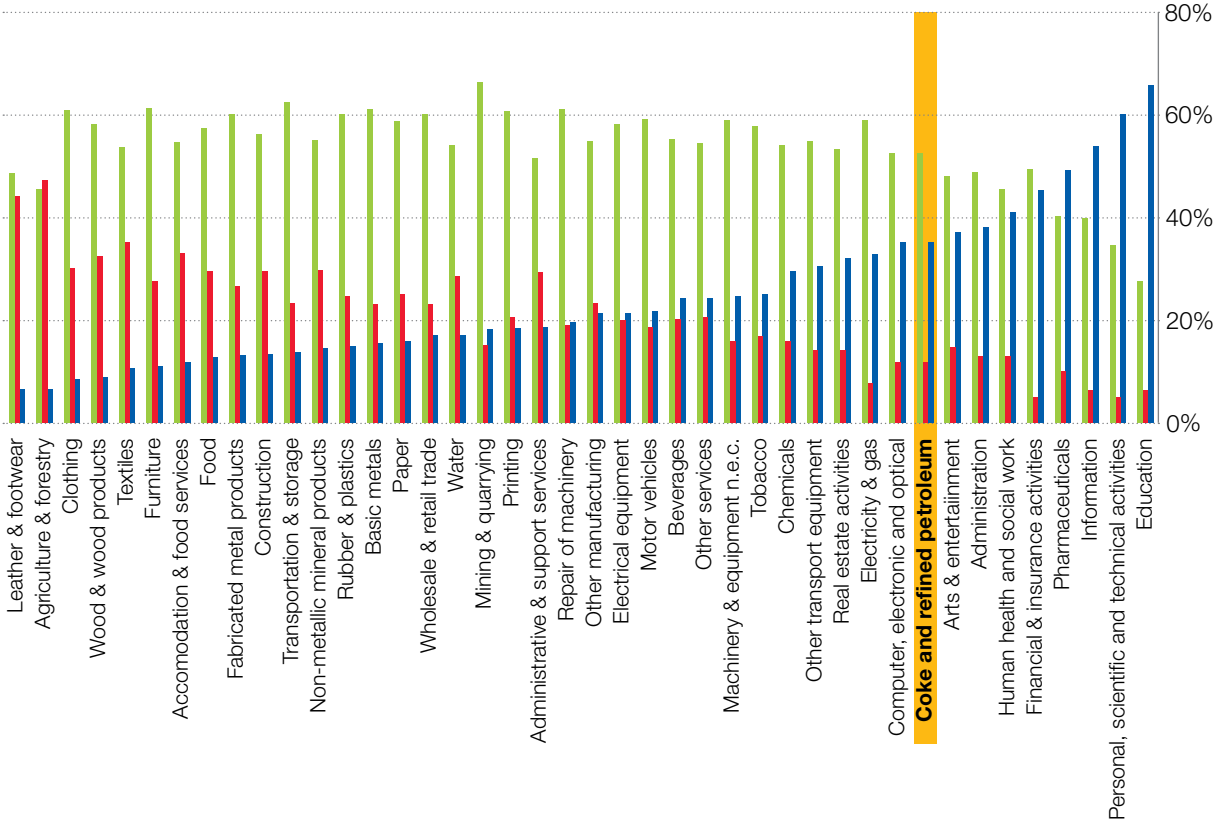
COKE AND PETROLEUM PRODUCTS

PROCESS INNOVATION

According to data presented by the European Commission in its annual Competitiveness Report, the EU Refining industry was the leading industrial sector in process innovation and among the top 4 for product innovation.

FIG.46 SKILL AND KNOWLEDGE INTENSITIES (% OF TOTAL EMPLOYMENT)

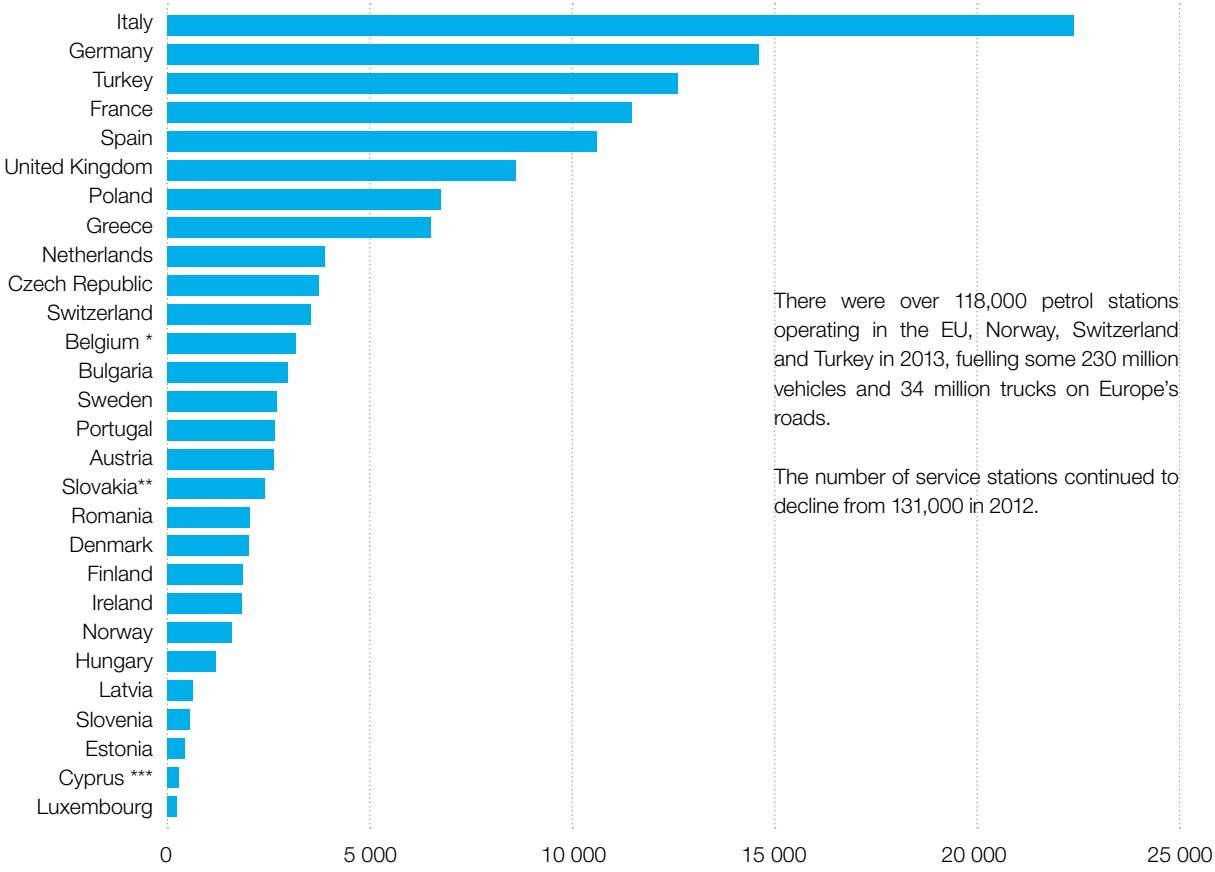
Source: European Competitiveness Report 2013



According to the European Commission's Competitiveness Report for 2013, the European refining industry employs one of the largest percentages of highly skilled workers of all manufacturing industries, just after the pharmaceutical industry.

FIG.47 NUMBER OF PETROL STATIONS IN EUROPE IN 2013

Source: National Oil Industry Associations (NOIA)



There were over 118,000 petrol stations operating in the EU, Norway, Switzerland and Turkey in 2013, fuelling some 230 million vehicles and 34 million trucks on Europe's roads.

The number of service stations continued to decline from 131,000 in 2012.

* Source: FAPETRO (department of the Federal Public Services Belgium)

** Source: Statistical Office of the Slovak Republic

*** Source: Petrol Owner's Association

Note: Data for Bulgaria and Slovakia refer to 2012

About FuelsEurope

FuelsEurope was known until June 2014 as Europia, which was formed in 1989 to represent the interests of Companies conducting refinery operations in the EU with the EU Institutions.

FuelsEurope is a division of the European Petroleum Refiners Association, an AISBL operating in Belgium.

This association, whose members are all 43 companies that operate petroleum refineries in the European Economic Area in 2013, is comprised of FuelsEurope and Concawe divisions, each having separate and distinct roles and expertise but administratively consolidated for efficiency and cost-effectiveness.

Members account for almost 100% of EU petroleum refining capacity and more than 75% of EU motor fuel retail sales.

FuelsEurope aims to promote economically and environmentally sustainable refining, supply and use of petroleum products in the EU, by providing input and expert advice to the EU Institutions, Member State Governments and the wider community, thus contributing in a constructive and pro-active way to the development and implementation of EU policies and regulations.

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