

Brussels, 22 June 2011

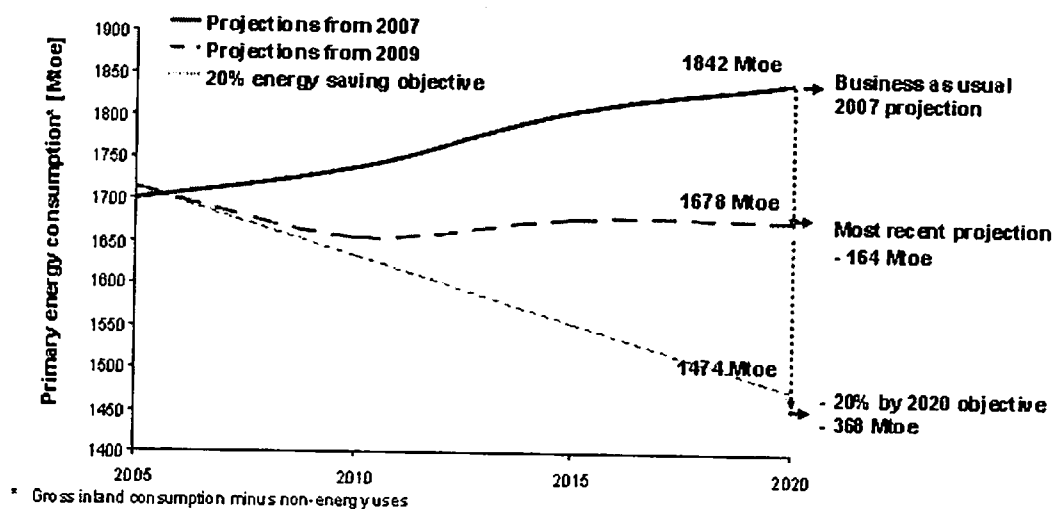
The Commission's new Energy Efficiency Directive

What is the objective?

The aim is to save energy and to reach the target the EU has set itself: By 2020, the EU wants to cut energy consumption by 20 percent¹. In absolute terms – calculated in million tons of oil equivalent (Mtoe)– this are **368 Mtoe** in 2020 compared to projected consumption in that year of 1842 Mtoe. This needs to be achieved by the EU as a whole.

At the moment – with all the measures on EU and national level in place so far – we would only reach 1678 Mtoe, or **9% of savings**.

Figure 1: Projection of primary energy use for the EU by 2020²



What are the measures proposed?

- Legal obligation to establish **energy saving schemes** in all Member States: **energy distributors or retail energy sales companies will be obliged to save every year 1,5 % of their energy sales, by volume**, through the implementation of energy efficiency measures such as improving the efficiency of the heating system, installing double glazed windows or insulating roofs, among final energy customers.
- **Public sector** to lead by example: public bodies will push for the market uptake of energy efficient products and services through a legal obligation to purchase energy efficient buildings, products and services. They will further have to progressively reduce the energy consumed on their own premises by carrying out **every year the required renovation works covering at least 3% of their total floor area**.

¹ COM(2005) 265 and Council conclusions 2007: 7224/1/07 REV 1

² SEC (2011)277 final

- Major energy savings for consumers: **easy and free-of-charge access to data on real-time and historical energy consumption through more accurate individual metering will now empower consumers to better manage their energy consumption. Billing should be based on the actual consumption well reflecting data from the metering.**
- Industry: **Incentives for SMEs to undergo energy audits and disseminate best practices while the large companies will have to make an audit of their energy consumption to help them identify the potential for reduced energy consumption.**
- Efficiency in energy generation: **monitoring of efficiency levels of new energy generation capacities, establishment of national heat and cooling plans as a basis for a sound planning of efficient heating and cooling infrastructures, including recovery of waste heat.**

What exactly is planned for public buildings?

From 1 January 2014, **3% of public buildings should be renovated each year, with the clear aim to save energy. Currently, the same percentage is renovated per year but in only half of the cases energy efficiency improvements are included (1, 5% energy related renovation rate).** In practice, this could mean that walls are insulated, double glazing windows are installed in kindergardens, schools or townhouses, roofs are redone and inefficient heating boilers replaced.

In many cases a cost optimal renovation can bring up to 60% energy savings. The benefit can be estimated to 6 Mtoe in 2020 would for illustration means that the construction of 17 coal power units or about 9 000 wind turbines would be avoided.

Due to the important share of public buildings (about 12% of the EU build up area), it could serve as a strong driver for higher market uptake of energy efficiency in other sectors and development of the skills and knowledge required.

Buildings (private and public) still represent 40 % of the overall final energy consumption.

How can you force government to spend money in times they have to save money?

The renovation of public buildings would to a **significant extent pay for itself** through the savings on the energy bills and would also help the economic recovery by stimulating business activity and jobs.

However, still there is a need for upfront investment in the implementation of energy efficiency improvements. For this reason, the proposed Directive includes **provisions to strengthen the energy services markets. In these markets energy service companies (ESCOs) would pay for the initial investments and get their money back from the savings on the energy bills.** In addition to energy savings, this will create business opportunities and new jobs, for example, for construction companies, equipment providers. The energy service market currently accounts for about € 6 billion as compared to € 30 billion in the USA where it is more developed). **The EU potential for such market is estimated at € 25 billion.**

In addition to the private funding, Member States can also use their allocations under the European Regional Development Fund (ERDF) to finance the renovation of public buildings. In the period 2007 – 2013, 4.4 billion Euro were available for that purpose.

Which measures are proposed for energy companies?

Energy companies dispose of important commercial information about the energy consumption of their clients that could make them an important actor in the energy savings market but they do not have stimuli to do so. To engage these companies, the Commission proposes that either **all energy distributors or all retail energy sales companies operating on the Member State's territory achieve annual energy savings equal to 1.5% of their energy sales volume in the previous year**. In principle, these are companies delivering gas, heating oil or electricity.

To achieve these savings the energy companies concerned would have to work with the final energy users (e.g. individual house owners, supermarkets, hospitals) to implement energy savings. The savings are counted in absolute terms and thus companies can still increase their sales.

Each Member State would have to devise its own scheme that best meets the national circumstances while following certain common EU requirements (e.g. same level of ambition, certification of savings).

In order to allow for sufficient flexibility, Member States have also the possibility to propose alternative energy savings mechanisms that lead to the same results but are not based on obligation on energy companies. These could, for example, be funding programmes or voluntary agreements.

If implemented properly and with a stringent level of ambition, it is expected that it will reduce the EU's energy consumption by **6.4% in 2020 (or 108 to 118 Mtoe primary energy which is the current consumption of Poland and Portugal together)**.

Do such energy efficiency schemes already exist?

There are already **positive experiences from the countries that have introduced similar obligations, e.g. Denmark, France, Italy, the UK, and the region of Flanders**. Because of the positive outcomes **Poland** has recently voted for similar scheme and **Malta** considers taking up a saving obligation scheme as well.

So far, reductions of 2.3% to 5.6% of final energy consumption have been realized by the energy companies concerned (typically suppliers or distributors) over the duration of the various schemes. The most advanced scheme works with an annual reduction of 1.5% as foreseen in the Directive. Still the level of ambition is lower than schemes in other countries like **Australia or USA (Illinois: 2%, Massachusetts: 2.3% per year additional through 2020, Vermont: averaging 2% additional per year, Iowa: 1.5% per year additional, Maryland: 1.5% to 1.8% additional per year)**.

Who will pay for such schemes?

Depending on the way the schemes are implemented at national level the costs are either **equally spread to all consumers or energy services companies are used and the upfront investments are recuperated from the savings on the energy bills over certain period of time**.

Are you not imposing to companies unnecessary obligations? Why not being more market liberal?

No. The approach proposed by the Commission is a **market based approach as Member States can decide – as it has happened in Italy, France, the UK and Flanders – to certify the savings and make them tradable**. This allows for the implementation of the savings at least cost and it has proved very efficient in mobilizing energy savings improvements. However, an additional flexibility is foreseen by allowing that the saving target can be met through other measures such as voluntary agreements or funding solutions if the Member States chooses so.

What are the benefits for the industry?

The Commission proposes that **large companies have to do regular energy audits carried out in an independent manner**. Member States are also encouraged to develop incentives for companies that introduce an energy management system as a systematic framework for the rational use of energy. **Exchange of best practices** in energy efficiency and projects aimed at building capacity on energy management are also proposed for SMEs.

And for the consumers?

Member States shall ensure that final customers of electricity, natural gas, district heating or cooling and district-supplied domestic hot water are provided with **individual meters** that accurately measure and allow making available their actual energy consumption and providing information on actual time of use.

Member States shall ensure the **accuracy and the frequency of the billing and that the billing is based on actual consumption**, for all the sectors covered by the Directive, including energy distributors, distribution system operators and retail energy sales companies. This should be done not later than **1 January 2015 for electricity, natural gas; hot water and centralised heat**. In a longer term, this may require introduction of intelligent metering although in the shorter term, frequent billing can be based on self reading of existing meters by the consumers themselves.

The potential savings that could be reached through improved information provided through more adequate metering and billing are estimated at the level of around 80 Mtoe. Indeed, some pilot projects have shown a potential of reduction of the energy consumption up to 15-20% (40% in electricity) when customers are allowed to turn off appliances by web interface or mobile³.

Why more obligations regarding 'smart meters' if they are already required in under the existing EU legislation?

Existing EU legislation on internal market for electricity and gas already foresees a roll-out of smart meters (e.g. at least 80% of smart meters for electricity deployed by 2020, subject to a positive cost-benefit analysis by Member States). Individual metering of heat and hot water consumption as well as frequent individual billing based on actual consumption of energy have also already been assumed by the existing Directive of Energy Services.

³ Project AlertMe in UK (<http://www.alertme.com/>).

But there are shortcomings in the current display and presently the developments on individual metering and billing so far have not been always helping end-users to save energy.

For example, new electronic meters for electricity/gas are often provided without proper interface (e.g. in-home display or via some other type of electronic device such as smart phones, tablets, etc). Billing is still often based just on forecasts and not actual consumption, billing of heat in multi-apartment buildings is often just based on flat rate per m²; billing based on actual consumption in some countries is sometimes required as often as annually, which all do not encourage the consumers to save energy.

The legislative proposal aims to ensure that certain minimum feedback from metering is provided **free of charge to individual consumers**.

What is proposed for district heating?

The Directive requires that by 1 January 2014, the Member States have established a national heating and cooling plan for developing the potential for the application of high-efficiency cogeneration (CHP) and efficient district heating and cooling.

Cogeneration is the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

CHP saves at least 30% of energy compared to separate electricity and heat production. CHP is a mature, well-proven technology and there is an additional economic potential of at least doubling CHP by 2020. Despite this, CHP share remained flat. The current share is 11%. Since 2004 there was only 0.5% increase. A 6% per year growth would be needed to realise the economic potential by 2020, which is at least 21%.

Why not binding targets? What is the 'two steps approach'?

We propose **binding measures** rather than binding **target** for each and every member state: once the directive enters into force, Member States will have the obligation to apply all its provisions. For instance, they cannot decide whether or not to implement the 3% renovation target for public If not, the Commission may start infringement procedures.

In addition, the Commission proposes that

- (1) Member States set themselves non-binding **national energy efficiency target**
- (2) the Commission will propose binding national targets if in 2014 we come to the conclusion that the EU is not likely to achieve the 20 percent target



Bruksela, 22 czerwca 2011

KOMISJA EUROPEJSKA – KOMUNIKAT PRASOWY

Nowe instrumenty prawne zachęcą do oszczędzania energii i poprawią efektywność energetyczną

Bruksela, 22 czerwca 2011 r. – Najtańsza energia to energia zaoszczędzona, dlatego do 2020 r. Unia zamierza osiągnąć dwudziestoprocentową poprawę efektywności energetycznej. Odliczanie już rozpoczęto, jednak jeśli w najbliższych latach sytuacja nie ulegnie zmianie, UE osiągnie ten cel jedynie w połowie. Taki wynik stanowiłby zagrożenie dla naszej konkurencyjności, dla starań o obniżenie emisji CO₂ oraz dla bezpieczeństwa dostaw. Oznaczałby również utrzymanie wysokich kosztów ponoszonych przez indywidualnych konsumentów. Dlatego Komisja Europejska przedstawiła dziś nowy pakiet przepisów służących zwiększeniu efektywności energetycznej. Jego celem jest nadrobienie zaległości i wprowadzenie UE na ścieżkę, która doprowadzi do realizacji celu. Mowa tu o wniosku dotyczącym nowej dyrektywy, która miałaby spowodować zwiększenie wysiłków państw członkowskich w celu poprawy efektywności zużycia energii na wszystkich etapach łańcucha energetycznego – począwszy od sprawności przemiany energetycznej i dystrybucji energii, aż po etap jej końcowego zużycia.

– Celem naszego wniosku jest zwiększenie efektywności wykorzystania energii w codziennym życiu oraz udzielenie obywatelom, organom administracji publicznej i przedstawicielom branży energetycznej wsparcia, które umożliwi im sprawniejsze zarządzanie własnym zużyciem energii. Efektem końcowym tych działań powinno być również obniżenie kosztów energii, a także istotne nowe możliwości tworzenia miejsc pracy w całej UE, – powiedział Günther Oettinger, europejski komisarz ds. energii.

W skrócie, środki zaproponowane przez Komisję są proste, ale ambitne:

- **Obowiązek prawny wprowadzenia systemów oszczędzania energii we wszystkich państwach członkowskich:** dystrybutorzy energii lub jej sprzedawcy detaliczni zobowiązani będą do uzyskania każdego roku oszczędności sprzedanej energii wynoszących 1,5 proc. w ujęciu ilościowym, czemu służyć ma wdrożenie – po stronie końcowych odbiorców energii – środków zapewniających efektywność energetyczną, takich jak poprawa efektywności systemów ogrzewania, podwójne okna lub izolacja dachów. Państwa członkowskie mają także możliwość zaproponowania – w ramach alternatywy – innych mechanizmów oszczędzania energii, na przykład w formie programów finansowania lub dobrowolnych umów, które pozwolą osiągnąć takie same wyniki, ale nie będą nakładać zobowiązań na spółki energetyczne.

Kontakt:

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Nicole Bockstaller (+32 2 295 25 89)

- **Sektor publiczny jako wzór do naśladowania:** zobowiązanie organów administracji publicznej do nabywania energooszczędnych budynków, produktów i usług sprawi, że będą one wspierały wprowadzanie na rynek energooszczędnych rozwiązań. Ponadto będą one prawnie zobowiązane do stopniowego obniżania ilości energii zużywanej w zajmowanych przez nie obiektach, poprzez coroczne prace modernizacyjne obejmujące przynajmniej 3 proc. ich całkowitej powierzchni użytkowej;
- **Znacząca oszczędność energii po stronie odbiorców:** prosty i darmowy dostęp do rzeczywistych i historycznych danych na temat zużycia energii dzięki dokładniejszym indywidualnym licznikom umożliwi odbiorcom lepsze zarządzanie zużyciem energii. Rachunki powinny być wystawiane zgodnie z rzeczywistym zużyciem, czyli powinny dokładnie odzwierciedlać dane z liczników;
- **Przemysł:** zachęty dla MŚP mają nakłonić je do prowadzenia audytów energetycznych i uczestnictwa w wymianie najlepszych praktyk; jednocześnie duże przedsiębiorstwa będą zobowiązane do skontrolowania własnego zużycia energii w celu określenia możliwości jego obniżenia;
- **Sprawność wytwarzania energii:** monitorowanie poziomów sprawności nowych mocy wytwórczych; ustanowienie krajowych planów instalacji grzewczych i chłodzących, dzięki czemu stworzone zostaną podstawy do przemyślanego planowania wydajnej infrastruktury grzewczej i chłodzącej, z uwzględnieniem na przykład odzysku ciepła odpadowego;
- **Przesył i dystrybucja energii:** uzyskanie wzrostu efektywności poprzez skłonienie krajowych organów regulacji energetyki do podejmowania decyzji – szczególnie w zakresie zatwierdzania taryf – uwzględniających kryteria efektywności energetycznej.

Kontekst wniosku

Wniosek Komisji jest odpowiedzią na pojawiające się ostatnio ze strony Rady Europejskiej (4 lutego 2011 r.), Rady ds. Energii (10 czerwca 2011 r.) i Parlamentu Europejskiego głosy, wzywające do działań, które zapewniłyby osiągnięcie celu, jakim jest obniżenie przewidywanego zużycia energii w UE o 20 proc. do 2020 r. Według przedstawionych ostatnio przez Komisję wyliczeń, w których uwzględniono przyjęte przez państwa członkowskie w kontekście strategii Europa 2020 krajowe cele w zakresie efektywności energetycznej na 2020 r., UE jest wciąż daleka od osiągnięcia tego celu.

Aby sprostać temu wyzwaniu Komisja Europejska przedstawiła najpierw – dnia 8 marca 2011 r. – nowy Plan na rzecz efektywności energetycznej, w którym zaproponowano szereg środków służących poprawie efektywności energetycznej; środki te miały być wdrażane we wszystkich sektorach gospodarki, zapewniając dodatkowe oszczędności energii. Plan ten zyskał uznanie Rady ds. Energii oraz Parlamentu Europejskiego.

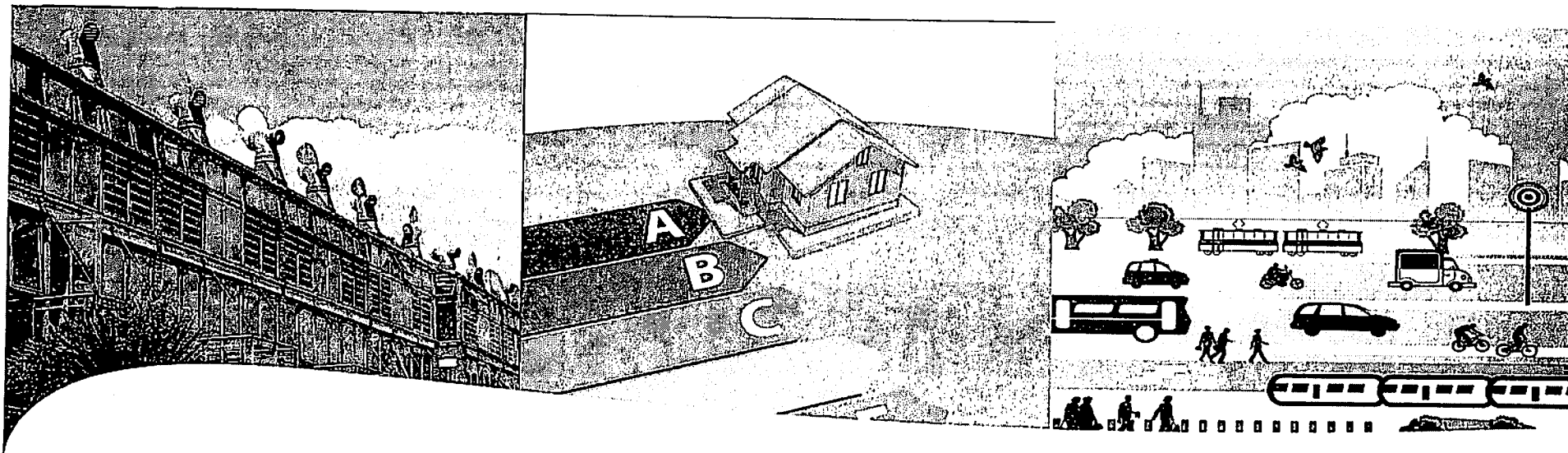
W dniu dzisiejszym Komisja przedstawiła wniosek legislacyjny dotyczący dyrektywy w sprawie efektywności energetycznej, w ramach którego wiele kluczowych propozycji działań zawartych w Planie na rzecz efektywności energetycznej staje się wiążące. W przedstawionym wniosku wykorzystano przepisy dyrektyw w sprawie wspierania kogeneracji i w sprawie usług energetycznych¹, które połączono w jeden spójny instrument regulujący kwestię efektywności energetycznej w obszarze dostaw energii i jej końcowego zużycia.

¹ Dyrektywy 2004/8/WE w sprawie kogeneracji oraz 2006/32/WE w sprawie efektywności końcowego wykorzystania energii i usług energetycznych

Dyrektywa przewiduje także, że Komisja ma dokonać w 2014 r. oceny realizacji unijnego celu dotyczącego poprawy efektywności energetycznej o 20 proc. do 2020 r., oraz – w razie potrzeby – przedstawić kolejny wniosek legislacyjny ustanawiający obowiązkowe krajowe cele w zakresie efektywności energetycznej.

Więcej informacji:

Dyrektywa w sprawie efektywności energetycznej:
http://ec.europa.eu/energy/efficiency/eed/eed_en.htm



Nowa Dyrektywa UE dotycząca poprawy efektywności energetycznej

- Wyzwania i proponowane
rozwiązania

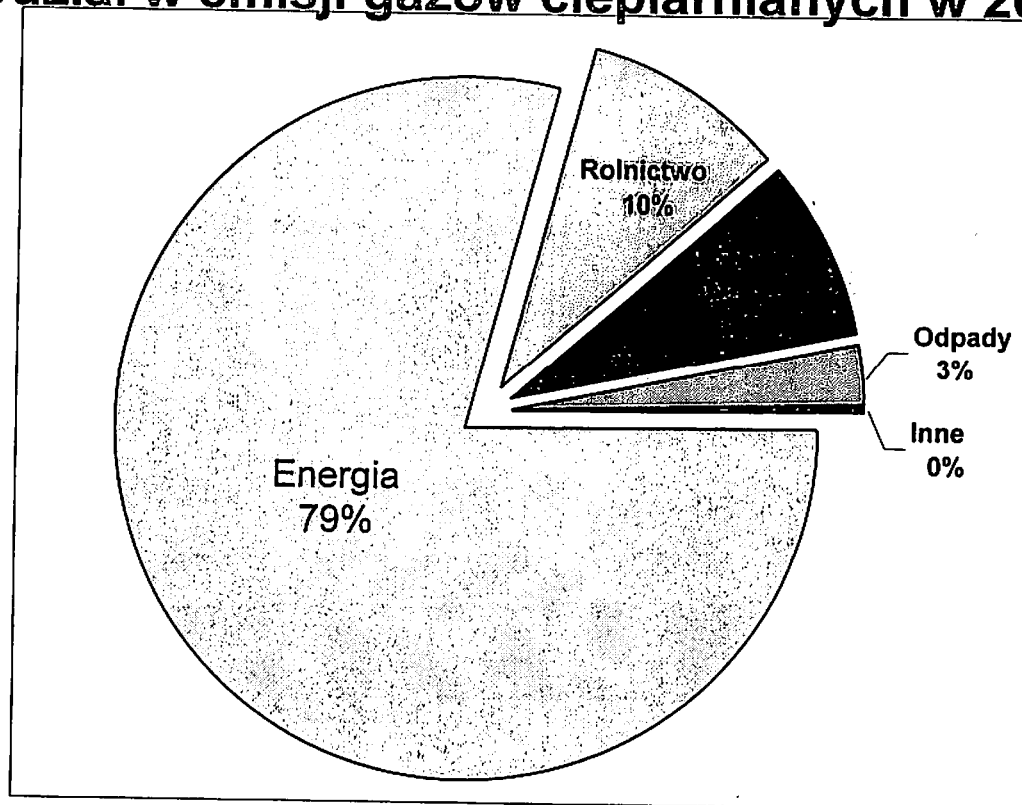
Directorate-General
for Energy

Krzysztof Gierulski
DG Energy
22/06/2011



ZUŻYCIE PALIW I ENERGII TO GŁÓWNE ŹRÓDŁO EMISJI GAZÓW CIEPLARNIANYCH

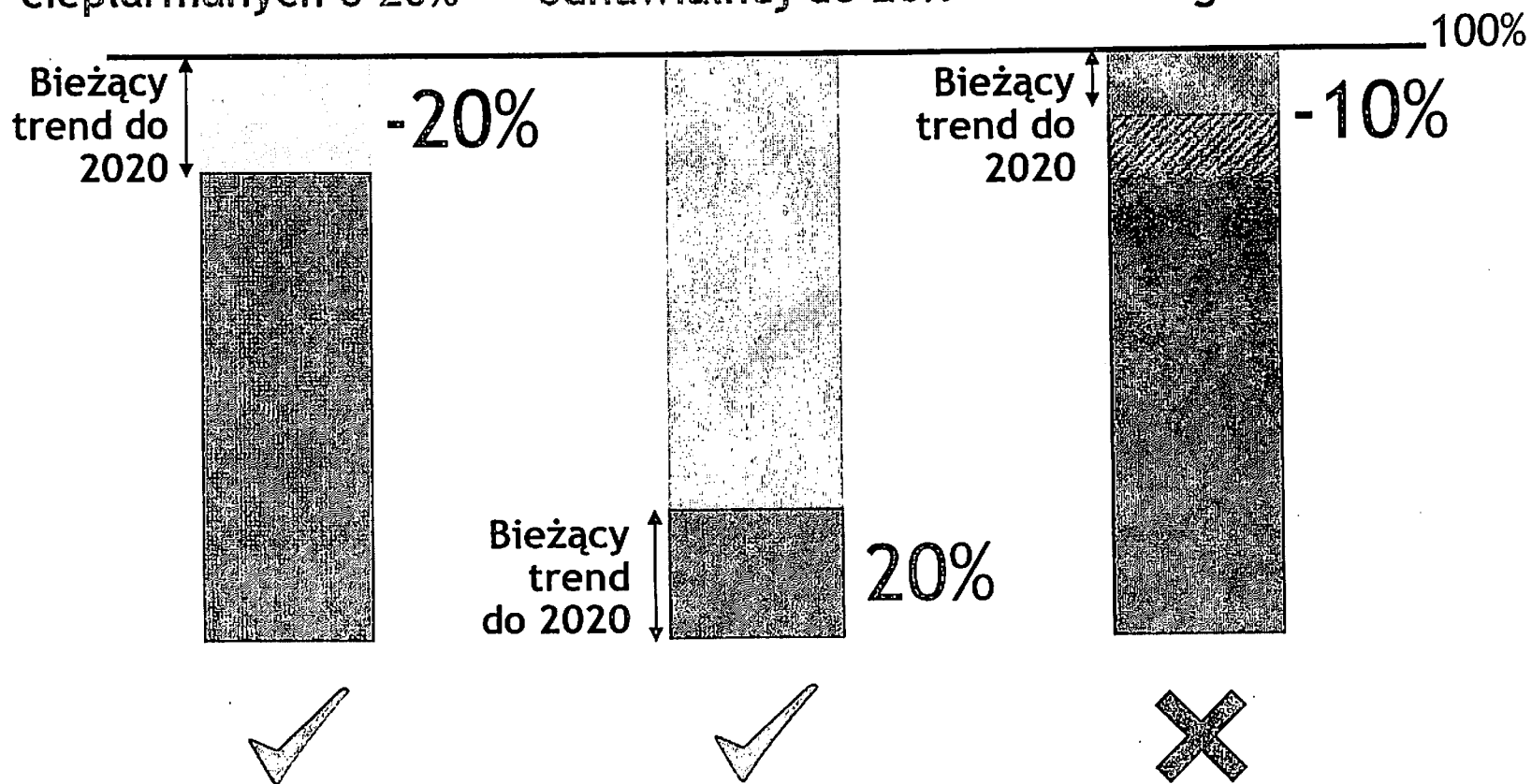
Udział w emisji gazów cieplarnianych w 2008



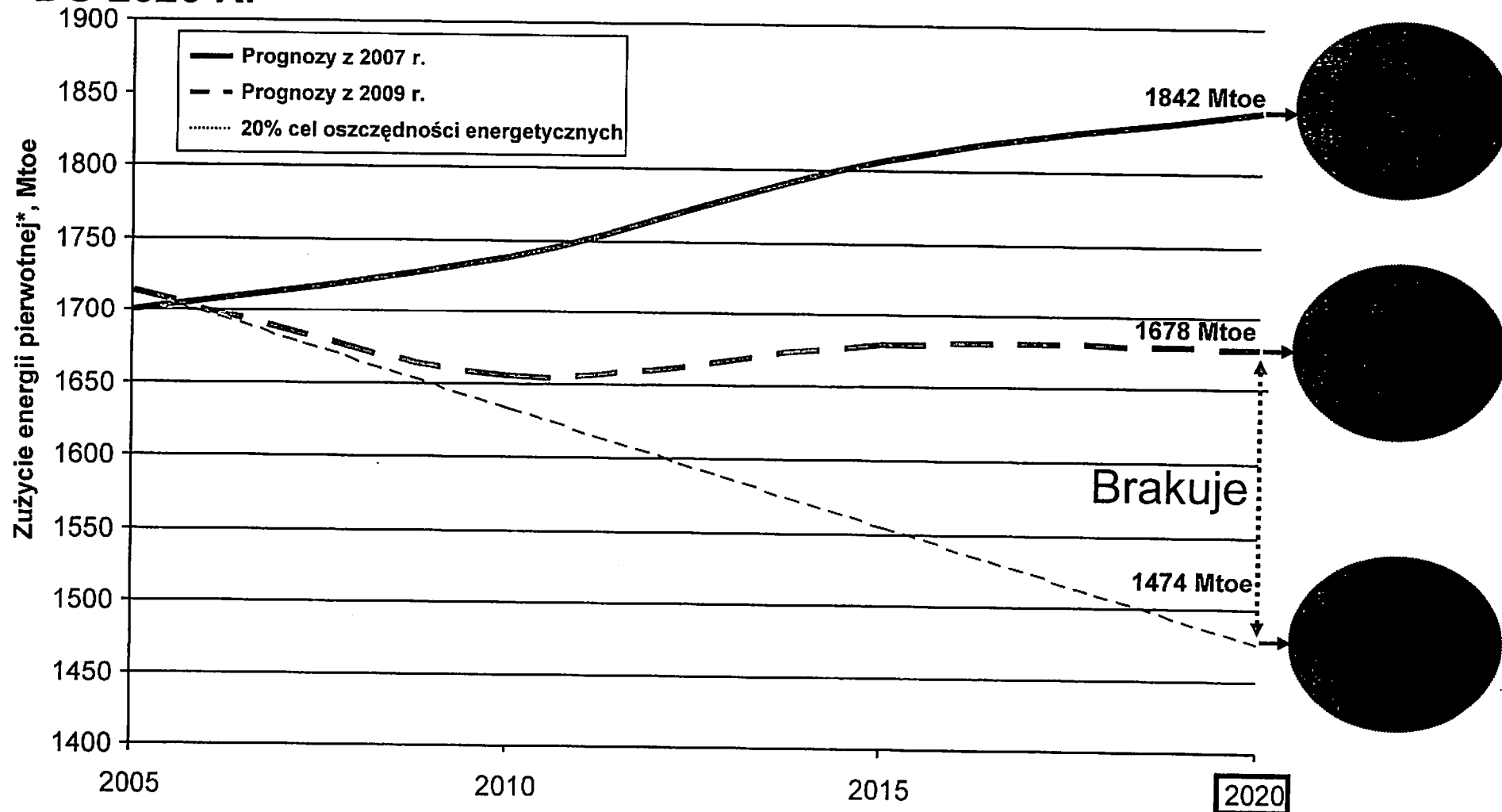
W ramach wykorzystania paliw i energii, sektor energetyczny odpowiada za 31% całkowitych emisji, transport za 19%, przemysł za 13%, gospodarstwa domowe za 9%, inne sektory za 7%.

W TYM KONTEKŚCIE OSIĄGNIĘCIE WSZYSTKICH TRZECH CELÓW STRATEGICZNYCH UE, CZYLI "20-20-20 DO ROKU 2020", STAŁO SIĘ ZADANIEM PILNYM

Redukcja emisji gazów cieplarnianych o 20% Wzrost udziału energii odnawialnej do 20% Zmniejszenie zużycia energii o 20%



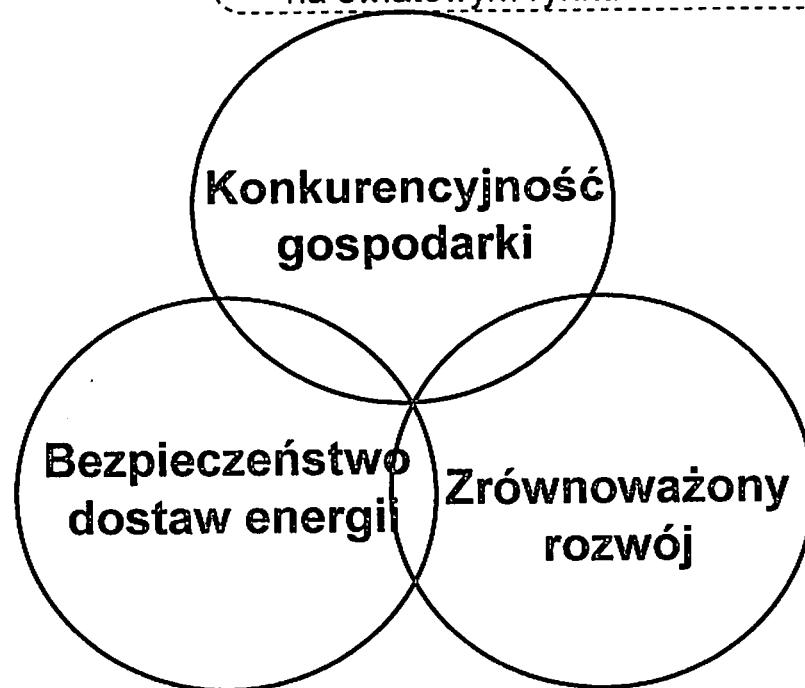
NA RAZIE UE NIE JEST NA DRODZE DO OSIĄGNIĘCIA STRATEGICZNEGO CELU 20% OSZCZĘDNOŚCI ENERGETYCZNYCH DO 2020 R.



* Krajowe zużycie energii pierwotnej brutto bez pozaenergetycznego wykorzystania paliw

OSZCZĘDZANIE ENERGII MOŻE PRZYNIEŚĆ EUROPIE WIELE KORZYSCI...

- ↓ obniżenie rachunku za energię o ok. 200 bln € rocznie w 2020 r.
- ↑ stworzenie 2 mln nowych miejsc pracy
- ↑ impuls dla rozwoju nowych technologii, pozycja lidera na światowym rynku



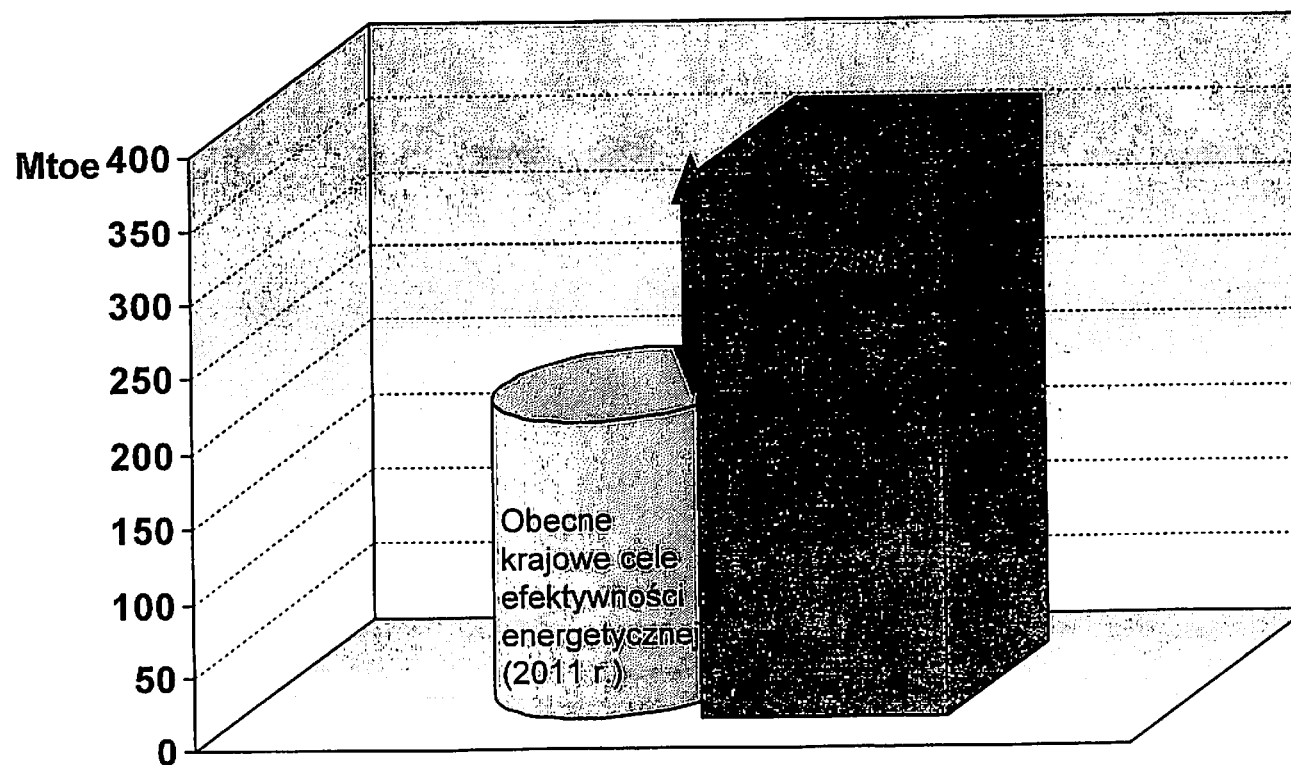
- ↓ mniejsze uzależnienie UE od importu
- ↓ mniejsze potrzeby inwestycyjne w energetyce
- ↑ poprawa salda w handlu paliwami i energią

- ↓ mniejsze emisje CO₂
- ↓ zmniejszenie degradacji środowiska

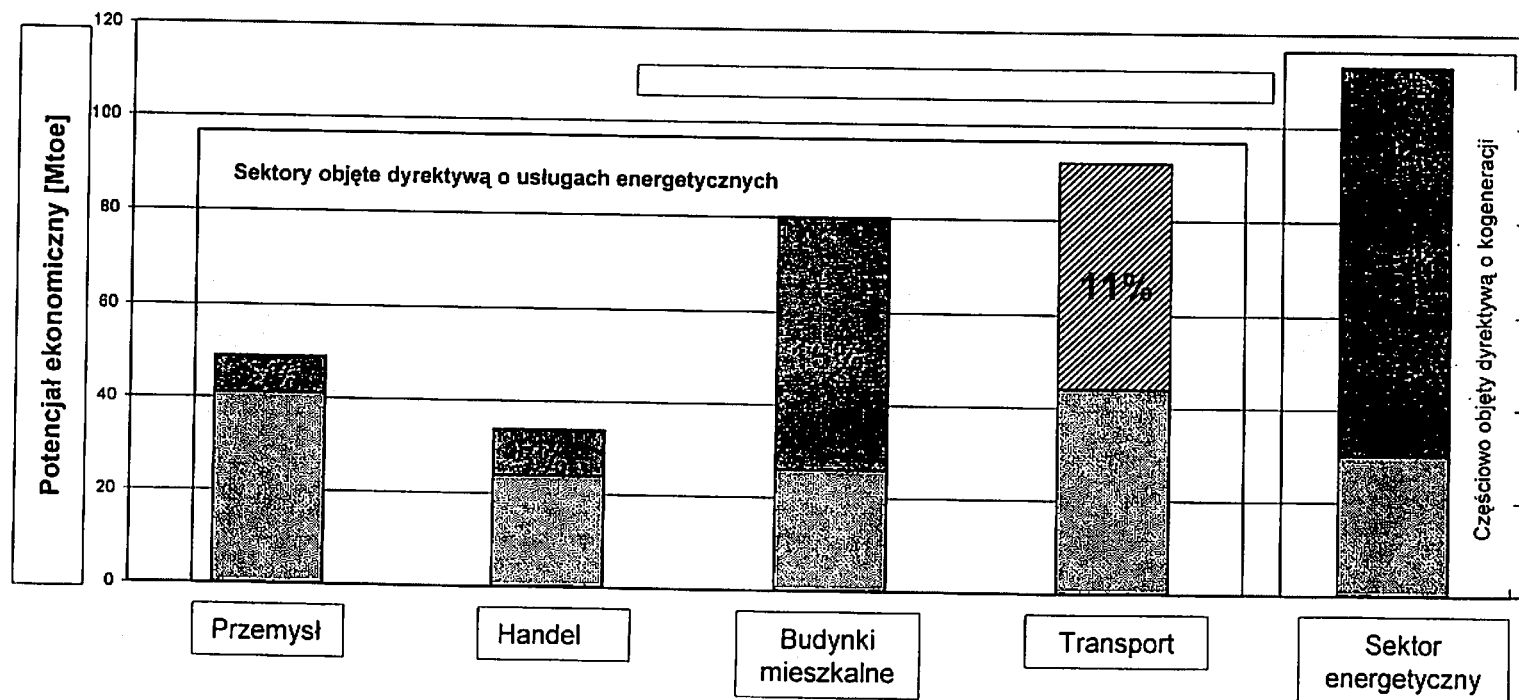
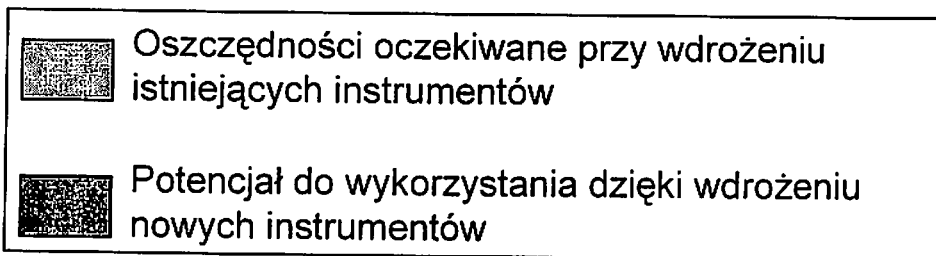
**MAMY KOMPLEKSOWY SYSTEM EUROPEJSKICH INSTRUMENTÓW, KTÓRE
BEZPOŚREDNIO LUB POŚREDNIO OBEJMUJĄ WSZYSTKIE ASPEKTY
EFEKTYWNOŚCI ENERGETYCZNEJ**



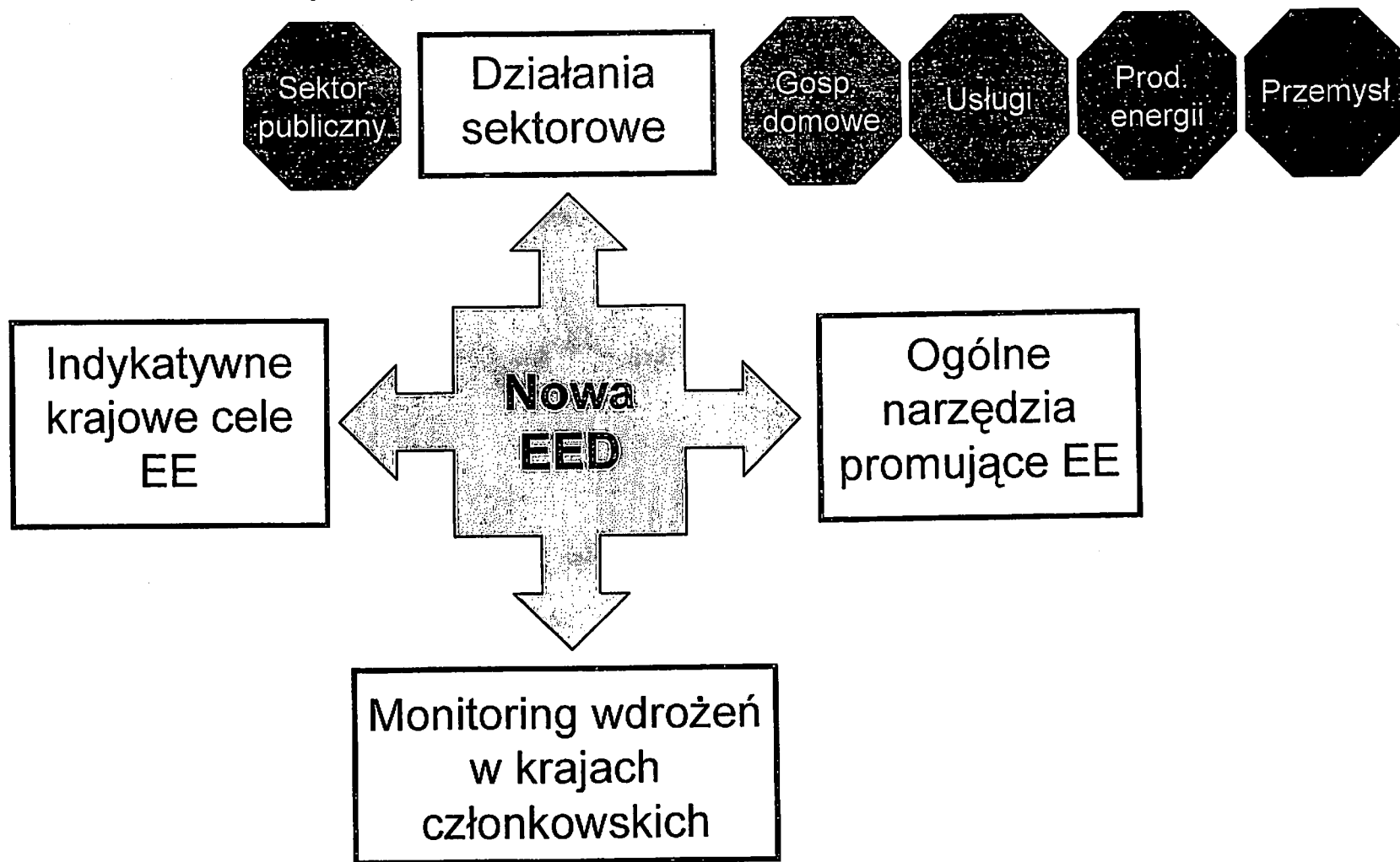
AKTUALNY POZIOM KRAJOWYCH CELÓW DOT. OSZCZĘDZANIA ENERGII NA 2020 r. NIE WYSTARCZY



EKONOMICZNY POTENCJAŁ OSZCZĘDNOŚCI ENERGETYCZNYCH ISTNIEJE WE WSZYSTKICH SEKTORACH

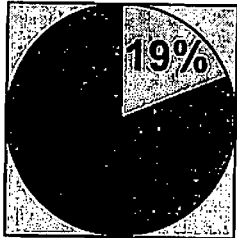


**POTRZEBNY JEST NOWY SILNY IMPULS : KOMISJA EUROPEJSKA
PROONUJE NOWĄ DYREKTYWĘ DOT. EFEKTYWNOŚCI
ENERGETYCZNEJ (EED)**

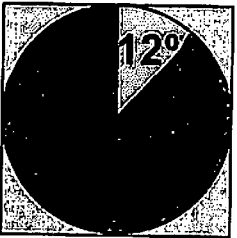


WZORCOWA ROLA SEKTORA PUBLICZNEGO

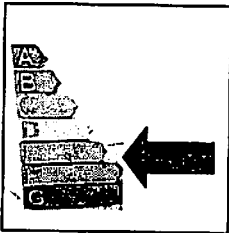
Stan obecny



- Wydatki sektora publicznego stanowią ważną część PKB UE



- Budynki należące do sektora publicznego



- Niski wskaźnik energooszczędności w budynkach, w tym budynkach sektora publicznego



- Optymalne kosztowo renowacje budynków mogą dać do 60% oszczędności energii

Rozwiązania EED

- Zakupy urządzeń, usług i budynków przy zachowaniu wysokich standardów efektywności energetycznej
- Cel dla renowacji 3% rocznie budynków sektora publicznego powyżej 250 m² co rok
- Lokalne plany poszanowania energii i wprowadzenie systemów zarządzania energią
- Bardziej systematyczne wykorzystanie **Kontraktów na Efektywność Energetyczną** (energy performance contracting)

KORZYŚCI DLA KONSUMENTÓW DZIĘKI DOSTĘPOWI DO INFORMACJI I USŁUG ENERGETYCZNYCH

Stan obecny



- Niewykorzystane możliwości dużych oszczędności w mieszkalnictwie i usługach
- Usługi energetyczne rozwijają się wolno
- Niska świadomość i słaby dostęp do informacji n/t efektywności energetycznej
- Rozwój technologiczny (np. inteligentne liczniki i sieci energet.) nie zawsze zapewniają korzyści konsumentom

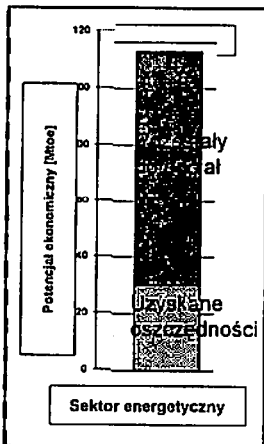


Rozwiązania EED

- Wprowadzenie krajowych **systemów zobowiązań dot. EE** dla przedsiębiorstw energetycznych (np. białe certyfikaty)
- **Minimalne wymogi dla indywidualnych liczników**, z dostępem do informacji o bieżącym i historycznym zużyciu energii
- Zapewnienie **dokładności i minimalnej częstotliwości dla rachunków** opartych o **faktyczne zużycie** (nie prognozy)
- Zawarcie kluczowych informacji, w rachunkach za energię pozwoli łatwiej oszczędzać energię i pieniądze

POPRAWA EFEKTYWNOŚCI ENERGETYCZNEJ W PRODUKCJI I PRZESYLE ENERGII

Stan obecny



- Fragmentaryczne regulacje i systemy wsparcia dla zmniejszania strat w produkcji energii
- Kogeneracja używa nawet do 30% mniej paliwa niż produkcja energii cieplnej i elektrycznej osobno: w UE tylko 11% en. elektr. z kogeneracji przy potencjale wynoszącym 21%

Nowe inwestycje w wytwarzanie energii nie odzwierciedlają systemowo najlepszych dostępnych technologii (Best Available Technologies)

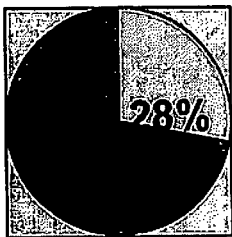


Rozwiązania EED

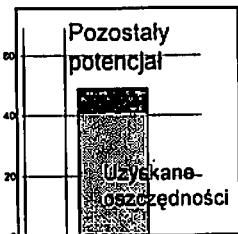
- 10-letnie krajowe plany wykorzystania ciepła (też chłodzenia) **przejrzystość i przewidywalność polityki inwestycyjnej**
- **Wymóg odzysku ciepła odpadowego (kogeneracja)** dla nowych i istniejących elektrowni i obiektów przemysłowych
- **Taryfy przesyłu energii elektr. mają zachęcać do oferowania usług energetycznych konsumentom, pozwalając im łatwiej oszczędzać i kontrolować zużycie energii**
- Monitoring efektywności energetycznej w produkcji energii elektrycznej i cieplnej w dużych instalacjach

PODNOSZENIE ŚWIADOMOŚCI N/T MOŻLIWYCH KORZYŚCI Z WPROWADZANIA ROZWIĄZAŃ ENERGOOSZCZĘDNYCH W PRZEMYŚLE

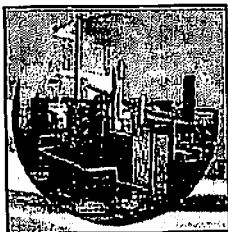
Stan obecny



- Przemysł odpowiada za istotną część zużycia energii finalnej



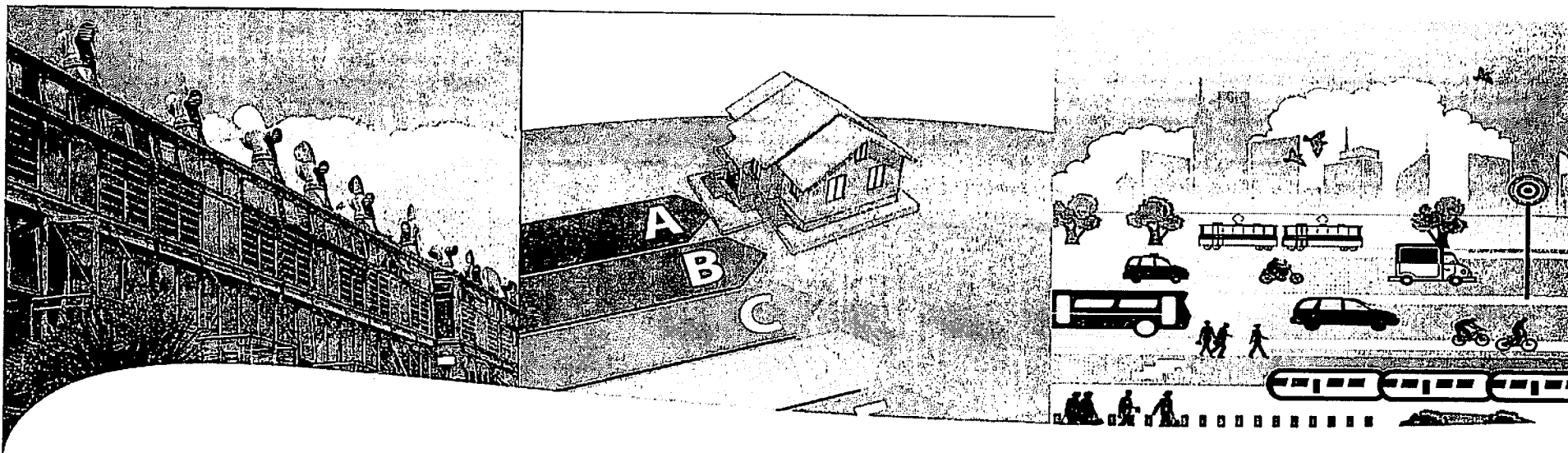
- Znaczny postęp, ale nadal jest dużo niewykorzystanych możliwości



- Energooszczędne technologie i doświadczenie są dostępne

Rozwiązania EED

- Kraje UE mają stworzyć systemy zachęt dla MŚP do korzystania z audytów energetycznych
- Upowszechnianie dobrych praktyk i wiedzy n/t korzystania z systemów zarządzania energią w MŚP
- Obowiązkowe audyty energetyczne w dużych przedsiębiorstwach, zachęty do wdrażania inwestycji w EE i wprowadzania Systemów Zarządzania Energią



Dziękuję za uwagę !

Szczegółowe informacje są dostępne w internecie :

<http://ec.europa.eu/energy/efficiency/>

BIEŻĄCY PLAN DO WDROŻENIA DYREKTYWY

- Parlament Europejski wyznacza sprawozdawcę
 - Pierwsza prezentacja i dyskusje w Radzie UE (Grupa Robocza ds. Energii pod przewodnictwem polskiej prezydencji)
-
- Kontynuacja prac w grupie roboczej w Radzie UE
 - Prace w komisji Parlamentu Europejskiego
 - Spotkanie ministrów ds. energii (listopad 2011 r.)
-
- Zamykanie uzgodnień politycznych
-
- Finalizacja prac nad tekstem legislacji w wersjach językowych
 - Wejście w życie nowej Dyrektywy o efektywności energetycznej (EED) do końca 2012 r.
-
- Termin wdrożenia nowej dyrektywy w krajach UE
-
- Ocena postępu w realizacji strategicznego celu 20% oszczędności energetycznych dla UE

Brussels, 8 March 2011

The Commission's new Energy Efficiency Plan

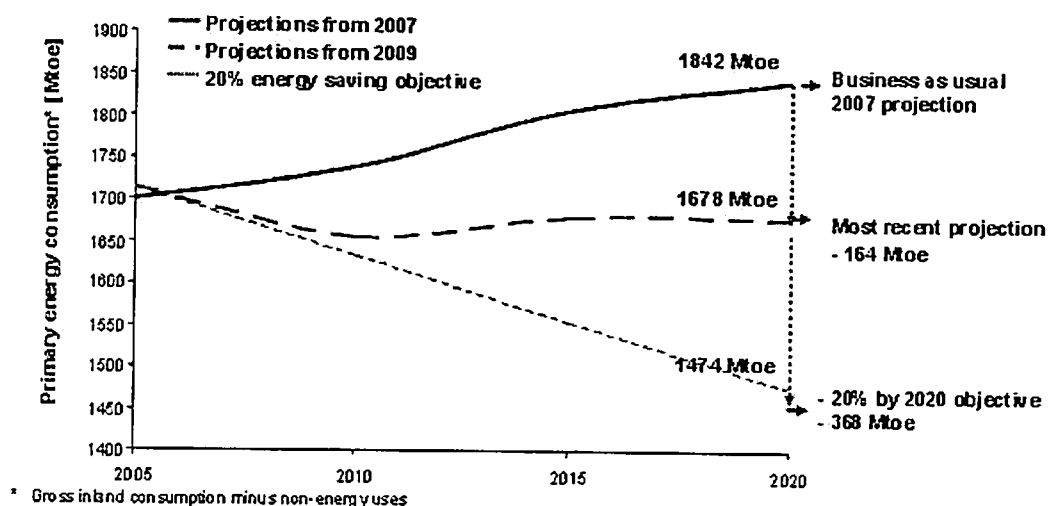
What is at stake?

Energy savings is one of the most cost effective ways to enhance security of energy supply, and to reduce emissions of greenhouse gas and other pollutants. This is why in 2007, the EU has set itself a target for saving 20 percent of its energy consumption by 2020.

The 20% objective translates into a saving of 368 million tons of oil equivalent (Mtoe) by 2020 compared to projected consumption in that year of 1842 Mtoe. This needs to be achieved by the EU as a whole.

According to the Commission's most recent projections, which take into account measures implemented at national and European level up to the end of December 2009, consumption in 2020 is expected to be 1678 Mtoe, equivalent to a saving of only 9% relative to the previous projection. This is illustrated on the figure below.

Figure 1: Projection of primary energy use for the EU by 2020 (Source: DG ENER)



Why was so little progress made?

A number of market and regulatory failures are responsible for that:

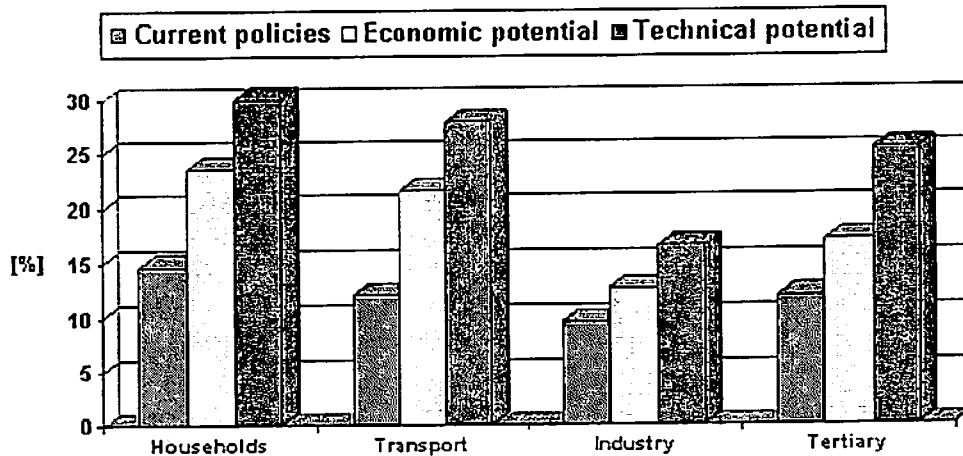
- **Governance:** the prominence of energy efficiency has increased in recent years but is still **not sufficiently high on policy agendas**, the policy mix is often insufficient or too softly worded to address all challenges and in many cases there is poor policy coordination.
- **Building sector** (residential and commercial buildings): **there is still low awareness on the benefits**, low mobilisation of the available funds to cover the initial costs, and a lack of the skills required by the buildings workforce.

Industry: significant improvements have been achieved but energy is not a major concern in many production processes due to low awareness (especially for SMEs) and low availability of funds to cover the initial costs.

What can be done now? What sectors should be targeted?

Current estimates show that the sectors that deserve the highest attention are **residential, transport and tertiary** with more limited possibilities also available for industry. Major improvements are also needed in the energy transformation sector if the overall 20% target is to be achieved.

Figure 2. Final energy savings potential in EU 27 in 2020 (as percentage of the projections done in 2007)



Why is there a need for an Energy Efficiency Plan? What about legislative proposals?

The Communication is a strategy paper that sets out ideas for binding measures to save energy. In a few months, legislative proposals with very concrete binding measures will follow.

As regards national energy efficiency targets, the Commission will firstly monitor the implementation of the national energy efficiency targets set in the context of Europe 2020 and check in 2013 whether they will deliver the European 20% objective. If the 2013 review shows that the overall EU target is unlikely to be achieved, the Commission will, at a second stage, consider proposing legally binding national targets for 2020.

What is proposed in the new Energy Efficiency Plan?

The plan focuses on instruments to trigger the renovation process in public and private buildings, to improve the energy performance of the appliances used in them and to foster energy efficiency in households and the industry.

The Communication does not cover transport, as a White paper on Transport is due to come out soon.

For the **public sector**, the EU Commission proposes the following binding measures:

- **Public authorities should be required to refurbish at least 3% of their buildings (by area) each year. This is roughly double of the actual renovation rate.** Each refurbishment should bring the building up to the level of the best 10% of the national building stock. When public bodies rent or buy existing buildings, these should always be in the best available energy performance class.
- High standards of **energy efficiency** should systematically be applied when **public authorities purchase goods** (e.g. office appliances), **services** (e.g. energy) and **works** (e.g. refurbishment of buildings). Due to the large volume of public spending (17% of GDP or roughly €2,000 bn and public buildings are about 12% of the EU build up area) it could serve as a strong driver for higher market uptake of energy efficiency and development of the skills and knowledge required

For the **private building sector**, the EU Commission proposes:

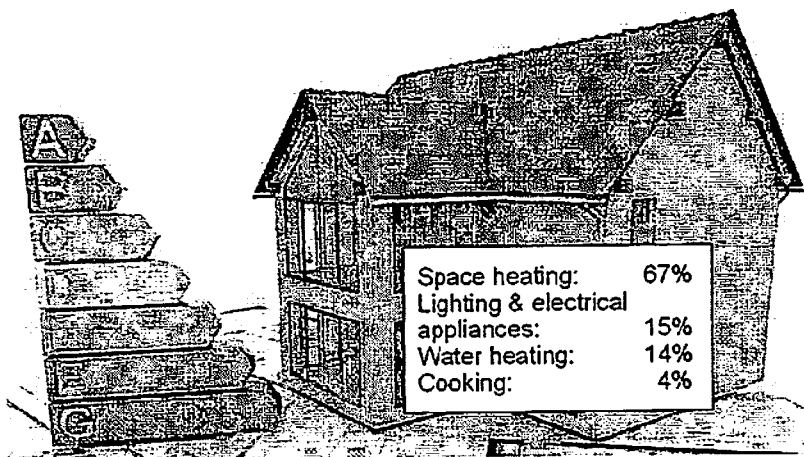
- Member States are **called upon to introduce measures** – in line with national property law - to address the problem of **split incentives**. This means how the costs of renovation are split between the tenant and the landlord in case of rented buildings and apartments. At the same time, Member States are called on to support the uptake of **Energy Service Companies** as catalysts for renovation. Energy Service Companies renovate private houses and apartment at their own costs and make profits by receiving the difference between the energy costs before and after the renovation over a defined period of time.

For **energy companies**, it is proposed:

Energy companies have to enable their **customers to cut their energy consumption**. This could take different forms. In the UK for example, large electricity and gas suppliers are obliged by law to cut energy consumption of their customers by a pre-defined level. The energy companies pay for new installations in private houses such as double glazing to cut energy. They get their costs back via energy prices. Another model is to ask Energy Service Companies to do the necessary investments.

For the **industry**, it is proposed:

- **Large companies** have to do regular and **independent energy audits**. They have to organize these themselves. Member States are encouraged to develop incentives for companies that introduce an energy management system as a systematic framework for the rational use of energy.
- **Exchange of best practices** in energy efficiency and projects aimed at building capacity on energy management are proposed for **micro and small companies**.



Source: Odyssee indicators, Build-up

What is the impact on consumers of the Energy Efficiency Plan?

The combined effects of full implementation of the existing and new measures has the potential to generate financial savings of up to €1000 per household each year; improve Europe's industrial competitiveness; create up to 2 million jobs

Through the Energy Efficiency Plan, the Commission aims to:

- Engage with industry and consumer organisations to create the right conditions for **better information, communication** Bills have to be clear and sent regularly to customers reflecting the real costs, not a forfait.
- Set out its approach to smart grids and smart metering in more detail in a Communication in the next months. This will help consumers to know in more detail where he has consumed how much energy. It will be possible to break this information down to specific rooms or even specific machines and appliances.

What is the difference between "Energy Efficiency" and "Energy Savings"?

While the two words are often used interchangeably, technically, 'energy efficiency' means using less energy inputs while maintaining an equivalent level of economic activity or service; 'energy saving' is a broader concept that also includes consumption reduction through behaviour change or decreased economic activity. Examples of energy savings without efficiency improvements are heating a room less in winter, using the car less, or enabling energy saving modes on a computer.

Brussels, 8 March 2011

European Energy Efficiency Plan: Commission gears up for more savings with renovation and smart meters

The European Commission today adopted a plan for saving more energy through concrete measures. Energy efficiency is a key tool for strengthening Europe's competitiveness and reduces energy dependence, while decreasing the level of emissions. The set of measures proposed aims at creating substantial benefits for households, businesses and public authorities: it should transform our daily lives and generate financial savings of up to €1000 per household every year. It should improve the EU's industrial competitiveness with a potential for the creation of up to 2 million jobs.

Günther Oettinger, European Commissioner responsible for Energy, said: "Despite progress, our estimates show that we need a further decisive and coordinated action on energy efficiency, without which the EU will not meet its objective of 20% energy savings by 2020. It paves the way for the longer term policies needed to achieve a decarbonised and resource-efficient economy by 2050 and to place the EU at the forefront of innovation. "

Recent Commission estimates suggest the EU will achieve only half of the 20% improvement in energy efficiency it aims for by 2020 if it continues business as usual.

Against this background, the Action Plan proposes several new actions:

- It promotes the exemplary role of the public sector and proposes a binding target to accelerate the refurbishment rate of the public sector building stock. Public authorities should be required to refurbish at least 3% of their buildings each year. It also introduces energy efficiency criteria in public procurement.
- It aims to trigger the renovation process in private buildings and to improve the energy performance of appliances.
- It seeks to improve the efficiency of power and heat generation.
- It foresees energy efficiency requirements for industrial equipment, improved information provision for SMEs and energy audits and energy management systems for large companies.
- It focuses on the roll-out of smart grids and smart meters providing consumers with the information and services necessary to optimise their energy consumption and calculate their energy savings.

The Commission will monitor the implementation of the Action Plan and translate these actions into a legislative proposal in the coming months.

It will report on progress in spring 2013 in the framework of the new EU 2020 governance. If the review shows that the overall EU target is unlikely to be achieved, the Commission will propose legally binding targets for 2020. For now, the priority is for binding measures to help Member States, companies and citizens alike to achieve their savings objectives and to save on their energy bills.



Energy Efficiency Profile: Poland

May 2011

Energy Efficiency Trends

Overview

In the period 1996-2009 the energy efficiency index for the whole economy (ODEX) decreased by 41%, against 9% for the EU. The annual rate of improvement between 1996 and 2003 was significantly higher than in consecutive years and amounted to 6%. The biggest progress was observed in industry and the lowest in transport. High rate of improvement resulted partly by tapping unused energy savings potentials becoming cost effective following the liberalisation of economy and energy prices.

Industry

The energy efficiency index of industry decreased by 58% over the analyzed period (1995-2009) in comparison with 20% in the EU: this reflects very significant energy efficiency improvement in industry far above the EU average. Most of the progress was observed between 1996 and 2000. The improvement in paper industry went almost in line with the industry average, except over the last few years. In case of chemical and steel industry improvement before 2000 was lower and amounted to 8% and 6% respectively (compared to almost 30% for the average). Since then the pace of improvement in these branches was closed to the average. Generally the improvement of the index for Poland is better than for EU due to an intensive dissemination of energy-saving technologies.

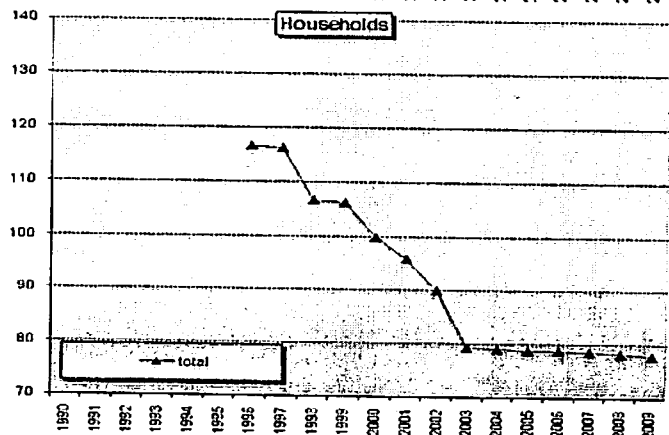
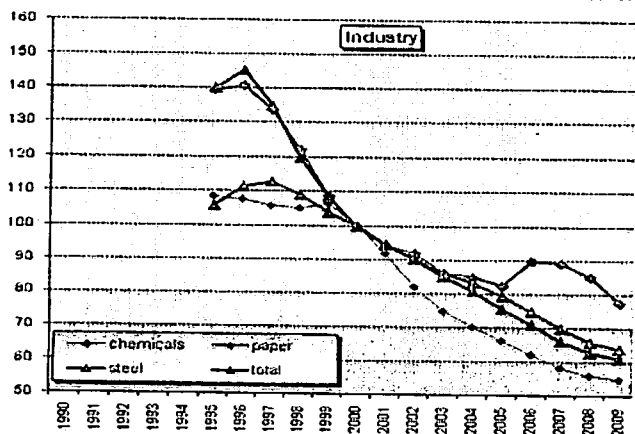
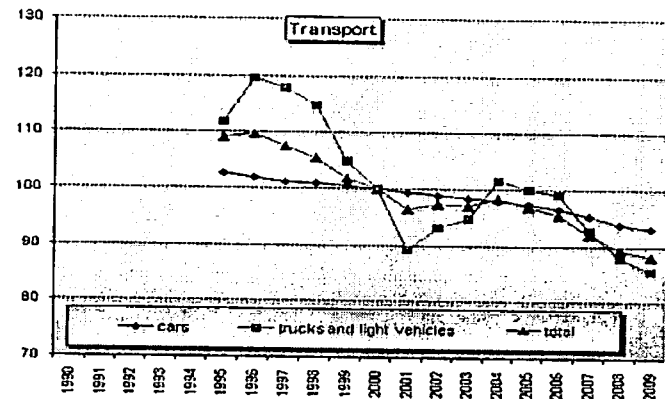
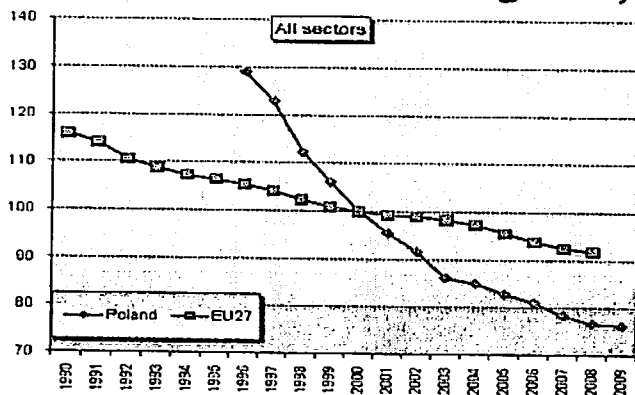
Households

Between 1996 and 2009 the energy efficiency index in the household sector decreased by 33%. This progress can be attributed to improvements in the efficiency of the building stock (this is made up of the large number of new houses which adhere to more stringent building regulations as well as retrofitting of existing stock) and fuel switching to oil and gas from solid fuels as well as using more energy efficient electrical appliances. The improvement in the energy efficiency of households slowed down significantly after 2003.

Transport

The ODEX indicator for transport fluctuated between 1995 and 2009, due to fluctuations for trucks and light vehicles. Overall the energy efficiency improvement for trucks and light vehicles amounted to 28% and was higher than for transport as a whole (20%). Progress for cars was more regular and reached 9%.

Energy efficiency index (base 100=2000)*



*All indicators measured as a three-year moving average
Source ODYSSEE
For more information: <http://www.odyssee-indicators.org/>

Energy Efficiency Policy measures

Institutions and programmes

Following the requirement of Directive 2006/32/EC, the Government of Poland prepared the **National Energy Efficiency Action Plan (NEEAP)** aiming to achieve the indicative target of 9% energy savings in 2016 (4.5 Mtoe) and an intermediate target of 2% in 2010. The NEEAP contains the list of measures and funds, which will enable to reach these targets. The energy efficiency is a priority element of the state energy policy. The existing measures and funds will be continued and will contribute significantly in achieving the intermediate target. In 2011 Polish government adopted the **Energy Efficiency Act** which includes the introduction of white certificate system. Planned energy savings will result primarily from the following measures: approximately 0.7 Mtoe from Programmes of **National Fund for Environmental Protection and Water Management (NFOŚiGW)**, 0.2 Mtoe from **Thermomodernisation Law and Fund**, 1.5 Mtoe from soft measures, and 2 to 2.5 Mtoe from the white certificate system. The mission of the National Fund for Environmental Protection and Water Management is to provide financial support for undertakings of a national or interregional scale. Sixteen Regional Funds for Environmental Protection and Water Management constitute the regional level. Both the national and the regional funds are legal entities and they take independent decisions to select the investments to be financed. The energy efficiency investment projects are being and will be supported from available EU funds.

Poland continuously supports CHP development. The **legal obligation for energy suppliers to purchase electricity produced in cogeneration** is expressed in the Decree of the Ministry of Economy on the Specific Scope of the Obligation to Purchase Electricity Produced in Cogeneration with Heat. This obligation, referred to in article 9a of the Energy Law, shall be considered fulfilled if the share of electricity purchased from cogeneration sources connected to the grid is not lower than 23,2% in 2012. Energy efficiency as well RES related investments and promotional activities are strongly supported by the environmental protection funds. In 1989 began operating

Industry

The **"Energy efficiency in industry"** programme is implemented as the Priority Programme of the National Fund for Environmental Protection and Water Management. The main aim of this programme is to initiate and support energy efficiency investments in the most energy intensive enterprises. The total amount of the budget allocation for the period 2011-2015 is approximately 820 MPLN, which comes from substitute fees and penalties imposed on energy enterprises by relevant laws and regulations. The beneficiary of the program can be any company which, in the year preceding the application, consumed 50 GWh. The support is provided by financing 70% of the energy audit cost and by soft loans for up to 70% of the investment costs (investments recommended in the audit, which ensured the reduction of energy consumption by at least 7% project).

In June 2010 the **Industrial Development Agency** has set up a loan fund **"Energy loan for energy saved"** for financing projects to improve energy efficiency. The programme is implemented as a result of government document "Energy Policy of Poland until 2030" and the loan may apply to micro, small and medium-sized enterprises. The main advantages of this loan are: low interest rate, long – term repayment (up to 48 months), low own contribution (min. 10% of the amount requested).

Households, Services

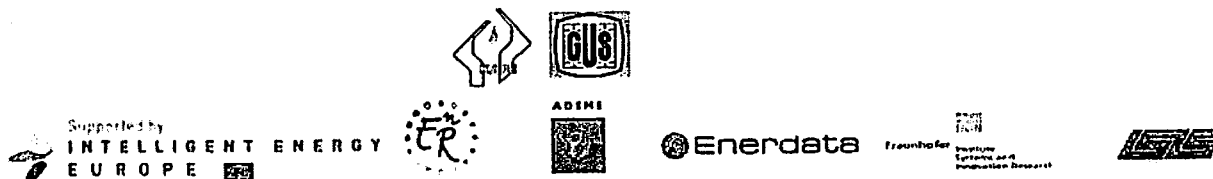
In 1998 the **"Act on Support for Thermo-Modernisation Investment in Buildings"** came into effect, assisted by Thermo-modernisation Fund. The act was revised in 2008 (Journal of Laws 2008, No 223, item 1459). The Act covers the rules for providing financial support to investors (building owners or administrators) in the form of the premium which can cover up to 20% of credit loan taken out for realisation of the thermal modernisation investments. At the end of 2008, the Directive 2002/91/EC on the Energy Performance of Buildings was fully implemented.

Selected Energy Efficiency Measures

Sectors	Title of measures	Since	Energy savings (2016)
All	White certificate system	2013	2,2 Mtoe
All	Green certificates for electricity production from renewable energy sources	2005	
All	Quota system for the promotion of green electricity	2005	
All	Quota system for the promotion of CHP	2005	
All	The National Fund for Environmental Protection and Water Management	1989	0.7 Mtoe
All	The Polish Sustainable Energy Financing Facility (PolSEFF)	2011	
Households/ Services	Thermo-modernisation Fund	1998	~ 200 ktoe/year
Industry	The "Energy efficiency in industry" programme	2011-2015	1000 MWh
Industry	Information/Training for top-level management and energy managers by Energy Conservation Technology Centre	2004	

Source MURE

For more information : <http://www.isisrome.com/mure/>



Europe 2020 targets¹

Member States' draft targets	Employment rate (in %)	R&D in % of GDP	Emissions reduction targets (compared to 2005 levels) ²	Renewable energy	Energy efficiency – reduction of energy consumption in Mtoe ³	Early school leaving in %	Tertiary education in %	Reduction of poverty in number of persons ⁴
AT	77-78%	3.76%	-16%	34%	7.16	9.5%	38% (including ISCED 4a, which currently is at about 12%)	235,000
BE	73.2%	3.0%	-15%	13%	9.80	9.5%	47%	380,000
BG	76%	1.5%	20%	16%	3.20	11%	36%	260,000 (500,000)
CY	75-77%	0.5%	-5%	13%	0.46	10%	46%	27,000
CZ	75%	1% (public sector)	9%	13%	n.a.	5.5%	32%	30,000 (conditions permitting)
DE	77%	3%	-14%	18% (in discussion)	38.30	Less than 10%	42% (including ISCED4 which currently is at 11.4)	330,000 (660,000)
DK	80%	3%	-20%	30%	0.83	Less than 10%	40%	22,000
EE	76%	3%	11%	25%	0.71	9.5%	40%	49,500
EL	70%	to be revised	-4%	18%	2.70	10%	32%	450,000
ES	74%	3%	-10%	20%	25.20	15%	44%	1,400,000-1,500,000
FI	78%	4%	-16%	38%	4.21	8%	42% (narrow national definition)	150,000
FR	75%	3%	-14%	23%	34.00	9.5%	50%	1,600,000 by 2015
HU	75%	1.8%	10%	13%	2.96	10%	30.3%	450,000-500,000

¹ The final national targets were set out in the National Reform Programmes in April 2011.

² The national emissions reduction targets defined in Decision 2009/406/EC (or "Effort Sharing Decision") concerns the emissions not covered by the Emissions Trading System. The emissions covered by the Emissions Trading System will be reduced by 21% compared to 2005 levels. The corresponding overall emission reduction will be -20% compared to 1990 levels.

³ (Million tonnes of oil equivalent). It should be noted that the national projections also vary as to the base year(s) against which savings are estimated.

⁴ Estimated contribution to EU target.

IE	69-71%	approx.2% 2.5% GNP)	-20%	16%	2.75	8%	60%	186,000
IT	67-69%	1.53%	-13%	17%	27.90	15-16%	26-27%	2,200,000
LT	72.8%	1.9%	15%	23%	1.14	9%	40%	170,000
LU	73%	2.3-2.6%	-20%	11%	0.20	Less than 10%	40%	Target not yet set
LV	73%	1.5%	17%	40%	0.67	13.4%	34-36%	121,000
MT	62.9%	0.67%	5%	10%	0.24	29%	33%	6,560
NL	80 %	2,5 %	-16%	14%	n.a.	8 %	No target in NRP: In 2020 expected to be on 45 %	100,000
PL	71%	1.7%	16	15.48%	14.00	4.5%	45%	1,500,000-
PT	75%	2.7-3.3%	1%	31%	6.00	10%	40%	200,000
RO	70%	2%	19%	24%	10.00	11.3%	26.7%	580,000
SE	80%	4%	-17%	49%	12.80	10%	40-45%	No specific number set
SI	75%	3%	4%	25%	n.a.	5%	40%	40,000
SK	72%	-1%	13%	14%	1.65	6%	40%	170,000
UK	No target in NRP	No target in NRP	-16%	15%	n.a.	No target in NRP	No target in NRP	Existing child poverty target
Estimated EU					206.9			
EU headline target	75%	3%	-20% (compared to 1990 levels)	20%	20% increase in energy efficiency	10%	40%	20,000,000

COUNTRIES FACTSHEETS

Energy Statistics for
Polka

Poland

Mtoe (unless otherwise specified)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Gross Heat Generation - PJ (GCV)	739,57	734,22	695,45	602,53	565,11	420,81	447,65	410,31	391,57	371,52	340,66	370,26	351,43	368,22	345,99	340,72	341,21	321,01	312,65	312,21	
Solid fuels	649,21	654,90	612,34	539,94	497,38	397,68	424,10	394,76	387,08	343,27	312,80	338,75	317,08	327,89	308,80	302,67	301,33	284,73	269,99	266,35	
Petroleum products (2)	42,50	39,49	36,35	35,11	35,09	11,18	11,77	10,90	10,28	10,83	7,94	0,46	8,90	8,63	8,21	4,96	4,79	4,39	4,21	4,32	
Gases (3)	33,88	24,23	20,09	13,19	17,68	9,85	9,20	10,93	11,25	14,77	17,32	19,31	22,35	27,88	28,77	27,75	29,70	25,66	30,33	28,37	
Nuclear																					
Renewables	11,01	10,70	12,87	10,85	11,32	0,76	1,44	1,72	1,80	1,81	1,84	1,82	2,12	2,77	2,79	3,59	3,75	4,71	6,34	11,27	
Distribution losses	1,15	1,64	1,72	2,10	2,04	1,86	2,41	1,88	1,73	1,53	1,59	1,54	1,43	1,52	1,46	1,44	1,37	1,34	1,19	1,21	
Available for final consumption	87,84	66,22	64,45	68,53	62,72	67,12	69,82	69,81	64,94	63,50	58,93	60,18	59,95	61,47	62,20	63,32	66,79	66,58	68,02	60,64	
Final non-energy consumption	4,22	3,41	3,14	3,19	3,39	3,71	3,99	4,04	3,95	3,58	4,36	3,88	3,68	4,14	4,31	4,49	5,03	5,04	4,92	4,59	
Final Energy Consumption	59,69	60,21	59,10	63,46	61,38	62,81	66,31	64,96	60,32	58,94	55,59	56,01	54,45	55,96	58,09	58,20	60,76	61,68	62,24	60,93	
by fuel/product																					
Solid fuels	17,32	18,13	19,11	21,04	19,95	22,58	23,90	21,34	17,01	15,73	13,47	12,88	12,06	11,34	11,69	11,47	12,42	12,02	12,21	11,40	
Petroleum products (2)	9,20	9,25	9,63	10,26	10,88	11,52	13,15	14,58	15,22	16,30	15,34	15,12	14,87	16,02	17,29	17,71	18,33	18,28	19,77	19,78	
Gases (3)	9,01	7,17	6,97	7,06	7,27	7,76	7,58	8,05	7,71	7,22	7,52	7,84	7,82	8,25	8,67	8,73	8,97	9,22	8,99	8,56	
Renewables	1,11	0,69	0,85	3,47	3,35	3,73	3,64	3,62	3,48	3,62	3,48	3,74	3,81	3,83	3,89	3,82	3,94	3,91	4,32	4,57	
Electricity	8,27	7,69	7,37	7,44	7,34	7,71	8,16	8,30	8,35	8,26	8,48	8,40	8,39	8,70	9,00	9,08	8,55	8,65	10,11	9,89	
Derived heat	19,56	19,47	14,49	12,72	11,89	8,82	9,33	8,66	8,07	7,62	6,89	7,50	7,11	7,39	7,17	7,06	7,06	8,94	8,39	6,38	
by sector																					
Industry	26,38	22,79	20,98	21,68	21,20	23,02	24,45	23,93	21,24	18,54	18,88	17,50	16,79	17,37	17,98	16,59	17,02	17,83	16,37	14,73	
Transport	7,50	7,65	7,77	7,62	7,89	6,19	9,23	9,69	10,18	11,21	9,79	9,74	9,45	10,34	11,58	12,44	13,84	15,19	16,32	18,57	
Households	18,03	20,27	21,05	24,83	23,54	22,66	23,03	21,70	19,55	19,42	17,19	18,80	17,77	17,75	17,62	18,34	19,25	18,39	18,62	18,74	
Services	5,63	6,06	5,65	5,01	3,95	4,16	4,84	4,46	4,58	4,90	4,96	5,38	6,09	6,31	6,45	6,41	6,85	6,75	7,31	7,35	
Agriculture	3,36	3,37	3,65	4,31	4,80	4,77	4,95	5,14	4,73	4,81	4,62	4,58	4,35	4,16	4,27	4,41	3,80	3,49	3,62	3,54	
Fishing														0,01	0,01	0,00	0,00	0,00	0,00	0,00	

COUNTRIES FACTSHEETS

Energy Statistics for
EU-27

EU-27

Mtoe (unless otherwise specified)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Gross Heat Generation - PJ (GCV)	2563,26	2509,94	2662,85	2563,95	2266,95	2251,10	2403,71	2216,56	2164,86	2171,74	2133,20	2265,94	2204,57	2649,23	2796,62	2877,29	2871,56	2460,08	2452,27	2413,18	
Solid fuels	1440,65	1368,91	1275,92	1199,35	1085,57	985,24	1051,85	992,99	902,31	856,75	804,90	804,80	762,25	808,56	848,80	781,99	776,52	774,42	760,10	726,54	
Petroleum products (2)	451,24	428,88	432,19	437,00	387,39	341,24	369,50	277,84	271,27	247,84	208,14	222,50	186,64	170,77	230,18	203,75	233,43	170,46	155,68	175,68	
Gases (3)	546,82	580,02	780,07	690,44	597,76	687,97	732,35	700,65	740,85	765,73	643,67	943,39	953,97	1178,40	1237,56	1252,53	1200,16	1090,31	1082,11	1052,02	
Nuclear	7,02	2,53	3,49	3,44	3,38	3,76	4,38	4,33	3,51	3,42	3,20	5,54	5,50	5,52	6,54	6,53	6,56	6,38	6,31	6,67	
Renewables	75,26	84,03	107,38	122,52	127,18	127,79	154,96	153,19	155,94	160,15	169,49	187,00	183,00	225,84	243,66	264,86	266,34	268,30	321,94	327,78	
Distribution losses	22,71	22,87	24,39	25,36	24,97	26,50	28,04	28,18	26,53	25,76	27,56	26,60	25,73	27,65	28,38	28,46	27,21	25,74	25,67	24,16	
Available for final consumption	1182,99	1180,80	1152,80	1157,35	1150,30	1179,50	1224,11	1217,86	1231,25	1222,13	1232,18	1262,09	1250,05	1285,38	1300,56	1313,19	1309,33	1290,70	1298,98	1224,02	
Final non-energy consumption	103,12	101,00	103,47	86,22	103,55	108,84	107,20	113,39	114,39	113,17	116,46	114,10	113,99	115,41	117,35	119,68	117,92	122,29	117,53	106,71	
Final Energy Consumption	1078,83	1084,59	1055,79	1059,51	1053,15	1071,26	1116,58	1108,49	1114,41	1112,57	1120,14	1144,40	1131,80	1171,70	1188,19	1192,54	1193,38	1168,60	1175,23	1113,67	
by fuel/product																					
Solid fuels	125,34	111,08	87,21	81,30	85,42	82,55	81,88	77,55	67,83	62,73	61,82	58,85	55,24	55,16	55,58	54,36	55,02	54,82	53,58	43,37	
Petroleum products (2)	448,87	455,88	455,85	459,02	459,01	459,24	475,24	476,90	487,37	466,65	482,23	493,66	487,26	494,57	498,04	500,11	498,67	488,14	488,83	462,62	
Gases (3)	229,01	237,75	223,17	229,36	231,97	246,30	265,92	256,18	259,93	260,46	268,44	273,91	270,00	285,42	285,56	284,82	278,04	266,37	269,70	252,58	
Renewables	37,83	38,93	38,59	41,49	41,27	43,06	45,54	47,54	47,82	48,78	48,28	48,12	48,39	50,87	52,59	54,68	58,47	62,64	67,41	70,17	
Electricity	184,89	188,40	186,00	185,97	188,42	183,44	199,66	202,70	206,58	210,44	216,49	222,07	224,41	229,73	234,90	238,14	243,16	244,84	245,98	233,79	
Distorted heat	54,01	52,68	54,01	51,21	47,14	45,13	46,17	44,30	43,72	44,35	43,81	46,60	45,27	54,71	57,10	58,92	58,36	49,81	40,47	46,43	
by sector																					
Industry	368,92	348,91	328,22	319,36	322,34	328,87	330,84	332,00	326,12	318,75	329,33	328,81	325,27	338,68	338,53	332,60	328,05	324,74	315,87	269,48	
Transport	281,55	283,78	282,16	285,43	288,82	302,87	312,92	318,48	330,52	340,00	341,44	344,80	347,66	352,85	363,56	367,32	375,05	360,33	377,90	367,64	
Households	273,38	288,91	279,72	288,61	278,38	281,81	308,08	294,56	294,94	290,74	292,55	301,74	293,00	297,87	301,24	302,21	299,56	284,34	297,02	295,21	
Services	108,49	115,75	112,46	111,27	111,47	114,22	124,27	118,78	121,00	123,47	115,07	126,97	124,72	131,45	133,81	138,29	138,79	135,54	141,52	140,76	
Agriculture	32,68	32,90	31,11	30,85	30,70	30,99	31,54	30,60	30,03	27,89	28,15	27,73	27,04	27,45	27,66	27,58	26,19	25,67	25,58	24,98	
Fishing	1,00	1,03	0,99	0,99	0,88	0,96	0,95	0,94	0,93	1,03	0,98	1,04	1,00	1,01	1,03	1,02	0,98	0,92	1,20	0,91	



COUNCIL OF
THE EUROPEAN UNION



Council conclusions on Energy Efficiency Plan

*3097th TRANSPORT, TELECOMMUNICATIONS and ENERGY Council meeting
– energy items only –*

Luxembourg, 10 June 2011

The Council adopted the following conclusions:

"The Council of the European Union,

RECALLING the EU's 2020 20% headline target on energy efficiency as enshrined in the Europe 2020 Strategy;

Further RECALLING the conclusions adopted by the European Council on 25/26 March 2010 (EUCO 7/10), 4 February 2011 (EUCO 2/1/11) and by the Council (TTE - Energy) on 28 February 2011 (6207/1/11);

WELCOMING the presentation by the Commission of its Communication on an "Energy Efficiency Plan 2011" (7363/11);

STRESSING that reinvigorated efforts are necessary in order to reach the 20% EU energy saving objective by 2020;

SETS OUT the following considerations and lines of action for an Energy Efficiency Plan 2011, while UNDERLINING the need to develop comprehensive, ambitious and cost-effective measures at EU level and the primacy of delivery of energy efficiency measures by Member States at the appropriate level:

I. General Considerations

1. Improved energy efficiency throughout the whole energy system will make a major contribution to the EU's wider goals of a competitive low-carbon economy, a more sustainable use of natural resources and security of energy supply.

P R E S S

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2. To establish energy efficiency more firmly as a cross-cutting policy objective, it should be mainstreamed at all levels into other policies, such as regional and urban development, transport¹, industrial policy, agriculture, international relations and education and training. Maximum consistency and mutual supportiveness between the Energy Efficiency Plan (EEP) and the other components of the Flagship initiative for a Resource-efficient Europe under the Europe 2020 Strategy must be attained. Furthermore, the new strategy should encompass the entire energy system, from production and transmission to distribution and end-use.
3. Further initiatives under the EEP must build on the achievements of and lessons learned from the *2006 Energy Efficiency Action Plan (EEAP 2006)*, give a strong and visible commitment to energy efficiency and savings, and set out the path for delivering the EU energy efficiency target. Complementarity with effective programmes in Member States and the full respect of the subsidiarity and proportionality principles need to be ensured. Building also on Member States' best practice, future measures should take due account of the second National Energy Efficiency Action Plans (NEEAPs) to be presented under the Energy Services Directive 2006/32/EC.
4. It is essential that all the relevant legislation and measures in place are implemented fully and in a timely manner in all sectors and policy areas concerned in order to reap the entire benefit of the EEAP 2006.
5. In the light of the headline targets under the Europe 2020 Strategy, Member States' setting of indicative, voluntary national energy efficiency targets as part of the National Reform Programmes, taking account of their starting points, national circumstances and potentials, makes a valuable contribution to creating commitment and visibility for national efforts, and allows for follow-up and monitoring. A review of the implementation of the EU energy efficiency target will take place by 2013, as established by the European Council.
6. In order to fully appraise progress and steer further action, a common, straightforward, cost-effective and workable methodology for monitoring energy savings and the evolution of energy efficiency should now be developed, taking into account the framework of NEEAPs, which will permit to quantify efforts of Member States on an equivalent basis by drawing on available statistical indicators, without creating unnecessary administrative burdens. Monitoring of energy savings should be encouraged where appropriate in financial mechanisms that support energy efficiency.
7. Continued and strengthened support for research, development and deployment of new energy-efficient technologies, for example through the Strategic Energy Technology Plan (SET Plan) and its Industrial Initiatives, will allow dynamic evolution of energy efficiency solutions and open up opportunities for innovation and job creation in Europe.
8. Ensuring the uptake of an energy efficiency services market throughout the Member States is crucial to enable the implementation and the financing of cost-effective energy efficiency solutions in industry and in buildings. The role of Energy Service Companies (ESCOs) and other providers of energy efficiency improvement measures needs to be strengthened through adequate support in terms of information such as lists of

¹ It is recalled that Directive 2009/28/EC on renewable energy sources states that "Cyprus and Malta, due to their insular and peripheral character, rely on aviation as a mode of transport, which is essential for their citizens and their economy. As a result, Cyprus and Malta have a gross final consumption of energy in national air transport which is disproportionately high, i.e. more than three times the Community average in 2005, and are thus disproportionately affected by the current technological and regulatory constraints."

qualified/certified/accredited energy service providers, guidelines such as model contracts, exchange of best practices and possible financing solutions to overcome market barriers for their development. The Commission is invited to facilitate exchange and public availability of this information and to draw up relevant guidelines for Member States.

II. Priority sectors and measures

Sectors

9. Public sector:

- Public authorities should systematically purchase goods (e.g. ICT equipment), and, where appropriate, services and works (e.g. refurbishment, operation and maintenance of buildings, energy and transport) that achieve high standards of energy efficiency. Similarly, they are encouraged to apply such high energy efficiency standards to their public vehicle fleet and its usage, including by resorting when appropriate to electric and hybrid vehicles;
- Public authorities should lead the way in bringing their buildings to high energy performance levels, whereby provisions could be envisaged that would require them to increase the refurbishment rate of their buildings including energy efficiency upgrading, taking into account cost-effectiveness, technical feasibility and national circumstances, including conditions related to heritage buildings. The Council encourages Member States to improve their rate of refurbishment in a cost-efficient way, and takes note of the annual refurbishment rate of 3% for public authorities' buildings (by floor area) suggested by the Commission. The Council invites the Commission to also consider, on the basis of a robust overall impact assessment, alternative approaches that would require to achieve an equivalent level of overall reduction in energy consumption through deep renovation of public authorities' building stock, and to propose respective measures as appropriate. Furthermore, when public bodies rent or buy existing buildings, wherever possible, one of the best available energy performance classes should be opted for, taking into account cost-benefit considerations, public procurement rules and national circumstances. In order to facilitate compliance with the Energy Performance of Buildings Directive 2010/31/EU, public authorities are encouraged already now to procure new buildings which correspond to a nearly zero-energy building standard, as foreseen under this Directive from 2019 onwards, once Member States have developed such definitions as foreseen in the transposition of the Directive;
- Cost-effective ways to finance investments in energy efficiency measures through savings from lower utility bills and maintenance costs such as energy performance contracting should be promoted by introducing provisions to facilitate its deployment in Member States, taking due account of existing national law;
- To realise the potential for action at local and regional level, local initiatives, networking and partnerships should be further promoted, for example by means of the Covenant of Mayors and the new Smart Cities and Communities initiative at EU level, as well as similar national initiatives. Continued training in the area of energy efficiency of public authority actors should also be encouraged;

10. Buildings:

- Since buildings represent 40% of the EU's final energy consumption and given their long lifetime, it could be appropriate to envisage a longer-term perspective beyond 2020 for tackling energy performance of existing buildings in a cost-efficient way, leaving sufficient flexibility for Member States to take appropriate measures. Member States are also encouraged to consider measures aiming at improved refurbishment of residential buildings, following the principle of cost-efficiency;

- Heating and cooling in buildings needs to be addressed, for example by promoting solutions such as district heating and cooling, including the use of waste heat and combined heat and power (CHP), and the use of renewable energy sources in the context of integrated urban planning;
- In order to create incentives for both owners and tenants to invest into energy performance upgrading, including in the residential, tertiary and commercial sector, the frequent situation of "split incentives" between them and related legal obstacles should be tackled where necessary, while respecting national circumstances including property and tenancy law. In this context, attention should also be paid to the issue of improving effective management of joint ownership of buildings. A closer dialogue and cooperation between actors on the market should be promoted;
- To foster the appropriate skills and knowledge required of those involved in realising technically demanding energy-efficient building solutions (architects, engineers, auditors, craftsmen, technicians and installers), the Commission is invited to develop initiatives to support Member States in assessing training needs and developing strategies to meet them;
- Energy Service Companies' (ESCOs) and other energy efficiency providers' capacities for supporting energy efficiency improvements, such as targeted deep renovations and installation of more efficient energy consuming equipment, should be strengthened. This could be done through requirements for the provision of more relevant, comparable and reliable information to potential clients in the private, including residential, and public sector and greater transparency as regards the services ESCOs or other providers of energy efficiency improvement measures can offer.

11. Industry and energy sector:

- There is considerable potential for further energy efficiency improvements in industry, while remaining consistent with existing policy instruments such as the Emission Trading Scheme (ETS) and the new Industrial Emissions Directive 2010/75/EU;
- Improvement achieved in the efficiency of heat and electricity generation under these policy instruments should therefore be kept under review and if progress is lacking, consideration should be given to making the achievement of best available technology (BAT levels) applicable to new installations a condition for the authorisation of new capacity and for upgrading existing installations when permits are updated, while maintaining carbon market incentives rewarding low carbon investments;
- Furthermore, on the energy supply side, when appropriate, taking into account cost-benefit analysis and technical feasibility, greater use of co-generation and district heating and cooling should be pushed for when authorising new and the retrofitting of existing thermal power generation where there is sufficient expected demand, and by combining district heating systems with electricity generation as much as possible. CHP should be promoted taking into account specific needs for heating and the role of energy from renewable sources. Grid access for electricity from CHP needs to be further facilitated, including by considering strengthened obligations for electricity distribution system operators to provide priority or guaranteed access for electricity from CHP;
- Building on experience in Member States, energy companies have an important role to play in providing energy efficiency solutions. National energy saving obligation schemes and other mechanisms for creating value for energy savings, as considered appropriate by Member States and set up and defined according to their national circumstances and taking into account cost-benefit analysis, can make a significant contribution in that respect;
- Obstacles to investments by small and medium-sized enterprises in energy efficiency should be addressed through improvements in information provision, market-based

incentives, development of benchmarking tools, training and building energy management capacity. For larger companies, measures such as regular energy audits, voluntary agreements and energy management systems, can result in sustained energy savings. The use of energy management systems can be encouraged by Member States *i.a.* through relevant financial incentives;

- Additional ambitious and dynamic measures to extend Ecodesign requirements to commonly-used products and standard equipment in industrial processes are to be pursued and implemented rapidly, following the relevant impact analysis.

12. Transport:

- Building on the Commission's White Paper on Transport presented on 28 March 2011, decisive action is crucial to improve transport sustainability and to reduce oil dependence, by increasing the energy efficiency of the transport system and the performance of vehicles and encouraging smart mobility, intermodal transport solutions etc., while creating synergies with measures undertaken in the overall energy efficiency policy framework.

13. *Consumers*

- Clear, objective, transparent, more understandable and accessible information in relation to appliances and their labelling, as well as metering, and independent consumer advice, should be promoted to make a greater contribution to realising consumer rights, strengthening consumer confidence and supporting consumer choices with more favourable energy efficiency outcomes;
- An ambitious and rapid implementation of existing and future reliable measures continuing the approach under the Ecodesign and Labelling Directives should be actively pursued over the coming period. This should encompass stricter consumption standards that reflect advances in technology and cover an increasing range of energy-related products, while ensuring that extended coverage of labelling for products is pursued in parallel;
- Market surveillance in relation to the compliance of products with minimum energy performance and labelling requirements laid down in EU law should be strengthened;
- The deployment of smart grids, meters and appliances needs to be accompanied by the development of appropriate standards and obligations for detailed consumption information for consumers, so as to allow them to become active drivers of energy efficiency themselves and reduce their energy bills. In this context, the Council takes note of the elements put forward in the Commission's Communication on smart grids of 12 April 2011 (9001/11) concerning information provisions for consumers and for access to information services and demand management;
- A sustained effort is needed to further raise the awareness of consumers on the advantages of taking into account the energy consumption of products over the entire lifetime of products.

III. Financing, next steps and reporting

14. Given the importance of energy efficiency, and in order to address financing needs for an effective implementation of the EEP, ways to make the best use of EU financial support mechanisms, to improve their coordination and to explore further options for unlocking investments in energy efficiency need to be defined, without prejudice to future negotiations on the next Multiannual Financial Framework. In this context, the Council looks forward to appropriate initiatives from the Commission that would demonstrate EU added value.

15. Initiatives could also include options for facilitated access to financing with high leverage and encouragement for the establishment by Member States of systems that provide incentives to speed up and expand the process of renovating private sector buildings in a cost-effective manner. Careful analysis is needed of the specific market failures;
16. The Council takes note that the Commission has transmitted its proposal for revision of the Directive on Energy Taxation.
17. Reinforced action to promote energy efficiency in its international dimension needs to be pursued with the EU's international partners, in the framework of energy partnerships and by making full use of multilateral fora dedicated to energy such as IEA, IPEEC and the Clean Energy Ministerial.
18. The Council invites the Commission to rapidly come forward with consistent and ambitious initiatives, including legislative ones where appropriate, supported by robust analysis of their cost-effectiveness and addressing the lines of action as outlined above in the priority areas of the public sector, buildings and industry and in support of favourable consumer choices. Further initiatives should take due account of the NEEAPs. When preparing these initiatives, the Commission is also invited to analyse how they will contribute to the achievement of the EU's 2020 20% objectives. Initiatives should avoid creating unnecessary administrative burdens on Member States and business, particularly SMEs. Initiatives should be accompanied by an estimate of costs and investments involved both at EU and national levels. Legislative initiatives should cover the revision of the Energy Services Directive 2006/32/EC and the CHP Directive 2004/8/EC.
19. Further initiatives under the EEP should include adequate and cost-efficient reporting and monitoring provisions and review mechanisms, that are consistent with existing reporting schemes and obligations in the area of energy policy."

MEDIA FIGURES

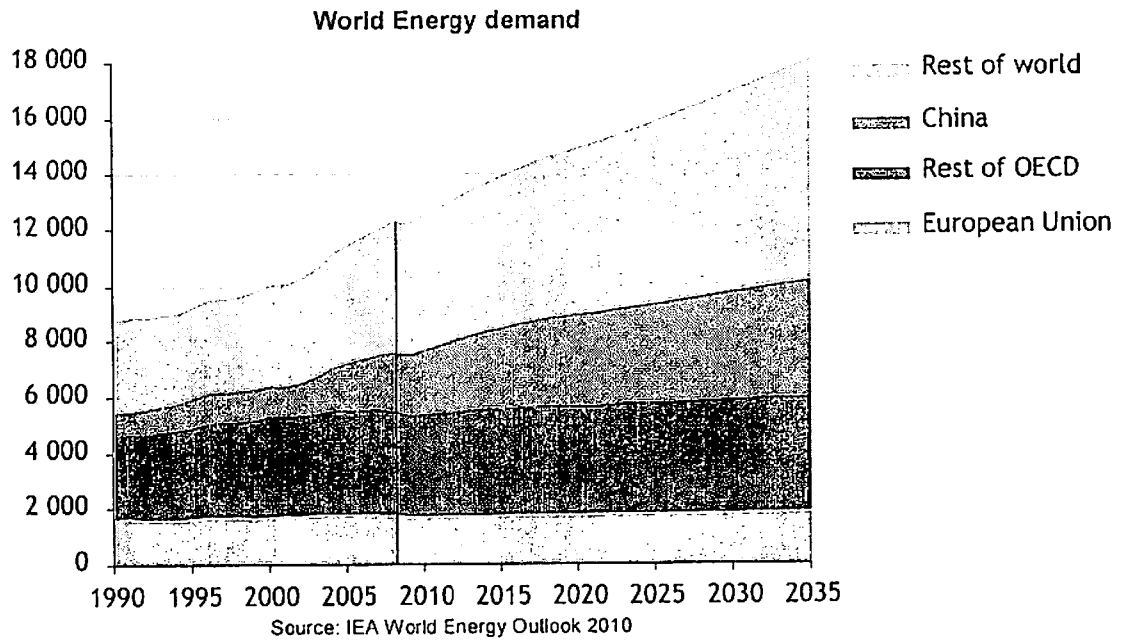
(draft 16/06/2011 ENER/A1/AT)

Content:

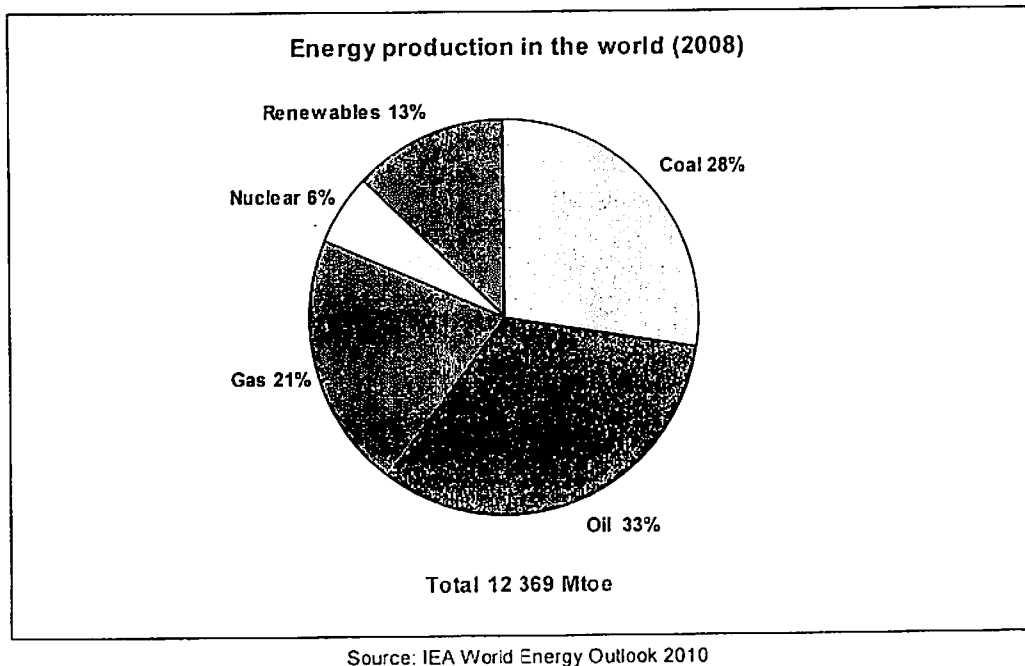
1. ENERGY IN THE WORLD	2
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1. Energy in the world

World energy demand is on the rise....

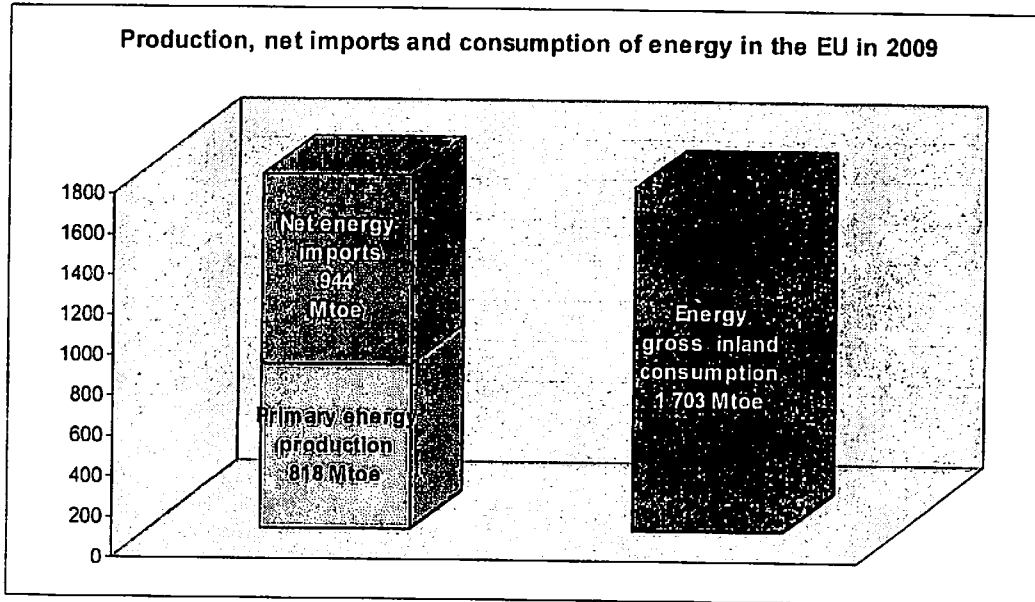


Oil, Coal and Gas account for more than 80% of the world energy production.



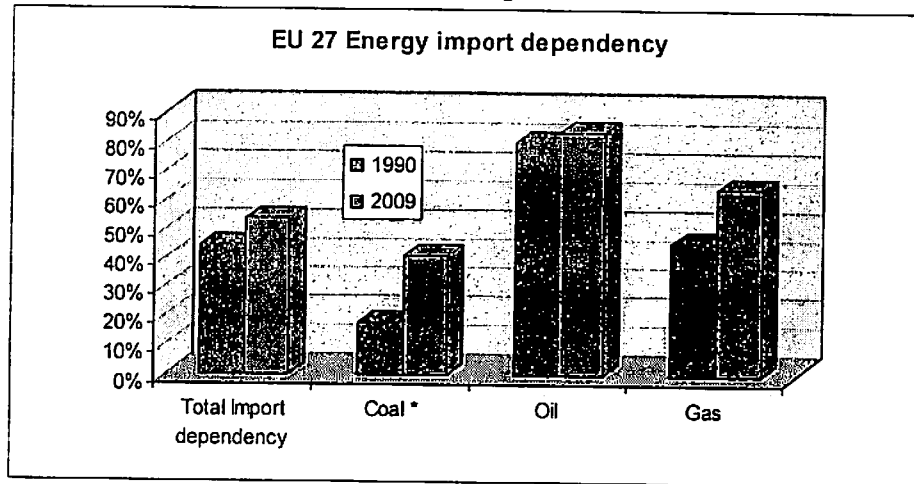
2. EU energy dependency

The EU produces 48% of its energy needs...



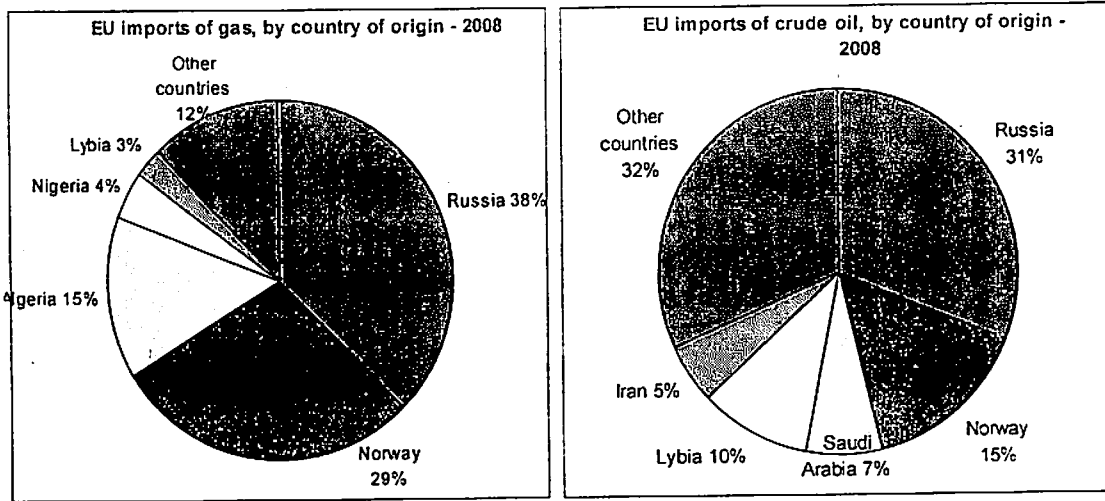
Source: Eurostat May 2011

And its dependence on imports is increasing for all fossil fuels...



Source: Eurostat May 2011

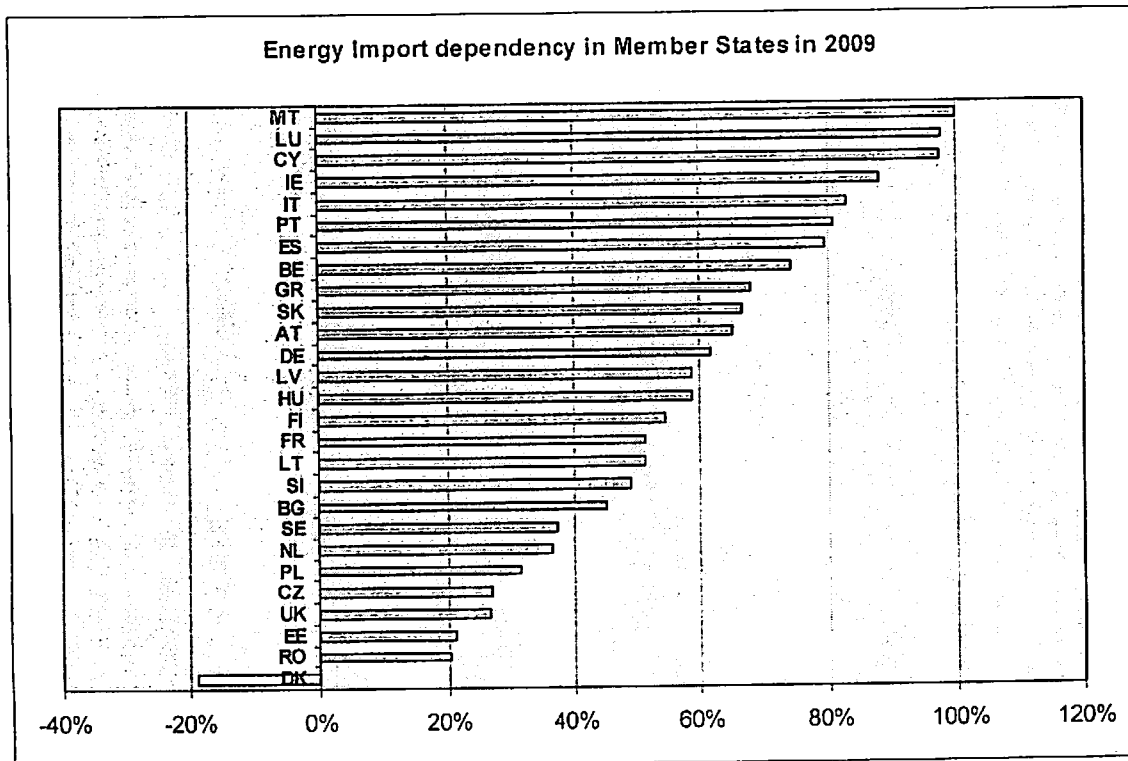
The EU depends on a few suppliers



Source: Eurostat

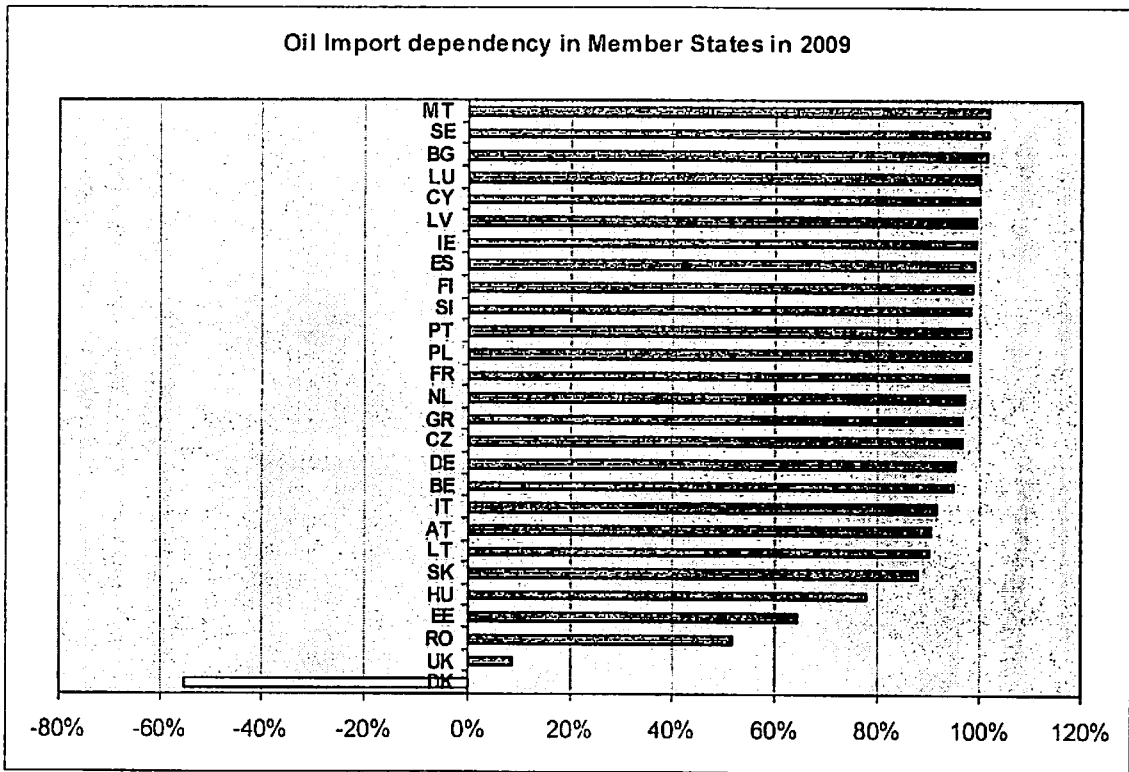
Today, the EU is very reliant on a few partners for its oil and gas supplies. Diversification of routes and sources is a strategic priority for the EU.

Energy dependency in Member States: Denmark is the only net energy exporter....



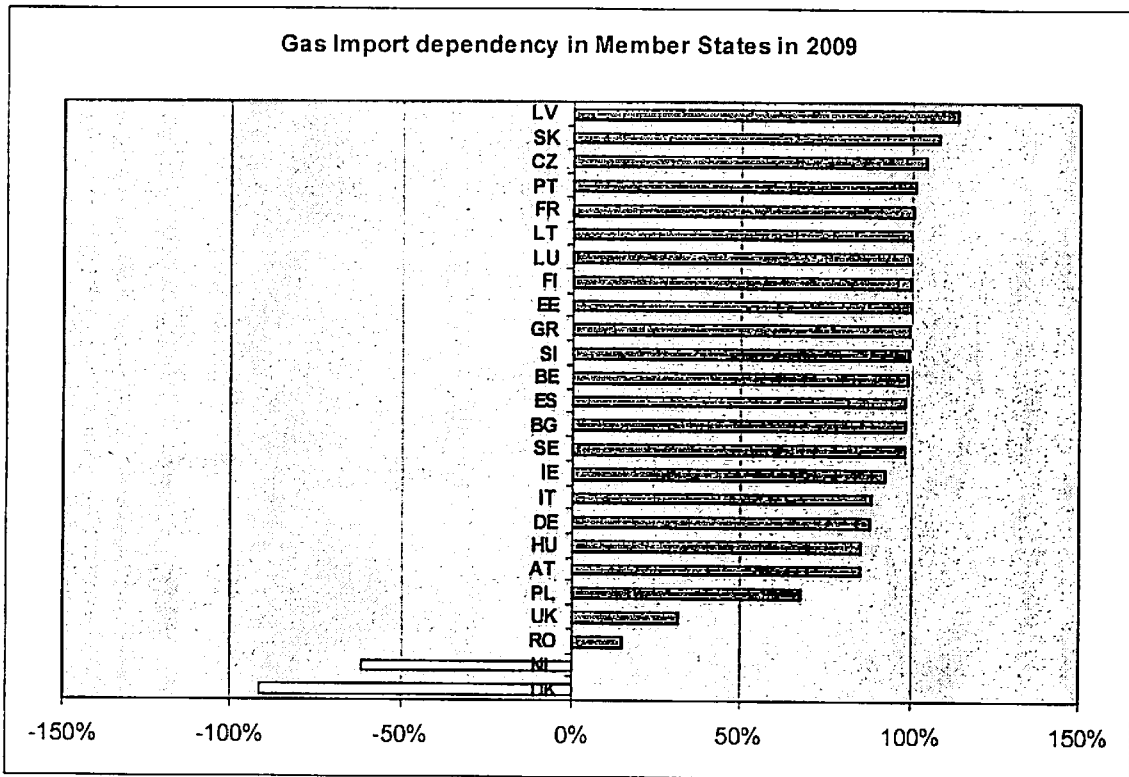
Source: Eurostat May 2011

Oil Import dependency in Member States in 2009



Source: Eurostat May 2011

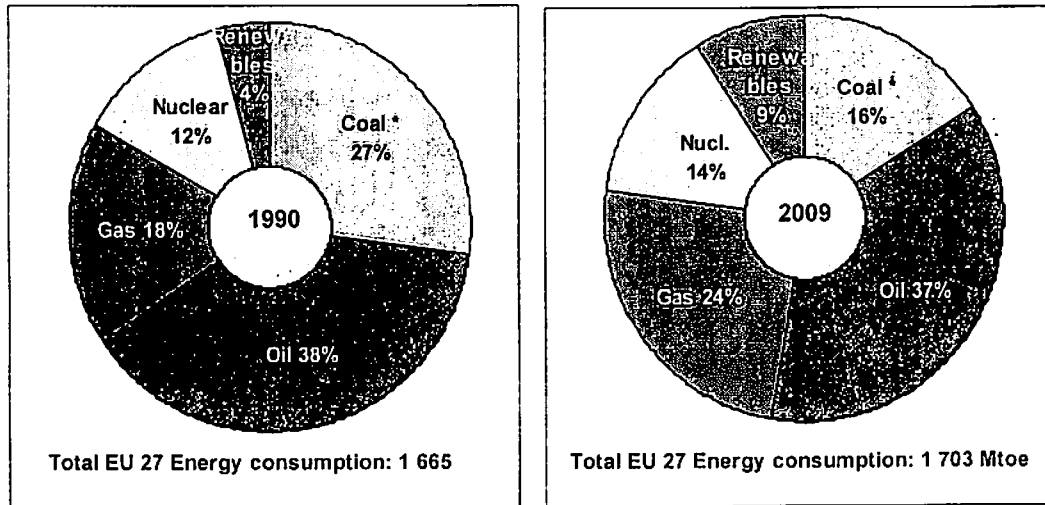
Gas Import dependency in Member States in 2009



Source: Eurostat May 2011

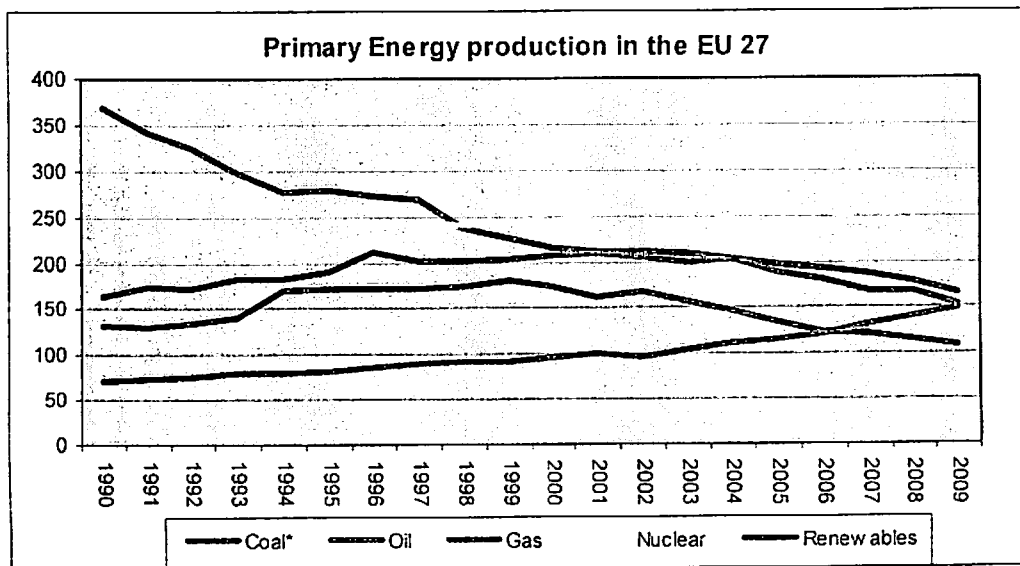
3. EU energy consumption by fuel

The EU energy mix is slowly changing....



Source: Eurostat May 2011; * Coal and other solid fuels

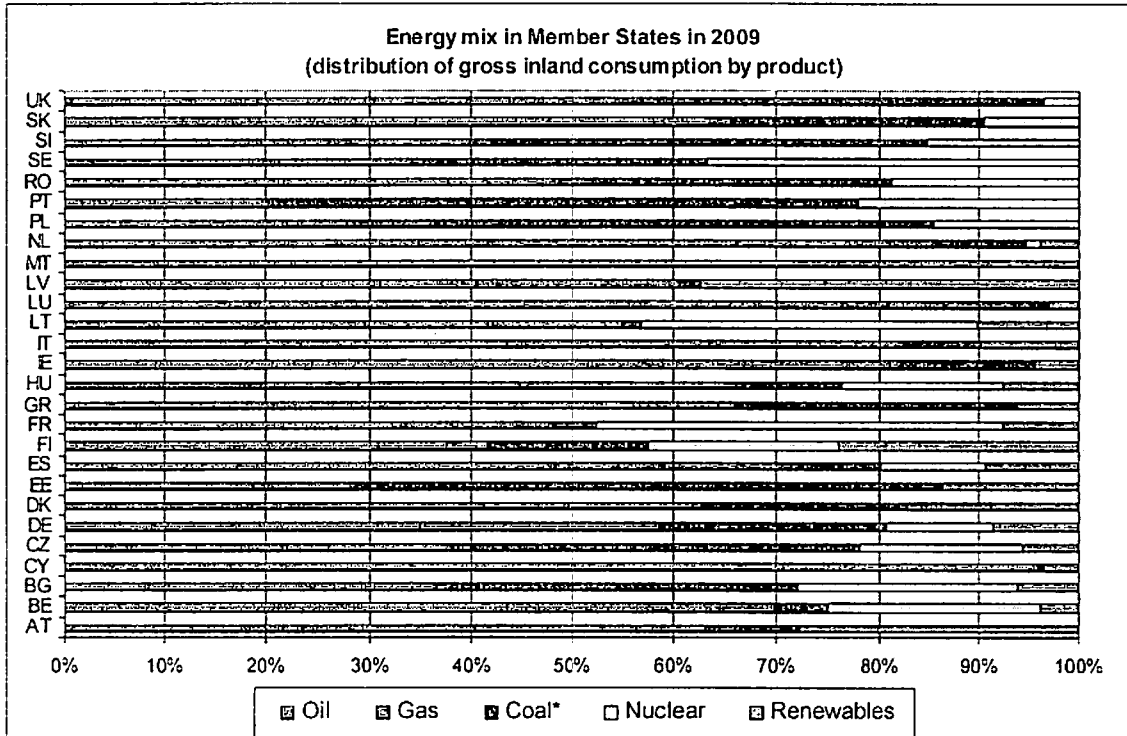
Fossil fuels represent three quarters of our energy mix today. Renewables are on the rise but there is still some way to go before reaching the 20% target by 2020.



Eurostat May 2011; * Coal and other solid fuels

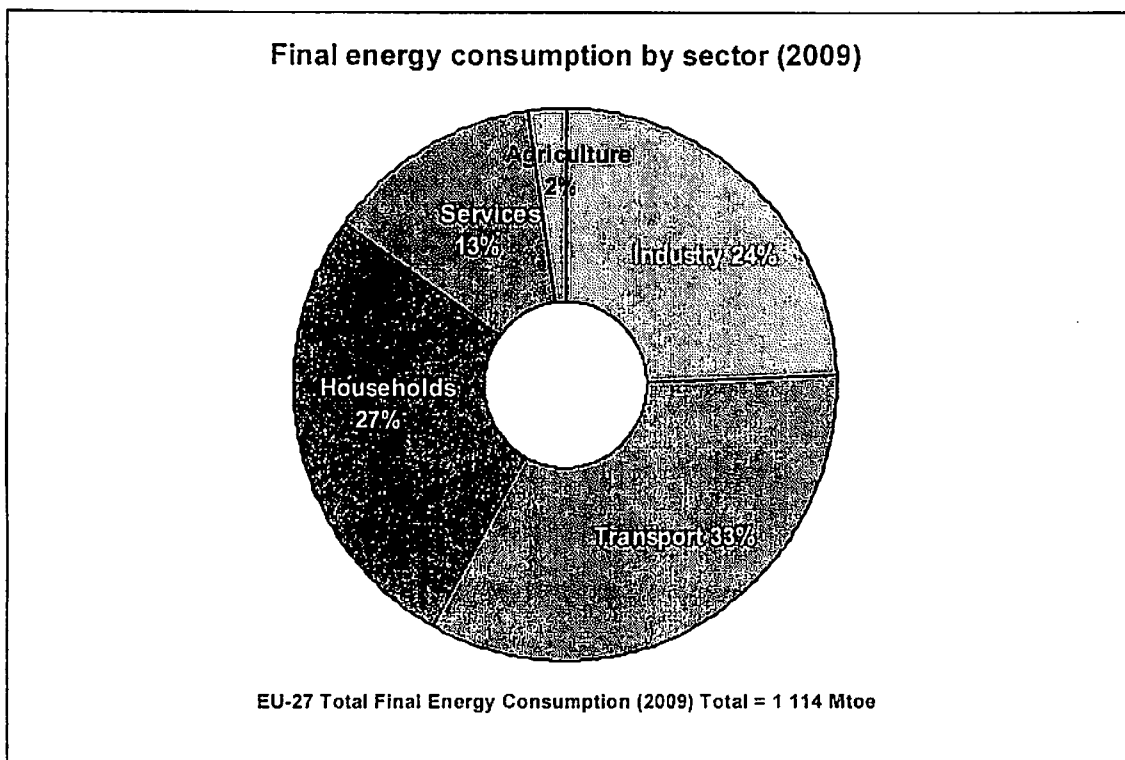
Source:

The picture of the energy mix strongly varies among Member States. For instance Malta energy consumption is 100% dependant on oil, while oil accounts for less than 3% of the gross inland energy consumption in Sweden.



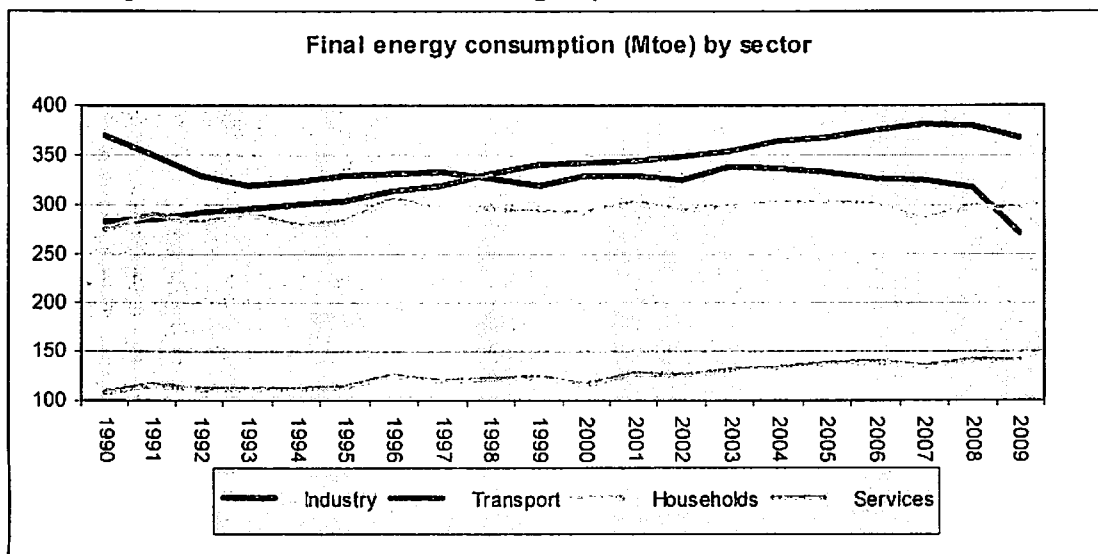
4. Final energy consumption

Transport and industry consume more than half of the total final energy in the EU, while a quarter of final energy is consumed by households.



Source: Eurostat May 2011

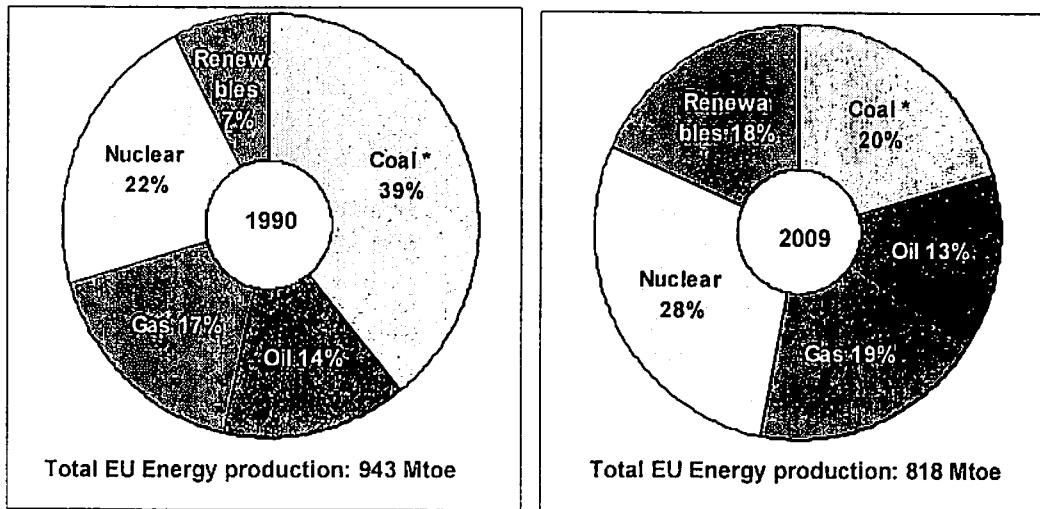
Final energy consumed by transport has strongly increased in the last 2 decades even though the economic crisis has slightly reversed the curb in 2009.



5. EU Energy production

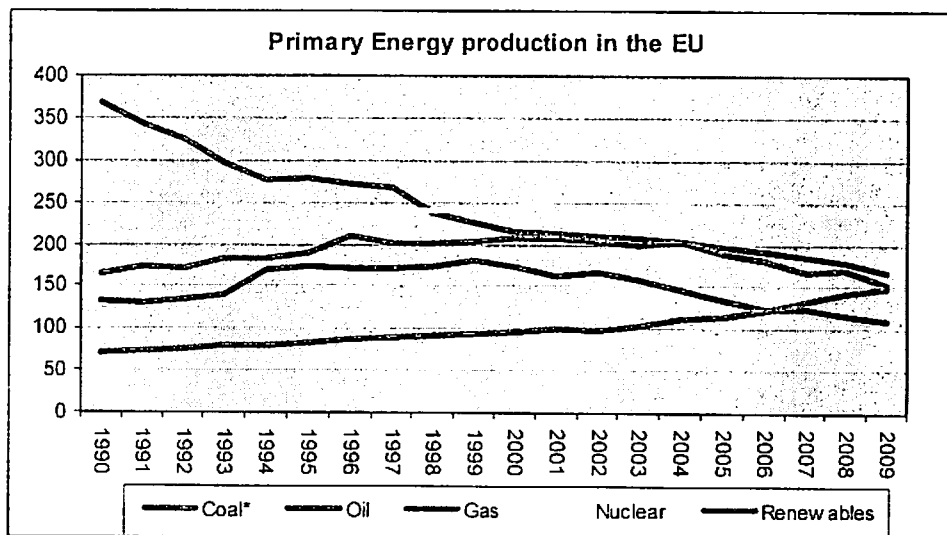
The EU primary energy production decreased by 13% over the last 20 years, mainly due to the large reduction of coal production (-55%).

EU energy production by fuel in 1990 and 2009



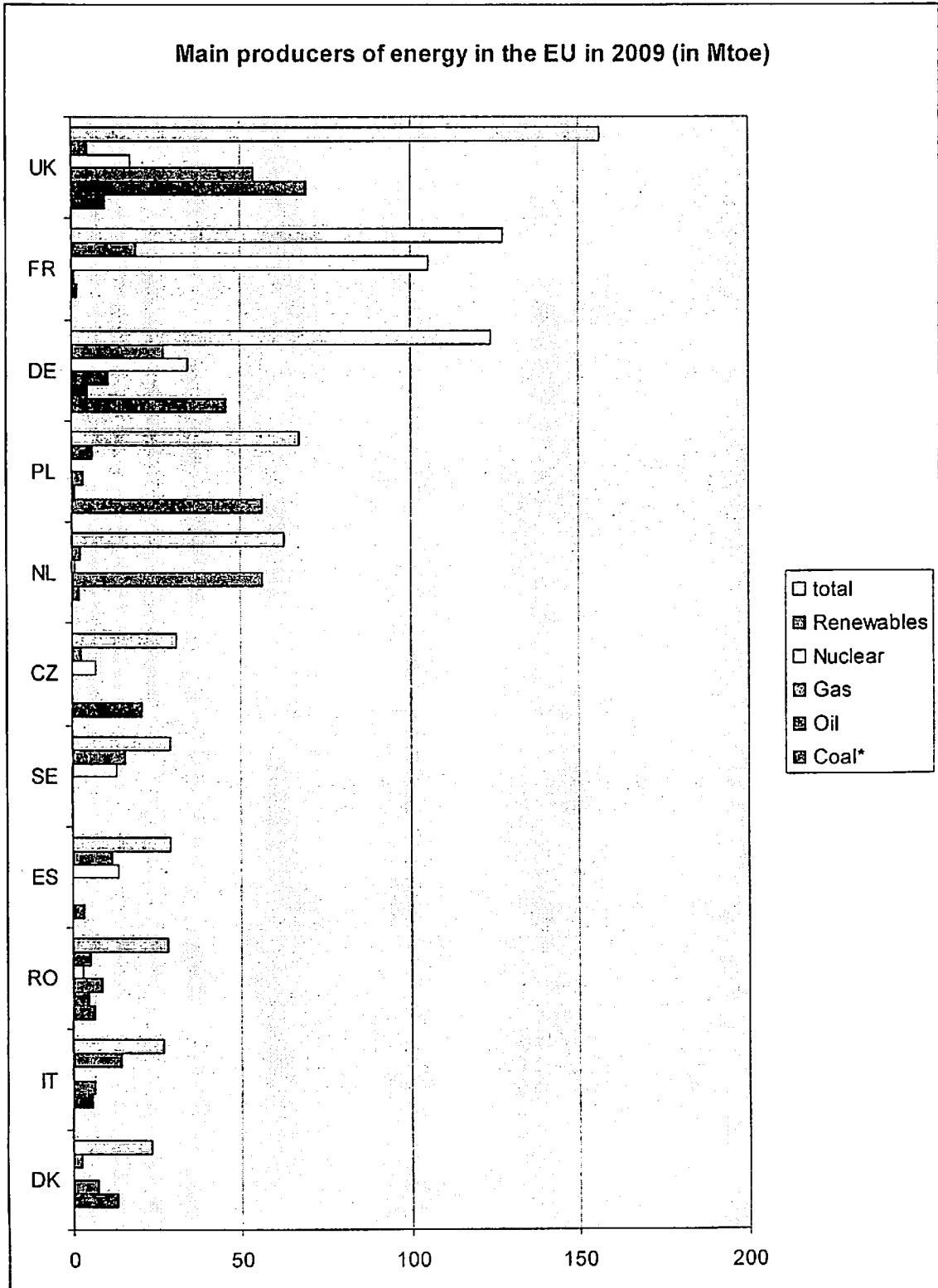
Source: Eurostat May 2011

By contrast production of energy from renewable sources is rapidly expanding.



Source: Eurostat May 2011

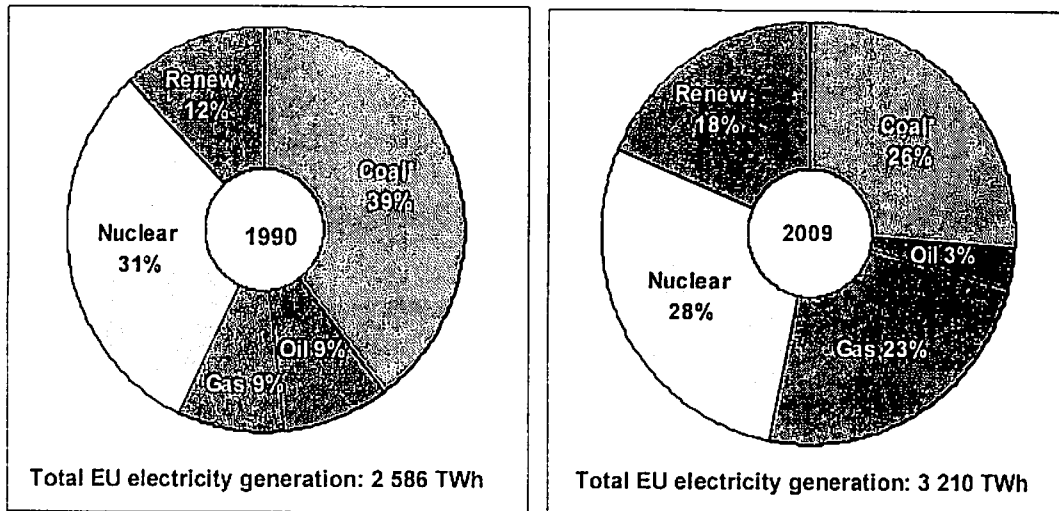
2/3 of the total primary energy production in the EU comes from 5 Member States...



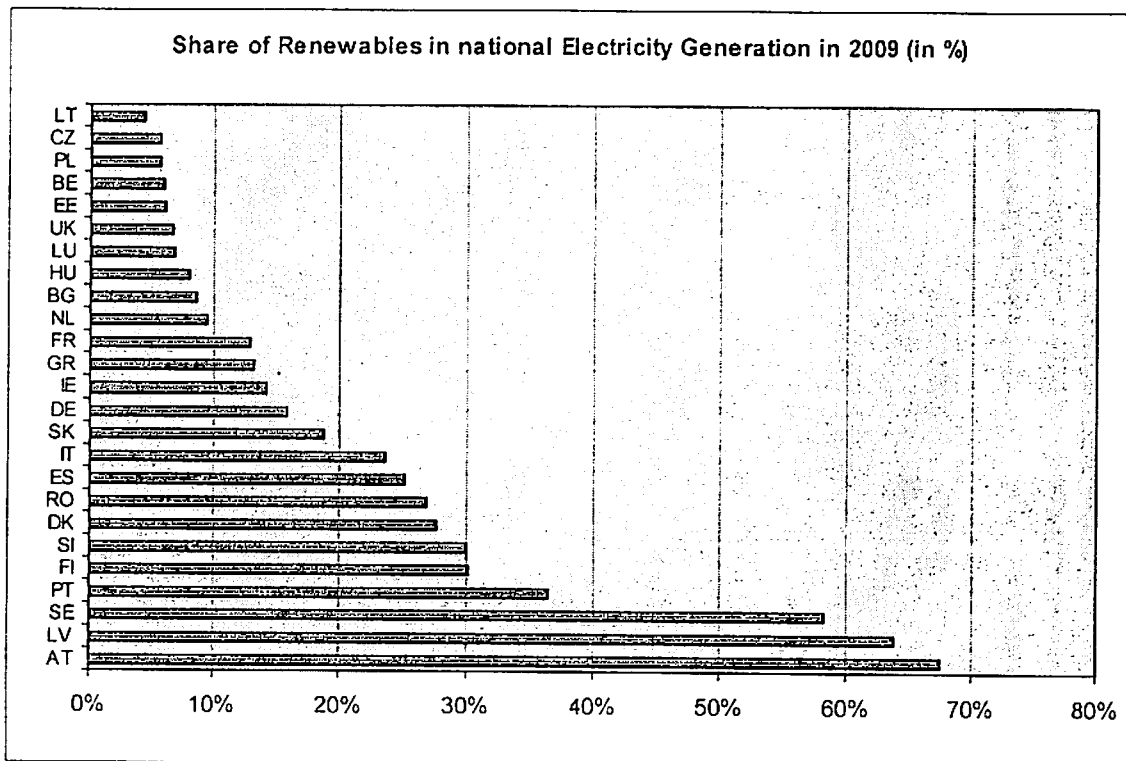
6. EU Electricity generation

Gas and renewables are more and more contributing to the electricity generation in the EU, just after nuclear and coal....

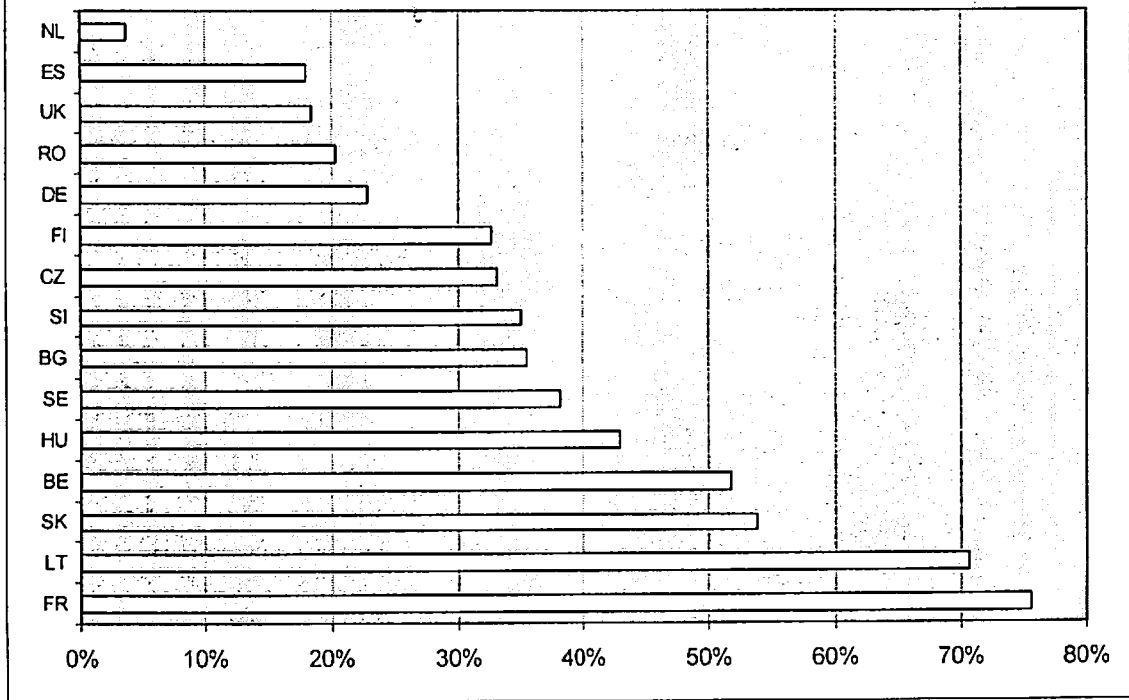
EU Electricity Generation in the EU by type of fuel in 1990 and 2009



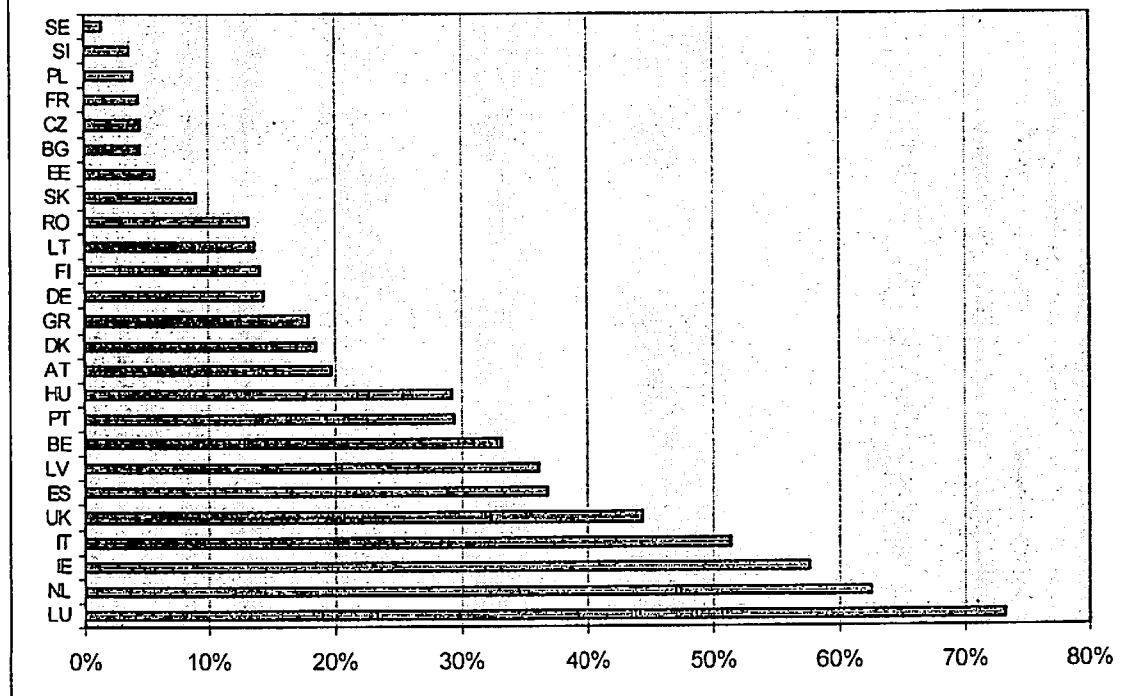
EU Electricity Generation in Member States by type of fuel



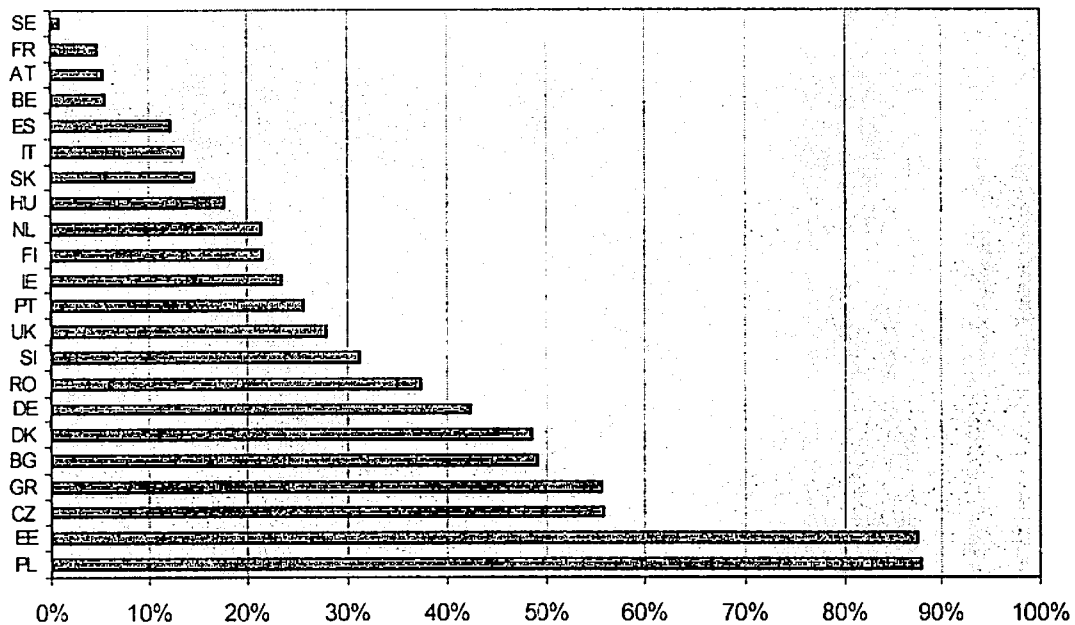
Share of Nuclear in national Electricity Generation in 2009 (in %)



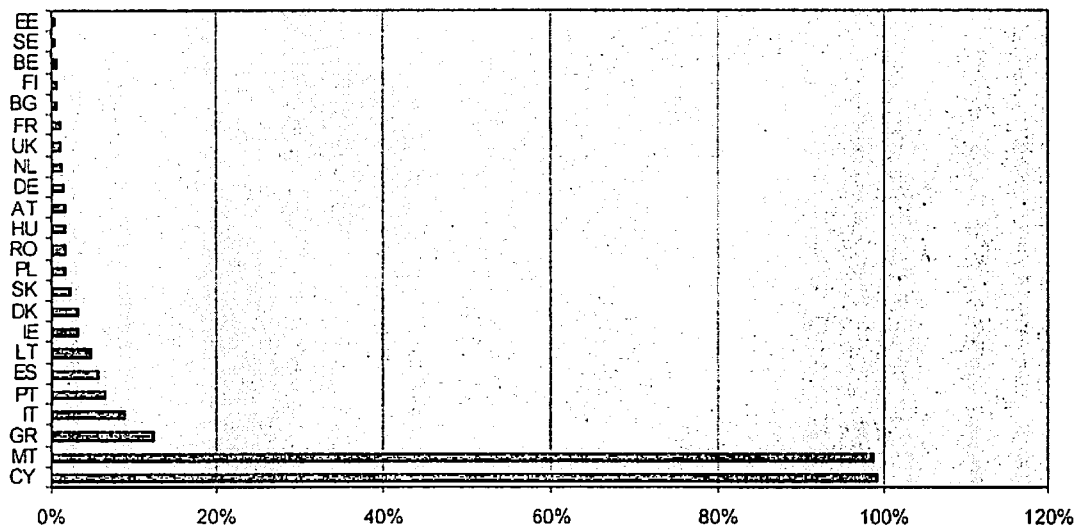
Share of gas in National Electricity Generation in 2009 (in %)



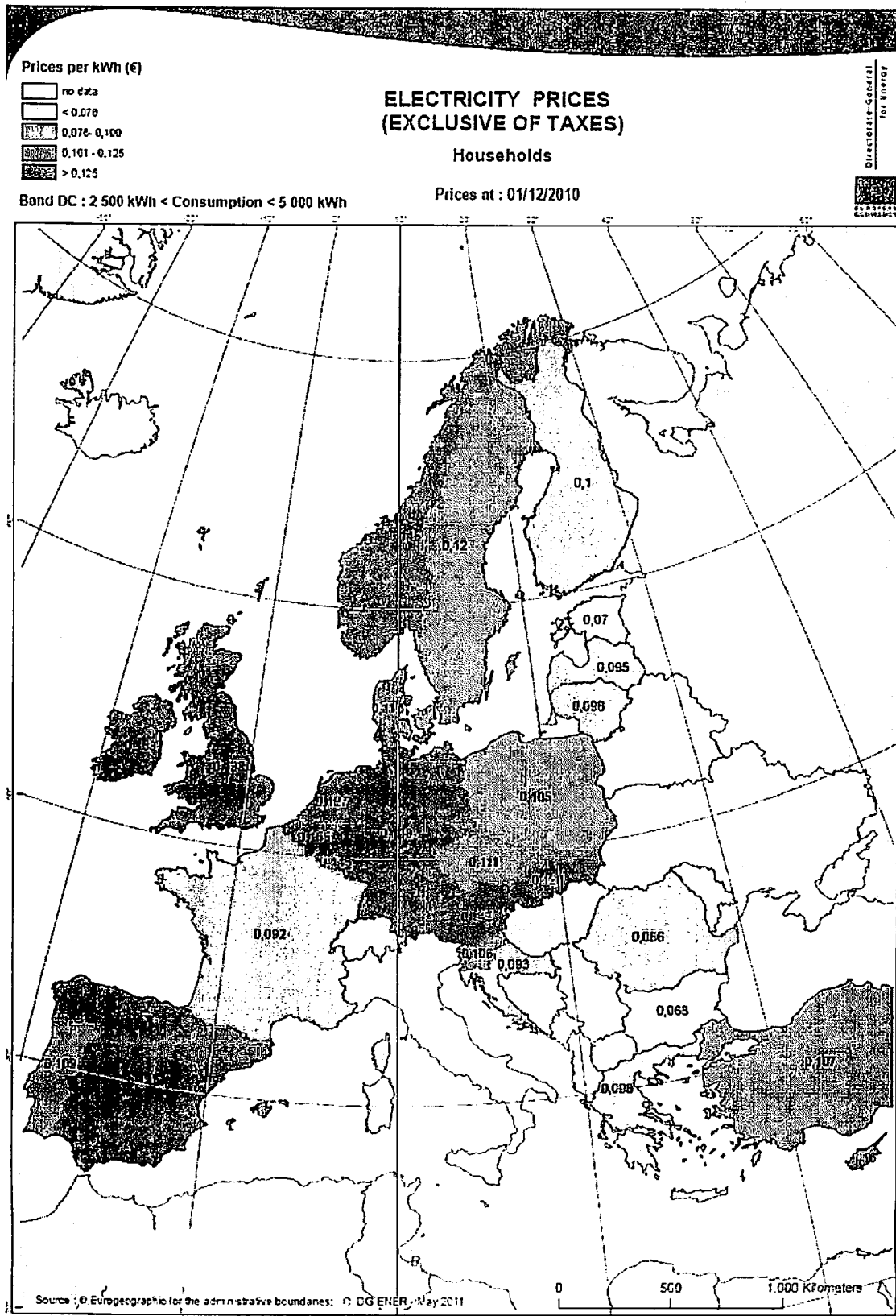
Share of Coal (and other solid fuels) in National Electricity Generation in 2009 (in %)



Share of Oil in National Electricity Generation in 2009 (in %)



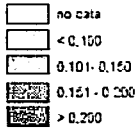
7. Energy prices



Direction-Général
de l'Énergie



Prices per kWh (€)



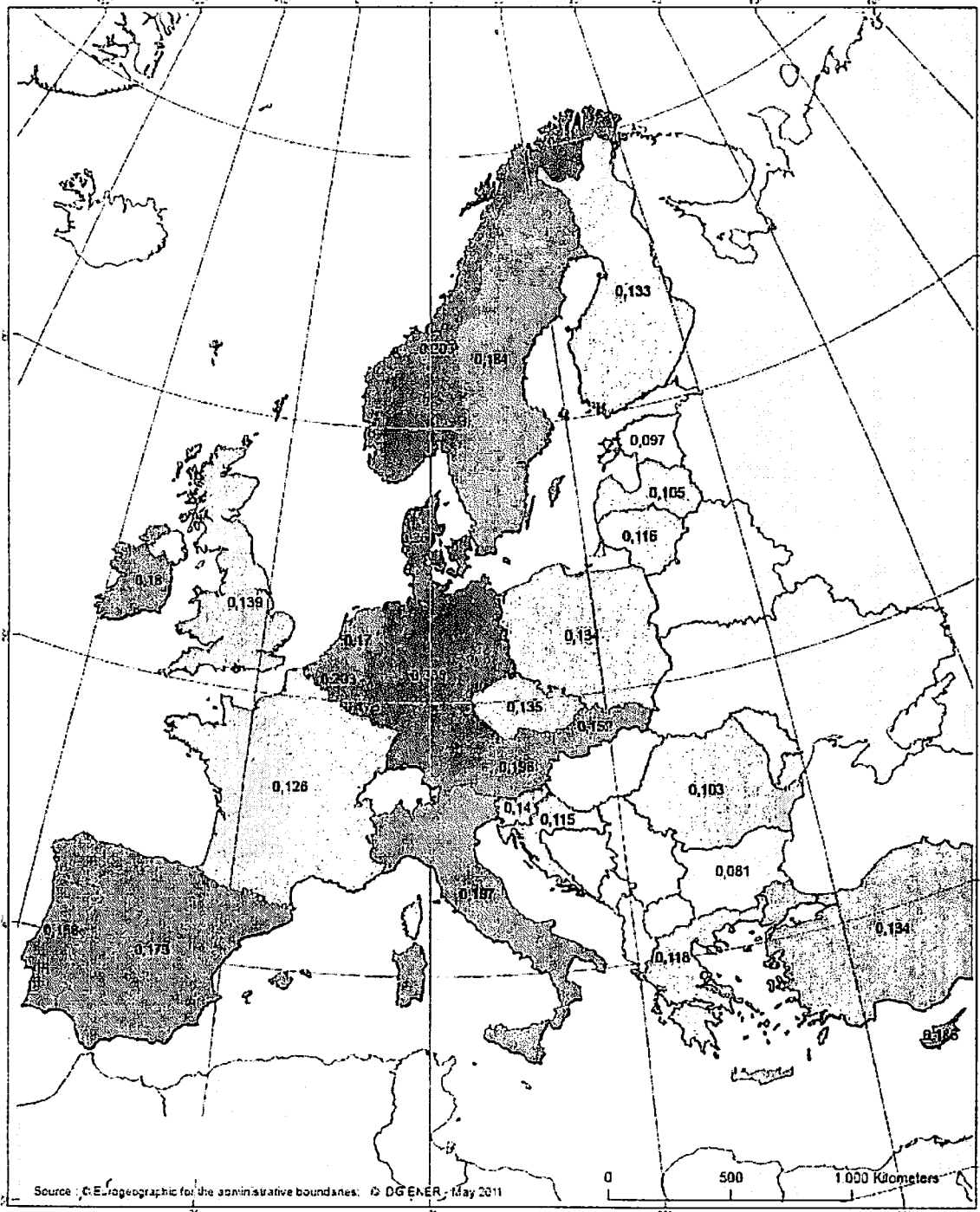
ELECTRICITY PRICES (INCLUSIVE OF TAXES)

Households

Prices at : 01/12/2010

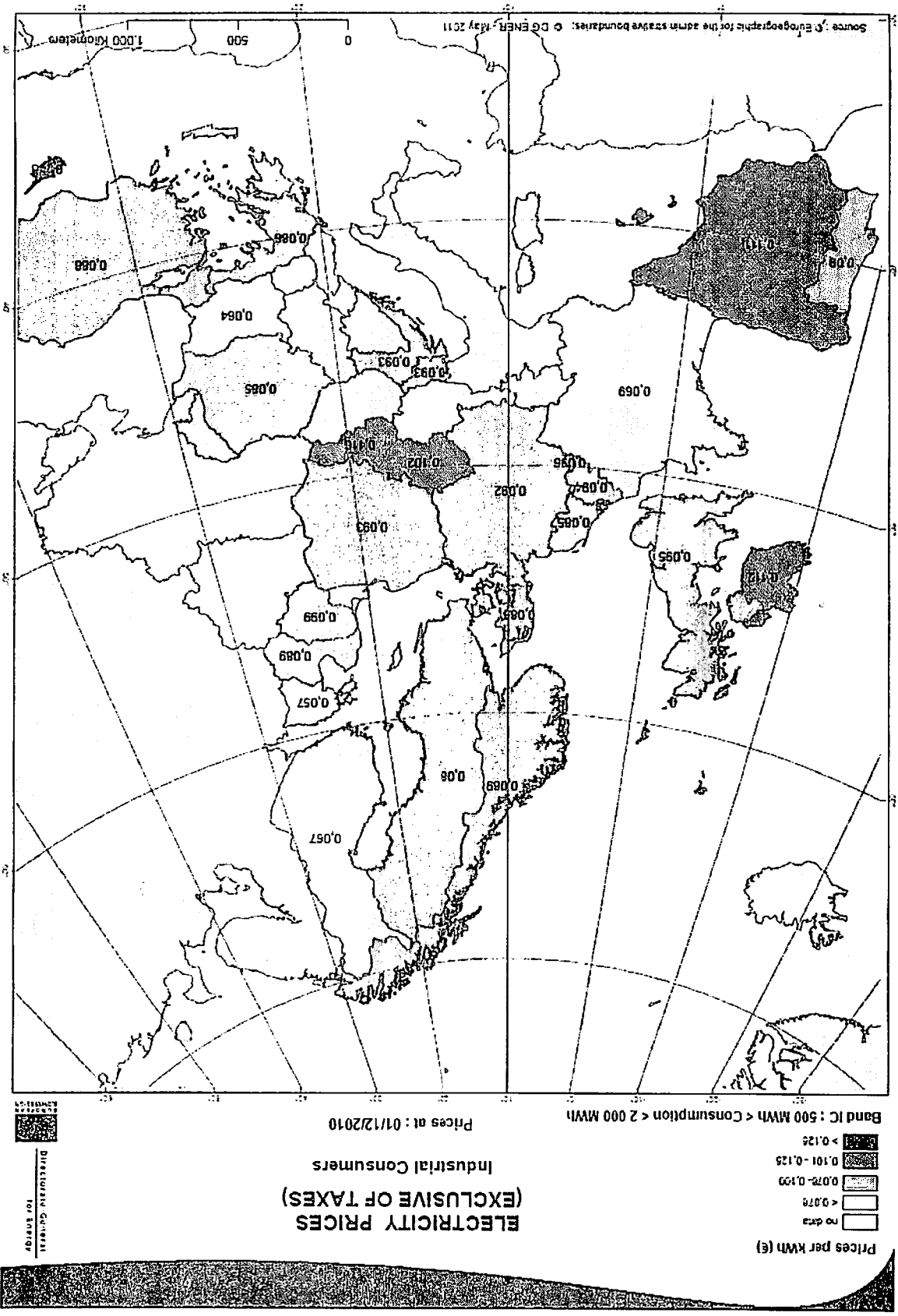
Band DC : 2 500 kWh < Consumption < 5 000 kWh

Directorate-General
Energy





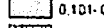


Source : Eurogeographic for the administrative boundaries. © DG ENER, May 2011

0 500 1 000 Kilometers



DIRECTORATE GENERAL
 FOR ENERGY

Prices per kWh (€)

-  no data
-  < 0,101
-  0,101 - 0,150
-  0,151 - 0,200
-  > 0,200

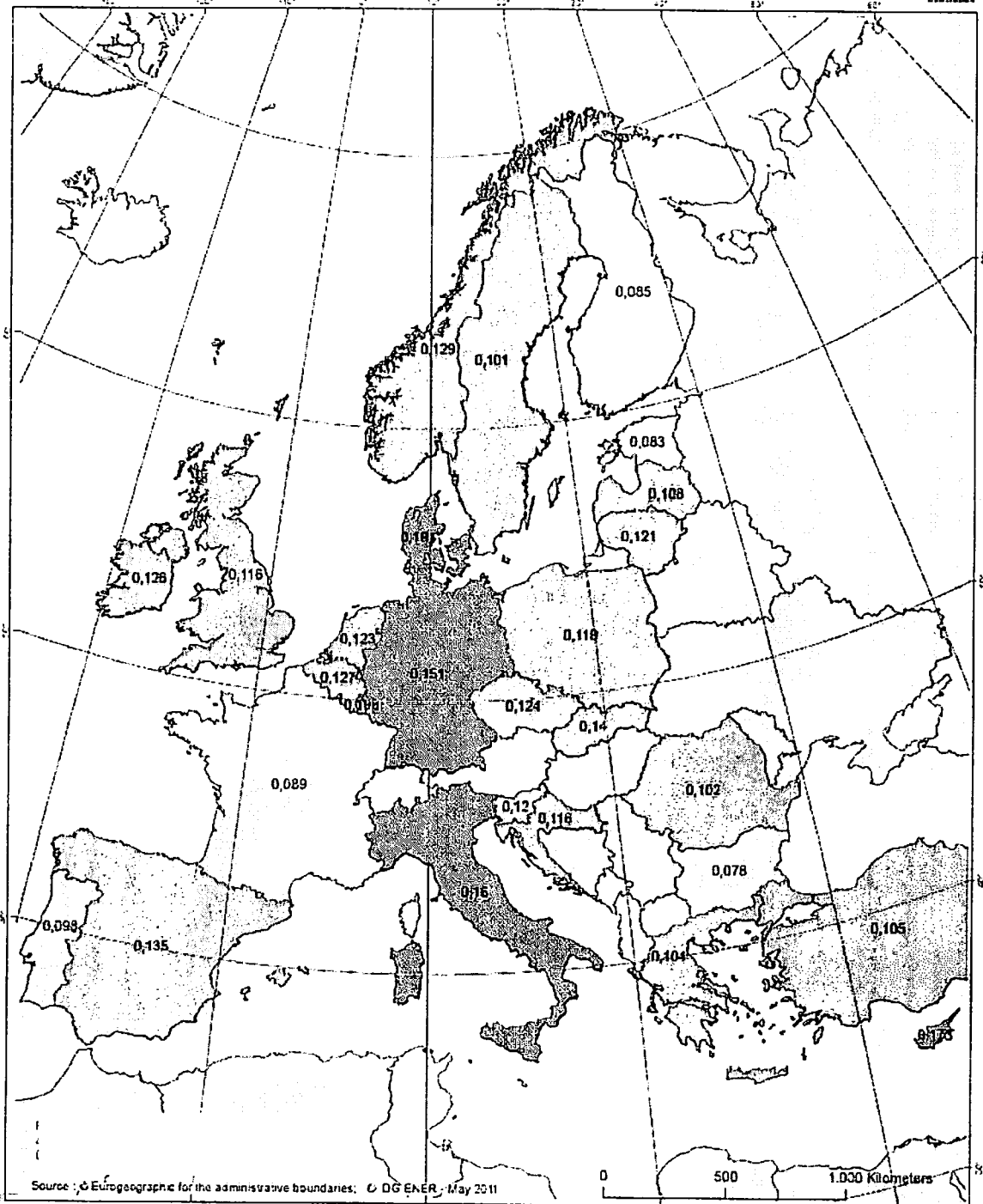
ELECTRICITY PRICES (INCLUSIVE OF TAXES)

Industrial Consumers

Prices at : 01/12/2010

Band IC : 500 MWh < Consumption < 2 000 MWh






Directorat General
for Energy



Source : Eurogeographic for the administrative boundaries. © DG ENER, May 2011

0 500 1.000 Kilometers

Prices per kWh (c€)

-  no data
-  < 5.01
-  5.01 - 10.00
-  10.01 - 15.00
-  > 15.00

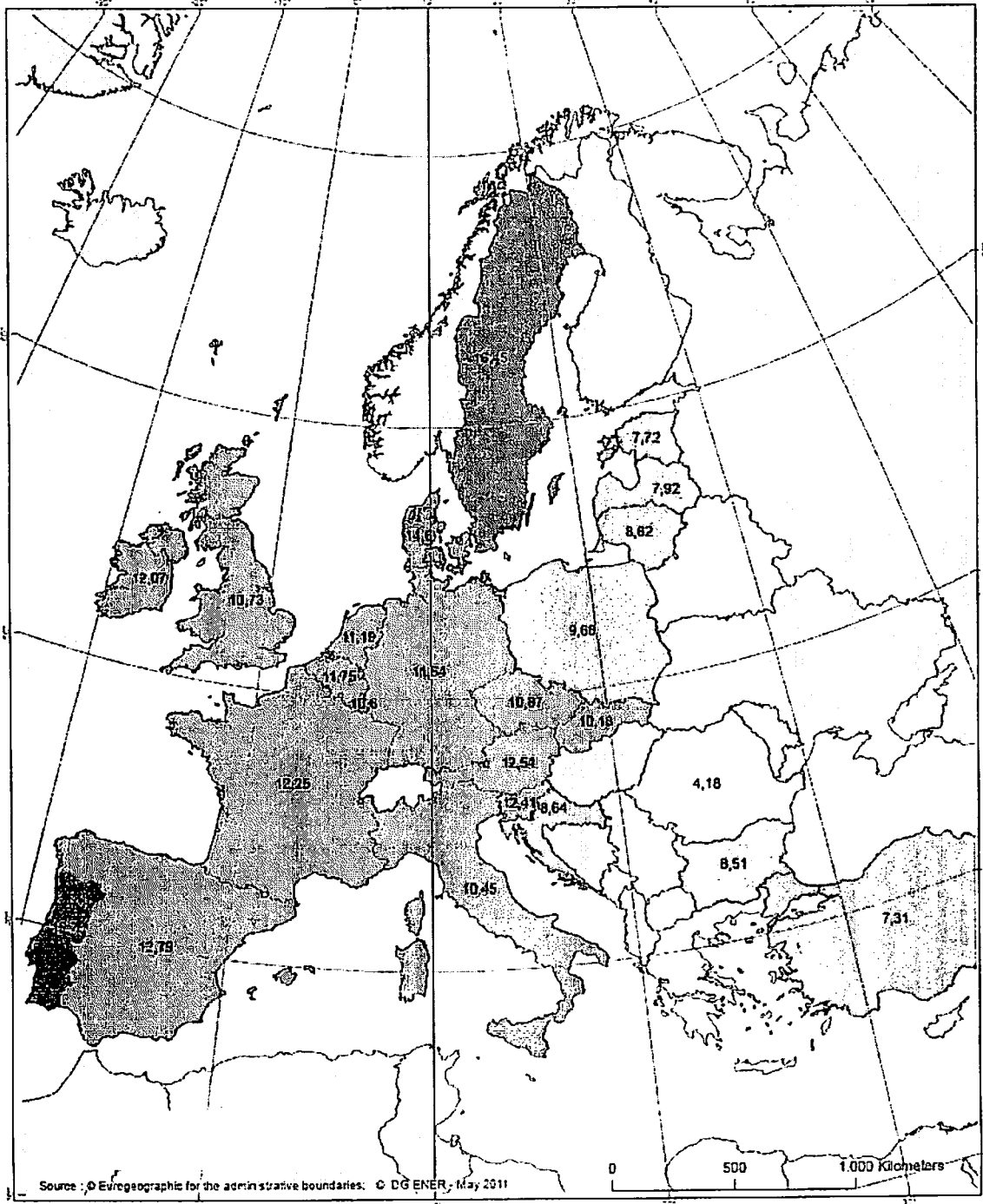
GAS PRICES (EXCLUSIVE OF TAXES)

Households

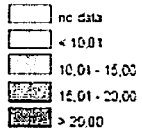
Prices at : 01/12/2010

Band D2 : 20 GJ < Consumption < 200 GJ

Directorat General
for Energy

Prices per kWh (c€)



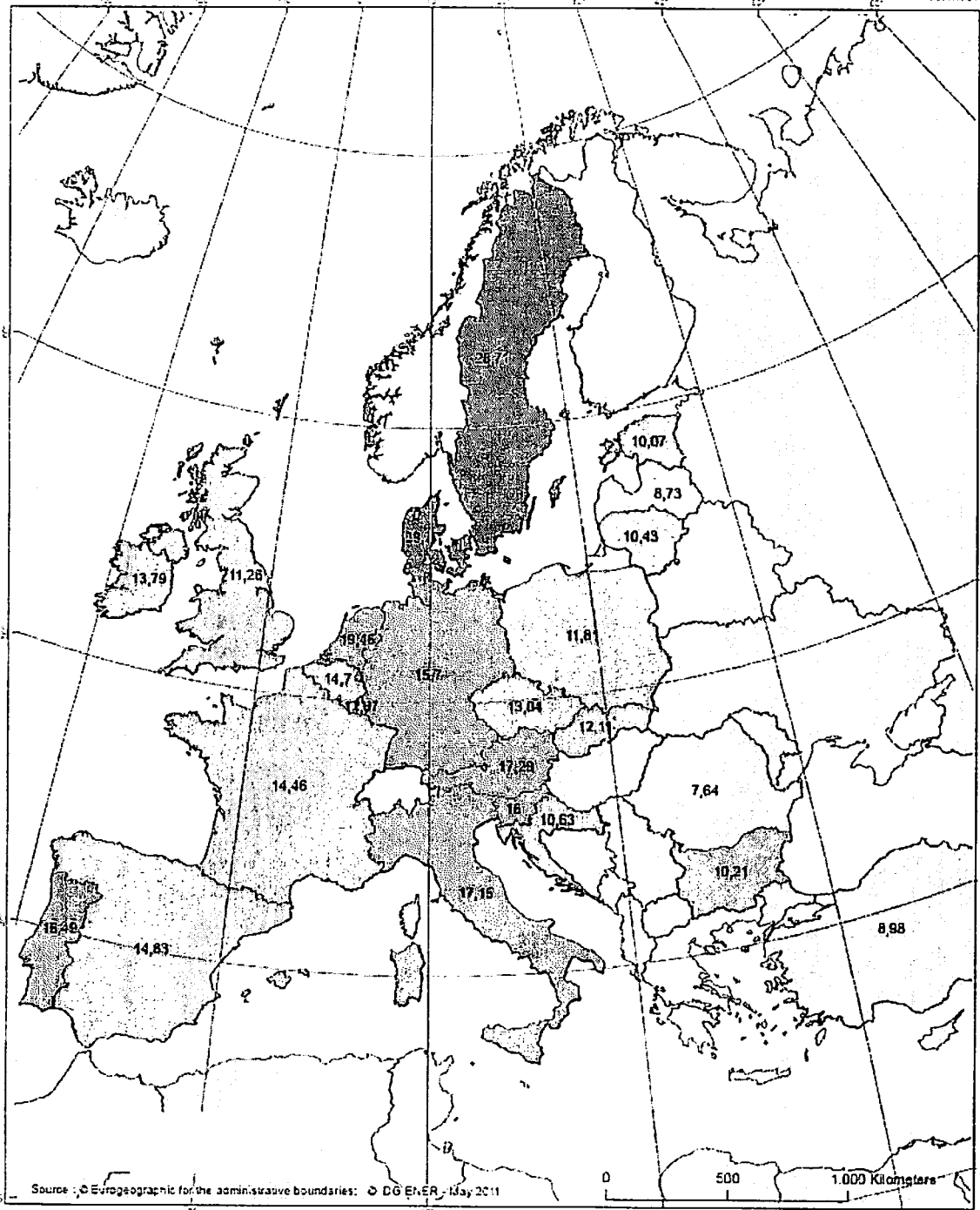
GAS PRICES (INCLUSIVE OF TAXES)

Households

Band D2 : 20 GJ < Consumption < 200 GJ

Prices at : 01/12/2010

Directorat General
ENERGIA



Prices per kWh (c€)

- no data
- < 6,01
- 6,01 - 8,00
- 8,01 - 10,00
- > 10,00

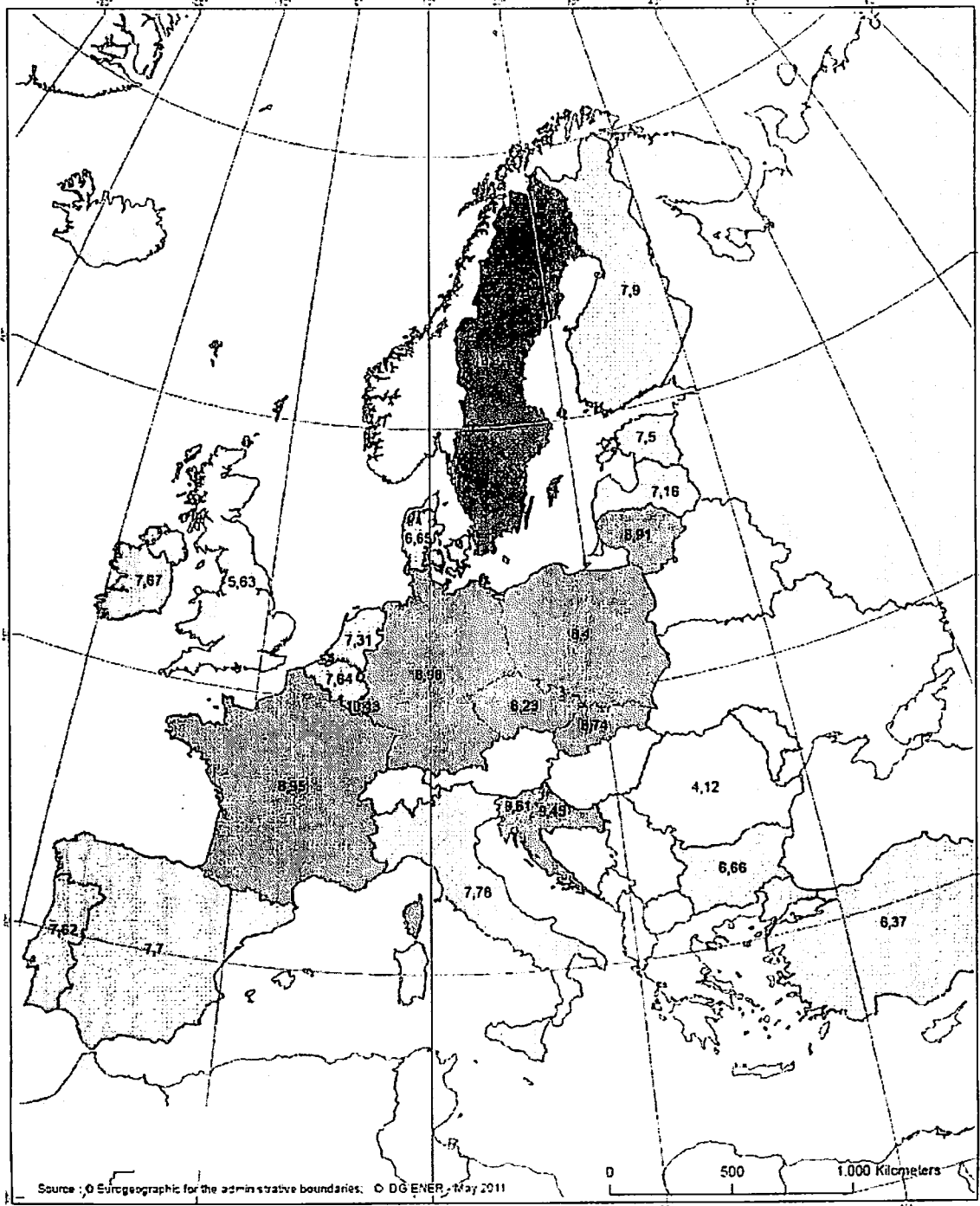
GAS PRICES (EXCLUSIVE OF TAXES)

Industrial Consumers






Prices at : 01/12/2010

Band 13 : 10 000 GJ < Consumption < 100 000 GJ

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DG ENER



Prices per kWh (c€)

-  no data
-  < 7,51
-  7,51 - 10,00
-  10,01 - 12,50
-  > 12,50

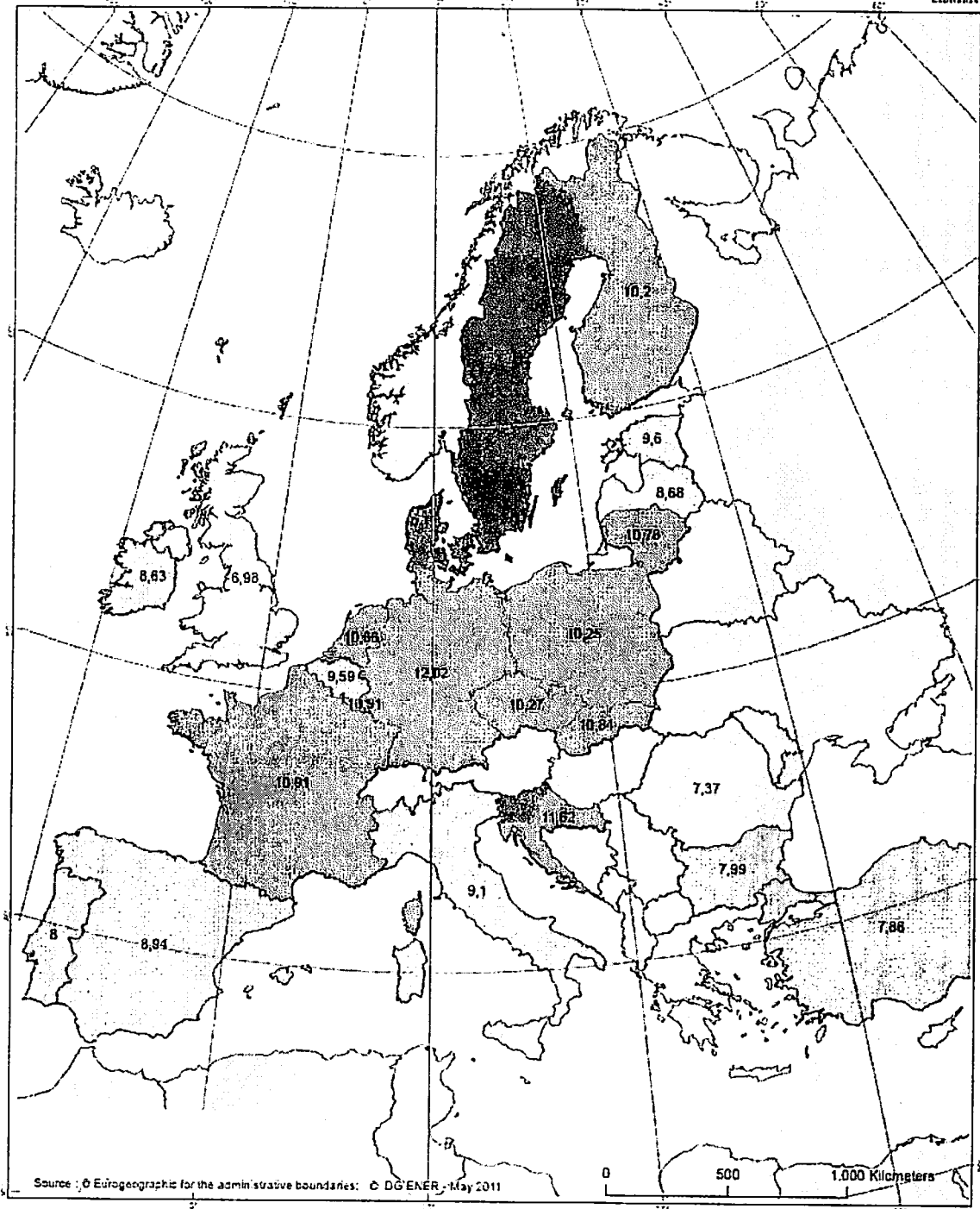
GAS PRICES (INCLUSIVE OF TAXES)

Industrial Consumers

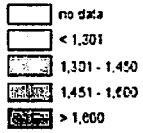
Band I3 : 10 000 GJ < Consumption < 100 000 GJ

Prices at : 01/12/2010

DIEBOLD GEORGEL
for Enery



Consumer Prices per litre (€)

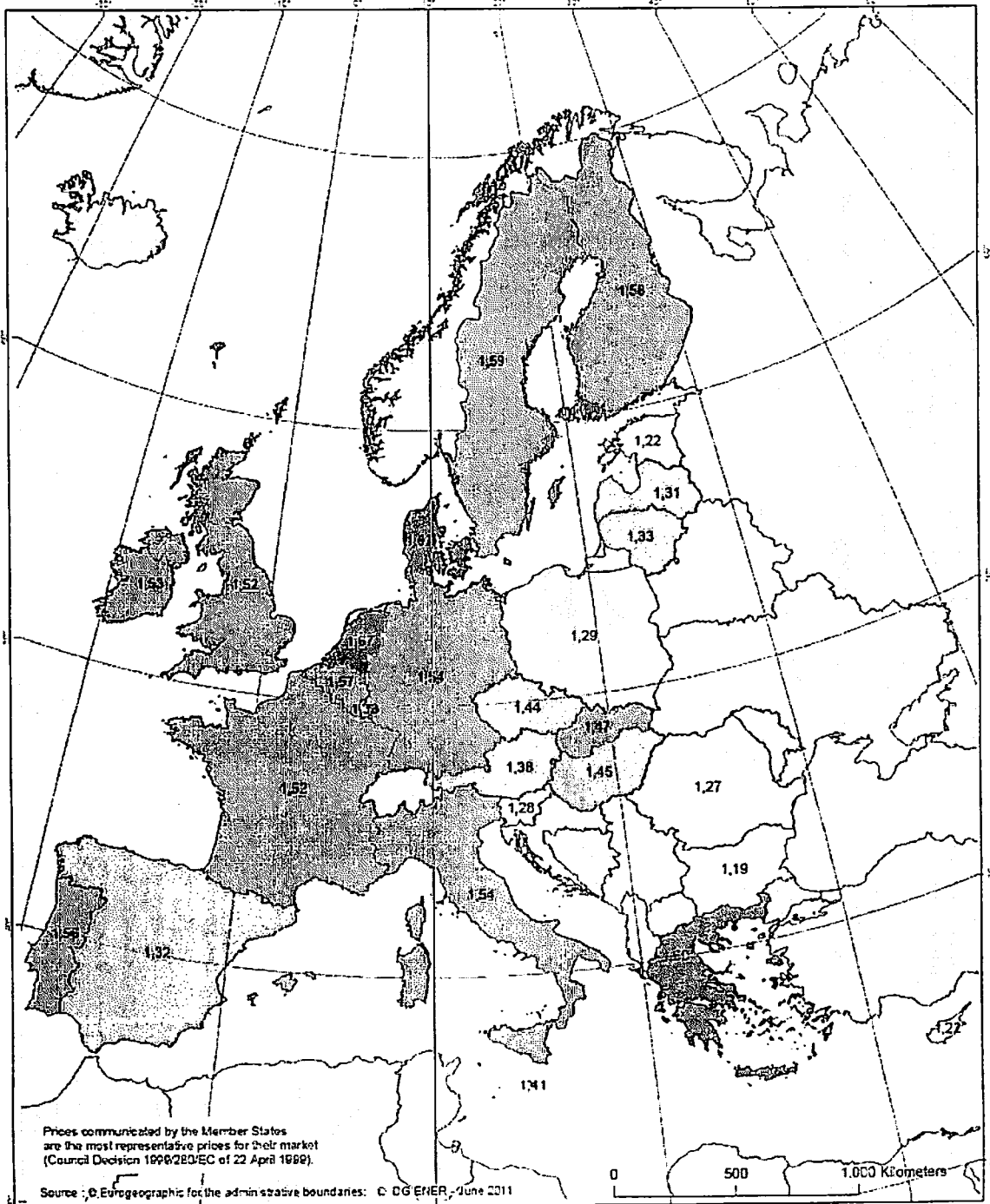


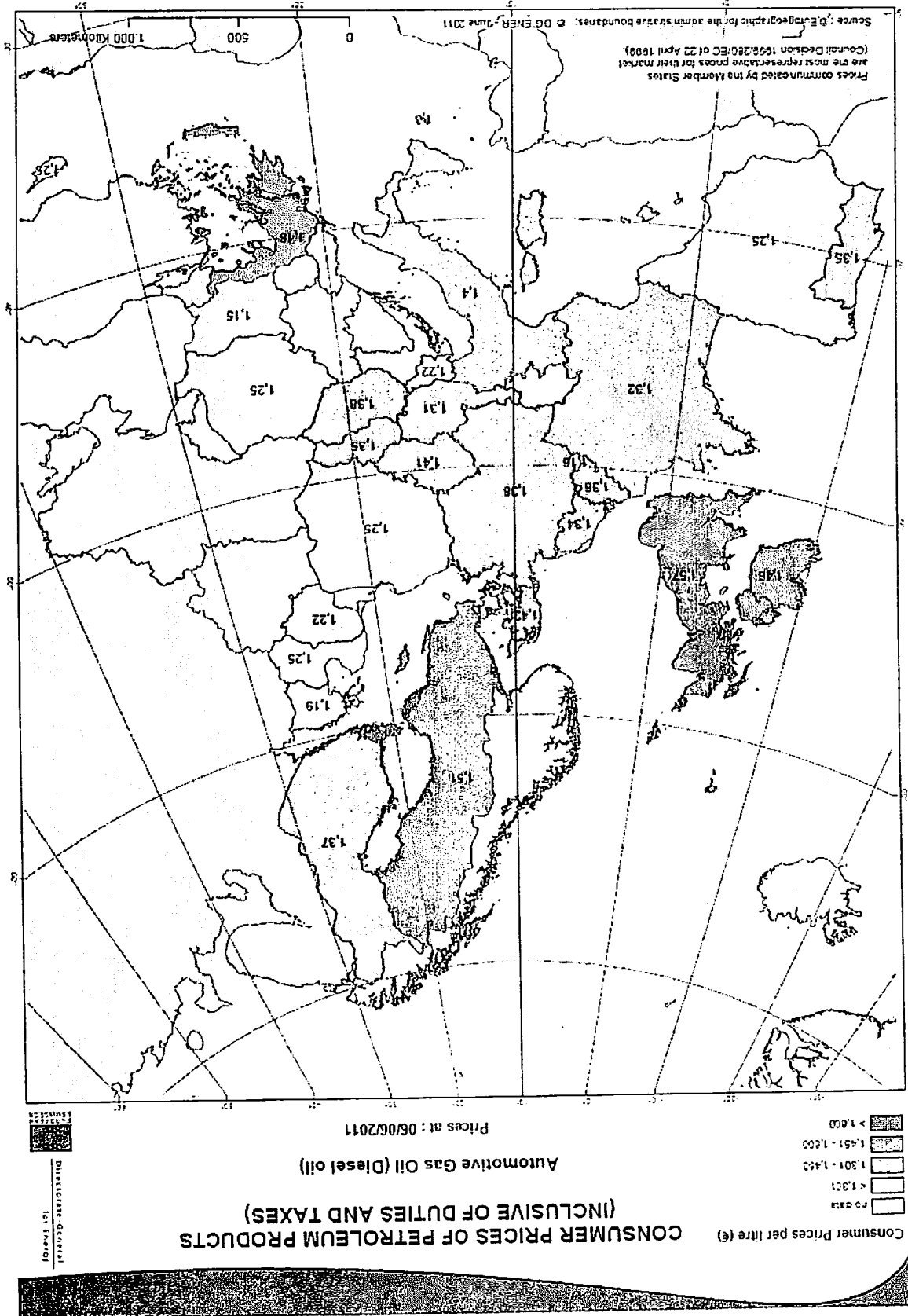
CONSUMER PRICES OF PETROLEUM PRODUCTS (INCLUSIVE OF DUTIES AND TAXES)


Euro-Super 96





Prices at : 06/06/2011

Directorate-General
for Energy
ENERGY
ENERGY





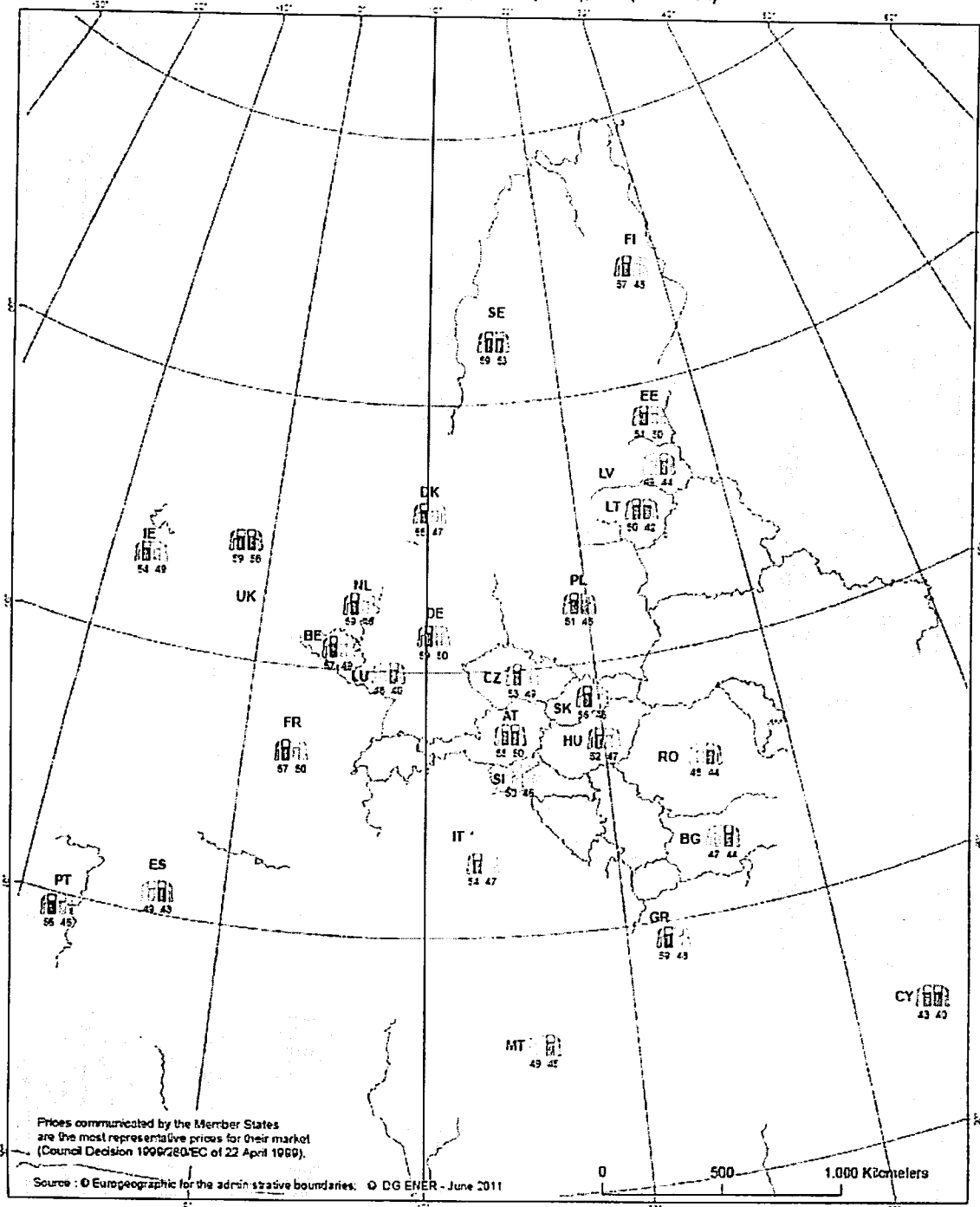
Euro-Super 95  Diesel oil

-  ≤ 40%
-  45% - 50%
-  50% - 55%
-  > 55%

TOTAL TAXATION SHARE IN THE END CONSUMER PRICE FOR EURO-SUPER 95 AND DIESEL OIL

Share at : 06/06/2011

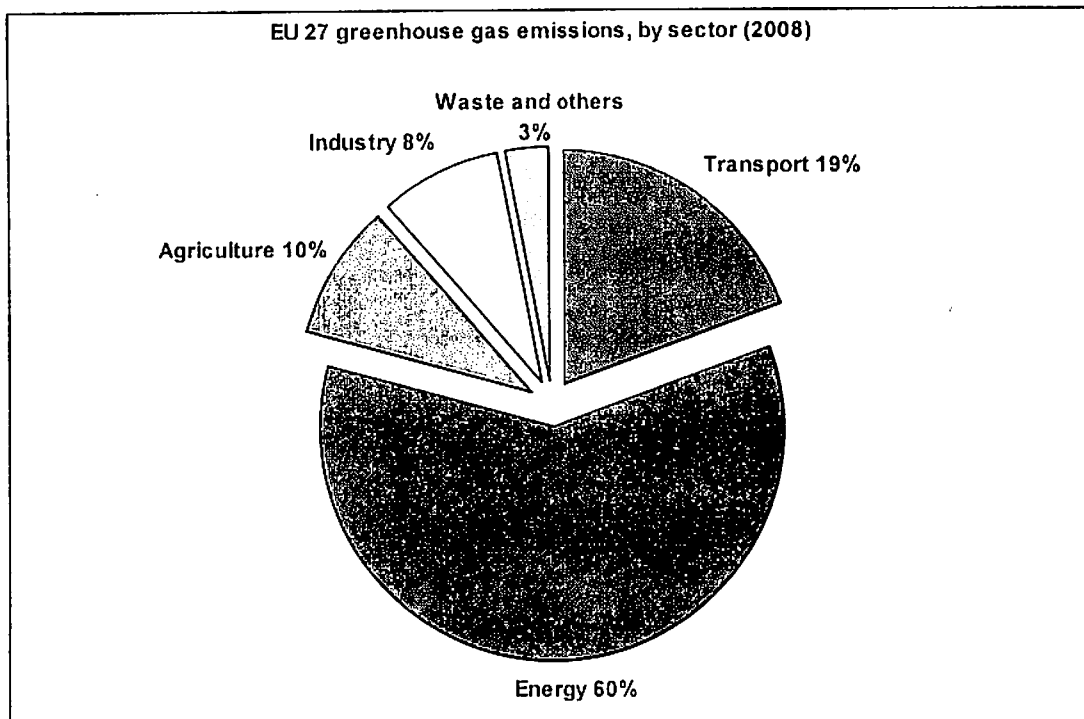
EU = 53% (Euro-Super 95), 47% (Diesel Oil)

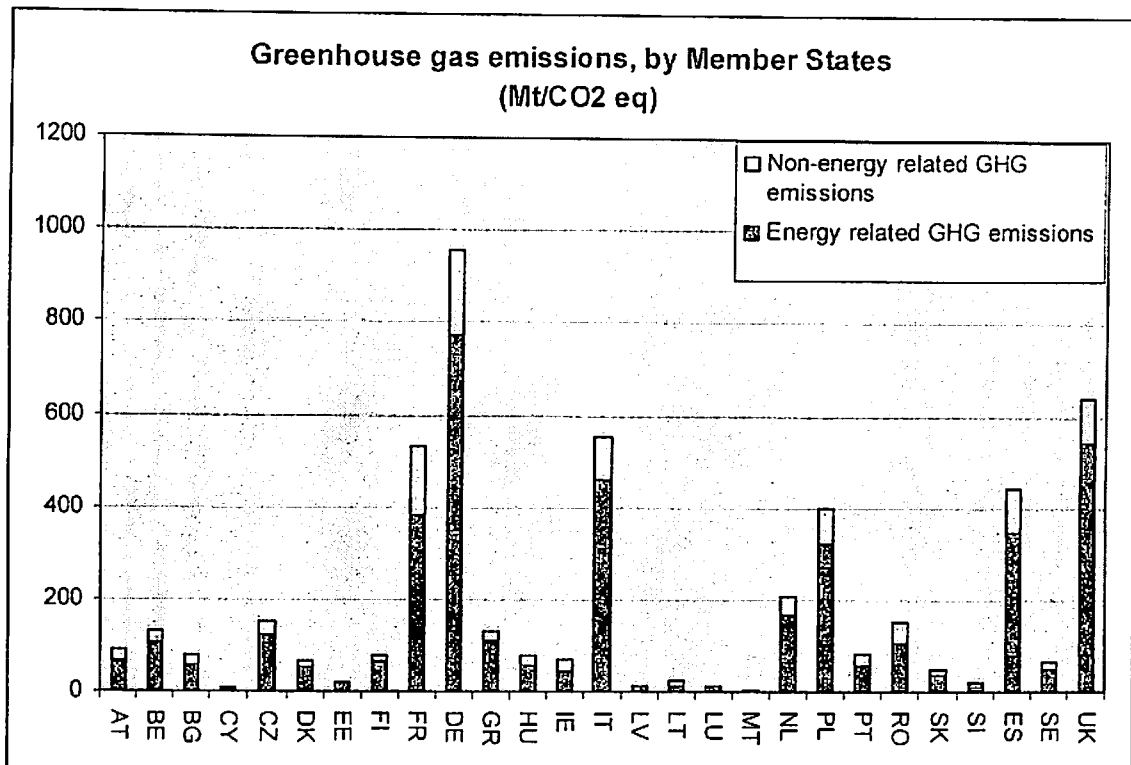


8. EU Energy targets: 20-20-20 by 2020

- Reduction of the greenhouse gas emissions by 20% compared to 1990

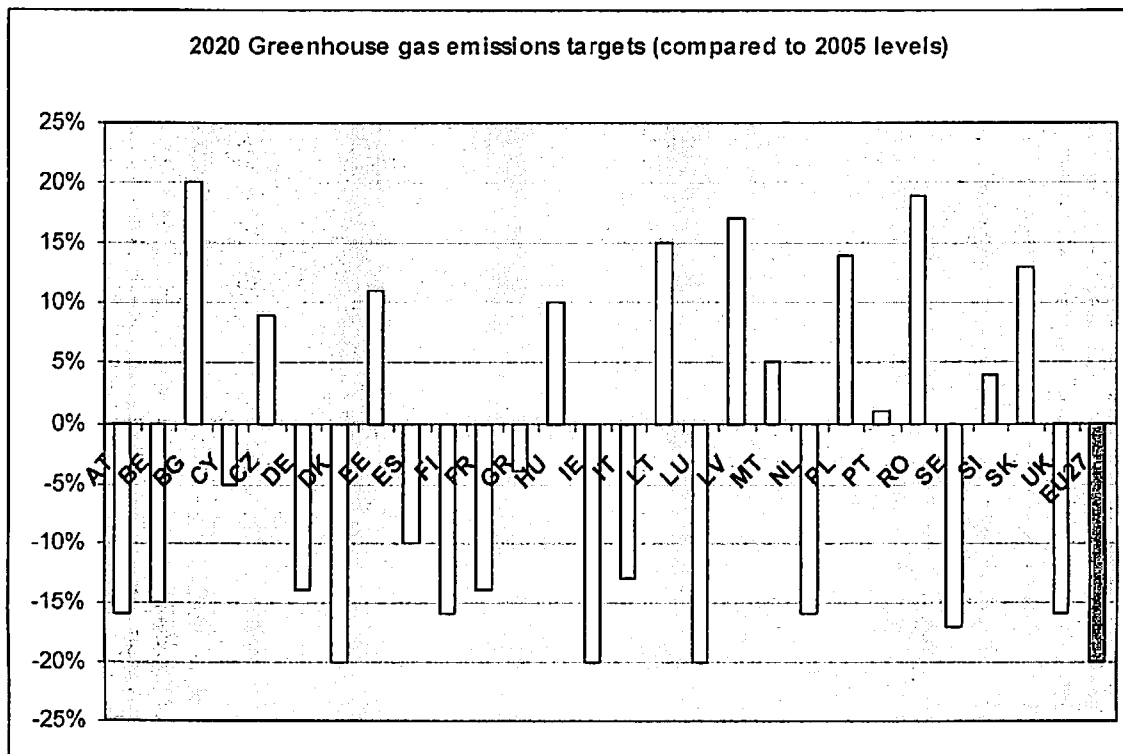
The use of energy is responsible for the majority of greenhouse gas emissions, with the energy sector representing 60%, transport 19%, agriculture 10% and industry 8%.





Source: EEA 2010

The EU is committed to reducing its greenhouse gas emissions by at least 20% from 1990 levels by 2020, and by 30% if a satisfactory international agreement is reached. Member States have set themselves specific targets.



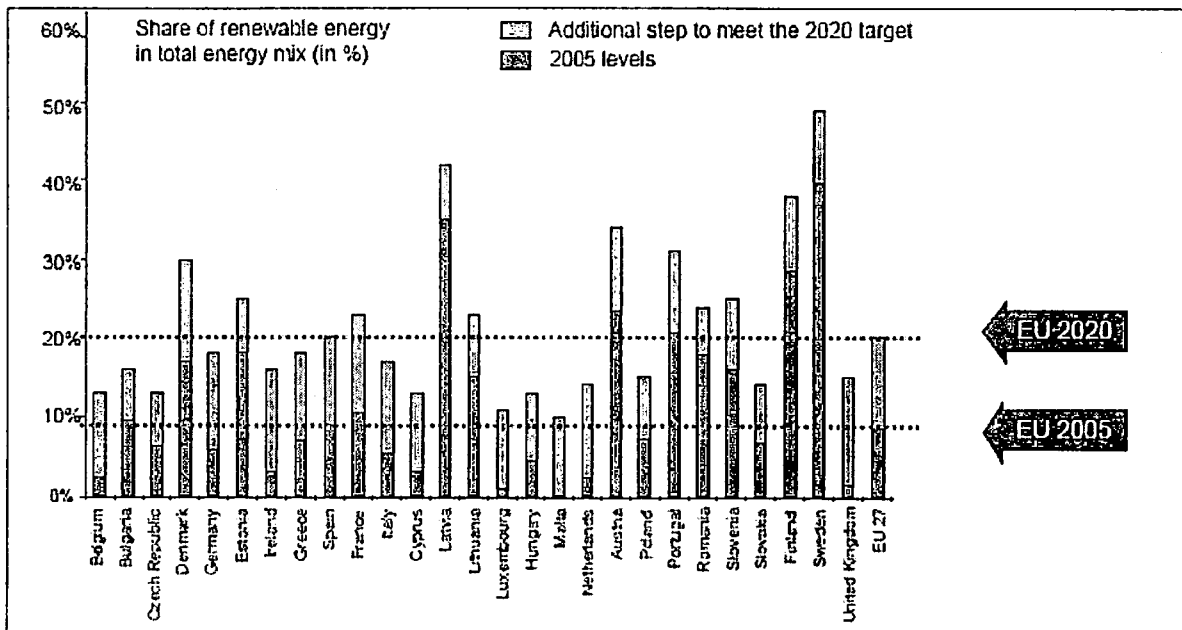
Source: European Commission Europe 2020 targets

- Increase in the share of renewable energy sources in final energy consumption to 20%

The numerous benefits of renewable energy sources are widely accepted - they help curb climate change, provide a secure supply of energy and serve our long-term economic interests.

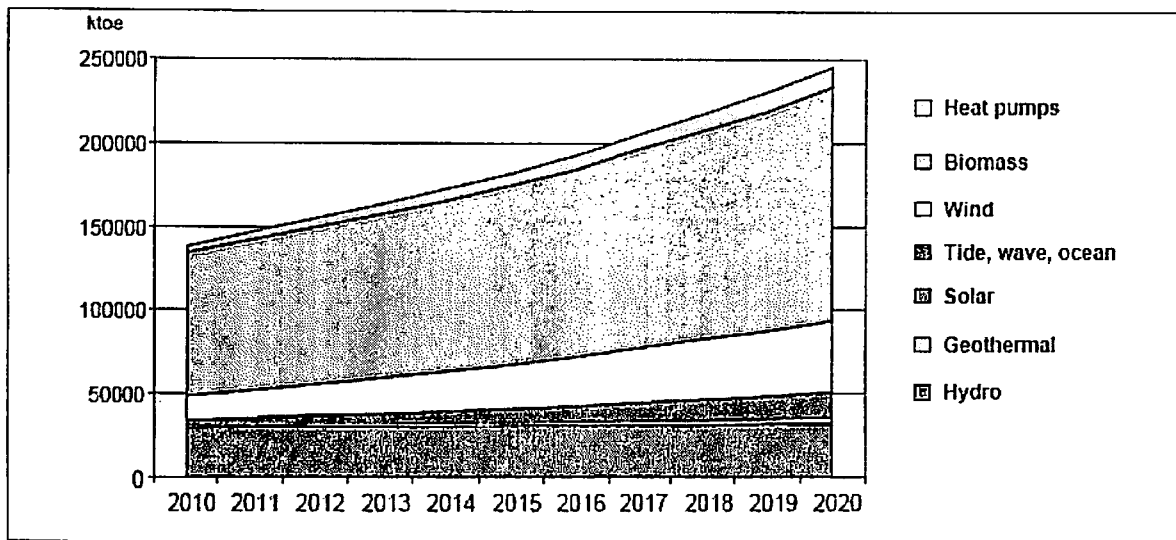
This is why the EU will increase the share of renewables in its overall energy mix to 20%, including biofuels and other renewable energy in the transport sector by 2020 and each Member State has a binding target to increase its share of renewable energy by 2020.

2020 Renewable energy targets



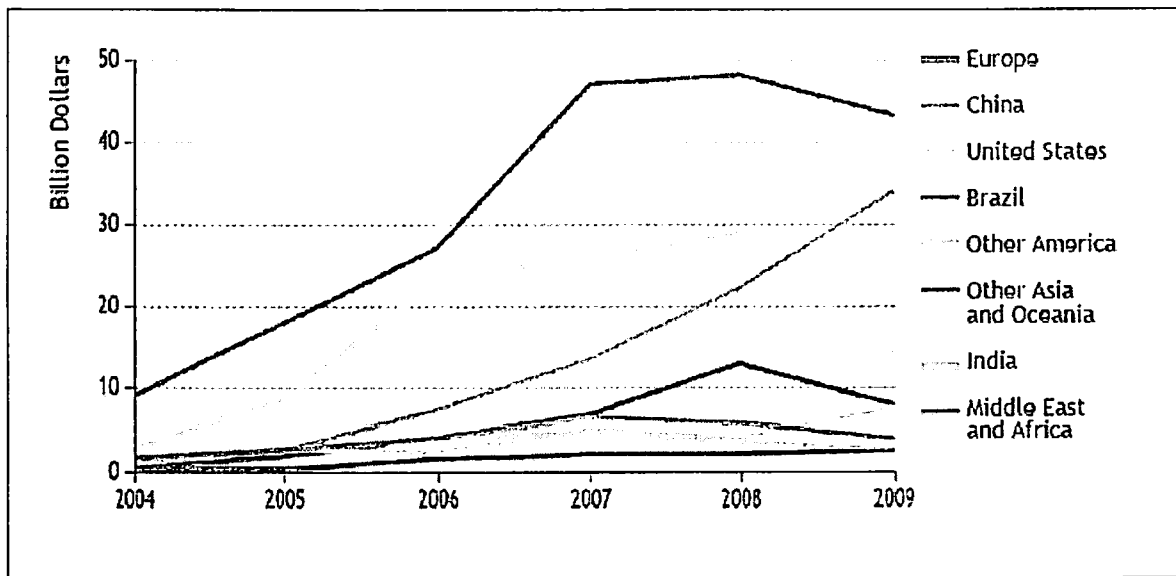
Source: Eurostat and European Commission

Growth and share of various types of renewable technologies



Source: European Commission

Investment in renewable energy at global level

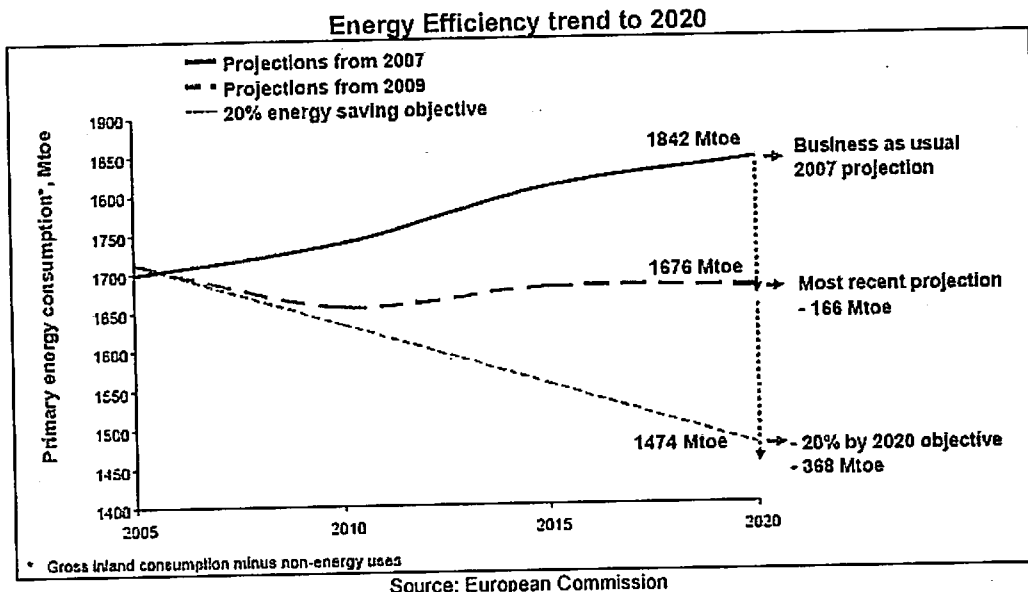


Source: International Energy Agency

In 2009, investment in renewable energy fell in the EU by 10% in the context of the economic crisis, while it increased by more than 50% in China.

- 20% increase in energy efficiency

In spite of progress, significant additional efforts are needed to achieve the - 20% energy consumption target.



Primary energy savings impact, Mtoe	
Austria	7,2
Belgium	9,8
Bulgaria	3,2
Cyprus	0,5
Czech Republic	n.a.
Germany	38,3
Denmark	0,8
Estonia	0,7
Greece	2,7
Spain	25,2
Finland	4,2
France	34,0
Hungary	3,0
Ireland	2,8
Italy	27,9
Lithuania	1,1
Luxembourg	0,2
Latvia	0,7
Malta	0,2
Netherlands	n.a.
Poland	14,0
Portugal	6,0
Romania	10,0
Sweden	12,8
Slovenia	n.a.
Slovak Republic	1,6
United Kingdom	n.a.
EU27	206,9

Source: National reform Programmes presented to the Commission in 2011.
National projections vary to the base year(s) against which savings are estimated

9. Some concepts and definitions

- **Gross inland consumption** is the quantity of energy consumed within the borders of a country. It includes deliveries to the energy transformation sector and to the energy industries themselves.
- **Final energy consumption** is the energy finally consumed in the transport, industrial, commercial, agricultural, public and household sectors. It excludes deliveries to the energy transformation sector and to the energy industries themselves.
- **Primary energy production** is the extraction of energy from a natural source.
- **Energy import dependency** shows the extent to which a country relies upon imports in order to meet its energy needs. Formula: $\text{net imports} / (\text{gross inland consumption} + \text{bunkers})$ (bunkers = quantities supplied to sea-going ships)
- **Renewable energy** includes hydroelectricity, biomass, wind, solar, tidal and geothermal energies.

