Extracting the truth: Oil industry attempts to undermine the Fuel Quality Directive

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Summary

Extracting the truth: Oil industry attempts to undermine the Fuel Quality Directive
is inspired by a barrage of oil company advertisements that have appeared in European media over the last year and the industry's combative approach towards European efforts to reduce greenhouse gas (GHG) emissions from fossil fuels.

With these advertisements the industry is attempting to bolster its image as an environmentally friendly, climate change conscious sector that is doing its best to improve environmental performance and take responsibility for the sustainable exploitation of earth's resources.

Not by accident, this high profile public relations campaign coincides with the drafting process of the new Fuel Quality Directive initiated by the European Commission in early 2007. This new legislation, if implemented in its current form, will require the oil industry to meet specific GHG reduction targets for the fossil fuels it produces.

Oil companies spend millions of Euros trying to convince decision makers and the general public that they are taking serious steps to reduce their energy use and to curb their emissions. But this does not correspond to reality. **Behind closed doors they are fiercely lobbying against GHG reduction targets and against sustainability criteria for biofuels/agrofuels**.

This report examines the oil industry's effort to undermine the new Fuel Quality Directive and contrasts it with the 'environmentally friendly' image it is attempting to craft among the public and decision makers. Furthermore, the report shows that in numerous official **statements, the oil industry has projected incorrect information** about its lack of the financial resources and technological instruments needed to reduce GHG emissions. This **directly contradicts the industry's own data** and the opinions of independent experts.

Evidence in this report proves that **oil companies can meet, if not exceed, the 10% CO2 reduction target** through reductions in gas flaring, improvements in energy efficiency and by fuel switching at refineries. These changes would eliminate the need to blend fossil fuels with expensive and environmentally detrimental biofuels/agrofuels.

Despite sky high profits (in 2007, ExxonMobil, Royal Dutch Shell, Chevron, TOTAL, BP and ENI **together earned over 125 billion US$**) **oil companies are not willing to accept responsibility and**

accept the necessary costs. It seems that since these investments do not result in higher short-term profits, the industry will not choose to take the necessary steps until a regulatory body compels them to do so.

The report **exposes the industry's supposed efforts to reduce GHG for what they are: a public relations exercise** and an example of hypocritical double talk contradicted by the industry's actual activity and even its own data. All major oil companies are branding themselves green and pledging to reduce emissions. In reality the emissions of most of them continue to rise with heavy investment in dirty tar sand oil, whilst their commitments to renewable energy products remain negligible, and in some cases decrease.

Introduction

Until 2007 the European oil industry was in a comfortable position with regards to its obligations to reduce GHG[1] emissions from fossil fuels production. Despite the fact that the oil industry bears primary responsibility for the exploration, extraction, refining and bringing to market of fossil fuels, the emissions reduction burden was almost exclusively passed onto end users, namely heavy industry and consumers.

It was the car industry that under various European Union (EU) schemes was pressed to reduce GHG emissions in the transport sector. So far however, even the car industry has not been required to make mandatory emissions reductions: agreements between the European Commission and the car industry have been strictly voluntary. Only recently has the Commission tabled a proposal to make such reductions mandatory. Needless to say, mandatory reductions would compel the car industry to make a financial and technical effort to introduce more efficient and cleaner cars.

Lower emissions have also been expected from the end user of fossil fuels - the motorist - who is asked to drive in a more environmental way - less often, slower and with as many passengers as possible.

GHG emissions are proven to be the major cause of climate change. Supporting science, such as that provided by the Intergovernmental Panel on Climate Change (IPCC)[2] , is widely accepted. Indeed, many of the remaining 'climate change sceptics' are financed by the fossil fuel industry.

Climate change and its impacts are at the heart of the EU's political agenda. It is the number one issue in the eyes of the media and the public. Measures for the reduction of GHG emissions have become top priority for national governments and international institutions.

The current EU legal framework regulating emissions from transport fuels is Directive 98/70/EC.[3] The so called 'Fuel Quality Directive' sets minimum standards for petrol and diesel fuels brought to market in the EU. However, it does not cover GHG emissions. At the end of January 2007, Environment Commissioner Stavros Dimas, on behalf of the European Commission, announced a new draft Fuel Quality Directive[4] to bring GHG into the scheme. The proposal introduces a new 'GHG reduction target' for transport fuels that will require **producers** to reduce the GHG emissions from their fuels by 10% by 2020 compared with 2010 levels. **For the first time, the main target of the directive will be the oil industry**.

[1] GHG - greenhouse gases (CO2, CH4, N2O).
[2] The IPCC was established to provide decision-makers and others interested in climate change with an objective source of information about climate change. The IPCC is a scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP). For more information please see: http://www.ipcc.ch/index.htm
[3] http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1998/L/01998L0070-20031120-en.pdf
[4] http://www.europarl.europa.eu/meetdocs/2004_2009/documents/pr/676/676597/676597en.pdf

1. The European Commission's proposal – a new Fuel Quality Directive

On 31 January 2007, the European Commission issued a proposal for revising the current Fuel Quality Directive. Article 7a of the proposal introduces an unprecedented 10% GHG emissions reduction target for all transport fuels to be achieved by 2020 compared with 2010 levels.

This means that all fuels brought to market, whether fossil-derived or biofuels/agrofuels will be assigned a figure for their life-cycle GHG emissions. Life-cycle emissions are also referred to as 'well-to-wheel' emissions - all the carbon emitted during production, distribution and consumption of a fuel. Article 7a concentrates on the production and distribution part of a fuel's emissions cycle: the 'well-to-tank' phase. This places the responsibility for GHG emissions reductions directly on oil companies.

Article 7a says companies must cut their fuels' life-cycle GHG emissions with either annual or biannual reductions of 1% or 2% respectively from 2011, with mandatory accounting of life-cycle emissions to be introduced in 2009. Therefore, GHG emissions must be 10% lower in 2020 than in 2010.

Possible methods to reduce GHG emissions from fossil fuels

A litre of petrol or diesel burned in a car releases about 2.5kg of GHG, no matter the original source and form of the fuel. But well-to-tank emissions vary greatly. Article 7a seeks to account for and limit those emissions released during the exploration, extraction, refining and transport of the fuel. The aim is to reduce a fuel's emissions at its most variable stage: before it is pumped into a car's tank.[5]

The Commission has explicitly insisted that its proposal should drive emissions reductions throughout the fossil fuel chain. According to the Commission, they should be mainly achieved by:

- less emissions flaring and venting;
- improved energy efficiency in oil refineries;
- increased use of cogeneration and fuel switching in refineries;
- carbon capture and storage (CCS).

Other proposed measures show more possibilities for energy efficiency and emissions reductions in the exploration and transportation phases of the fuel production process.

Although the Commission believes that GHG emissions from fossil fuels can be reduced, it is also promoting the use of second-generation biofuels/agrofuels to reach the targets set out in Article 7a. Since first-generation biofuels/agrofuels often bring many unintended consequences, and in the worst cases actually result in greater emissions than fossil fuels, the Commission advocates the introduction of 'sustainability criteria' to ensure the market abandons them for second generation, or 'cellulosic' biofuels/agrofuels, when these become available. Although these fuels are still under development, some argue that the best can reduce life-cycle GHG emissions by 90% compared to fossil fuels.[6]

Biofuels/agrofuels currently produced in Europe offer nowhere near this saving. Rapeseed biodiesel, which accounts for about 80% of biofuel/agrofuel production in Europe, results in relative GHG warming effects estimated at 1–1.7 times larger than the relative cooling effects of not using fossil fuels. For corn bioethanol, which is dominant in the US, the figure is 0.9–1.5 greater, and for sugarcane bioethanol 0.5–0.9.[7] On average, only sugarcane offers any reduction at all. Second generation cellulosic biofuels/agrofuels might one day present a better alternative to conventional fuels from a CO2 perspective,

[5] According to scientific data this part of the fuel emissions accounts for 15-20% of its overall life-cycle GHG emissions.

[6] Rapporteur Dorette Corbey, MEP at the "Fuel Quality Directive" workshop, European Parliament, July 5, 2007.

[7] "Biofuels could boost global warming, finds study," Chemistry World, 21 September 2007. http://www.rsc.org/chemistryworld/News/2007/September/21090701.asp

but that remains to be seen. Even the oil industry acknowledges that if biofuels/agrofuels must be used for transport, the second generation will be much more effective than the products currently available.[8] Nevertheless, second generation biofuels/agrofuels might not be available in sufficient quantities for another ten years, and many questions must be answered on their environmental performance before an entire policy agenda is built around them.

The Commission estimates that all measures to reduce GHG emissions from fossil fuels (i.e. reduction of gas flaring, energy efficiency at refineries, increased use of cogeneration and fuel switching in refineries) are more cost-effective than switching to first-generation biofuels/agrofuels, which currently cost €150/ tonne.[9] The costs of reducing gas flaring, for example, could be mitigated using carbon credits that encourage gas flaring reduction projects, according to Bent Svensson, Manager of the World Bank's Global Gas Flaring Reduction (GGFR) partnership[10] Claude Mandil, the previous Executive Director of the International Energy Agency (IEA), stated that based on IEA analysis *"…in many cases a cubic metre [of flared gas] saved in Russia (for example) can be more economic than one produced – given the increasing development costs."*[11] At the time of the writing of this report, however, precise data on the costs of overall reduction of GHG from fossil fuels were not available. Nevertheless, even the oil industry acknowledges that gas flaring is *"a so called low-hanging fruit in terms of climate change abatement because it's relatively simple; it can be done quite easily."*[12]

2. What should be done – the oil industry's room for manoeuvre

As the Commission pointed out, the oil industry, if it wants to achieve the targets of Article 7a, will have to decrease its GHG emissions mainly via less gas flaring and energy efficiency improvements at refineries.

Other possibilities, such as increased energy efficiency and emissions reductions during exploration and transportation, provide additional options. As crude oil is transported by pipelines and tankers to refineries where it is stored in tanks the methane that is present within either leaks out or is vented. The resultant methane emissions, particularly from crude oil tankering, are even more harmful than typical GHG emissions, such as CO2. Unfortunately, the full scope for reduction during these production stages is unknown due to the industry's unwillingness to provide concrete data about these emissions.

Moreover, the importance placed on carbon capture and storage (CCS) is overblown, since the technology is not yet fully developed and is not expected to bring substantial emission reductions before 2020. The long-term impacts of CCS are also uncertain and could contradict expectations. Even if developed and implemented, CCS technology will not reduce the overall level of GHG emissions from the fossil fuel production chain – it will only provide a means for capturing and storing the already released gases and leaving them for future generations. For the oil industry, it does not represent an alternative method of GHG emissions reductions in the 2010-2020 timeframe.[13]

[8] Peter Tjan, Secretary General of European Petroleum Industry Association (EUROPIA), Strasbourg, 25th April 2007.
[9] "Row looms over plan to cut road fuel carbon," ENDS Europe REPORT, August 16, 2007.
[10] http://go.worldbank.org/3L2RITYSM0
[11] http://www.iea.org/textbase/speech/2007/mandil/global_gas.pdf
[12] Anne Margrethe Mellbye (Statoil) in "Billion Dollar Bonfire" documentary by BBC/Earth Report: Global Gas Flaring & Climate Change (http://www.tve.org/earthreport/archive/doc.cfm?aid=1842)
[13] Peter Tjan, Secretary General of European Petroleum Industry Association (EUROPIA), Strasbourg, 25th April 2007.

2.1 Less gas flaring

According to the data presented by the Commission, achieving a 1% GHG reduction requires cutting the emissions volume by 10 million tonnes.[14] The same document estimates that through gas flaring the four main European oil companies (Shell, Total, BP and ENI) release 50 million tonnes per year. By stopping flaring gas, a 5% reduction of GHG would be achieved, and that's only from the four largest European oil companies. Such a stoppage should not pose a problem to the industry since in most of their European operations the oil companies have already developed the infrastructure for commercial utilisation of the otherwise wasted gas.

However, there are also other oil companies operating in Europe, including local concerns such as Repsol, MOL, OMV, Neste Oil, Statoil, CEPSA, Saras, Galp Energia, PKN Orlen and Hellenic Petroleum, and big internationals with European branches such as ExxonMobil, Chevron and ConocoPhillips. Most publish GHG emissions data in their annual sustainability or citizenship reports. Some even provide the amounts of flared and vented gas, but in many cases these crucial numbers are missing.

Oil companies operating in Europe. GHG emissions data for 2006 based on companies' reports.

Company	Total GHG (million tonnes of CO2 equivalent / year)	Amount of GHG flared and vented (million tonnes of CO2 equivalent / year)	Potential for Reduction of GHG Article 7a
ENI	59.3	15	**50.3 mln tonnes 5.03% of Article 7a**
Total	57.8	17	
Shell	98	15	
BP	64.4	3.3	
ExxonMobil	145.5	16.25	**24.75 mln tonnes 2.5 % of Article 7a**
Chevron	65.3	4	
ConocoPhillips	62.3	3	
Statoil	9.8	1.5	
			75.05 mln tonnes 7.5 % of Article 7a
Repsol	26.49	N/A	**Potentially 10 mln tonnes 1 % of Article 7a**
OMV	6.6	N/A	
MOL	5.9	N/A	
Galp Energia	3.1 (2005)	N/A	
Neste Oil	2.8	N/A	
Saras	2.3	N/A	
Hellenic Petroleum	2.2	N/A	
PKN Orlen	1.2 (Płock refinery only)	N/A	
CEPSA	0.6	N/A	
Others (Q8, Tamoil, Lukoil, Lotos, etc.,)	N/A	N/A	N/A
			85 mln tonnes 8.5 % of Article 7a

Data for Shell, ENI, Total, BP and Statoil represents the total amount of GHG flared and vented by these companies. Despite the fact that some of their petroleum sales and production (especially in the case of Shell) are outside of the European market, Friends of the Earth believes that as Europe-based companies they should be obliged to reduce the life-cycle emissions from their entire production, and not only from their European operations, or products and fuels sold on the European market. This is in line with the Commission's data that these companies could reduce their emissions by 50 million tonnes per year.

[14] European Commission, UK observations on Art 7a.

Data for ExxonMobil, Chevron and ConocoPhillips represents the amount of GHG flared and vented by these companies calculated according to the level of their product sales on the European market.

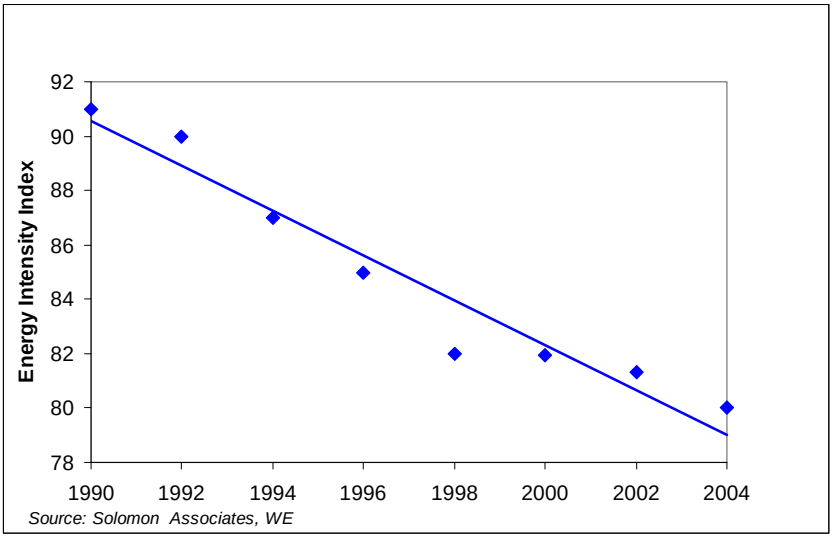
For the remaining companies, the GHG flared and vented data was not available at the time of writing. The figure of ten million tonnes is a very conservative estimate.

This lack of data represents a major obstacle for establishing the total amount of gas flared by oil companies operating in Europe. As a result, it is impossible to calculate with precision the potential for GHG emissions reductions in this area. However, as the **eight main** companies collectively flare **75 million tonnes** annually, it can be conservatively estimated that on average, based on their total GHG emissions, the remaining ones could together flare ten million tonnes annually. These (ten) millions of tonnes of GHG emissions, if eliminated, could result in an additional 1 % of the Article 7a target, bringing the total potential of GHG reductions via reduced gas flaring to **8.5%.** This alone almost equals the reduction target proposed by the EU.

The above data is based on emissions released by the oil companies in 2006. Some reductions are anticipated for 2007-2010 as several of the companies have indicated plans to limit their emissions, e.g. by reducing gas flaring. During the same period, however, new operations will be put in place resulting in additional emissions, meaning that without access to more up-to-date emission data and to the companies' plans, it is impossible at this time to precisely estimate the total amount of emissions, and thus the potential for their reduction.

2.2 Increased energy efficiency at refineries

The Solomon Associates Energy Intensity Index shows that the energy efficiency of EU refineries has increased by 13% over the past 15 years.[15] This was achieved without any GHG reduction target in place.



Indeed, European oil refineries have been improving their energy efficiency by almost 1% per year on average since 1990. According to the oil industry itself, (Concawe, as quoted in the European Commission, UK observations on Art 7a), this 'business as usual' (BAU) improvement can result in a 1% reduction of the GHG emissions over a period of ten years.

[15] http://www.solomononline.com/index.asp

Even greater energy efficiency can be achieved through the development of cogeneration (CHP) facilities at refineries. Cogeneration is the simultaneous production of heat and power suitable for a wide range of applications (such as district heating) with otherwise wasted hot air and steam. The process effectively displaces the combustion of carbon-based fuels, with all their environmental implications. According to ExxonMobil, cogeneration can be twice as efficient as traditional methods of producing steam and power separately. As refining plants have traditionally been located near demand areas[16], cogeneration offers significant potential for further GHG reductions. ExxonMobil's most efficient EU refinery in Antwerp is currently tripling the capacity of its CHP plant while its current cogeneration capacity reduces its global CO2 emissions by over 10.5 million tonnes annually, showing that much room for improvement might also exist at other refineries.[17]

The potential for further energy efficiency improvements was revealed by a Swedish study presented to the European Parliament in July 2007. The study charted a 20% difference in refinery efficiency across Europe. The discrepancy is due to a shocking lack of investment. The reason? "Other investments are more profitable (for the oil companies)", it said.[18]

It can thus be inferred that with additional financial investment in all 116 European refineries[19] further GHG reductions are easily achievable. If all refineries were to be brought up to speed, reductions in GHG emissions of up to 1% could be expected.

Since mid-2004 the European refining industry has been in a positive economic cycle. Therefore, any increase in costs as a result of GHG reductions are likely to be alleviated by strong demand for refinery products in high growth regions with insufficient refining capacity (China, Asia, and North America), as product prices continue to grow. Such an environment should allow producers to pass on costs to consumers, at least in the short term.[20] Taking record profits into account (earnings of the five biggest international oil companies have tripled since 2002[21]), investments in energy efficiency and other GHG reductions measures should not be hard to come by. The resources are there, but, as many insiders mention, these investments are not profit or shareholder driven; the industry will not spend any money on them unless compelled by a regulatory body.

2.3 Fuel switching in refineries

Another option to reduce emissions at refineries is switching to less GHG intensive fuels. Across Europe, refineries use different types of fuel - some use coal, some gas and others oil. According to Concawe, up to 30% of refinery fuel could be switched - a switch to natural gas would reduce GHG emissions from refineries by 25%, about 2% of the total 'well-to-tank' emissions. GHG emissions reduction could also be accomplished by use of low emissions hydrogen fuel (H2).

The IFP - a French research centre working for the oil industry[22] - investigated the use of biomass as a potential refinery fuel. They estimated that up to 50 million tonnes of GHG emissions could be mitigated if the refineries were powered this way, reducing by about 5% 'well-to-tank' emissions. Furthermore, the IFP sees no major technical barrier for biomass use as it is already fired in power and cogeneration facilities.[23]

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[16] "The European refinery industry under the EU Emissions Trading Scheme- Competitiveness, trade flows and investment implications" IEA Information Paper, November 2005.
[17] ExxonMobil Corporate Citizenship Report 2006.
[18] Kristina Holmgren (IVL, Swedish Environmental Research Institute): GHG emission reduction in the fuel chain: "Refining" at the "Fuel Quality Directive" workshop, European Parliament, July 5, 2007.
[19] Oil & Gas Journal and Concawe - oil companies' European association for environment, health and safety in refining and distribution.
[20] "The European refinery industry under the EU Emissions Trading Scheme- Competitiveness, trade flows and investment implications" IEA Information Paper, November 2005.
[21] "Exxon Mobil's Profit in 2007 Tops $40 Billion," Washington Post, February 2, 2008.
[22] http://www.ifp.fr/IFP/en/aa.htm
[23] European Commission, UK observations on Art 7a.

The UK government mentioned in its 'UK observations on Art 7a', that replacing approximately 10% of refinery fuels with biomass would result in a 1% reduction of the 'well-to-tank' emissions. However, considering the competing demands for biomass it is unclear whether these levels can be achieved sustainably.

3. Potential for reaching the Article 7a target

In summary, if all of the above measures were to be simultaneously implemented by the oil industry operating in Europe, within the ten years envisioned in the Directive they would have completely fulfilled the emissions reductions target of Article 7a using fossil-fuel related measures only. There would be no need to blend biofuels/agrofuels.

Measure	Based on available data / BAU	Estimated potential
Less flaring and venting emissions	**8.5 %**	**8.5 %**
Ongoing energy efficiency improvements at oil refineries	1%	1%
Further efficiency improvements		1%
Fuel switching in refineries: UK estimate	1%	
Fuel switching in refineries: other estimates		2-5%
Total	**10.5 %**	**12.5 - 15.5%**

As the data shows, the measures proposed by the Commission could, in a conservative scenario, result in a **10.5%** and, more ambitiously, up to a **15.5%** reduction of GHG emissions.

Yet, despite the available solutions for reducing their GHG emissions and complying with the Commission's proposal, the oil industry fiercely opposes the Article 7a target on essentially each of the proposed measures.

Alternative fuel:
Liquefied Natural Gas (LNG) offers an energy density comparable to petrol and diesel fuels while producing less pollution. If a 10% penetration of LNG powered vehicles was reached across the EU it would result in a further 2.5% reduction in overall GHG intensity of fuels.[24]

4. The oil industry denies responsibility

Targeting the oil industry with the new Fuel Quality Directive, the Commission aims to cut the life-cycle carbon emissions of fuels before they are pumped into cars' tanks.
Until last year, the GHG emissions released during the fuel production phase were not subject to any mandatory European regulation, with the exception of the EU emission trading scheme (EU ETS) legislation that covers refineries.

The Fuel Quality Directive was debated in the European Council on 30th October and voted in the European Parliament's Environment Committee on 22nd November 2007. Originally scheduled for 15th January 2008, the full plenary vote on the Directive will now not take place until an ad hoc working group of Member State representatives puts forward recommendations on sustainability criteria for biofuels/agrofuels.

[24] European Commission, UK observations on Art 7a.

Emissions released by oil and gas companies during gas flaring and venting amounts to approximately 400 million tonnes of CO2 on a global scale.[25] This is more than the amount covered under current Kyoto mechanisms. **Globally flared and vented gas makes up about one third of the EU's annual gas consumption.** Eliminating gas flaring worldwide would reduce CO2 emissions more than all the projects currently registered under the Kyoto Protocol's Clean Development Mechanism - the landmark agreement between nations to reduce emissions by 2012. It would reduce GHG emissions by a factor four times the amount needed to achieve the 10% reduction proposed in the revised Fuel Quality Directive. This illustrates the enormous potential of the oil and gas companies to reduce CO2 emissions.

The 50 million tonnes of gas flared by the four main European oil companies accounts for 12% of the reported global total, and if eliminated, would reduce GHG intensity of fuel by 5%. All of the main oil companies are members of the World Bank's Global Gas Flaring Reduction Partnership (GGFR) - a voluntary scheme that since its establishment, besides a few glossy projects, has not achieved any significant flaring reductions by its members. This is despite the fact that in some countries where they operate, such as Nigeria, flaring is illegal. The EU has endorsed the GGFR and is listed as one of its donors.[26] From a technical point of view some flaring is required for safety reasons, but the amount of gas currently wasted and its effect on climate change is enormous.

The initial public reaction of the oil industry to the proposed revision of the Fuel Quality Directive and inclusion of a new Article 7a was that it welcomed the Commission's effort to tackle GHG emissions from fossil fuels as a measure to combat climate change.

However, once out of the public view, at the first stakeholder meeting on the FQD hosted by the Commission on 29th May 2007, EUROPIA (the European association of oil companies)[27] and CONCAWE[28] (the oil industry research association) argued that the oil industry itself **can do nothing** to reduce the greenhouse gas intensity of mineral oil-based fuels, *but they support the application of the proposed greenhouse gas mechanisms to biofuels/agrofuels.*[29] During the same meeting, ExxonMobil's representative said that the company agreed with the EUROPIA estimates that oil industry CO2 emission reductions would have to come from an increased *use of biofuels/agrofuels*.

The Commission's proposal makes biofuel/agrofuel use conditional on sustainability criteria. EUROPIA have attempted to shift these criteria off the agenda, pushing to finalise the Directive faster and leave sustainability criteria for another day.[30] However, removing the sustainability criteria will simply allow oil companies to import the cheapest, most easily available biofuels/agrofuels to fulfil the Article 7a target rather than investing in GHG emissions reductions from their fossil fuels. As a result, the industry will also not be motivated to invest in second-generation of biofuels/agrofuels - a view shared by one of the Shell's executives according to whom, *"more sustainable biofuels tend to be higher cost, so (existing) biofuels with lower emissions should receive higher incentive…"*[31]

The industry justifies its position on biofuels/agrofuels and its opposition to the inclusion of sustainability criteria in Article 7a on the grounds that emissions related to fossil fuel production and distribution

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[25] Global Gas Flaring Reduction Partnership. http://go.worldbank.org/NEBP6PEHS0
[26] IBID.
[27] EUROPIA - the European Petroleum Industry Association represents the downstream interests of the oil and gas Industry in Europe, covering around 90% of EU petroleum refining capacity and some 75% of EU retail fuel sales. www.europia.com
[28] CONCAWE objectives are to acquire pertinent scientific, economic, technical and legal information on environmental, health and safety issues relating to the refining of crude oil and the distribution and use of petroleum products and to communicate these findings in order to improve understanding of these issues by all stakeholders including the industry, authorities and the public at large. www.concawe.be
[29] European Voice - Oil giants attack biofuels target. www.europeanvoice.com
[30] Fuel Quality Directive" workshop, European Parliament, July 5, 2007.
[31] "Shell says it hopes to be producing '2nd generation' biofuel in 5 years" November 7, 2007. www.lowcvp.org.uk

represent 'only' 15% of overall fuel life-cycle emissions. EUROPIA argues that within this 15%, there is 'very little scope; for improvement while growing demand for diesel will drive increases in GHG emissions from refineries.[32]

The industry also uses this rationale when arguing against calls to improve the energy efficiency of oil refineries (refinery emissions represent circa 8-10% of the overall life-cycle emissions from conventional fossil fuels). The contention is that since refineries are already a part of the ETS they should not be subject to a second piece of legislation (Article 7a). This, according to EUROPIA, is unfair,[33] regardless of the fact that the Commission's study shows that Article 7a need not affect ETS functioning[34] and that the ETS scheme is currently not leading to significant CO2 reductions.[35]

EUROPIA and ExxonMobil claim that the potential for oil refinery efficiency improvements was limited by rising demand for fuel and by financial and technological constraints. However, as the industry's own data show, even with a business-as-usual approach refineries are improving their efficiency by an average 1% per year. This implies that with additional investment even higher rates of improvement could be achieved, lowering GHG emissions. The argument against reform due to financial restraints is simply invalid in the face of rising prices and spiralling demand.[36] Indeed, it becomes laughable if one takes into consideration the recent record-high profit margins that major oil companies have enjoyed. If there is one industry that has more than enough resources to invest in CO2 reduction measures, it is the oil industry.

Major oil companies profits in 2007	
ExxonMobil	40.6 bln USD
Royal Dutch Shell	31.3 bln USD
BP	17.5 billion USD
Chevron	17.1 bln USD
ENI	13 bln USD
TOTAL	5.2 bln USD
	124,7 bln USD

In 2007, ExxonMobil profits topped 40.6 billion US$; Royal Dutch Shell profits leapt 23% to a record 31.3 billion US$; Chevron's rose 29%, reaching 17.1 billion US$;[37] TOTAL's surged by 62% to 5.2 billion US$;[38] BP earned 17.5 billion US$,[39] and ENI over 13 billion US$.[40]

The well worn argument that for CHP schemes, *"to be successful, heating demand needs to be near the production source…"* while *"many refineries are located away from major residential areas"*[41] is

[32] "Row looms over plan to cut road fuel carbon," ENDS Europe REPORT, August 16, 2007.
[33] Stakeholder meeting to discuss technical aspects of the proposed Article 7a in the Commission proposal to modify Directive 98/70 (Com 2007(18)). 18th July 2007
[34] IBID.
[35] EEX – European Energy Exchange. EU Emission Allowances. Spot. www.eex.com/en/
[36] "The European refinery industry under the EU Emissions Trading Scheme- Competitiveness, trade flows and investment implications" IEA Information Paper, November 2005.
[37] Washington Post, February 2, 2008. http://www.washingtonpost.com/wp-dyn/content/article/2007/02/01/AR2007020100714.html
[38] International Herald Tribune, February 13, 2008. http://www.iht.com/articles/2008/02/13/business/total.php
[39] CNBC, Reuters, February 5, 2008. http://www.cnbc.com/id/23005502/
[40] OilVoice, February 16, 2008. http://www.oilvoice.com/n/Eni_Announces_Preliminary_Results_for_the_fourth_Quarter_and_Full_year_2007/0b9f21cc.aspx
[41] EUROPIA reflections on "CO2 Emission Reduction Costs for Petroleum Refineries in Sweden"

countered by the International Energy Agency's - a recognised international scientific body - research that states that refining plants are traditionally located near high demand areas.[42]

The issue of technological constraints was also recently addressed by the Saudi Arabian oil minister who concluded that, *"technology to reduce emissions is available…"*[43]

During negotiations on the possibilities for reducing GHG released during flaring and venting, the industry usually argues that flaring is needed for safety reasons and that reducing the amount of flared gas will require developing costly installations for its commercial utilisation. As mentioned above, these financial burdens can be overcome by the oil companies, given their record profits. Indeed, the oil companies have shown how easily flaring can be reduced, as they have – under pressure from governments - almost completely stopped flaring in several European countries.

However, on the whole the industry has spent a year of negotiations trying to stymie efforts to discuss gas flaring, knowing that it would undermine efforts to reduce the 10% GHG reductions target or have Article 7a removed completely.

Another strategy employed by the oil industry has been to shift the burden for transport-related GHG reductions to the car industry, declaring that, *"if the Commission is serious about its GHG reduction by 2020, it will have to do something with the car industry"*. The car industry reacted swiftly: ACEA (the European Automobile Manufacturers Association) responded that it is *"important that the fuel industry takes part"* in reducing emissions.[44]

The oil industry's arguments against Article 7a targets and measures to meet them have been repeatedly used in various stakeholder meetings and in official statements. Alarmingly, the oil industry also had extensive access to EU officials. According to data acquired by Friends of the Earth Europe, between January and July 2007, the industry had 16 exclusive and four non-exclusive meetings with the Commission on the Fuel Quality Directive. EUROPIA had nine; CONCAWE with EUROPIA had two; ExxonMobil, Shell, BP and Japan Petroleum Energy Centre each had one.

As the preparations for the revised FQD continued, the industry resorted to a head on attack against Article 7a. On 4th September 2007 EUROPIA published its 'Position on the Fuel Quality Directive Proposal to Regulate GHG Emissions from Road Fuels' in which it stated that, *"inclusion of Article 7a in the Fuels Quality Directive is premature and should be withdrawn from the current Directive proposal"*.

In short, the arguments used by the industry to undermine Article 7a targets and the overall scope of the new FQD contradict even industry-own data on its ability to achieve GHG reductions, calling into question the industry's self-proclaimed intention to address climate change.

5. Imaginary steps – the oil industry's PR campaign

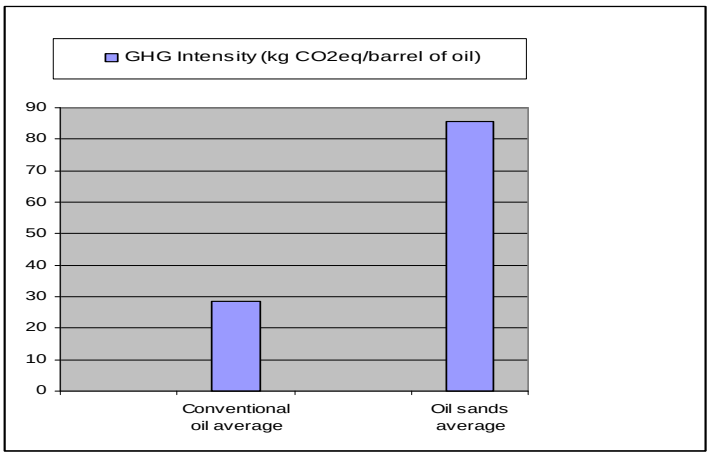
While lobbying strongly against the new FQD behind closed doors, to the general public the oil industry has been presenting quite a different message.

At corporate level, in their annual 'sustainability'or citizenship reports, all oil companies mention that they are, *"committed to meet the global demand in an environmentally responsible way"*. They list numerous initiatives that they are undertaking to reduce emissions and combat climate change.

Meanwhile, in most cases, their emissions continue to grow while the industry invests heavily in high energy and GHG intensive oil sands, shale oil and coal-to-liquid technology. For Shell, a company that

[42] "The European refinery industry under the EU Emissions Trading Scheme- Competitiveness, trade flows and investment implications" IEA Information Paper, November 2005.
[43] "Opec shifts its stance on climate change," Financial Times, November 16, 2007.
[44] "EU aims at oil firms on way to low-carbon future," www.euractiv.com

advertises its environmental credentials in a high-profile way, long-term projects such as the Canadian oil sands are, *"the foundations for Shell in the first half of the 21st century,"* according to its CEO Van der Veer.[45] At the same time, less than 1% of Shell's investments are in renewable energy.



Producing a barrel of oil from the oil sands produces three times more greenhouse gas emissions than a barrel of conventional oil .

Source: Pembina Institute, Canada, "Oil Sands Fever".[46]

ExxonMobil used a slew of advertisements last year in the European Voice newspaper to bolster its image as an environmentally friendly, responsible company, asserting that it is taking steps to help conserve energy and to curb GHG emissions.[47]

According to the adverts, ExxonMobil is, *"Taking action to reduce greenhouse gas emissions,"* and uses adverts to, *"…highlight some of the steps we're already taking to address the challenge of reducing greenhouse gas emissions in effective and meaningful ways…".*

Similar messages are used in an ExxonMobil advertising campaign at Brussels Airport. In the terminal's jet ways (the corridors connecting the terminal and planes which are used by passengers for boarding and disembarking) visitors to the European Union capital are greeted by the message: *"We're working to reduce emissions, for cars, trucks, buses… and 6.5 billion people,"* and, *"Our destination? A world with more energy supplies and fewer greenhouse gas emissions".*

In reality, ExxonMobil's GHG emissions increased from 136.8 million tonnes in 2003 to 145.5 million tonnes in 2006.[48] In terms of gas flaring, ExxonMobil's efforts to address the challenge have been even more 'striking.' Their emissions increased from 612 million cubic feet per day in 2003 to 891 million cubic feet per day in 2006.

As the data shows, ExxonMobil is clearly exploiting the lack of public knowledge of environmental issues and misleading people about its services, factual company data and its contribution to environmental protection.

Shell flaunted false environmental credentials even more explicitly with its, *"Don't throw anything away, there is no away"* advert in various newspapers and magazines, including the European Voice, the NRC (Dutch newspaper) and the Sunday Times magazine (UK). The advert showed a classic refinery outline but with flowers rather than smoke flowing from the chimneys, giving the impression that Shell's refineries are clean and suggesting that Shell's products and services do not have an impact on the environment. In the advert Shell claimed,*"we use our waste CO2 to grow flowers".*

[45] Pembina Institute, Canada, "Oil Sands Fever." (http://pubs.pembina.org/reports/OilSands72.pdf)
[46] http://pubs.pembina.org/reports/OilSands72.pdf)
[47] "European Voice" April 4-11, 2007, May 24-30, 2007.
[48] ExxonMobil Corporate Citizenship Report 2006.

Shell's data show that in 2006 it produced almost 100 million tonnes of GHG,[49] while only at one refinery (Pernis in the Netherlands) does Shell recycle CO2 for growing plants. According to Shell, this saves 350,000 tonnes of C02 each year[50] - about 0.35% of Shell's total direct emissions. Shell also continues illegal gas flaring in Nigeria. The UK and Dutch Advertising Standard Authorities ruled that this Shell advert misled the public on Shell's environmental performance.

On 15th December 2006, in a widely distributed press release, Total proclaimed that, *"After introducing a 'zero flaring' policy for new projects in 2000, Total announced that it will reduce gas flaring by 50% at its operated facilities worldwide by 2012."* Further down the text the company proclaimed that, *"Total contributes to the combat against climate change, in particular by managing its greenhouse gas emissions".*[51]

A good source of information on how Total manages its GHG emissions is its own Corporate Social Responsibility Report from 2006.[52] On page 89, among the 'Key Indicators', it presents its GHG emissions and the amount of flared gas. The numbers are as follows:

Indicator	2004	2005	2006
Six greenhouse gases *(millions of tonnes of carbon dioxide equivalent per year)*	57.1	57.6	57.8
Flaring and venting *(thousand tonnes of oil equivalent)*	5,932	6,001	6,049

The *"group's dedication to assuming its environmental responsibilities"* as it also states, is clearly evident in the above table. GHG emissions and flaring are on an upward trend - despite Total's boasts about joining the Global Gas Flaring Reduction Partnership in March 2004 a few paragraphs below in the same press release.

Not long ago, BP rebranded itself as a green company that goes 'Beyond Petroleum', stating as recently as 2006 that it was *'looking to a greener future'* on huge billboards across the London underground network.[53] By 2008, its new CEO had decided to forget about environmental initiatives, reducing investment in alternative energy and expanding the company's stake in Canadian oil sands.[54] More than three times as much GHG is released to produce oil from oil sands than from conventional crude.

Highlighted text on the shoulder

ENI, on its sustainability internet page advertises that, *"We believe in technological development that respects the individual and the environment,"*[55] while it leads development of the Kashagan oil field in Kazakhstan – a highly controversial project infamous for the threats it poses to Caspian Sea ecosystems and the local population. Thousands of people have already been relocated in the region because of sulphur emissions and other highly poisonous chemicals such as mercaptans, which are present at very high levels in Northern Caspian oil. Sulphur is also recognised as a major cause of acid rain on a global level.[56]

Moreover, ENI's dismal record in CO2 emissions from its own Sustainability Report from 2006 reveals increases from 32.08 million tonnes in 2004 to 35.95 million tonnes in 2005, up 37.72 million tonnes in

[49] The Shell Sustainability Report 2006.
[50] The Shell Sustainability Report 2005.
[51] http://www.total.com/en/press/press_releases/pr_2006/061215-reduce-gas-flaring_10956.htm
[52] http://www.total.com/en/corporate-social-responsibility/home-csr/home-csr_9178.htm
[53] http://www.plasticbag.org/archives/2005/11/bp_adverts_look_just_like_my_site/
[54] http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=7038865
[55] http://www.eni.it/ENI_en_IT/sustainability/sustainability_swf.page?
[56] Kashagan oil field development, FOE Europe, 2007, www.foeeurope.org/publications/2007/KashaganReport.pdf

2006.[57] (It seems that the red fire coming out of ENI's 6 legged dog mouth quite well reflect the company's "gas flaring policy.")

Conclusions - double talk and hypocrisy

Since the Commission proposed the new Fuel Quality Directive at the beginning of last year, and since it became clear that this new GHG reduction mechanism will target the emissions associated with fossil fuels production, the oil industry has been trying to shirk its responsibility.

The oil industry is lobbying forcefully against the 10% GHG reductions target and against measures that could allow it to reach the target. The industry even called for Article 7a to be entirely removed, claiming that it is, *"premature and should be withdrawn from the current Directive proposal".* Such lobbying directly contrasts the oil industry's attempts to cultivate a green image for itself with commercials and publications positioning it as environmentally friendly.

The industry officially refuses to acknowledge that flaring less gas could substantially (if not entirely) fulfil the Directive's targets, while its own data clearly indicate potential. Not only does the industry try to limit the significance of gas flaring reduction measures but it continuously flares enormous amounts of GHG while claiming in advertisements and statements that it is *'working to reduce its emissions'* (ExxonMobil) or that it has a *'zero flaring'* policy for new projects since 2000 (Total). It has even claimed to use its waste CO2 *'to grow flowers'* (Shell) – a claim that was found to be misleading.

The industry claims to be acting responsibly while in reality a lack of investment in lower emissions technologies and processes perpetuates a 20% disparity in refinery efficiency in Europe. Industry claims that these upgrades are expensive and technically demanding are undermined by its own data on efficiency improvements achieved in the refinery sector in the last decade and upwardly spiralling profits due to high oil prices.

In advertisements oil companies say they are, *"…are taking steps to reduce the GHG emissions for cars, trucks, buses…"* (ExxonMobil) while in the EU corridors of power they attempt to shift the responsibility for GHG reductions onto the transport industry or advocate higher levels of biofuels/agrofuels. In similar fashion oil companies insist in the media that they approach biofuels/agrofuels sustainably while lobbying against sustainability criteria.

ExxonMobil's billboards stating, *"Our destination - a world with more energy supplies and fewer greenhouse gas emissions"* neglect to mention the company's (along with other oil majors') investment in production of fuel from Canadian oil sands that before it is pumped into cars releases at least three times more GHG than that made from conventional crude.

ENI, another industry giant proclaims that it, "*…believes in technological development that respects the individual and the environment."* If this and the other public statements of the oil industry were accurate one would believe in the industry's intentions to tackle its greenhouse gas emissions. Yet the reality is that the oil companies neither respect the individual nor the environment. They mislead the public in their advertising campaigns while continuing to destroy the environment and lobbying against measures that aim at emissions reductions.

The oil industry should stop its 'greenwash' advertising, fully recognise the magnitude and imperatives of climate change and start taking real steps to reduce its emissions.

[57] ENI Sustainability Report 2006, p. 99. http://www.eni.it/en_IT/attachments/sostenibilita/pdf/eni-sustainability-report-2006-eng.pdf