

Acid News

Profitable measures

Additional emission controls would cost only 3 euro per person in 2020, while the health benefits would amount to 22-70 euro per person.

Page 4 ▶

Road charging

The Commission has proposed an end to the ban on member states charging lorry operators for "external" costs.

Page 6 ▶

A missed opportunity?

The EU's first legislation to reduce greenhouse gas emissions from aviation has been formally agreed.

Page 9 ▶

Member states must act

The Commission has written to 23 member states to request information on what action they are taking to reduce particle concentrations in the air.

Page 10 ▶

BAT threatened

Proposal would undermine the principal of applying Best Available Techniques when setting permit conditions for industrial installations.

Page 12 ▶

EU Climate package

When the Parliament's industry committee voted on key directives the outcome was weaker requirements.

Page 14 ▶

Last gasp of coal industry

A new report takes a look behind the bright vision of carbon capture and storage (CCS).

Page 18 ▶

Climate impact discussed

No progress toward an agreement to reduce shipping CO₂ emissions within the International Maritime Organization.

Page 20 ▶



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Critical legislation delayed

Citizens groups for the environment and health call for revision of NEC directive to bring further cuts in emissions.

The National Emission Ceilings (NEC) directive, which was expected to undergo revision in 2008, has been put on hold for an undetermined period by the European Commission. In mid-July, the European Environmental Bureau (EEB) and the Health and Environment Alliance (HEAL) sent a joint letter to the Commission asking that it publish its proposal, which had already been final-

ized in June in the Commission's formal inter-consultation service.

The NEC directive is one of the pillars of the EU's air pollution control legislation and plays a vital role in achieving the goals of the sixth environmental action programme (EAP). The revision would determine the much-needed new interim air quality targets for 2020, and set

Page 3 ▶

Acid News

A newsletter from the Air Pollution & Climate Secretariat, the primary aim of which is to provide information on air pollution and its effects on health and the environment.

Anyone interested in these matters is invited to contact the secretariat. All requests for information or material will be dealt with to the best of our ability. Acid News is available free of charge.

In order to fulfill the purpose of Acid News, we need information from everywhere, so if you have read or heard about something that might be of general interest, please write or send a copy to:

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The Air Pollution and Climate Secretariat

The Secretariat has a board consisting of one representative from each of the following organizations: Friends of the Earth Sweden, Nature and Youth Sweden, the Swedish Anglers' Association, the Swedish Society for Nature Conservation, and the World Wide Fund for Nature Sweden.

The essential aim of the Secretariat is to promote awareness of the problems associated with air pollution, and thus, in part as a result of public pressure, to bring about the needed reductions in the emissions of air pollutants. The aim is to have those emissions eventually brought down to levels – the so-called critical loads – that the environment can tolerate without suffering damage.

In furtherance of these aims, the Secretariat:

- ✗ Keeps up observation of political trends and scientific developments.
- ✗ Acts as an information centre, primarily for European environmentalist organizations, but also for the media, authorities, and researchers.
- ✗ Produces information material.
- ✗ Supports environmentalist bodies in other countries in their work towards common ends.
- ✗ Participates in the lobbying and campaigning activities of European environmentalist organizations concerning European policy relating to air quality and climate change, as well as in meetings of the Convention on Long-range Transboundary Air Pollution and the UN Framework Convention on Climate Change.

Editorial

Publication of a long-awaited EU proposal to tighten national emission ceilings (NEC) for air pollutants has yet again been delayed by the Commission.

According to the 2001 NEC directive, a review was to be completed in 2004, and a proposal for revision was expected to accompany the thematic strategy on air pollution. But when the strategy was presented in September 2005, the Commission announced that revision of the NEC directive had been postponed until 2006. Then it was postponed until 2007.

Eventually, after the publication of the climate and energy package in January 2008, a final analysis of cost-effective emission ceilings for member states was carried out. The Commission's Environment Directorate-General produced a proposal in April, which went through the Commission's internal process of inter-service consultation in May, and was scheduled for adoption in early July. But that never happened.

When it became clear that the proposal had been blocked, environmental groups EEB and HEAL wrote to the Commission, warning that any further postponement would risk delaying the NEC directive revision until the arrival of the new Commission in November 2009, or even longer if the background analysis needs to be updated.

It took the Commission a further two months to come up with a response to

the green groups. When it arrived, the response did not really say anything of interest – failing to explain why the proposal was (again) delayed or when it was expected to be published. The Commission only said “it seems appropriate to await a situation” where a consistent policy framework can be ensured, and that “a proposal will be made in due course.”

It has been speculated that one possible motive for the Commission's non-action on NECs is that the costs of implementing new 2020 emission ceilings would particularly affect the newer member states, and that this could complicate ongoing negotiations on the EU climate and energy package.

Mark Twain once said: “Never put off until tomorrow what you can do the day after tomorrow”.

This Commission has successfully managed to keep the revised NEC directive in limbo for four consecutive years, and it now appears very likely that it will hand over this responsibility to the next Commission.

So when it comes to revising the NEC directive, the policy of the Commission can better be described as “Never put off until tomorrow what you can avoid altogether”.

Christer Ågren

Avoiding action

Change of name

Since 1 October the Swedish NGO Secretariat on Acid Rain has a new name.

From now on we are the **Air Pollution & Climate Secretariat**

Please note our new web address, www.airclim.org, and new mail addresses: info, christer.agren, reinhold.pape, acidnews; all followed by @airclim.org



A new publication from European Environmental Bureau, *In the Queue for Clean Air: Interim Evaluation of Implementation of the National Emission Ceilings Directive*, was published in June.

It summarizes data on existing conditions and projected pollutant levels and assesses the probability of achieving the 2010 interim air quality targets of the directive. Can be downloaded at www.eeb.org

Critical legislation ...

Continued from front page

national caps on five pollutants: tighter limits on emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, and ammonia, plus first-ever national caps on emissions of fine particulate matter (PM_{2.5}), to be achieved by member states by 2020.

Genon Jensen, executive director of HEAL, said, "The NEC directive is not just about protecting health, it is about ensuring a healthy environment for those most vulnerable. It will be our children, those suffering from asthma and the elderly who will be hurt the most by any further delays and lack of ambition."

In their joint letter, EEB and HEAL reminded the Commission that the European Parliament has recently called on the Commission "to present a proposal for a revised national emission ceilings directive as soon as possible".

To support the Parliament's position, the organizations highlight the facts that:

- ▶ Significant delays in the NEC directive review have already occurred – it should have been presented at the same time as the Thematic Strategy on Air Pollution in September 2005. If postponed again, there is a great risk that

the delay will be considerable, i.e. until after the new Commission starts work in November 2009.

- ▶ Current national emissions ceilings are not sufficient to meet even interim (environmental and health) objectives for 2010, so new stricter ceilings are urgently needed.

- ▶ Sector legislation – such as emission standards for power plants and road vehicles – is a necessary complement, but does not guarantee the attainment of environmental and health quality targets.

- ▶ Member states and industry require adequate time frames for implemen-

The NEC directive

Directive 2001/81/EC on national emission ceilings (NECs) for certain atmospheric pollutants aims to gradually improve, through the stepwise reduction of air pollutant emissions, the protection of both human health and the environment throughout the EU.

By setting binding national emission ceilings for the four air pollutants that cause acidification, eutrophication, and the formation of ground-level ozone, namely SO₂, NO_x, VOCs, and NH₃, the directive is the key legislation for the achievement of the air quality objectives of the EU's sixth environmental action programme, as well as for attaining air quality standards for a number of pollutants, including SO₂, NO₂, fine particles (PM₁₀ and PM_{2.5}), and ozone.

tation, so any (further) delay will be detrimental to the cost-effective implementation of the directive. It is time for clear guidance to be given to the market, as investment portfolios addressing air pollution and climate change are unfolding now. At best, a delay will create uncertainty for these investments and, at worst, undermine and discourage them.

- ▶ Further delaying the NEC directive proposal also sets a precedent whereby it becomes a tactic for member states wanting to evade controls as long as possible. Clearly, this should not be the message the Commission sends out.

- ▶ Postponement will lead to a delay in other air quality laws scheduled for presentation and adoption in 2009/10, particularly stricter emissions and fuel standards for marine shipping. Such a chain reaction of delays will further jeopardize the attainment of the objectives of the sixth EAP by failing to significantly reduce air pollution from ships on European seas and ashore.

- ▶ Postponement of policy proposals in the EU has wider international implications – such as slowing down progress under the Convention on Long-Range Transboundary Air Pollution (CLRTAP), where negotiations on revising the 1999 Gothenburg Protocol are due to start any time now.

"The citizens of Europe have waited long enough to stop suffering from respiratory diseases linked to bad air," said John Hontelez, EEB secretary general. "The Commission is acting irresponsibly if it thinks it can put protection of human health and the environment on hold. We want to see immediate action by the Commission to restart the NEC directive revision process and improve the quality of our air."

Christer Ågren

Note: In mid-September the two organizations received a response from the Commission saying among other things that: "With decisions in these important policy fields [i.e. climate and international shipping] expected in the near future it seems appropriate to await a situation where the EU is in a position to ensure a coherent and consistent policy framework for its future climate and air quality policy." and that "I hope the above will re-assure you that the revision of the [NEC] directive remains a priority for this Commission and that a proposal will be made in due course."

New scenarios for future emissions

Additional measures to achieve the interim targets of the thematic strategy on air pollution would cost 3 euro per person in 2020, while the health benefits would amount to 22–70 euro per person.

When presenting its thematic strategy on air pollution three years ago, the European Commission failed to come up with proposals for specific action to reduce air pollutant emissions. It did however announce its intention to revise the national emission ceilings (NEC) directive (see box, previous page), and propose in 2006 new emission ceilings for 2020 that would be based on the level of ambition set out in the strategy.

Since that date, several proposals have been presented for new or revised EU legislation that will help to reduce emissions, but (so far) there have been no proposals regarding the new emission ceilings (see also article on front page).

Policies and strategies for greenhouse gas (GHG) reductions have a big impact on energy use and thus on air pollutant emissions. In earlier analyses for the new NEC directive, various energy scenarios have been analyzed, illustrating the impacts of different assumptions regarding future use of fossil fuels within the EU (see AN 3/07, pp. 8–11).

For its latest analysis, the Commission's consultant, IIASA, used energy projections that correspond to the Climate & Energy Package presented by the Commission in January 2008.

This energy scenario is in line with the target to reduce greenhouse gas emissions by at least 20 per cent by 2020 (from 1990) and increase the share of renewables to 20 per cent by 2020. About six per cent of the GHG reduction would come from reductions outside the EU, through the use of flexible mechanisms limiting the reduction within the Union to around 15 per cent. EU emissions of the main greenhouse gas, carbon dioxide

(CO₂), are set to fall by some 11 per cent between 1990 and 2020.

The baseline projection for air pollutant emissions under the NEC directive should in principle include the effects of full implementation of all existing national and EU-wide legislation and measures. But the analysis by IIASA has so far ignored further measures that might be needed to meet the national emission ceilings in 2010. It also failed to consider measures that may be required to comply with EU air quality limit values for particles (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂).

Based on national forecasts, only about half of the member states will achieve their emission ceilings for nitrogen oxides (NO_x) by 2010, and some will also have problems achieving their ceilings for volatile organic compounds (VOCs) and ammonia (NH₃). Even by 2020 some member states are projected not to attain their 2010 NECs for NO_x and NH₃, unless additional measures are taken.

New scenarios

In order to account for recent developments, such as the EU's Climate & Energy Package, IIASA has in spring 2008 updated its analysis of what measures will be needed to attain the interim 2020 environmental targets of the thematic strategy.

For this purpose, a new baseline scenario was developed, which also includes some additional assumptions, namely that new Euro VI standards for heavy-duty vehicles will be introduced as from 2014, that emission standards for large combustion plants will be strengthened as from 2016 (in line with the Commission's proposed new directive on industrial

emissions), and that the 2010 NECs will not be exceeded by any member state in 2020.

Starting from this new baseline scenario, IIASA applied the optimization mode in its GAINS computer model to

Table 1. Emissions of air pollutants from land-based sources in EU27 under various scenarios (ktonnes).

		2020	Change
SO ₂	2000	10,352	
	Baseline	2,924	-72%
	Optimized	2,336	-77%
	MRR	1,755	-83%
NO _x	2000	12,155	
	Baseline	5,684	-53%
	Optimized	5,158	-58%
	MRR	4,446	-63%
NH ₃	2000	4,021	
	Baseline	3,709	-8%
	Optimized	3,139	-22%
	MRR	2,394	-40%
VOCs	2000	10,867	
	Baseline	6,146	-43%
	Optimized	6,072	-44%
	MRR	4,138	-62%
PM _{2.5}	2000	1,857	
	Baseline	1,263	-32%
	Optimized	1,006	-46%
	MRR	655	-65%

Baseline = Baseline scenario reflecting current legislation and policy, in this case assuming full implementation of most existing air quality legislation plus including implementation of proposed Euro VI standards for heavy-duty vehicles and proposed emission standards for large stationary sources in line with the proposed industrial emissions directive.

Optimized = New optimized scenario achieving the environmental targets of the 2005 thematic strategy on air pollution.

MRR = Maximum reductions in the GAINS model, i.e. limited to include only so-called end-of-pipe technical measures.

Table 2. Summary of air pollution effects in EU27 under various scenarios.

	Human health		Natural environment	
	Premature deaths due to PM _{2.5}	Monetized health damage (billion euro/yr)	Acidification: Unprotected forest area (km ²)	Eutrophication: Unprotected ecosystem area (km ²)
2000	423,000	298-947	259,000	1,020,000
Current policy 2020	256,000	180-573	91,000	858,000
Optimized 2020	224,000	159-504	62,000	766,000
MRR 2020	185,000	130-413	39,000	583,000

Note: When evaluating chronic mortality from exposure to PM_{2.5} two alternative values are shown here, the lower one is based on value of life years lost (VOLY) and the higher one on value of a statistical life (VOSL).

identify the least-cost set of emission reduction measures for the EU as a whole to achieve the environmental targets of the thematic strategy. The resulting optimized emission reductions are shown in Table 1.

As compared to the baseline scenario, SO₂ emissions in 2020 would need to come down by another 588 kilotonnes (kt), NH₃ by nearly 570 kt, those of NO_x by 526 kt, PM_{2.5} by 257 kt, and VOCs by 74 kt.

Health benefits

The scenario analysis also includes estimates of some health and environmental impacts expected to result from the projected levels of future emissions, see Table 2. For PM_{2.5} the GAINS model estimates changes in the loss of statistical life expectancy that can be attributed to changes in anthropogenic emissions.

Using the pollution levels for the year 2000, it is estimated that PM_{2.5} results in an average shortening of life expectancy in the EU of approximately eight months. In the baseline scenario, this figure comes down to 4.8 months by 2020, and in the optimized scenarios to 4.2 months.

As a result of decreased emissions in the baseline scenario, the number of premature deaths from ground-level ozone is estimated to decrease by about 10 per cent, from 20,300 to 18,200, between 2000 and 2020. The optimized scenario is estimated to further reduce this figure to 17,600.

Environmental effects

The analysis of environmental impact includes ozone damage to vegetation, and acidification and eutrophication of various types of sensitive ecosystems.

In the year 2000, more than 20 per cent of the forest area in the EU, or approximately one quarter of a million square kilometres, received acid depo-

sition above the critical loads. By 2020 this is calculated to drop to seven per cent under the baseline scenario, and to five per cent under the optimized scenario.

Three euro per year

The costs of the additional emission reduction measures beyond the baseline (current policy) that are required to meet the targets of the strategy are estimated at 1.5 billion euro per year in 2020. This equals an annual cost per person of approximately three euro, or a daily cost per person of less than one eurocent.

Climate policies not only influence the costs of additional measures beyond current legislation to meet given air quality objectives, they also affect the cost of implementing current legislation. It is estimated that the annual costs of implementing current legislation on air pollution in 2020 would increase from 79.9 to 87.5 billion euro, i.e. by 7.6 billion euro per year, by switching from the Climate & Energy Package scenario to an energy scenario without climate policy. On top of this, under the latter scenario, additional emission control costs would increase from 1.5 to 2.4

billion euro per year.

The total difference in air pollution control costs between the non-climate policy and the climate policy situation thus amounts to 8.5 billion euro/year, which constitutes a significant fraction of the costs for adjusting the energy system towards the needed CO₂ reductions.

Benefits 15–47 times greater than costs

Moreover, when comparing the costs of additional emission reductions with the incremental monetized health benefits, it is clear that the benefits far outweigh the costs. Assuming the lowest figures for health damage valuation, the benefits are 22 billion euro (about 15 times higher than the costs), and assuming a higher health damage valuation, benefits are estimated at 70 billion euro, i.e. to exceed the costs 47 times!

Note that this comparison of costs and benefits does not include all the benefits that would result from improved air quality – notably it excludes benefits to ecosystems and cultural heritage as well as some health benefits.

Christer Ågren

Sources: NEC Scenario Analysis Reports No. 6: National Emission Ceilings for 2020 based on the 2008 Climate & Energy Package. July 2008. By M. Amann et al., International Institute for Applied Systems Analysis (IIASA), Austria. Analysis of the Costs and Benefits of Proposed Revisions to the National Emission Ceilings Directive: NEC CBA report 3. July 2008. By S. Pye et al., AEA Energy & Environment, Didcot, UK.

These two reports and more information on the NEC directive and its revision can be found on the website of the Commission's environment directorate: http://ec.europa.eu/environment/air/pollutants/iam_nec_dir.htm

Sensitivity analyses

In its study, IIASA also investigates the so-called robustness of the optimized emission ceilings by changing some of the basic assumptions in input data, including among others:

- * Alternative energy projections;
- * Implementation by the agriculture sector of the nitrates directive;
- * Alternative assumption for PM_{2.5} health impacts;
- * Lower air pollutant emissions from international shipping.

It is estimated that implementation of the nitrates directive would cut ammonia emissions by an extra nine per cent (310 kt), re-

sulting in an overall reduction in emission control costs for the EU27 of nearly 0.7 billion euro. This calculation does not, however, include costs of balanced fertilization and revenue losses to farmers.

If international shipping were to reduce its emissions in line with the decision taken by the International Maritime Organization in April this year (see AN 2/08, pp. 3–4), the annual costs of additional measures at land-based sources would come down from 1.5 to 0.95 billion euro for the target year 2020. (Note that this analysis did not include the 2020 global fuel standard of 0.5 per cent sulphur, since this figure is scheduled to be reviewed in 2018.)



ROAD CHARGING

EU hesitant on ending “externalities” ban

The Commission has proposed an end to the ban on member states charging lorry operators for the external costs of road use, but it has put a limit on the charges that may be imposed.

The unveiling of three Commission initiatives on “greening transport” early in July is designed to make transport prices better reflect their real cost to society. Last year, the then transport commissioner Jacques Barrot promised a new approach to so-called external costs – such as environmental damage, noise, health and congestion – not paid by the road users causing them.

Under current EU legislation, member states are banned from charging for external costs, a situation which conflicts with the “polluter pays” principle. They are only allowed to charge for building

and maintaining road infrastructure.

Under the proposed revision of the Eurovignette directive, governments will be able to charge hauliers for the external costs of road use, but only electronically and only according to a strict formula. There will be no obligation to charge, but any country that does charge must follow these rules.

Jos Dings, director for the European Federation for Transport and Environment, T&E, said: “Member states may not be banned from charging trucks for the negative environmental and

health impacts of their journeys, but the charges will be capped to such a degree that the areas that suffer the worst environmental impacts will be unable to set charges which reflect the real costs. The decision to set a cap on charges makes no sense economically, or environmentally, and should be scrapped. We call on European Parliament and ministers to make sure this proposal will really make transport greener.”

T&E has also been critical of the time it has taken Brussels to propose this legislation. Seven years ago Switzerland

started charging road freight operators for the environmental and health impacts of their journeys, with the result that Switzerland has improved its efficiency in the road transport sector, reduced emissions, and improved its competitiveness ranking, all without negative effects on the labour market.

In a speech to Parliament's transport committee in July, the French chair gave an assurance that this proposal will be prioritised and debated at the Council meeting in October. The Commission believes the new rules could enter force before 2011.

Road freight is growing faster than

GDP across the EU27 with an annual growth rate of 4.9 per cent, while international road freight transport is expected to double from 2000 to 2020.

Source: T&E Bulletin, July 2008. The proposal: European Commission, <http://ec.europa.eu/transport/greening/>

Factfile: "Greener Transport Package"

The package's main element is a legislative proposal revising the EU's 1999 "Eurovignette" directive on infrastructure charging for heavy goods vehicles. The other elements are a strategy for calculating transport's environmental costs and measures to cut noise pollution in the rail sector.

The existing Eurovignette directive applies only to routes belonging to the established trans-European road network. Lorries using the network cannot be charged for costs other than building and maintaining infrastructure.

The draft revised law would extend the rules to other types of road such as interurban roads, and allow EU member states to charge lorries for the cost of air pollution, noise and congestion, but not of climate change and accidents. According to the Commission, climate change should instead be regulated by means of fuel taxes.

Charges could vary by road type, vehicle emission class and driving time, but there is no binding requirement on EU states to apply these rules. The Commission proposes "maximum chargeable costs" to limit the amount of cash raised by authorities that choose to charge lorries.

The Commission calculates that the average amount is likely to be in the range of four to five eurocents per kilometre for a Euro IV truck. But this is only a rough estimate as exact charges for specific areas will vary widely and will depend on a complex set of developing circumstances.

Revenues from external cost charging are earmarked for measures aimed at facilitating efficient pricing, reducing road transport pollution at source, mitigating its effects, improving CO₂ and energy performance of vehicles, and developing alternative infrastructures for transport users.

Switzerland has been charging for seven years

Switzerland is the only European country where road user charges that internalize external costs of transport are applied. The scheme involves a per km charge for all heavy-duty vehicles on all Swiss roads. It was introduced in 2001 and the main results of this experience after seven years are the following:

- ▶ Increased efficiency in the road transport sector: between 2001 and 2005 the number of kilometres travelled by heavy goods traffic (kilometre performance) decreased by 6.4 per cent, whereas the goods transported (transport performance) increased by 16.4 per cent.
- ▶ Positive effects on environment: reduction of emissions of particles by 10 per cent, nitrogen oxides 14 per cent and carbon dioxide six per cent.
- ▶ No negative effects on the labour market: the number of people employed in road transport remained stable.
- ▶ Negligible effect on consumer prices: according to Swiss government figures, the overall attributable price increase following the introduction of the scheme has been only 0.1 per cent.
- ▶ Effects on competitiveness: Switzerland climbed the global competitiveness rankings to be ranked as the most competitive economy in the world in 2006–2007, according to the World Economic Forum.

Source: T&E Background Briefing, www.transportenvironment.org/Pages/lorry-charging/

Proposed tyre rules unambitious

In May, the European Commission proposed new noise and energy efficiency standards for tyres, which set obligatory levels for rolling resistance, tyre pressure monitoring systems, and noise limits.

Low rolling resistance tyres together with tyre pressure monitoring systems will, according to the Commission, reduce emissions of carbon dioxide by up to seven grams per km. Maintaining proper tyre inflation is essential for both fuel efficiency and better tyre performance. Road noise would also be reduced under the proposal, and the improvements would all be achieved without compromising the level of traffic safety. The regulations are proposed to come into effect from 2012.

The proposal has been criticized

by T&E, the European Federation for Transport and Environment, for not going far enough in addressing the fact that around half of Europe's citizens suffer from the effects of excessive road noise.

According to T&E, roughly half the tyres on the market today already meet the requirements that will apply from 2012.

Policy officer Nina Renshaw comments: "We need tough standards that require and inspire innovation and new technology in the industry. This has been the case with emissions standards for new cars, so why not with tyres?"

Sources: T&E Bulletin, June 2008, Commission press release 23 May 2008.

Hidden emissions from catalytic converters

Levels of emissions from vehicles are strongly influenced by the performance of catalytic converters and particle filters.

In a recent study¹, detailed experiments were conducted to measure the extra emissions produced periodically in cars when post-combustion systems such as catalytic converters are operated in regeneration mode.

The results show that regeneration caused substantial additional emissions that may not be identified using standard testing procedures. Two cars fitted with catalytic converters (one petrol and one diesel vehicle) had short regeneration times that would be covered by standard measurement techniques.

However, the remaining two diesel vehicles showed long time periods between regeneration. Emissions from such regeneration would not necessarily be detected using the latest European test procedures, as these employ a standard test cycle.

¹ Science for Environment Policy, 19 June 2008. *The study*: Alvarez, R, Weilenmann, M. and Novak, P. (2008). Pollutant emissions from vehicles with regenerating after-treatment systems in regulatory and real-world driving cycles. *Science of the Total Environment*. 398 (1-3): 87-95.

Is better regulation of ammonia required?

Road traffic is a major source of reactive nitrogen compounds, such as nitrogen oxides (NO_x) and ammonia. Swiss researchers have measured different reactive nitrogen compounds in the tail-pipe emissions from twenty cars, chosen to represent the existing Swiss vehicle mix.

They found that although the vehicles were within the limits of NO_x emissions, levels of ammonia were unexpectedly high, between 40 and 80 per cent of the total reactive nitrogen compounds.

While current vehicle legislation puts a cap on the total amount of NO_x that is released, there are no limits for ammonia.

The research also suggests that levels of reactive nitrogen compounds are rising due to the current trend to replace petrol cars with diesel vehicles. The permitted levels of NO_x emitted from diesel vehicles are three times higher than those for petrol cars.

Source: Science for Environment Policy, 13 May 2008. *The study*: Heeb, N.V., Saxer C.J., Forss, A., Brühlmann, S. (2008). Trends of NO, NO₂, and NH₃ emissions from gasoline-fueled Euro-3 to Euro-4 passenger cars. *Atmospheric Environment*. 42: 2543-2554.

Committee wants weaker limits for heavy vehicles

The European Parliament's environment committee has voted to water down proposed limits on nitrogen oxides and fine particle emissions from heavy vehicles. The decision appears to reflect a wish to prioritize fighting carbon dioxide (CO₂) emissions over air pollutants.

The vote by the environment committee came on the Euro VI proposals on pollutant emissions from heavy road vehicles that are due to come into effect in April 2013 (see AN 1/08).

The Commission proposed the revised legislation in December last year, suggesting a target of an 80-per-cent reduction for NO_x emissions and 66 per cent for particles compared with the Euro V standards, which come into force this year. But it was recognized that achieving such levels could cause a

slight rise in carbon dioxide emissions.

At July's meeting, the committee voted to water down the proposed limit on NO_x from 400 to 500 mg/kWh, a move they justified by saying it would permit the use of technologies that could reduce CO₂ emissions.

They also stick to the Commission's figure for fine particles of 10 mg/kWh rather than a proposal by the rapporteur Matthias Groote for 5 mg/kWh. Groote had also wanted to bring forward the introduction of the new regulations by one year, but could not get support for this change from the environment committee, which only agreed to three months.

The next stage is a full vote by Parliament, after which the environment ministers will have their say.

Source: T&E Bulletin, September 2008.

Road charges proposed in Manchester and Copenhagen

The Association of Greater Manchester Authorities wants to introduce congestion charging, revenues from which would help to finance major investments in the region's infrastructure, particularly public transport. Motorists would also be expected to benefit as a result of reduced congestion on streets and roads.

The congestion charge is designed to tackle traffic problems at the time and place and in the direction where they are worst. The system is based on two charging rings that pick up vehicles heading into Manchester on weekday mornings, and out of the city in the evenings.

According to the website that has been set up for the consultation process (www.gmfuturetransport.co.uk) several cities in the UK have similar plans, including Cambridge, Bristol, Bath, New-

castle upon Tyne and Leeds. Nottingham is exploring workplace car parking charges.

Cities in other countries that are said to be considering congestion charging include Los Angeles, Seattle, San Francisco, Copenhagen, Padua, Verona, Naples, Helsinki, Beijing, and Seoul.

A Greater Manchester-wide referendum will be held at the end of 2008.

A similar initiative was taken in Copenhagen in June, when sixteen municipalities in the region agreed on a proposal for a charging scheme of the same type as is now in place in London and Stockholm. Until now a majority in the Danish parliament (Folketinget) has blocked the introduction of congestion charging, but as a result of the new agreement the municipalities are hoping for a change.



A milestone – or a missed opportunity?

The EU's first legislation to reduce greenhouse gas emissions from aviation has been formally agreed – but environmentalists describe it as “a historic missed opportunity”.

The terms for aviation's entry into the EU Emissions Trading System were agreed between the European Parliament and national governments in July. They were adopted by the Parliament by 640 votes to 20, and means all flights involving the EU from 1 January 2012 will need carbon dioxide emissions permits.

Yet the compromises failed to make the proposal effective in reducing emissions. João Vieira, policy officer at Transport & Environment (T&E) comments: “Environmental campaigners have consistently said the plan must deliver real reductions in greenhouse gases, but this deal will offset just one year's growth in emissions from aviation based on the Commission's own analysis.”

The Parliament wanted an earlier start date, stricter limits on the amount of CO₂ that can be emitted and a multiplier

to account for the non-CO₂ impacts of aviation. Under pressure from governments, however, they agreed to a compromise that will mean:

- ▶ The scheme will apply to all flights from 2012.
- ▶ Emissions from aircraft will be 97 per cent of 2004–06 levels for 2012, and 95 per cent in 2013; the Parliament had wanted 90 per cent of 2004–06 levels.
- ▶ Airlines will have to pay for 15 per cent of their allowance allocation, not the 25 per cent the Parliament wanted.
- ▶ There will be no specific allocation of the revenue, but governments must report on how the money is used, and are recommended to use it for low emission modes of transport.

Vieira added: “National governments should take the blame for failing to deliver a law that will actually cut emissions. The Parliament had asked for a

number of measures that could have resulted in real emissions cuts from aviation, but governments once again took the side of their flag-carrying airlines. We should be marking a historic deal to cut international aviation emissions, but in fact we are marking a historic missed opportunity.”

The Commission estimates the deal will add between two and nine euros to the price of a return flight within the EU. The Association of European Airlines is warning that the measure may drive airlines to use non-EU airports, and there are some who are still questioning the legality of the deal as it involves non-EU airlines.

Source: T&E Bulletin, July 2008. See also Editorial in the same issue, available at www.transportenvironment.org.

EU member states must act on PM₁₀ pollution

The European Commission has written to 23 member states to request information on what action they are taking to comply with the EU's air quality standard for particulate matter.

The new EU air quality directive, which came into effect on 11 June this year, is a revision and amalgamation of several existing directives. In the case of PM₁₀ the new directive means that member states can request extra time to meet the PM₁₀ standard under certain conditions. It was originally intended that they should comply by 2005. The deadline for compliance may now be extended until 10 June 2011.

Time extensions will be granted only for zones that satisfy the conditions laid down in the directive, which relate to external factors over which the member states have no direct control, such as transboundary contributions and adverse climatic conditions. Outside these areas the air quality standards must be fully complied with already.

The Commission estimates that on average 40 per cent of air quality zones in the EU currently do not comply with the PM₁₀ standard.

On 26 June the Commission adopted a Communication (COM(2008) 403 final) providing guidance to Member States wishing to request time extensions. In assessing notifications for such requests, the Commission will look specifically at the efforts undertaken to comply by the initial deadline, i.e. 1 January 2005 in the case of PM₁₀. The Commission must also be convinced that full compliance will be achieved at the expiry of the time extension period.

In the light of this guidance, the Commission has written to the 23 member states that reported exceedances of the limit value for PM₁₀ in 2006, asking them to provide information by 30 September 2008 on the steps they



The Netherlands wants more time to meet air quality standards for PM₁₀ and NO₂. Measures should instead be taken to reduce emissions from areas such as transport, argues the Netherlands Society for Nature and Environment.

are taking to achieve compliance. This concerns all member states except Ireland and Luxembourg, which reported no exceedances of the PM₁₀ standard in 2006, and Bulgaria and Romania, which did not join the EU until 2007. The two latter states have until 30 September to communicate their monitoring data, and most probably they would then have an individually extended deadline for requesting time extensions.

In the letters, the Commission makes clear that member states are expected to submit requests for time extensions by 31 October 2008. Failure either to achieve compliance with the standard or to submit notifications by that date will lead to legal action against the member state concerned.

The first country to request an extension was the Netherlands, which made its request in July. It has asked for time extensions for both PM₁₀ and nitrogen dioxide (NO₂). In the latter case the standards come into effect in 2010, but extensions can be sought until 2015.

In its request the Netherlands states

that nearly 2 billion euro has been earmarked for national and local measures under a comprehensive air quality programme designed to meet the delayed deadlines.

However, the environmental movement in the Netherlands is highly critical of the request for long time extensions and of the government's plan of action.

Karin Blaauw, air pollution officer at the Netherlands Society for Nature and Environment (Stichting Natuur en Milieu), says that the plan is inadequate and does not focus on health improvements. Important but controversial measures, such as speed reductions are being postponed because of the time extensions. She also says that it is fragile because in effect it aims at reaching the limit values "just in time" and only in years when the weather is average or better.

Other countries reported to be preparing applications for time extensions include Denmark and the UK.

Per Elvingson

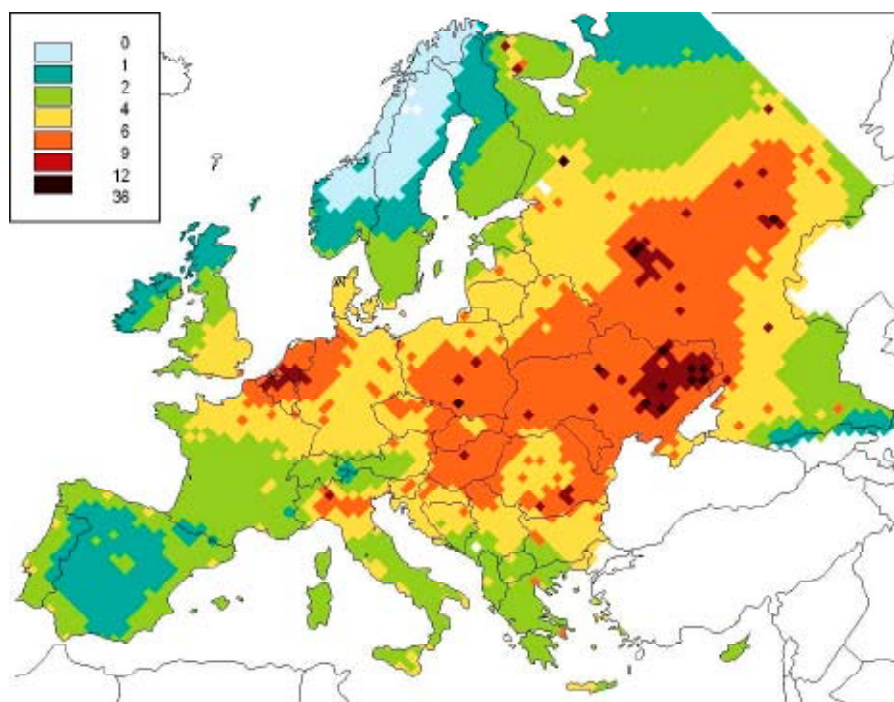
Source: European Commission press release, 8 July 2008. For further information, including information on exceedances of standards by member states in 2006, see DG Environment, <http://ec.europa.eu/environment/air/quality/>

Factfile: PM₁₀ standards

The PM₁₀ standard consists of two limit values:

- × 50 micrograms (µg)/m³, measured over 24 hours; this can be exceeded on no more than 35 days per year.
- × 40 µg/m³, measured over one year; no exceedance is allowed.

High airborne concentrations of particles are a problem over much of Europe. The map shows estimated loss in statistical life expectancy (months) due to the exposure to anthropogenic PM_{2.5} in 2020, with an energy scenario where greenhouse gas emissions rise by 3 per cent. Maps from Markus Amann, IIASA GAINS model.



Member states can be forced to take action

Individual citizens can force the adoption of action plans if air quality does not comply with EU standards, according to a decision by the European Court of Justice.

Dieter Janecek is a resident of Munich who lives near the city's central ring road. When the EU limit values for particulate matter (PM₁₀) were exceeded in 2005 and 2006 he requested that the local authorities should implement a programme of action. However German judges said the resident had no right to make such a demand under national law.

The matter was taken to higher authorities and eventually brought in front of the European Court of Justice, which has now ruled that European citizens are entitled to require air quality action plans from local authorities when there is a risk that limits set under EU legislation may be exceeded. This is laid down in the framework directive that was adopted in 1996 and recently reviewed and amalgamated with several daugh-

ter directives to create the directive on ambient air quality and cleaner air for Europe (2008/50/EC; see also AN 1/08).

The German authorities may choose not to comply with the court's decision, but the court has a wider influence and may help to speed up the implementation of the new legislation. Exceedances of particulate limits are a problem in most EU member states and a considerable rise in complaints from individual citizens can be expected. Proceedings are already underway in several countries, including Austria, the Czech Republic and Sweden.

Further information: European Court of Justice, press release 25 July 2008 (judgement in case C-237/07).

Court "wrong" over Dutch PM limits case

Last year the Netherlands was refused a request made to the European Commission for permission to set stricter limits on particulate emissions from diesel cars. Under the "environmental guarantee" clause of article 95 of the treaty, the Netherlands wanted to set the limit for new cars at 5 mg/km, effective from 1 January 2007. Current legislation allows emissions of five times this figure (25 mg/km).

The Netherlands took the matter to the European Court of Justice, where the court of first instance (CFI) went along with the Commission's line and rejected the case. Following an appeal by the Netherlands, the court's adviser, advocate general Juliane Kokott, has stated that she believes the request was handled wrongly, since no consideration was given to the specific conditions that could justify the need for setting stricter emission limits.

Ms Kokott does not recommend rejecting the Commission's decision, but believes that the Commission failed to consider air quality data submitted by the Netherlands and that the case should be referred back to CFI.

Sources: ENDS Europe Daily, 21 July 2008. European Court of Justice, opinion in case C-405/07.

France to take new air pollution action

France will adopt measures to further reduce emissions of particles, with the objective of reducing particulate concentrations by 30 per cent by 2015.

The measures will be taken as part of France's second national plan on health and environment, which will be put to consultation this autumn. According to environment minister Nathalie Kosciusko-Morizet, the government will propose stricter emission standards for certain boilers, and financial incentives to switch to cleaner heating systems, especially wood-fired heating systems that emit large amounts of fine particles (PM_{2.5}).

Other proposed actions include extending France's pollution tax to cover particle emissions, and increasing the number of inspections of industrial installations regulated under the EU's IPPC directive.

Source: ENDS Europe Daily, 11 July 2008.

Best Available Techniques threatened

In his report to the European Parliament, German Liberal rapporteur Holger Kraemer proposed amendments that would undermine the principal of applying Best Available Techniques (BAT) when setting permit conditions for industrial installations.

In a proposal dating from December 2007 the European Commission wants to merge the 1996 integrated pollution prevention and control (IPPC) directive with six other sectoral directives, including the 2001 directive on air pollutant emissions from large combustion plants. (See AN 1/08, p. 11).

The industrial installations covered by this legislation account for a considerable share of EU's air pollutant emissions (83 per cent for sulphur dioxide; 34 per cent for nitrogen oxides; 43 per cent for dust; and 55 per cent for volatile organic compounds).

One of the main reasons for the Commission's proposal to revise the IPPC directive was the very poor implementation by member states – it was estimated that only about 50 per cent of the 52,000 installations covered had received a permit. The Commission wants to strengthen the application of Best Available Techniques (BAT) across the EU, particularly by restricting divergence from BATs to specific cases and placing greater emphasis on justifying the conditions laid down in the permits.

Minimum emission limit values in certain industrial sectors should according to the Commission be tightened, particularly for large combustion plants (LCPs), where progress on pollution reduction is insufficient. The scope would also be extended to include medium-sized combustion plants, i.e. between 20 and 50 megawatts thermal input.

Recent studies have shown a very high potential to further reduce air pollution from power plants in Europe. One study

by the European Environment Agency indicated that emissions of sulphur dioxide and nitrogen oxides could be cut by 97 and 87 per cent, respectively (as compared to 2004 levels of emissions), if emission levels are assumed to be in line with the strict interpretation of BAT (also known as the “lower end” of BAT). If on the other hand they are taken to be at the “upper end” of BAT, emissions could come down by 80 and 59 per cent, respectively (see AN 2/08, p. 8).

In September the proposal was debated in the European Parliament's environment committee. During the debate German Liberal rapporteur Holger Kraemer proposed amendments that would undermine the principal of using BAT as the central starting point for setting permit conditions – in particular emission limit values – for industrial installations.

Emission limits set by national authorities when determining pollution permits should not necessarily be based on BAT-associated levels, he claimed. Instead he wanted the EU to set binding sector-specific emission limits for all industrial installations that are currently regulated under the IPPC directive. In spite of the fact that these limits are likely to be less stringent than emission levels associated with BAT, Mr. Kraemer called this proposal the “European safety network”.

The rapporteur rejected the intention to extend the IPPC's scope to include combustion plants between 20 and 50 megawatts. Moreover, he proposed to significantly weaken requirements for plant inspections and reporting, and to remove the obligation to compare

performance with BAT. As a result, the enforcement of the legislation would be much more difficult in practice.

In another amendment, Mr. Kraemer wanted to relax sulphur dioxide emission standards for certain coal-fired large combustion plants, thus providing a loop-hole for old ineffective lignite-fired power plants.

Mr Kraemer's draft amendments were briefly debated in the environment committee on 9 September. The committee is expected to vote on the proposals in the first week of November, followed by a plenary vote in early 2009.

Christer Ågren

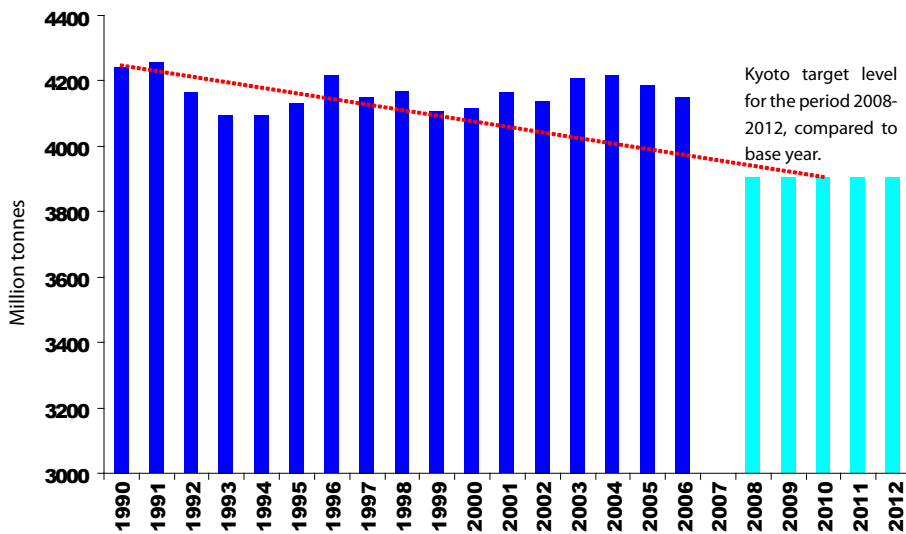
Efficient buildings reduce emissions

There is enormous potential for reducing energy use in the residential building sector. When the European Commission's joint research centre (JRC) did calculations it found that the total life cycle emission reduction potential amounts to 360 million tonnes CO₂-eq per year in the EU25.

This figure corresponds to about 7 per cent of the total direct greenhouse gas emissions in EU25 in 2005. Furthermore, up to 95 per cent of the measures are free or profitable. There are some barriers to overcome, however. The initial investment costs could mean that measures are not taken despite being profitable.

Further reading: **Environmental Improvement Potentials of Residential Buildings** (IMPRO-Building). Available at <http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=1744>

Slow progress in EU GHG emission reductions



From 1990 to 2006, EU15 emissions of greenhouse gases decreased by 2.7 per cent. Assuming a linear reduction path (red dotted line) the pace has to increase markedly to reach the Kyoto target of an eight-per-cent reduction between the base year (in most cases 1990) and the average for the years 2008-2012. Emission credits from other countries can be bought to fill the gap. Please note that the y-axis in the figure does not start at zero.

Greenhouse gas emissions in the European Union decreased slightly between 2005 and 2006, according to the official inventory report prepared by the European Environment Agency (EEA).

Overall emissions within the EU27 fell by 14 million tonnes (0.3 per cent) and now stand 7.7 per cent below 1990 levels.

The EU emission target under the Kyoto protocol – an eight-per-cent reduction by 2008-12 – only applies to the EU15 however (i.e. those countries that were members before the expansion in 2004). In these countries average emissions have only fallen by 2.7 per cent compared with the base year.

The net reduction in greenhouse gas (GHG) emissions observed for the EU27 was mainly due to reduced emissions of nitrous oxide (12 million tonnes CO₂-equivalents) from chemical plants.

Overall emissions of carbon dioxide (CO₂), the most important greenhouse gas, remained stable over the period 2005-2006.

Heavier use of coal for power and heat production resulted in an increase of 15.4 million tonnes CO₂ from this

sector in 2006. Poland alone accounted for an increase of 7.6 million tonnes in emissions from this sector.

Denmark and Finland experienced the biggest relative increase in GHG emissions (with 10.9 and 16.3 per cent respectively), due to heavier use of solid fossil fuels for power generation.

Emissions from road transport continued to grow. The rise was mostly driven by increased use of diesel for freight and passenger transport.

Emissions of greenhouse gases from international aviation and shipping activities continued to rise sharply in 2006. Contributions from these sectors, currently not included under the Kyoto Protocol, rose by nearly five million tonnes (aviation) and 10 million tonnes (international shipping).

Total emissions in the European Union were slightly more than 5.1 billion tonnes in 2006.

Source: Annual European Community Greenhouse gas inventory 1990-2006 and inventory report 2008. EEA Technical report 6/2008. Available at http://reports.eea.europa.eu/technical_report_2008_6/en

Transport remains main source of pollutants

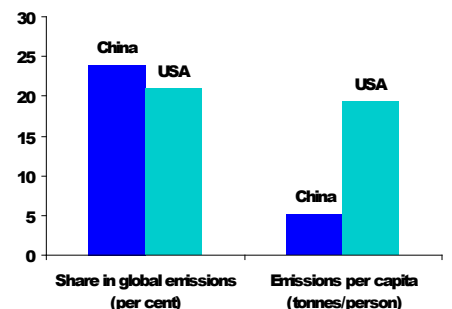
Across the EU27, significant emission reductions have occurred for various air pollutants since 1990 – the reported emissions of nitrogen oxides in 2006 have decreased by more than 35 per cent, and sulphur dioxide by almost 70 per cent. The emission reductions have taken place across many of the economic sectors reported by countries.

The figures are taken from the annual report by the European Environment Agency to the LRTAP Convention.

Road transport remains the single main source of nitrogen oxides (NO_x) and non-methane volatile organic compounds (VOCs), and the second largest source of fine particulate emissions (PM₁₀ and PM_{2.5}) in the EU27.

Further reading: LRTAP Convention emission inventory report 1990-2006. Technical report No 7/2008. Available at http://reports.eea.europa.eu/technical_report_2008_7/en.

Chinese emissions rise most, but USA worst per capita



With an eight-per-cent national increase, China's emissions of carbon dioxide (CO₂) accounted for two thirds of last year's global carbon dioxide increase of 3.1 per cent.

This puts China top of the list of CO₂ emitting countries, with about a quarter share in global CO₂ emissions (24 per cent), followed by the USA (21), the EU15 (12), India (8) and the Russian Federation (6 per cent).

However, when emissions are expressed per person they reveal a very different ranking (CO₂ emissions in tonnes per person): USA (19.4), Russia (11.8), EU15 (8.6), China (5.1) and India (1.8).

These figures are based on a preliminary estimate by the Netherlands Environmental Assessment Agency (MNP), using recently published BP (British Petroleum) energy data and cement production data for 2007.

Source: MNP Press release 13 June 2008 (www.mnp.nl).



EU's lead role could be tarnished

When the Parliament's industry committee recently voted on key directives the outcome was weaker requirements for its own industry and increased opportunities to buy in emission credits.

In September the European Parliament's industry committee voted on the Commission's climate package.

The targets for at least 20 per cent renewable energy and 10 per cent biofuels by 2020 are described on the facing page. Perhaps more important, but attracting less attention, are the proposed changes in the emissions trading system for carbon dioxide over the period 2013–2020, and the burden-sharing arrangements required between countries in order to reduce greenhouse gas emissions by 20 per cent by the year 2020, relative to 1990 – or by 30 per cent if other major nations make the same commitment.

In brief, the Commission's proposal to reform the emissions trading system means that the cost of emission rights will rise progressively as a result of increased auctioning.

It was on this issue that the industry committee voted for a significant weakening of the proposal, by arguing for continued free allocation to many areas of industry, and prompting sharp criti-

cism from environmental NGOs. "This decision has not been backed up by evidence proving that they would suffer undue economic disadvantage compared to similar companies outside the EU," writes the Climate Action Network (CAN) Europe in a press release.

Environmentalists also slammed the

committee's opinion that countries should be able to buy their way out of real emission cuts in the EU by being able to purchase an even greater quantity of offsets than originally proposed by the European Commission.

The industry committee vote would allow up to 80 per cent of emission re-

It's time to lead!

2009 is a crucial year for the climate as the nations of the world come together in Copenhagen in December 2009 to agree a global deal for tackling climate change.

Climate Action Network-Europe, Greenpeace, Friends of the Earth and WWF have come together to campaign for strong climate change policies to be adopted by the European Union.

Visit the website www.timetolead.eu to challenge your member of the European Parliament to show leadership!

ductions to be met by the purchase of external offset credits. This would mean that by 2020, member states' emissions from non-industrial sectors would only be reduced by a feeble two per cent, compared to 2005 levels, according to CAN Europe calculations.

"This vote weakens the domestic emission reduction efforts required by the EU. If other developed countries followed the EU's lead, the world would be on course for at least a 3.6°C increase in average global temperatures above pre-industrial levels," said Tomas Wyns, CAN Europe.

The industry committee also voted to delay or even prevent the planned shift from a 20 to a 30-per-cent emission reduction target, on condition that an international climate deal is reached next year.

Reacting to the vote, Climate Action Network Europe, Friends of the Earth Europe, Greenpeace and WWF said: "Should these types of amendments become law, the EU would cease to be seen as a credible climate partner internationally. European politicians should take meaningful action to avoid dangerous climate change, such as strict annual targets enforced by financial penalties."

Parliament's environment committee, which is the lead committee on these matters, is due to vote on 7 October. The goal is that the complete climate package should be adopted by spring 2009 at the latest, before the June 2009 elections to the Parliament. Negotiations are continuing on several issues in an attempt to reach a first reading agreement between Parliament and the Council of Ministers.

The environment ministers held a debate on the climate package in June. A group of central and eastern European states want the burden-sharing legislation to be based on 1990 figures, not on emissions in 2005 as stated in the Commission's proposal. Several countries called for more flexibility in the burden-sharing legislation, including the opportunity for member states that beat annual interim emission targets to sell the difference to countries that are falling behind.

Per Elvingson

Renewables target remains, but with stiffer requirements for biofuels

When the European Parliament's industry committee made its position clear in September on the issue of renewables and biofuels it marked an important decision. The intention is that the committee's position should now be negotiated with government representatives, during which both sides will aim to reach a compromise text that could be approved by the Parliament's plenary body and by ministers in a first reading agreement by the end of the year.

The industry committee wants to retain the Commission's proposed target that at least 20 per cent of electricity should be generated from renewable sources by the year 2020. But it also wants binding interim targets for member states in the run up to 2020, and inclusion of a direct penalty scheme for countries that miss their targets. The committee would also like to see a binding obligation to promote renewable heating and cooling in buildings, and a requirement placed on electricity and gas grid operators to prioritize access for renewables.

Most of the discussion has however centred on the Commission's proposal that at least 10 per cent of transport fuels should come from renewable sources by 2020. This has been criticized from several quarters, not least against the background of the world food crisis and the growing threat to biodiversity.

The industry committee agreed to maintain the 10-per-cent target, but with certain "sub-targets" aimed at placating those concerned about the social and environmental impact of biofuels production.

The committee agreed to an interim target of five per cent by 2015, which is down on the current voluntary target of 5.75 per cent by 2010. Of this five per

cent, a fifth will have to be either second-generation biofuels or electric cars powered by hydrogen or electricity from renewable sources. The 2020 target of a 10-per-cent share of transport fuels is supposed to be made up of two-fifths of second-generation fuels or electric cars. The committee also agreed to a major review of the targets in 2014.

There also appears to be greater clarity on the sustainability criteria that will form the measuring stick by which biofuels are approved. Biofuels can only be approved if they are shown to save at least 45 per cent of the equivalent carbon dioxide of fossil fuels, rising to 60 per cent in 2015.

In addition, MEPs have included a criterion for "indirect land use change", following concerns that changing the use of land to grow biofuel crops could lead to more land being used for food crops and an increase in overall greenhouse gases.

Nuša Urbancic, policy officer at T&E, European Federation for Transport and Environment, said: "The fact that the savings have to be 45 per cent from the start, rather than the 35 per cent the Commission proposed, is a positive development, but we cannot be happy that the overall 10-per-cent target has been maintained. The EU should not be concentrating on volume targets but on the climate objectives it wants European industry to achieve."

Meanwhile a report by the OECD (see p.23, this issue) says existing biofuel policies in developed countries are expensive, inefficient and a poor substitute for cutting energy consumption in the transport sector.

Main source: T&E Bulletin, September 2008.

MEPs stand up for fuel-efficient cars

The EU has to convert its high ambitions on climate matters into legislation that reduces emissions. Its decision-making ability is now being put to the test over CO₂ from new cars.

In December 2007 the European Commission proposed that average emissions from new cars sold in the EU from 2012 should not exceed 130 grams of carbon dioxide per kilometre (g CO₂/km).

The car industry's trade organizations, as well as some member states (in particular Germany), have lobbied hard against this proposal. When the European Parliament's industry committee voted on 1 September, members chose to go along with the car industry on several key points. Their amendments added up to a serious weakening of the proposal and included lower penalties and a postponement and weakening of the short-term target for 2015.

However in a vote on 25 September the environment committee, which is handling the reading of the proposal before full Parliament, gave support to the Commission's proposal that the average new car should emit no more than 130 g/km by 2012. The committee also backed penalties for carmakers who fail to comply with the new targets, again agreeing with the Commission that penalties should rise to €95 per gram of CO₂ exceeded.

The generous allowances that the industry committee wanted to grant the car industry for cars that also run on renewable fuels were cut back heavily by the environment committee.

Both the industry and environment committee voted for a long-term emission target of 95 g/km to be met by 2020. The Environment Council also wants a target for 2020, but has not yet agreed on a figure.

The European Federation for Transport and Environment (T&E) demands

Converting between grammes/km and litres/100 km. One litre of petrol gives rise to around 2.4 kg of carbon dioxide, while a litre of diesel produces around 2.6 kg.

CO ₂ (g/km)	Petrol (l/100 km)	Diesel (l/100 km)
158	6.6	5.9
120	5.0	4.5
95	4.0	3.6
80	3.3	3.0

80 g/km by 2020, i.e. around half the current level (158 g/km 2007).

Jos Dings, director of T&E said: "The Parliament appears to have stood up to the demands of the car industry and four or five car-producing member

states and has sent a strong signal that Europeans need fuel-efficient cars now, not in five or ten years time. The short-term target is achievable with currently available technology. The long-term target agreed today should send the message to the car industry that it needs to change its ways and put all its efforts into developing the next generation of fuel-efficient cars."

This is not the last word, however. Parliament's line will be decided when the proposal is heard at the plenary session in October. The matter will then pass to the environment ministers.

Per Elvingson

Cars become more fuel-efficient, but not fast enough

Carbon dioxide emissions from new cars sold in the EU fell by 1.7 per cent between 2006 and 2007. This is faster than the year before, but still wholly inadequate. For all cars sold in the EU the average in 2007 was 158 g of carbon dioxide per kilometre (g CO₂/km). To achieve the target of 130 g/km by 2012 it will require a reduction of 17 per cent from the 2007 level.

European carmakers cut their emissions by 1.6 per cent, to give average vehicle emissions of 157 g/km. Japanese and Korean manufacturers achieved 159 g/km and 161 g/km respectively, according to a report from Transport & Environment (T&E).

The biggest reductions among European manufacturers were achieved by German firms. BMW reduced its emissions by 7.3 per cent (14 g CO₂/km) by implementing a range of fuel-saving measures. In second

place came Hyundai (-3.9 per cent) and in third, Daimler (-3.5 per cent).

The T&E report shows that German carmakers now appear to be closing the gap on their French and Italian rivals, in contrast to last year when their emissions actually increased on average.

According to the report, France's PSA Peugeot-Citroen and Renault and Italy's Fiat are the best placed to meet their proposed goals for 2012. Suzuki has the hardest task of all, and would have to cut emissions by 25 per cent by 2012 to make the grade.

Among all EU countries, Sweden achieved the biggest reduction in new cars' fuel consumption (-3.8 per cent), but still has by far the thirstiest new cars on average.

Further reading: Reducing CO₂ Emissions from New Cars: A Study of Major Car Manufacturers' Progress in 2007. Available at www.transportenvironment.org

1948: 7.5 litres/100km



2008: 7.5 litres/100km



60 years of progress?

MEPs – It's time to shift fuel efficiency up a gear.

Vote for 120g CO₂/km by 2012 and 80g CO₂/km by 2020.

www.forlesspollutingcars.com

1948 Volkswagen Beetle (Type 1), 7.5 litres / 100km "average running", source: Volkswagen Type 11 "Instructor Book", pg 5, 1948; 2008 Volkswagen New Beetle Luna 1.6 Petrol, 7.5 litres / 100km (EU combined), source: www.volkswagen.de



Sixty years apart, but the same fuel efficiency

The 1948 and 2008 Volkswagen Beetles, separated by sixty years of advances in automobile design, still have the same level of fuel efficiency. This startling fact is highlighted in a new advertising campaign launched by Friends of the Earth Europe (FoEE) and Transport and Environment (T&E).

The two environmental organizations are asking members of the European Parliament (MEPs) to "shift fuel efficiency up a gear" by voting in favour of legally binding long-term targets for new car emissions of carbon dioxide.

Kerstin Meyer of T&E said, "For the last six decades, carmakers have been innovative in everything but fuel efficiency. And they have failed to notice that times have changed, we need fuel efficient cars that minimize impacts on the environment."

"If new cars were twice as efficient as they are today, we'd be on the right track. It's up to MEPs to set the targets, and Europe's top automotive talent to produce the goods."

The post-war Beetle used 7.5 litres per 100 km driven. The 2008 Beetle 'Luna' 1.6 Petrol uses the same.

EU spending €1 billion a day on oil imports

For the first time in history EU member states are spending over €1 billion every day on imported oil – four times more than in 2003 and smashing all previous records, according to analysis by Transport and Environment (T&E), presented in June.

T&E points to the paradox of European leaders failing to make the connection between rocketing oil prices and worrying levels of oil dependence on the one hand, and the need to tackle Europe's gas-guzzling car fleet on the other.

Hydrogen cars will need huge subsidies

It will take massive subsidies from the US government to make hydrogen fuel cell vehicles a significant part of the nation's transportation future, according to a National Research Council report released in July. The study finds that even under a best-case scenario only about two million hydrogen fuel cell vehicles will be on American roads by 2020, less than one per cent of the nation's estimated total number of cars and trucks.

Achieving that goal would require the government to pump in at least \$55 billion in subsidies over the next 15 years.

Source: *Environment News Service*, 18 July 2008.

Sticks and carrots for French car market

Buyers of energy-efficient cars in France will receive a discount that is funded by a surcharge on vehicles with high fuel consumption figures (see AN 1/08). The system was introduced in January and was intended to be revenue-neutral for the government. However the scheme is now expected to cost 140 million euro this year, since car buyers have been buying much more fuel-efficient vehicles than predicted. Sales of cars that receive the discount (with CO₂ emissions of less than 130 gram/km) are reported to have risen by 45 per cent, and average car emissions have fallen by nine per cent (8g CO₂/km).

In July the government announced it would tighten the rules from next January by imposing an annual tax on cars emitting more than 250g/km. The threshold for entitlement to the bonus may be reduced by 5 g/km.

Sources: *ENDS Europe Daily*, 27 August 2008, *Le Monde*, 19 August 2008.

Coal industry fighting for survival

A directive that is intended to encourage carbon capture and storage is making its way through the EU approval process. There are clear problems with this technology however.

By employing carbon capture and storage (CCS) we can continue to use fossil fuels and at the same time greatly reduce carbon dioxide emissions. The solution is close, it is just a matter of getting some pilot projects running, and coal power plants equipped with CCS technology will become a viable, commercial mitigation option.

This frequently painted picture sounds almost too good to be true, and that is probably the case. A new report¹ takes a look behind the bright vision of CCS given by proponents of this technology.

Technology is not CO₂-free

In comparison with conventional coal power plants, carbon dioxide (CO₂) emissions can be reduced significantly by using capture technologies (despite the fact that the process itself reduces plant efficiency by around 10 percentage points). While CO₂ emitted directly at the power stations is reduced by 88 per cent, a life cycle assessment shows substantially lower overall reductions in greenhouse gases, ranging from 65 to 79 per cent. This translates into CO₂ emissions of up to 274 g CO₂-eq/kWh.

Funds could be used more effectively

CCS entails high costs and risks of future leakage. Failing to combat climate change would be even more costly, but this would only be an argument if no other solutions were at hand. But there are – renewable energies in combination with efficiency improvements and reduced energy demand have been shown to be environmentally safe and sound technologies.

The costs of these solutions cannot be compared with traditional coal-fired

power plants – they have to be compared with CCS equipped plants.

The “capture-ready” swindle

Many of the coal-fired power plants under planning or construction are so-called capture-ready. “Capture-ready” suggests that coal power plants will be retrofitted. Nobody knows at which point in time this will be the case, if at all. The key factor for CCS is whether or not commercial capture options will be available for coal-fired power plants and at what cost. The simplest way to avoid misuse of the “capture-ready” concept is to say no to all new coal power plants without real, working CCS.

Last gasp of the coal industry

The proponents of CCS are mainly the

coal industry and governments of countries that have a lot of coal and coal-fired power plants, as well as some oil and gas nations.

Coal power is the worst method of producing electricity from the climate perspective. A serious climate policy would hit the coal industry and coal-dominated power industry very hard. However, the power industry is well organized and power suppliers are pinning their hopes on CCS, or perhaps more precisely, they hope that enthusiasm for CCS will win them time to continue extracting and using coal.

Per Elvingson

¹ **Last gasp of the coal industry.** By Gabriela von Goerne and Fredrik Lundberg, published by the Air Pollution & Climate Secretariat. Available from www.airclim.org.

Carbon Capture and Storage (CCS) in Norway

Norway has taken a particularly close interest in the CCS approach, despite the fact that the country's oil reserves are dwindling. One likely explanation is that the main player in this field, the largely government-owned StatoilHydro, believes that CCS will have beneficial effects on future oil production in Norway.

Carbon dioxide that is captured from power plants may be used as a means of increasing the pressure in oil fields, and help extract more oil. This process is called Enhanced Oil Recovery, or EOR for short. More CCS plants built all over the world may speed up the learning process, and help bring down the unit cost. Reducing the costs of CCS technology may increase its use in EOR, and consequently help to prolong oil extrac-

tion in Norway. The economic benefits from this may be huge, in the order of hundreds of billions of euro.

Strong economic and political motives, combined with a partly positive and partly silent NGO community, has contributed strongly to the present powerful commitment towards the use of CCS in Norway.

The overall effect of this commitment has been a negative impact on efforts to reduce emissions of greenhouse gases in other sectors, especially the transport sector, where emissions are growing fastest.

Further reading: Carbon Capture and Storage in Norway. By Tore Braend, published by the Air Pollution & Climate Secretariat. Available from www.airclim.org.



No progress to reduce shipping climate impact

Delegates to a recent IMO working group meeting were unable to make progress toward an agreement to reduce emissions of greenhouse gases from international shipping.

Despite urging from the Secretary General of the International Maritime Organization (IMO), delegates to a recent working group meeting were unable to make progress toward an agreement to reduce greenhouse gas (GHG) emissions from international shipping. The June meeting, which was held in Oslo, had been instructed by the IMO's Marine Environment Protection Committee (MEPC) to develop market-based, operational and technical measures to reduce GHG emissions from ships.

International shipping represents a substantial and growing source of global greenhouse gas emissions. Shipping emissions of carbon dioxide (CO₂), a primary greenhouse gas, have recently been estimated by the IMO at about 1.1 billion tonnes. This is about 3.5 per cent of global CO₂ emissions, and exceeds the CO₂ emissions of many industrialized countries, including such countries as

Canada, Germany and the UK.

Shipping is also a substantial emitter of particulate matter, including black carbon, or "soot." Black carbon absorbs sunlight and is thus a potent climate-forcing agent, especially when it is deposited on snow and ice in regions such as the Arctic. In the Earth's snow and ice-covered regions, black carbon can reduce the reflectivity of surface ice and snow, thereby accelerating the ongoing melting process. The total warming impact of global black carbon emissions is estimated to be between 25 and 60 per cent that of annual CO₂ emissions.

International shipping is estimated to emit between 70,000 and 160,000 tonnes of black carbon each year. It is important to note that the Oslo meeting did not discuss the issue of shipping emissions of black carbon at all, but dealt only with CO₂ emissions.

The IMO has been considering how to reduce GHG shipping emissions since before 2000, when it received a report estimating those emissions and describing various potential measures to reduce them. However, progress since then has been thwarted by the opposition of certain developing countries (non-Annex I countries under the Kyoto Protocol on climate change) to mandatory application of any GHG reduction measures to their ships.

However, the IMO is not the only authority concerned about the problem of shipping GHG emissions. For example, the European Commission has made clear that if the IMO cannot find the political will to act to reduce GHG emissions from shipping, then Europe will move ahead with its own requirements.

Delegates at the June 2008 Oslo working group meeting discussed several pri-

mary issues, with the following results:

▶ A mandatory design CO₂ index to require new ships to meet a design CO₂ limit that would be set from time to time by the IMO, at a level below the average CO₂ index (baseline) for the existing world fleet. This is intended to improve the fuel efficiency of newly built ships.

Although a methodology for determination of the baseline and the index were discussed, based on submissions from Denmark and Japan, a group of countries including China, India, Brazil, South Africa and Saudi Arabia objected to any mandatory application of such an index. They argued that developing countries would have difficulty adapting to the requirements and would need capacity-building assistance for their implementation.

▶ A non-mandatory CO₂ “operational index,” intended only as a means of evaluating the effect of operational fuel efficiency measures (such as vessel speed and improved routing), and not as a method for reducing CO₂ emissions from shipping.

Various details of this tool were discussed, but because of its recommendatory, rather than mandatory, nature, its potential impact is unclear.

▶ A CO₂ baseline methodology for use with the operational index.

Delegates could not agree on a mandatory reporting system to gather the fuel consumption data necessary to establish such a baseline, and some thought it acceptable simply to rely on prior estimates.

▶ Market-based CO₂ reduction mechanisms – global bunker fuel levy and global shipping emission trading schemes.

Many delegations supported the use of economic instruments as an effective way to reduce global CO₂ emissions, while providing revenues from the sale of emission allowances. These revenues could then fund measures to help developing countries mitigate and adapt to climate change, build capacity and transfer technology. In addition, some funding could be used to support research and development of measures to reduce global shipping CO₂ emissions.

Necessary discussion of the details of any such economic instruments did not proceed very far, however, as delegations

from a number of developing countries objected to the mandatory application of any such schemes to ships outside of Europe and other Kyoto Annex I countries.

▶ Best practices. The group decided to develop guidance (non-mandatory) for best practices for fuel-efficient operation of ships and limitation of leakage rates for refrigerant gases and coolants on ships.

Representatives of a number of environmental groups attended the Oslo working group meeting as delegates of Friends of the Earth International (FoEI), which has observer status at IMO. The green groups stressed the urgency of the climate crisis and the need for all sectors of industry, including shipping, to be a part of the solution by substantially reducing their GHG emissions over both the short and longer terms.

FoEI urged IMO to adopt a package of measures to reduce GHG emissions from all ships (regardless of their flag of registry). FoEI pointed out that no single measure will solve the problem, as the reductions must be deep enough

Ports agree to combat climate change

On 11 July officials representing 55 ports attended the C40 World Ports Climate Conference in Rotterdam and signed a declaration in which they actively commit themselves to reduce emissions of carbon dioxide and improve air quality.

Among other things they agreed that the ports should develop a global indexing system that will enable them to reward cleaner and climate-friendlier ocean-going ships, and punish those that pollute more. In November a follow-up will take place in the port and city of Los Angeles.

Source: www.wpcrotterdam.com/intro

Demand to include ships in EU emissions trading

When the European Parliament's industry committee considered the Commission's proposed changes to the Emission Trading Scheme for carbon dioxide on 11 September, a majority voted to include the shipping sector in emission trading from 2013.

to meet the climate stabilization recommendations of the Intergovernmental Panel on Climate Change (IPCC). FoEI recommended that the policy package include short-term and long-term measures, mandatory requirements and different types of policy instruments, including technical measures, operational measures and economic incentives. Finally, the green groups urged IMO to adopt necessary measures by July 2009.

The working group's failure to make any real progress on these tasks will present a significant challenge to delegates to IMO's upcoming October meeting in London, where these issues will again be discussed. If IMO cannot reach agreement on significant reductions of GHG emissions from shipping, then European and other countries around the world will need to act on their own to limit GHG emissions from ships travelling in their territorial waters. The issue is simply too important to allow IMO inaction to be the last word.

David Marshall
Clean Air Task Force

This had been recommended by rapporteur Lena Ek, but was not part of the Commission's proposal. The matter comes before a plenary session of Parliament this autumn.

Ships degrade air quality in coastal cities

Chemists at the University of California in San Diego have measured for the first time the impact that smoke from ships cruising at sea and generating electricity in port can have on the air quality of coastal cities.

Most of the sulphur emitted by ships burning bunker oil is released as sulphur dioxide (SO₂), a gaseous pollutant that is eventually converted to sulphate (SO₄) in the atmosphere. But some – usually less than seven per cent of all sulphur emitted by ships – is emitted as primary sulphate particles, which are particularly harmful to humans.

The scientists report that ship emissions on some days account for nearly one-half of the fine, sulphur-rich particulate matter in the air that is known to be hazardous to human health.

Source: <http://ucsdnews.ucsd.edu/newsrel/science/08-08DirtySmoke.asp>

High soot emissions

Ships emit more than twice as much soot as previously estimated, according to a new study.

Shipping releases roughly 130,000 tonnes of soot per year, or 1.7 per cent of the global total, much of it near highly populated coastlines, according to a new study by the National Oceanic and Atmospheric Administration (NOAA) and the University of Colorado.

“Commercial shipping emissions have been one of the least studied areas of all combustion emissions,” said lead author Daniel Lack of NOAA. “The two previous studies of soot emissions examined a total of three ships. We reviewed plumes from 96 different vessels.”

Emission plumes from commercial vessels in open ocean waters, channels, and ports along the southeast United States and Texas were observed during the summer of 2006.

It was found that tugboats emit nearly a gram of soot per kg of fuel burned, twice as much as any other vessel type. Because they travel within ports, tug-

boats have a disproportionate impact on air quality. Ocean-going tankers and container ships emit half a gram per kg of fuel burned when at dock and slightly less when travelling, doubling previous estimates.

A recent scientific study linked particle pollution from shipping emissions to between 60 and 70 thousand premature deaths each year, most of them along coastlines in Europe, East Asia, and South Asia (see AN 4/07). Soot makes up a quarter of that pollution, said Lack.

Soot – or black carbon – is also an important greenhouse gas. The small dark particles absorb sunlight, create haze, and affect how clouds form and make rain. If commercial shipping extends new routes through Arctic waters as they become navigable, soot emissions there could increase.

Source: www.noaanews.noaa.gov/stories2008/20080709_soot.html

Cleaner shipping fuels in California

As from 1 July 2009 ships visiting ports in California will be required to use distillate fuels – either 1.5 per cent sulphur marine gasoil (MGO) or 0.5 per cent sulphur marine diesel oil (MDO) – in their main engines and auxiliary boilers, according to new regulations approved by the California Air Resources Board (CARB) on 24 July 2008.

The new rules will apply within 24 nautical miles of California’s coast and cover some 2,000 ships that visit Californian ports annually. As from 1 January 2012, the sulphur requirements will be stiffened to 0.1 per cent.

In 2009 about 75 per cent of particulate matter (PM) will be eliminated, along with over 80 per cent of sulphur dioxide (SO₂) and six per cent of nitrogen

oxides. In 2012, diesel PM will be cut by 83 per cent (compared to uncontrolled emissions), and SO₂ by 95 per cent.

According to CARB, an estimated 3,600 premature deaths will be avoided between 2009 and 2015, and the cancer risk associated with emissions from these vessels should be reduced by over 80 per cent.

Since 1 July 2008 the Port of Los Angeles and the Port of Long Beach have been running an incentive scheme under which ships visiting the two ports can switch to MGO with 0.2 per cent sulphur or lower in their main engines and receive compensation from the port authority for the extra cost. The scheme runs until July 2009 when the new regulations enter into force.

Information: www.arb.ca.gov/newsrel/nr072408b.htm

New “Clean Shipping Index” launched

Twelve of Sweden’s biggest importers and exporters are now placing environmental demands on their shipping operators. According to the Clean Shipping Project it is the first time an environmental index has been developed to evaluate shipping companies as a whole.

The index has been designed to give ships a score based on 20 environmental factors, including marine fuel, lubricants, bilge water, ballast water, antifouling paint, refrigerants and waste.

Index points are only gained when ships exceed demands under existing laws, regulations or conventions.

By clearly showing the best operators from an environmental perspective, the index will give the “greener” operators a competitive advantage with increasingly demanding customers.

The twelve companies, including among others ABB, Ericsson, H&M, Stora Enso and Volvo Logistics, are now asking 77 of the world’s largest shipping operators to report environmental information through the Clean Shipping Index.

The Clean Shipping Project is a non-profit project driven by public authorities in western Sweden. The index can be found at the project website and is freely available for anyone to use, and non-Swedish companies are also welcome to participate in the network.

Information: www.cleanshippingproject.se

Stena Line invests in on-shore power supply

The Swedish shipping company Stena Line has decided that by 2010 almost all its vessels in Scandinavia will use power supplied from shore when at berth – an environmental commitment that is estimated to cost between eight and 10 million euro.

Using electricity generated onshore when in dock, rather than by burning oil, almost eliminates emissions of carbon, sulphur and nitrogen oxides. Stena’s 18 ships in Scandinavia spend around 32,000 hours each year in ports, and the reduction in emissions of nitrogen oxides, for example, is equivalent to the annual emissions of 35,000 cars.

Stena Line’s Scandinavian fleet comprises 18 ships which serve ports, and altogether it has 36 vessels operating between 27 ports.

Information: www.stenaline.com

Cutting subsidies can reduce GHG emissions

Scrapping fossil fuel subsidies could play an important role in cutting greenhouse gas emissions, according to a new report by the UN Environment Programme (UNEP).

The study estimated that energy subsidies, almost all for fossil fuels, totalled about US\$300 billion a year or 0.7 per cent of world GDP. Many subsidies are meant to help the poor by lowering the price of energy, but the report said they often backfired by mainly benefiting wealthier people.

“Cancelling these subsidies might reduce greenhouse gas emissions by as much as six per cent a year while contributing 0.1 per cent to global GDP,” it said.

Source: UNEP press release, 26 August 2008.

UN-backed report warns of costs of inaction

Government leaders must take urgent action to ensure that weather-related hazards, which are becoming more intense and frequent due to climate change, do not lead to a corresponding rise in disasters, according to a new report¹ commissioned by the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the NGO Care International.

The study identified India, Pakistan, Afghanistan and Indonesia as being among the global warming “hotspots,” or countries particularly vulnerable to increases in extreme drought, flooding and cyclones that are anticipated in coming decades.

¹ **Humanitarian Implications of Climate Change: Mapping Emerging Trends and Risk Hotspots.** Available for download at www.care.org.

Climate changes cause water crises

Longer dry periods, more severe flooding and reduced water quality are some of the effects of climate change on the global availability of water, according to a recent report from IPCC, the UN climate panel.

Since the 1970s the area of the Earth that is classified as very dry has more than doubled. The climate models show that by the middle of this century there will have been a sharp reduction in fresh water resources in the Mediterranean, western United States, southern Africa and northeast Brazil.

Further reading: **Climate Change and Water.** IPCC Technical Paper VI. Available at www.ipcc.ch/ipccreports/tp-climate-change-water.htm



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Coral reefs and other ecosystems are already being affected, even though the planet’s average temperature has barely risen by one degree above the pre-industrial mean. The target levels that have been discussed so far are therefore regarded as too high.

Call for tougher targets in climate negotiations

On Monday 23 June 2008, full-page advertisements were published simultaneously in the Financial Times, the International Herald Tribune, and the New York Times, carrying the headline “<350”. This figure relates to the upper limit for atmospheric carbon dioxide.

The message in the advertisements is directed towards nations involved in the negotiations leading up to and beyond the Copenhagen Climate Change Conference in December 2009.

The concentration of carbon dioxide (CO₂) in the atmosphere has long been a key indicator for climate change. Several proposals for an upper limit for CO₂ have come forward and until recently scientists estimated that the level could

reach 450 ppm without threatening life on Earth.

“We are concerned that the negotiations are heading in the wrong direction,” said Professor Johan Rockström, Executive Director of the Stockholm Environmental Institute.

“The CO₂ threshold under discussion is too high. Today, the scientific community has a pretty clear picture of how much CO₂ our atmosphere can sustain, and there is growing evidence that 350 ppm should be our target, rather than 450 ppm.”

Further information: Stockholm Environmental Institute, www.sei.org. See also an article on this subject in Acid News 2/08, p. 20.

Commission consults on future climate targets

What should be the EU approach to a global climate change agreement beyond 2012? The Commission is inviting stakeholders and the general public to put forward their views on a number of critical issues, such as mid-term emission reduction targets for developed countries and emission reduction measures for developing countries, adaptation to climate change, technology cooperation and finance.

The consultation period runs until 10 October 2008. The online questionnaires are available at <http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=climatepost2012>

New climate package approved in Germany

The German government has adopted a second climate package made up of measures intended to help the country achieve its target to reduce greenhouse gas emissions by 40 per cent between 1990 and 2020. Germany has cut emissions by 20 per cent over the period 1990 to 2007.

Climate package number two builds on the programme of measures that was presented in August 2007. The emphasis is on measures to improve energy efficiency in the transport and construction sector:

- ▶ A rise in tolls for heavy transport vehicles from an average of 13.5 to 16.2 euro cents per kilometre. This toll will be graduated according to truck size and emission level. The most polluting trucks would pay tolls of 28 cents per km and the cleanest trucks 14 cents.
- ▶ Go-ahead for an 850-kilometre underground grid to transport offshore wind energy to the south of the country.
- ▶ A requirement for new and significantly renovated buildings to use 30 per cent less energy from 2009. New rules for the replacement of central heating boilers, new standards for windows and

the insulation of building facades.

- ▶ At least 70 per cent of heating costs must be linked to individual consumption. Until now, heating costs in multiple family houses or apartment buildings were tied equally to consumption and apartment size.

Due to differences within the ruling coalition, however, plans to link car taxes to carbon emissions were not included in the package and instead delayed until 2010.

According to federal environment minister Sigmar Gabriel the package means lower emissions, lower energy costs for citizens and the creation of more than 500,000 additional jobs by 2020.

The environmental group Bund said the government had failed to achieve its aim of being an international climate policy leader. Only about half of new climate policy proposals launched in 2007 had gone forward, and many had been watered down, it said.

Sources: German environment ministry press release 18 June 2008, ENDS Europe Daily, 18 June 2008.

Great Britain cannot meet climate target

The British government has now admitted that it will miss by a large margin its own target of cutting carbon dioxide (CO₂) emissions by 20 per cent from 1990 levels by 2010. New projections from the Department of the Environment (DEFRA) put CO₂ emissions in 2010 at only 15.5 per cent below 1990 levels.

The situation is further complicated by the fact that a large proportion of

emissions has moved beyond British borders. Taking imports, exports and international transport into account, overall CO₂ emissions associated with UK consumption of goods and services increased by nearly 115 million tonnes of CO₂, or 18 per cent, between 1992 and 2004. Over the same period emissions within the UK fell by five per cent.

Source: www.defra.gov.uk

Recent publications

Costs of Inaction on Key Environmental Challenges

The costs of not responding to key environmental policy challenges, such as climate change and air pollution, can be considerable, in some cases representing a significant burden on OECD economies. This report provides some introductory perspectives on the costs of inaction and discusses some of the future problems likely to be encountered in this highly complex area.

175 pp. €28.00. Published by OECD, www.oecd.org/bookshop. ISBN 9789264045828.

Biofuel Support Policies: An Economic Assessment

Governments in many countries actively promote the production and use of alternative transport fuels made from agricultural commodities.

This report, jointly produced by the OECD and the IEA, analyzes the implications of this support from various perspectives. It shows that the high level of policy support contributes little to reduced greenhouse-gas emissions and other policy objectives, while it adds to a range of factors that raise international prices for food commodities. It concludes that there are alternatives to current support policies for biofuels that would more effectively allow governments to achieve their objectives.

146 pp. €21.00. Published by OECD, www.oecd.org/bookshop. ISBN: 9789264050112.

Oil Dependence: Is Transport Running Out of Affordable Fuel?

Oil consumption is increasingly concentrated in transport and relatively limited fluctuations in transport demand can have increasingly significant effects on oil prices.

This Round Table assesses the policy instruments available to address oil security and climate change and examines their interaction with measures to manage congestion and mitigate local air pollution. A number of incompatibilities and trade-offs are identified, underlining the importance of integrated policy making.

ITF Round Tables No. 139. 210 pp. €75.00. Published by OECD, www.oecd.org/bookshop. ISBN: 9789282101216.

Energy around the Baltic Sea

Material for schoolchildren in the countries around the Baltic Sea. The material is available in English, Estonian, Latvian, Lithuanian, Polish, Russian and Swedish.

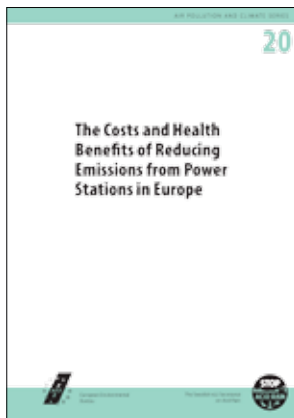
Available from the Swedish Energy Agency, www.swedishenergyagency.se

Recent publications from the Secretariat



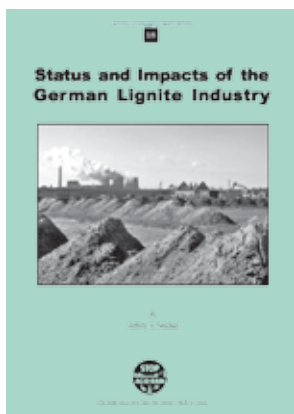
Air Pollution from Ships

Emissions from shipping contribute significantly to the concentrations and fallout of harmful air pollutants in Europe. This eight-page brochure describes emissions from shipping, the technology that can be used to reduce them and the current political status. It contains a series of recommended measures that ought to be taken at EU level and have been formulated in collaboration between the Secretariat and five other organizations: Seas At Risk, Bellona Foundation, North Sea Foundation, European Environmental Bureau (EEB), and European Federation for Transport and Environment (T&E).



The Costs and Health Benefits of Reducing Emissions from Power Stations in Europe

According to this study, application of advanced emission control technologies to the 100 most polluting plants in the EU27 would cut total EU27 emissions of SO₂ by approximately 40 per cent and emissions of NO_x by 10 per cent. The average benefit-to-cost ratio for measures at the 100 most polluting plants in Europe is 3.4, i.e. the estimated health benefits are 3.4 times bigger than the estimated emission control costs. By Mark Barrett, UCL, and Mike Holland, EMRC, April 2008.



Status and Impacts of the German Lignite Industry

This report includes a historical treatment of German lignite use and discusses many of the hidden costs involved: excessive greenhouse gas emissions, depletion of groundwater resources, and destruction of hundreds of villages. Special consideration is paid to eastern Germany, where lignite accounts for up to 85 per cent of electrical power consumption in some regions. By Jeffrey H. Michel, *updated version March 2008*.

How to order

Single copies of the above mentioned material can be obtained from the Secretariat (free of charge within Europe). Please call for quotation if more copies are required. Reports can also be downloaded in pdf format from www.airclim.org

Change of name

Since 1 October the Swedish NGO Secretariat on Acid Rain has a new name.

From now on we are the **Air Pollution & Climate Secretariat**

Please note our new web address, www.airclim.org, and new mail addresses: info, christer.agren, reinhold.pape, acidnews; all followed by @airclim.org

Coming events

For the latest news and direct links, please visit www.acidrain.org

IMO Marine Environment Protection Committee. London 6-10 October. *Information:* www.imo.org

Energy Investments and Trade Opportunities. Athens, Greece, 8-9 October. *Information:* www.kepa.uoa.gr/PROMITHEAS2_Conference.htm

9th International Conference on Walking. Barcelona, Spain, 8-10 October. *Information:* www.barcelonawalk21.com

EU Transport, Telecommunications and Energy Council. 9-10 October.

EU Environment Council. Luxembourg, 21 October.

2nd Annual Conference Reducing Air Pollution and CO₂ Emissions from Shipping and Ports. London, 21 October. *Info:* www.thewaterfront.co.uk

ICS International Shipping Conference 2008. London, UK, 23 October. *Information:* www.marisecon.org/icsconference

3rd Annual BioFuels 2008. Berlin, Germany, 28-30 October. *Information:* www.wraconferences.com

Climate and the Oceans. Brussels, Belgium, 5 November. *Information:* www.seas-at-risk.org

How to fight air pollution and climate change effectively together in Europe? Strasbourg, 6-7 November. *Information:* EFCA, www.efca.net

CIVITAS Forum 2008: "Cities and Mobility: Change is possible". Bologna, Italy, 9-11 November. *Information:* www.civitas-initiative.org

2008 EU Presidency Renewable Energy Policy Forum. Paris, 17-22 November. *Info:* www.erec.org

UN Climate Change Conference. Poznań, Poland, 1-12 December. *Information:* www.unfccc.int

EU Environment Council. 4 December.

EU Transport, Telecommunications and Energy Council. 8-9 December.

CLRTAP Executive Body for the Convention. Geneva, Switzerland, 15-19 December. *Information:* www.unece.org/env/lrtap

Airborne Particles: Origins, composition and effects. London, UK, 16-17 December. *Information:* www.rsc-aamg.org

CEPS 4th Annual European Energy Policy Conference 2009. Brussels, 20-21 January 2009. *Information:* www.euenergypolicy.com

World Sustainable Energy Days 2009. Wels, Austria, 25-27 February 2009. *Information:* O.Ö. Energiesparverband, www.wsed.at

Beyond Kyoto: Addressing the Challenges of Climate Change – Science meets Industry, Policy and Public. Aarhus, Denmark, 5-7 March 2009. *Information:* Aarhus University, <http://klima.au.dk>

Climate Change: Global Risks, Challenges and Decisions. Copenhagen, Denmark, 10-12 March 2009. *Information:* <http://climatecongress.ku.dk>