

# AIR QUALITY

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## From coal to cars, EU states fail to combat air pollution

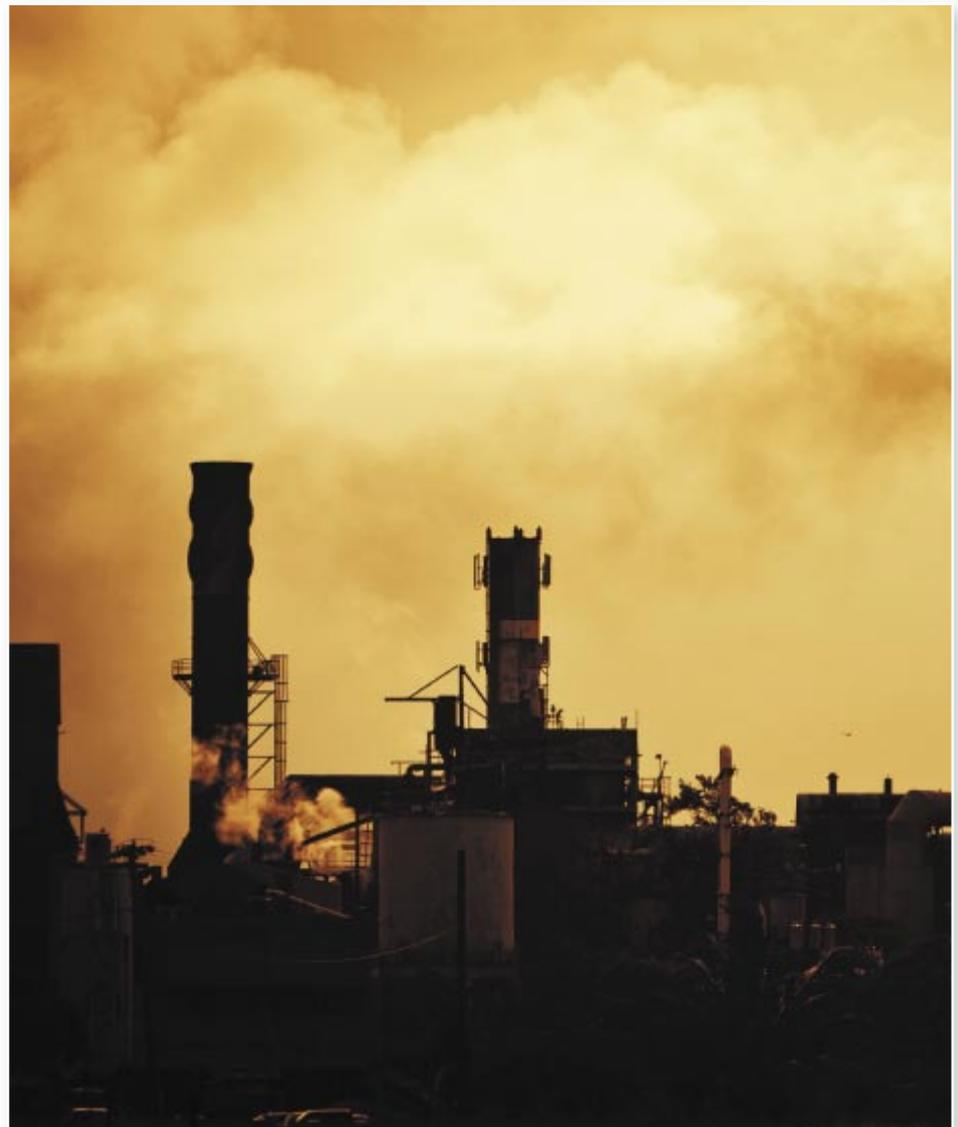
Economic heavyweights France and Germany continue to violate limits of one of Europe's most common urban pollutants, nitrogen oxides, despite their legal obligations to clean up the air.

At the same time, France, Poland, Romania and the United Kingdom have sought to exempt dozens of coal-fired energy stations from the EU's pollution regulations for large-combustion plants, allowing the heavy polluters to continue operating at least until the end of 2015.

Health and environmental groups say such examples of timid regulation and uneven enforcement of laws undermine efforts to cut some of Europe's most pernicious emissions, including nitrogen oxides, or NO<sub>x</sub>, which affect local as well as trans-European air quality.

Spotty compliance with the rules comes despite a generation of EU efforts to reduce levels of NO<sub>x</sub>, sulphur dioxide (SO<sub>2</sub>), mercury and carbon emissions in road transport, industry, energy production, aviation and shipping.

Reports released ahead of the EU's Green Week, which runs through 7 June,



have exposed widespread breaches of pollution laws and their costly effects on healthcare and human lifespans, with some studies saying that bad air causes as many as 500,000 premature deaths per year in the EU – 0.1% of the bloc's population.

Julia Huscher, a campaigner for the Health and Environment Alliance

in Brussels, calls NO<sub>x</sub> “one of the most health damaging pollutants that we experience today in Europe.”

“It is also important to take the international experiences into account,” said Huscher, an author of a new report on the environmental impact of the EU's

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coal-fired power plants, which provide 20% of the bloc's electricity, slightly less than nuclear.

The report says big polluters have used loopholes to escape compliance while EU policymakers have enacted standards for heavy polluters such as coal-fired power plants that are less rigid than laws in China and the United States.

"High standards for power plants have been introduced in the US and in China, and they should really be the standards that are taken into account for the EU," Huscher told EurActiv, adding that "international collaboration and cooperation would be very welcome."

HEAL's report estimates that the emissions from Europe's coal-fired power plants contribute to 18,200 premature deaths each year and cost up to €42.8 billion in healthcare expenses a year from respiratory and cardiovascular diseases.

### Poland: An 'interesting case'

Campaigners and lawyers who have gone to court to seek enforcement of air quality laws see a host of failures in Europe, including protections for coal plants, the failure to enforce laws, and business pressure against tougher regulations at a time of economic uncertainty.

Poland, for example, has sought exemptions for its older coal-fired power plants under the two-year-old Industrial Emissions Directive, or IED, even though European Commission documents show that Poland had failed to meet the 1 January 2013 deadline to fully transpose the directive into national law.

"Poland is an interesting case here because they are applying a derogation for a transitional national plan under the IED, and they haven't even implemented it yet under national law," said Huscher, citing the country's requests to extend the life of its older coal-fired electricity plants.

A Polish government official in Brussels said singling out his country was unfair. "You cannot change history overnight," he said on condition of anonymity, referring to infrastructure from the country's communist era that is still in use.

"We inherited [electricity plants] that must be modernised or replaced, and we are working with our European partners to do just that and it will take time. But telling Poland that it cannot burn coal for electricity would be like telling the French they have to stop using nuclear. Can you imagine? Paris would be dark."

### Other emissions sources

Poland is not alone and energy production is not the only culprit.

France and Germany are among the seven EU states that violate the limits set under the EU's National Emission Ceilings Directive, the 2001 law that obliges EU states to cut NO<sub>x</sub> pollution along with sulphur dioxide, ammonia and other emissions that pollute the air and ground.

"The road transport sector is one of the main contributory factors behind the large number of NO<sub>x</sub> exceedances, as reductions of NO<sub>x</sub> from this sector over the last two decades have not been as large as originally anticipated," the European Environment Agency said in its National Emissions Control status report.

"This is partly because the sector has grown more than expected and partly because of the increased penetration of diesel vehicles that have higher NO<sub>x</sub> emissions than petrol-fuelled vehicles and for which vehicle emission standards have not always delivered the anticipated level of reductions," the EEA report.

### Emissions decline, concern remains

Technological advances using advanced selective catalytic reduction

(SCR) of NO<sub>x</sub> in vehicles, ships and industrial smokestacks are now required or are being phased in under EU and international standards as a part of efforts to cut ozone and other pollution. The technology can cut NO<sub>x</sub> emissions by as much as 90%.

Overall, NO<sub>x</sub> emissions have fallen since the 1990s, though at a much slower pace than other leading pollutants. NO<sub>x</sub> is part of the cocktail of gases and fine particles that create ozone when exposed to solar radiation. Besides its long-term impact on human health, ozone mixes with rain and is carried through the air, affecting areas well beyond its source of emission.

In a legal challenge brought by environmentalists, lawyers for Britain's environment department have acknowledged that indigenous emissions also contribute to pollution in other EU states, while blaming Ireland and countries across the Channel – namely Belgium, France, Germany, and the Netherlands – for being the main culprits in sulphur and nitrogen deposits in the UK.

But Alan Andrews, a lawyer for the British environmental group ClientEarth, doesn't buy such arguments. ClientEarth has waged a two-year court battle to force the British government to meet its obligations to reduce NO<sub>x</sub> pollutants under EU air quality laws.

Britain's argument "rings rather hollow," Andrews told EurActiv in a telephone interview, "especially when you see that the UK government is lobbying to weaken air pollution limits through the [EU] Year of Air review, it's not taking a leadership position in the process".

"If the problem is mainly transboundary and they can't do anything to stop, then they need to engage in the EU process and make sure that delivers a robust and effective system which governs air pollution from all member states and we're not seeing any signs of that."

# Trade-offs: What's good for the climate may not be good for the air

From wood stoves to diesel engines, the European Union has promoted fossil fuel alternatives and technology to help meet its obligations to reduce carbon dioxide emissions blamed for climate change. But these are also contribute to dirty air, leaving regulators to figure out some legislative repair work.

Some efforts appear to be paying off. In a new report, the European Environment Agency (EEA) says the EU's greenhouse gas emissions fell 3.3% in 2011 and were 18.4% below 1990 levels. That would put the EU well on its way of achieving a 20% reduction from 1990 levels by the end of this decade.

The Eurostat statistical agency, meanwhile, reported that carbon dioxide (CO<sub>2</sub>) emissions fell 2.1% in 2012 after declining 4.1% a year earlier.

But numbers on carbon emissions aren't necessarily good news for air quality – the focus of the EU's Green Week this week.

## A 'major' environmental problem

The EU's achievements mean little while the rest of the world still pumps out record levels of carbon, and Europe's methods for cutting greenhouse gases come with side effects, including higher emissions of nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), ground-level ozone (O<sub>3</sub>), soot and sulphur that have both short- and long-term effects on



*Wood may be a renewable source of energy, but burning it has implications for air quality.*

human health.

"Air pollution remains one of the major environmental problems in Europe, affecting health and well-being of European citizens," the EEA says in a new report on the impact of pollution on human health.

Air pollution was ranked as one of the top-10 risk factors for health globally, according to a global review of the burden of diseases published in December last year by the British medical journal *The Lancet*.

According to the study, over 430,000 premature deaths and over 7 million years of healthy life were lost across Europe in 2010 from exposure to fine particulate matter (PM<sub>2.5</sub>), with 166,000 premature deaths in Western Europe, 95,000 deaths in Central Europe, and 169,000 deaths in Eastern Europe, which includes Russia.

"Everyday exposure to outside air pollution in Europe is now recognised as one of the big factors affecting our

health," said Anne Stauffer, deputy director of Health and Environment Alliance (HEAL). "For the first time, the Global Burden of Disease assessment has ranked an environmental factor among the more widely discussed 'life-style' risk factors, such as tobacco and alcohol."

## Trade offs

Markus Amann, an expert on air pollution and greenhouse gases, said European policies show there are trade-offs in reducing greenhouse gases. "Ill-designed climate policies can result in higher particulate matter emissions," he told a recent air quality conference in Brussels.

Amann, who works at the International Institute for Applied Systems Analysis in Austria, mentioned support for diesel engines as a case in point.

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While diesel engines were promoted in Europe for their lower carbon emissions, they are blamed for stubbornly high levels of gases like nitrogen oxides (NO<sub>x</sub>) that contribute to ozone and acid rain.

Technological advances using advanced selective catalytic reduction (SCR) of NO<sub>x</sub> in vehicles, industrial smokestacks and ships are now required or are being phased in under EU and international standards to help deal with the problem. The technology can cut NO<sub>x</sub> emissions by as much as 90%, yet because older vehicles and some industrial plants are exempt, it could be years before the benefits of these technologies are realised.

Another example are biofuels and biomass, which have been promoted through European policies, including the Renewable Energy Directive, as part of the bloc's carbon-cutting efforts. Yet their impact is far from benign.

Spurred by a combination of concerns over high food prices and doubts about the climate benefits of plant-based vehicle fuels, the European Commission last October made a U-turn on its policies that set targets to encourage the use of ethanol and biodiesel.

### Where there's smoke, there's pollution

Mark Lawrence, the scientific director of the Institute for Advanced Sustainability Studies (IASS) in the German city of Potsdam, says biomass is considered green and advertised as such.

"If you think about the grey, brown and black smoke plumes above chimneys, you will see that this is not so green," Lawrence told the science conference co-sponsored by his institute.

"But probably nobody I've talked to in the public is aware of the pollution that comes out of their chimneys. They are aware of the smoke that comes out, but they think it's something that is just

an irritant to their neighbours."

Wood stoves are considered climate friendly because they emit relatively little carbon, but they contribute to air quality problems because they produce black carbon – an ingredient of soot – and NO<sub>x</sub>, which health officials say contribute to respiratory and cardiovascular problems, and environmental campaigners say contribute to ozone and affects plants and wildlife when they mix with rain to produce acidic deposits.

Lawrence was among the speakers at the conference on air quality and climate change, held on 21 May in Brussels, who pointed to the often divergent policies where efforts to combat climate change without considering the effect on air quality.

"If the policies are enforced, I think they are adequate to meet the limit values. With the human health concerns, science tells us that there are no thresholds, so they benefit from reducing it to very low concentrations."

Scandinavian countries in general have been leaders in reducing CO<sub>2</sub> emissions, and in using biomass for heating and energy, but they also exceed the Air Quality Directive's annual mean value of NO<sub>x</sub>, which is 30 micrograms per cubic metre.

### NOx emissions decline

Overall, NO<sub>x</sub> emissions have fallen since the 1990s, though at a much slower pace than other leading pollutants. When exposed to solar radiation, NO<sub>x</sub> reacts with other chemicals and gases to form ozone, which is harmful to humans and ecosystems and acts as a greenhouse gas. It also mixes with rain and is carried through the air, affecting areas well beyond its source of emission.

Health and environmental experts point to another culprit in NO<sub>x</sub> and soot pollution: biomass, or the use of wood and plant waste for home and water heating. Figures show that about half of

the EU's renewable energy targets are set to be achieved through the use of biomass.

Wood stoves, which are billed as a renewable energy and have grown in popularity across Scandinavia and in Central Europe, produce soot and high levels of NO<sub>x</sub>, black carbon – fine particulates that create soot – that are culprits in ground-level pollution and acid rain. Black carbon also contributes to climate change.

Experts at the Brussels conference said more effort needs to be put into coordinating climate and pollution policies to avoid the policies that address one problem but may create another.

### IEA sees stalled progress

But Europe's climate and pollution efforts, no matter how divergent, still put it ahead of other regions of the globe. The International Energy Agency reported recently that CO<sub>2</sub> emissions have changed little since 1990, despite regulatory efforts and the rise in renewable energy production.

"The drive to clean up the world's energy system has stalled," IEA Executive Director Maria van der Hoeven said when the Paris-based organisation released its clean energy monitoring report. "Despite much talk by world leaders, and despite a boom in renewable energy over the last decade, the average unit of energy produced today is basically as dirty as it was 20 years ago."

"As world temperatures creep higher due to ever-increasing emissions of greenhouse gases like carbon dioxide – two thirds of which come from the energy sector – the overall lack of progress should serve as a wake-up call," van der Hoeven said.

"We cannot afford another 20 years of listlessness. We need a rapid expansion in low-carbon energy technologies if we are to avoid a potentially catastrophic warming of the planet, but we must also accelerate the shift away from dirtier fossil fuels."

# British survey exposes ignorance of air quality challenge

When a London anti-pollution organisation polled British lawmakers about the greatest risks to public health, most MPs were wrong, ranking traffic accidents or heavy drinking ahead of air pollution as a leading killer of Britons.

“The vast majority of over 100 members of Parliament responding to our survey displayed a shocking level of ignorance about the health impact of air pollution,” said Simon Birkett, head of Clean Air in London, an advocacy group.

“In particular, over two-thirds of Conservative MPs responding said air pollution has less impact than road traffic accidents,” he said on releasing the survey results on 23 May.

Figures crunched by the London-based group show that the cocktail of fine particle emissions comprising gases such as nitrogen oxide (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) kill some 29,000 people in the United Kingdom each year, while 1,901 people died in traffic crashes in 2011. Only smoking kills more Britons than bad air, government health figures show, an average of 80,000 per year, with as many as 22,000 people dying of alcohol-related causes.

## Dirty air across Europe

Environmental and health groups say London is by no means an isolated case. Some of the EU's deadliest air can be found in Bulgaria and Romania, yet few urban areas escape unhealthy pollutants, according to the European Environment

Agency (EEA).

Residents of most large cities in the European Union are exposed to stubbornly high levels of noxious pollutants that in some cases exceed international health standards, including fine particulates produced from emissions of NO<sub>x</sub>, SO<sub>2</sub>, ammonia (NH<sub>3</sub>) and organic compounds.

Transport, along with energy production and agriculture, are leading polluters, EEA figures show. Diesel engines, though they produce lower levels of carbon emissions, produce high NO<sub>x</sub> emissions that contribute to unhealthy ground-level ozone and smog – although newer vehicles are required to be outfitted with filtering technology.

Britain, like most EU countries, has a spotty record at enforcing the European Commission's 2008 Air Quality Directive and other laws that are intended to reduce pollutants. The European Commission has taken action against some 20 countries – including the UK – for failing to improve air quality.

But health and environmental groups argue that the Air Quality Directive, the EU's main pollution-fighting law, needs more teeth to punish states for inaction.

## European court to hear clean-air case

In a victory for clean-air activists, the Supreme Court, on 1 May ruled in favour of complaint brought by environmental lawyers who argued that the British government was in breach of the EU rules on nitrogen dioxide (NO<sub>2</sub>) emissions. NO<sub>2</sub> is the part of the NO<sub>x</sub> family of highly reactive gases that is most harmful to human health.

The case by the environmental law group ClientEarth now heads to the European Court of Justice at Luxembourg.

ClientEarth contends that the government has done little since the complaint was filed two years ago to address Britain's pollution comply with Article 22 of the Air Quality Directive,

which requires countries to file air quality plans to the European Commission by 2015. London has sought a 10-year extension.

“If anything their attitude has got worse,” ClientEarth lawyer Alan Andrews told EurActiv in a telephone interview. “The only really new policy that the government have seems to be to lobby to weaken the nitrogen dioxide limits through the EU Year of Air process.”

“In terms actual policies on the ground to tackle air pollution, I can't see that any progress has been made. I'm sure that the government's aim is to do nothing and hope that they can water down air pollution laws.”

Lawyers for Defra, the UK's environment department, acknowledged in court that the government has failed to meet its EU obligations. But they countered that they asked the European Commission for an extension to deal with pollution in London and 15 other regions mentioned in the ClientEarth case.

## Activists 'waking up'

The case marks a rare example of a civic organisation challenging a national government for alleged failure to comply with EU law, and Andrews said the ClientEarth complaint and a few similar cases in other EU states could set an example for legal action.

“What we are seeing is NGOs waking up to the fact that they can use EU litigation to go to their national courts to enforce clean air laws, and this is very exciting,” he said.

In part, authorities are hoping new emission standards on vehicles will address some of the urban emissions problems. The rules are designed to gradually reduce harmful pollutants, including NO<sub>x</sub> emissions from diesel engines.

The Euro 5 and 6 vehicle-emissions

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standards cover carbon monoxide (CO), NO<sub>x</sub> and particulate matter produced by diesel exhaust and also set lower CO thresholds for emissions from petrol and natural gas.

NO<sub>x</sub> emissions standards set under Euro 5 in 2009 were tightened by 60% from those introduced under Euro 3 in 2000, according to the non-profit International Council on Clean Transportation, and Euro 6 imposes further reductions for all vehicles by 1 September 2015.

Still, health experts are concerned about the years it could take for the standards to reach their potential since the standards apply only to new vehicles. Some studies say bad air causes nearly 500,000 premature deaths per year in the EU – 0.1% of the bloc's population – while the EEA contends that shifting to electric vehicles and other anti-pollution measures could cut the toll to 230,000 by 2020.

Besides causing respiratory and cardiovascular complications, high nitrogen and ozone levels damage vegetation, soil, water and buildings. Pollution reduces every European's life expectancy by 8.5 months, according to the EEA.

### An Olympic moment

London's notorious air pollution – blamed on dense, diesel-powered congestion – was a major concern for the city's image-makers and organisers of the 2012 Olympic Games. Residents and commuters were urged to switch to public transport, walking and cycling to help tourists and athletes breathe a little easier.

Defra, Britain's environment department, has acknowledged that indigenous emissions also contribute to pollution in other EU states, while blaming Ireland and countries across the Channel – namely Belgium, France, Germany, and the Netherlands – for

being the main culprits in sulphur and nitrogen deposition in the UK.

But Simon Birkett, the founder of the Clean Air in London campaign group who last year used the Olympics to press for changes to air quality, says his group's survey shows there is too little awareness about the impact of pollution on people.

"The most valuable thing [from this survey] is that a lot of people will be quite shocked when they see the levels of ignorance among MPs, who are really quite sophisticated people. So this is probably a pretty good snapshot of how the general society ranks these things."

"We've been trying to raise the profile of this issue, including through two [parliamentary] select committee enquiries, and yet we have this astonishingly high level of ignorance."

He said he hoped the survey, conducted by Politics Home in April, and a new smartphone air quality app released by Clean Air in London would lead to pressure for change.



*During the 2012 Olympics, Londoners were urged to walk, cycle and take public transport to cut emissions.  
Photo of the London Eye by London Olympic Committee*

# Ukrainian ecologists call on EU not to fund new coal plants

A Ukrainian application for European funding of two new coal plants would cause massive health and environmental damage to local people from nitrogen oxide emissions and other related pollution effects, local environmental campaigners have told EurActiv.



*A Ukrainian miner in the coal-rich eastern Donbas region.  
Reuters photo by Gleb Garanich*

Ukraine is asking the Energy Community – an EU-led partnership with Balkan and Eastern European states – to select a new 800MW coal plant at Burshtyn and three 220MW units at Dobrovir as ‘Projects of Energy Community Interest’.

This would prioritise the projects, and enable a fast-tracking process that typically ends with funding from European development banks and private investors.

Oleg Savitsky, a spokesman for the National Ecological Centre of Ukraine (NECU), said the health effects for the local population of new plant builds in the coal-rich region would be disastrous.

“Burshtyn is already the most polluted city in Ukraine,” he said in a telephone interview from Kyiv. “We have very poor [regulatory] standards for emissions of hazardous pollutants.”

If the new plants were built, “local people would be really exposed to impacts from these coal plants, such as respiratory diseases, heart diseases and cancers,” he added, because old coal units would not necessarily be closed when new ones were opened.

The 65 million tonnes or so of coal mined every year in Ukraine is of

notoriously low quality; high in sulphur and ash. It also contains lead, mercury, cadmium, and radioactive substances such as thallium in hazardous quantities.

Uranium and thorium also exist in Ukrainian coal – below hazardous levels – but Russian scientists such as Leonid Kizilstein contend that they can produce significant localised radioactive pollution.

Olena Pavlenko, director of DiXi Group, a Ukrainian think tank specialising in energy issues, told EurActiv that “the eastern part of Ukraine is characterised by ecological danger or even catastrophe” because of heavy industrial production.

Following protests in the region, politicians had begun campaigning on the issue, she said.

## Energy independence

Ukraine is following a strategy to become a regional energy hub, and plans to increase its coal production which currently makes up about a third of its electricity supply.

Pavlenko said this would give Ukraine greater energy independence from its gas-rich Russian neighbour, but would need to be carefully implemented

with modern technologies.

“If these coal plants can reduce the air pollution maybe it will be good but the question is really whether these monies will be used properly and whether they will be enough to really reduce air pollution,” she said.

Figures in the Energy Community application request indicate that the Dobrovir plant would cost €1 billion and the Burshtyn plant €1.35 billion. If successful, both would be commissioned in 2019.

## 18,200 premature deaths a year

According to a recent Health and Environmental Alliance report, coal-fired emissions of nitrogen oxide (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) are annually responsible for 18,200 premature deaths in Europe, and 8,500 new cases of chronic bronchitis.

NO<sub>x</sub> contributes to the formation of ozone and, along with fine particulate matter, is considered one of the greatest threats to public health.

But other hazardous substances - heavy metals such as mercury and

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persistent organic pollutants such as dioxins and polycyclic aromatic chemicals – also pose grave health risks.

One study conducted in the Ukrainian city of Donetsk found cadmium levels of 500 grams per tonne, which is 125 times the recommended exposure limit for soils.

The same paper reported an average content of 76-90 grams of lead per tonne in coal samples taken from the eastern Donbas region.

### Effect on neighbouring

Emissions can travel widely and the new plants could pollute neighbouring EU countries. The energy they generate is also destined for abroad.

DTEK, the Ukrainian private energy monopoly which made the Energy Community application, has also requested prioritisation of transmission line projects from the proposed coal plants into EU states, such as Poland and Hungary.

Even though EU businesses and households would benefit from this coal-based energy, the resulting greenhouse gas emissions would be considered Ukrainian, under current carbon accounting rules

As such, environmentalists say they could make it much more difficult for Ukraine to ever gain accession to the EU, which is committed to decarbonising its economy by 2050.

“Because Ukraine’s energy strategy now presumes an increase in coal consumption in the energy sector from 86 million tonnes now to 105 million tonnes in 2030, it has a very poor chance of being accepted as an accession candidate for the EU,” Savitsky said.

Under the terms of the Energy Community deal, Kyiv has an obligation to implement measures contained in the EU’s 2001 Industrial Emissions Directive, but is not expected to do so for many years.

## Denmark’s new NO<sub>x</sub> tax keeps politicians nervous

Denmark’s tax on nitrogen oxide emissions, which was raised during the financial crisis, could be scrapped if it’s proven to have a negative impact on jobs and competitiveness.



The centre-left Danish government, which was formed in October 2011, decided at the end of that year to raise the tax from 5 to 25 Danish crowns (from €0.7 to 3.4) per kilo of nitrogen oxide NO<sub>x</sub> emissions. The tax was introduced on 1 July 2012.

The increased NO<sub>x</sub> tax was adopted after long debates in the Danish parliament where opposition parties warned it would be expensive not only for companies emitting NO<sub>x</sub>, but for all businesses.

“This increase will reduce our competitiveness and cost thousands of Danish jobs,” argued Torsten Schak Pedersen, spokesperson on tax issues for the Liberals’ opposition party.

Another liberal politician, Kim Andersen, worried that an increased tax would affect companies hard-hit by the

global financial and economic crisis.

“This is like dealing with a sick guy by kicking him in the stomach and hitting him in the head with a hammer so that he can really feel it,” he said told the magazine Ingeniøren.

Last October, the government reversed policies on another controversial tax, having abolished a levy on fatty foods on the grounds that it was hurting the economy and encouraging people to shop in neighbouring Germany. The government also scrapped its plans to introduce a sugar tax targeting sweets and drinks.

Opposition parties worried that the fivefold tax increase wouldn’t reduce the amount of NO<sub>x</sub> pollution in Denmark.

“Figures have shown that 90% of the NO<sub>x</sub> pollution in Denmark comes from other countries. Besides, the government only wants to put the new tax on stationary installations. Then only half of the NO<sub>x</sub> pollution in Denmark will have a tax,” said Ole Birk Olsen, tax spokesperson for the Liberal Alliance party.

### Experience and time

The government’s initial plan was to apply the new NO<sub>x</sub> tax as of 1 January 2012, but it later decided to postpone it by six months, arguing it would give companies time to invest in technologies to reduce their emissions.

Thomas Jensen, tax spokesperson

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from one of the ruling coalition parties, the Social Democrats, argued that the tax would not only reduce pollution but also finance some government initiatives to boost the Danish economy during the crisis.

“We have heard about doomsday and wrong calculations from the opposition parties about what the tax would cost. But the new tax will ensure financing and at the same time reduce NO<sub>x</sub> emission. The companies which will pay the most are also the companies with the most emissions,” he stated.

Jensen referred to previous experiences from Denmark and abroad, which showed that a higher tax would reduce both NO<sub>x</sub> and other kinds of polluting gases.

Jonas Dahl, tax spokesperson from the Socialist People's party, mentioned that money raised by the tax, around 600 million Danish crowns per year (€80.5 million), would ring-fence the jobs opposition parties were afraid would be lost.

“The NO<sub>x</sub> tax is going to kickstart the

Danish economy and get us up of the hole we have been in,” Dahl stressed.

**Special sectors**

The Danish NO<sub>x</sub> tax hits power plants and energy-intensive industries, such as the Aalborg Portland cement plant which threatened to move its headquarters outside of Denmark. The right-wing think tank Concito criticised the tax for being ‘environmentally wrong’ as it does not include transport and wood stoves, which also emit NO<sub>x</sub>.

Growers who use oil for heating have been especially hard hit by the NO<sub>x</sub> tax. Leif Marienlund from the Danish Horticulturists organisation said it distorts competition for Danish producers and hopes the tax will eventually be repealed.

“The NO<sub>x</sub> tax is hitting our members disproportionately. Not just up against our competitors in the Netherlands and Sweden, but also within Denmark,” he said according to the newspaper Berlingske Tidende.

“The tax hits especially horticulturists

with CHP engines based on gas and those using oil in the peripheral areas of the country and that is around 30% of our members.”

When the Danish government started discussions on a new job plan in January 2013, Socialist Environment Minister Ida Auken mentioned that she would be ready to look into the NO<sub>x</sub> tax and change it if the tax did not produce the right effects.

“NO<sub>x</sub> is a problem, but the question is whether we are getting enough out of this tax as it is. The tax can be put together in many ways and I'm willing to look into this,” she told the online site Altinget.

“Taxes have to be put in place the right way. Green taxes must have the primary goal of benefiting the environment. There are some taxes that I would like to look at without prejudice. Are they working so that they benefit the environment or are they just benefiting our budget? If they are only helping the budget then I won't stand in the way of changing them.”

The Danish NO<sub>x</sub> tax was eventually not affected by the government's new job plan.

## Auto pollution exceeds manufacturers' claims, report says

The gap has widened between the fuel-efficiency that carmakers declare for their models and the reality for drivers, with luxury German vehicles showing the biggest divergence, a study has found.

The research by the non-profit International Council on Clean

Transportation (ICCT) found “real-world” carbon emissions for new cars based on fuel consumption are about 25% higher on average than carmakers say, compared with 10% a decade ago.

The findings will add to pressure for the reform of EU vehicle testing procedures to ensure that advertised fuel-efficiency values better reflect normal use. That in turn could make it harder for manufacturers to meet a new EU carbon dioxide (CO<sub>2</sub>) vehicle emissions target proposed for 2020.

BMW reported emissions figures for its vehicles on average 30% lower than those found in actual use, said the report, published on 28 March.

BMW was not immediately available to comment on the findings reported by the ICCT, which aims to improve efficiency in transportation to benefit public health and mitigate climate change.

Volkswagen AG's luxury unit Audi had the second widest disparity, with reported emissions some 28% below actual use, while Mercedes showed a gap of 26%.

Figures for emissions from Toyota vehicles were found to be about 15% less than in real use and Renault and PSA Peugeot Citroen's published data was about 16% lower than for vehicles on the road.

**Costlier to consumer**

“This means that the actual fuel consumption experienced by the average driver is typically 25% higher than what is printed on the sales sticker,” Peter Mock, managing director of ICCT Europe, said.

That difference in fuel use costs

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drivers on average an extra €300 per year, said the report, which was based on data from nearly half a million private and company vehicles across Europe.

Previous research has shown how carmakers have perfected the art of lowering fuel use and thus emissions in laboratory tests, through measures such as using tyres with extra traction or unrealistically smooth driving surfaces.

Driving habits vary, meaning there will always be a discrepancy and exploiting loopholes is not illegal.

But the car industry agrees on the need for change. VDA, which represents the German industry, has said it is “working actively” on reform of the testing regime.

The United Nations is leading a worldwide effort to update test

procedures that date from the 1980s.

In parallel, the European Union is working on how to tighten EU law on vehicle testing and also to enforce a 2020 emissions goal of 95 grams of CO<sub>2</sub> per kilometre (g/km) across the European Union.

Legislators in the European Parliament have said a tougher testing procedure should be introduced by 2017, but some EU member governments have been seeking a delay until 2020.

The 95 g/km target for new cars from 2020 has been broadly agreed. However, Germany has led calls for exceptions that campaigners say would seriously weaken enforcement of the goal.

## For information on EurActiv Special Reports...

### Contact us

**Delia Nicolaescu**  
 events@euractiv.com  
 tel. +32(0)2 788 36 72

**Ross Melzer**  
 publicaffairs@euractiv.com  
 tel. +32(0)2 226 58 17

### Other relevant contacts:

**Rick Zedník**  
 ceo@euractiv.com  
 tel. +32(0)2 226 58 12

**Frédéric Simon**  
 executiveeditor@euractiv.com  
 tel. +32(0)2 788 36 78